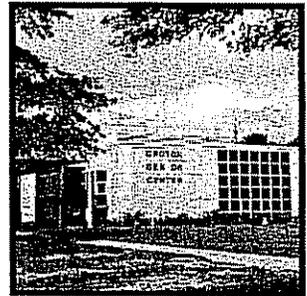


INFRASTRUCTURE THEMES

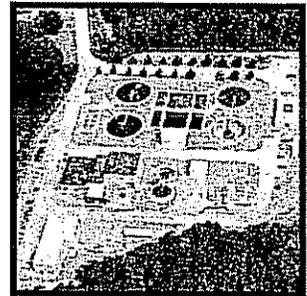
Enhance Transportation Options



Address Community Facility Needs



Enhance Infrastructure



Enhance Government Structure



ENHANCE TRANSPORTATION OPTIONS

13

Overview

For most of the past century, the transportation system in Groton has been dominated by the automobile. There is little doubt that the automobile is largely responsible for most of the development patterns that exist in Groton today.

While there may not be major changes in the dominance of vehicular circulation during the planning period, the time has come for a better balance in the transportation network in Groton. That balance can be promoted through more emphasis on transportation alternatives such as walking, bicycles, and transit.

At the same time, programs should continue to be implemented to maintain and improve the overall vehicular circulation network.

The transportation network must meet the needs of the residents and the community ...

New Road and Sidewalk Construction



Carefully Manage The Existing Roadway System

Groton is a major roadway hub for the southeastern Connecticut region due to:

- the Gold Star Bridge on Interstate 95 (the only bridge over the Thames River between Long Island Sound and Route 2A in Montville/Ledyard)
- the US Navy Base
- Electric Boat Corporation, Pfizer and other major employers
- the tourist traffic to the casinos, Mystic, and other area destinations

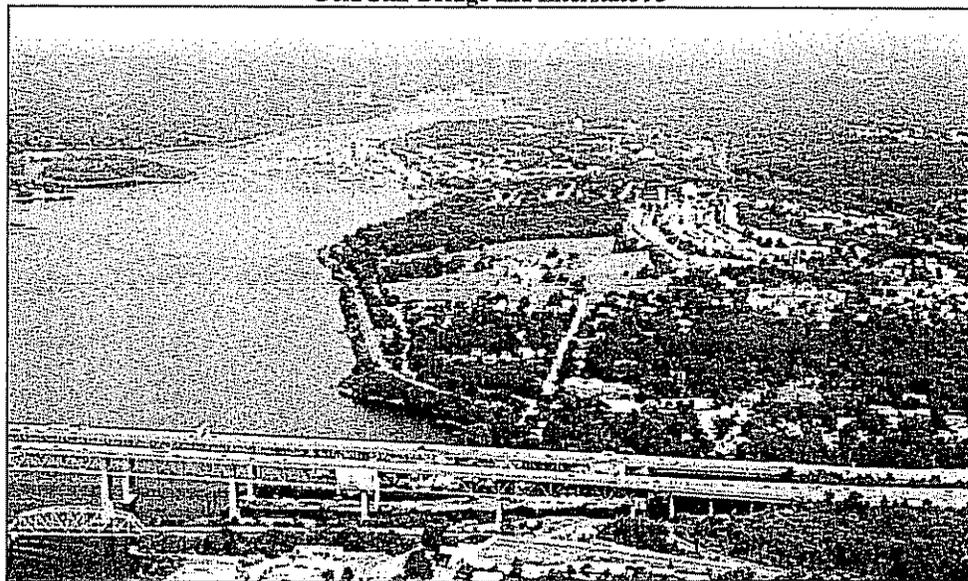
As shown in the following table, traffic volumes on State highways in Groton can be significant. The table below lists the top ten traffic locations on local streets in Groton in 1996-97 (Interstate 95 excluded).

1996-97 Major Traffic Locations

Route	Location	1996 ADT	1987 ADT
1	From Route 12 to Route 349 NB	27,400	27,200
12	From Route 184 to Crystal Lake Road	26,300	29,200
12	From Route 1 to Route 184	24,800	23,800
349	From Meridian Street Extension to Route 1 Exit	24,300	22,700
12	Between ramps to WB Route 184	23,700	27,400
184	From Interstate 95 to Route 12 ramp	23,700	27,400
1	From Exit to Route 349 to Meridian St Extension	21,800	24,400
349	From Rainville Avenue to Meridian Street Extension	21,400	19,700
349	From Route 1 Exit to Interstate 95	18,500	n/a
184	From Kings Highway to Route 117	18,200	15,300

Groton is served by four interchanges on Interstate 95 and this interstate highway provides an important east-west travel route for Groton residents. Traffic volumes on Interstate 95 range from 62,000 vehicles per day at the Stonington line to 117,000 vehicles per day on the Gold Star Bridge.

Gold Star Bridge and Interstate 95



Overall Circulation

Groton has a good hierarchy of roads to meet the needs of residents and businesses. However, due to historical development patterns, Groton has many more north-south roads than east-west roads.

East-west traffic is restricted to Route 1, Route 184, and Interstate 95. Potential east-west connections to provide additional traffic circulation are shown on the map on page 113.

Capacity, Congestion and Access Management

Congestion occurs when traffic volumes exceed the capacity of a roadway (or an intersection). The main capacity deficiencies in Groton are located along Route 12 and at the junction of Interstate 95, Route 184, Route 12 and Route 1. While improvements are being planned to address these and other areas in Groton, there is a limit to how much can be accomplished through continued widening.

It may surprise some people to realize that Groton's road network is essentially fixed since few major new roads will be built in Groton in the future. At the same time, expanding roadway capacity (roadway widening or intersection improvements) is very expensive and can have significant community impacts.

Thus, a challenge of the Plan will be to manage the existing roadways effectively in order to preserve their capacity. Access management is an approach that seeks to manage driveways and intersections on state highways and other major roads in Groton to maximize roadway capacity and reduce congestion.

Since access management is becoming a priority for CTDOT, funding is available for access management studies of major corridors. Such studies might be considered for sections of Routes 1, 12, and 184. Groton should request funding for an access management study of these routes from the Southeastern Connecticut Council of Governments and CTDOT. The Planning Commission and the Zoning Commission should implement recommendations from the study as part of any land use approval in these areas.

Recommendations

1. Develop east-west connectors, where feasible and desirable.
2. Maintain traffic capacity to accommodate future traffic volumes through correction of existing deficiencies and management of existing roadways while striving to maintain community character.
3. Make intersection improvements where needed on Routes 1, 12, and 184.
4. Undertake one or more access management studies on Routes 1, 12, and 184.
5. Implement recommendations from the access management study as part of any land use approval in these areas.
6. Encourage access management strategies along major roadways in Groton.

Traffic Congestion

Rules-of-thumb indicate that two-lane arterial roadways can handle up to about 17,000 vehicles per day before congestion becomes apparent and that four-lane arterial roads can handle up to about 26,000 vehicles per day.

On the basis of traffic volumes alone, it can be seen that several roads have the potential to be congested, particularly at peak hours.

Access Management

Access management is an approach based on the premise that since road capacity is limited and driveways and streets can reduce road capacity, access to arterial roadways should be managed in order to preserve the capacity of the roadway.

Access management techniques can include:

- interior connections between parking lots
- access from secondary streets
- shared parking
- sidewalks
- driveway alterations

Access management techniques should continue to be applied in commercial areas on Routes 1, 12, and 184.

Consolidated Parcels

One way to encourage access management is to allow abutting parcels to be considered as one lot for zoning purposes. This often allows for greater lot coverage, reduced setbacks on the common property line, shared parking, and fewer driveways. Some communities allow for a lot coverage or other bonus if two or more parcels are consolidated.

Road Classifications

Federal, state, and regional transportation planning organizations use regional road classifications to identify and prioritize road projects for funding under the Transportation Improvement Program (TIP).

Local road classifications are used to establish road construction standards. For example, an industrial access road would be wider and straighter than a residential dead end street.

Revise Roadway Classifications

For evaluating roadway networks, roads are typically classified based on their function (through traffic versus access), major land use (business or residential), traffic volumes, and overall location. Local roads and their recommended classifications are identified below and on the map on the facing page.

Local Road Classifications and Segments

Limited Access Highways - Roads that serve regional traffic and have limited access.

- Interstate 95
- Route 349 from I-95 to Rainville Ave

Arterials - Highways which carry both regional and local traffic from the collectors.

- Route 1
- Route 12
- Route 27
- Route 117
- Route 184
- Route 649
- Route 215 (Groton Long Point Road, Mystic-Noank Road, and Water Street)
- Route 614 (Allyn St., Mystic St., Cow Hill Rd)
- Route 349 (Rainville and Eastern Point Rds to Shennecossett Road)

Collectors - Take traffic from local streets and direct it to arterial highways system.

- Antonino Road
- Benham Road (city)
- Brandegee Ave (city)
- Bridge St. (city and Town)
- Brook St. (GLP Road to Elm Street)
- Col. Ledyard Highway
- Cow Hill Rd: from Mystic St. to High St.
- Crystal Lake Road
- Depot Road
- Eastern Point Road: from Poquonnock Rd to Rainville Ave (city)
- Fairview Ave (city)
- Fish Town Road
- Flanders Road
- Gales Ferry Road
- Gungywamp Road
- High St. (Mystic)
- John St. (city)
- Kings Hwy
- Lambtown Road
- Main Street (Noank)
- Meridian St. (city)
- Military Hwy
- Mitchell Street (city)
- Mosher Ave (Noank)
- Noank – Ledyard Road
- North St. (city)
- Ocean View Ave
- Plant St. (city)
- Pleasant Valley Road North
- Pleasant Valley Road South
- Poquonnock Rd from Rt 649 to Rte 1
- Poquonnock Rd from Thames to Rainville (city)
- Pumpkin Hill Road
- Sandy Hollow Road
- Shewville Road
- Shore Avenue (Groton Long Point)
- Terrace Ave
- Thames Street (city)
- Thomas Road (Town and city)
- Toll Gate Road
- Walker Hill Road
- West Mystic Ave
- Winding Hollow Road

Local - Roads providing access to neighborhoods and individual properties

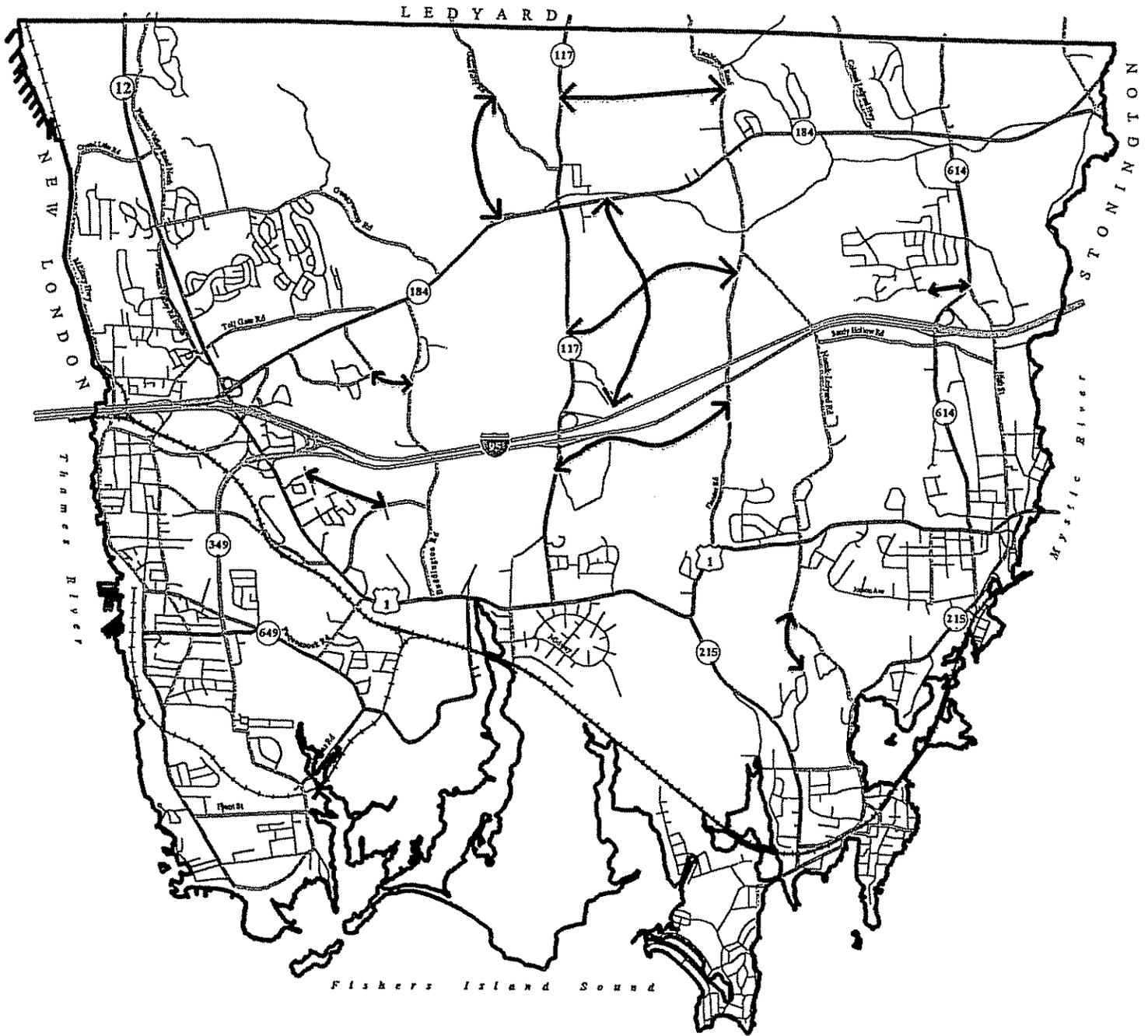
- Other roads and streets in Groton.

Recommendations

1. Update subdivision and other regulations to incorporate the roadway classification scheme, as necessary.

Transportation Plan

Town of Groton, CT



Note:
 Potential connections are only shown conceptually;
 detailed engineering and environmental analysis
 will be required to determine specific locations.
 These roads are intended to be built as development occurs.
 Potential connections could be either public roads
 or appropriate private connections.

LEGEND

- Limited Access Highway
- Arterial Road
- Major Collector Road
- Minor Collector Road
- Local Road
- Potential Connections
- Other
- Rail

5000 0 5000 Feet



Scenic Road Elements

Scenic road elements include narrow road width, tree canopies, stone walls, scenic vistas, agricultural lands, historic buildings, and notable natural features.

Sources: CGS 7-149a, CGS 13b-31b

New Scenic Roads

Strategies to make new roads or reconstructed roads more scenic and enhance Groton's community character could include:

- narrower paved widths
- slower design speeds
- steeper grades
- not clearing trees and grading flat for the full width of the road right-of-way
- retaining or building stone walls
- street tree planting
- providing landscaped center islands in cul-de-sacs to minimize paved areas, provide additional snow storage area, and provide an amenity in the roadway

Encourage Roads That Are More Scenic

Transportation engineering has typically focused on removing road hazards and moving cars as efficiently as possible. This has tended to result in roads that are wide, flat, and straight - the very characteristics that encourage speeding and detract from community character.

In recent years, the focus has turned more towards balancing traffic efficiency with community character. More attention is being paid to ensure that roadways (which comprise only about 10 percent of all land area in Groton) do not dictate the overall character of the community. In other words, efforts are being devoted to making roads that serve their purpose and are more scenic.

The following pictures illustrate the difference between a road that is out of character with a local residential street in Groton (primarily due to paved width) and a collector road that has been recognized as a scenic road in Groton. Each road provides for safe overall traffic circulation. It is ironic that the road that carries more traffic volume has more character than the residential street.

Sandy Hollow Road (Collector Road)



Judson Avenue (Local Street)



It should be our goal to make all roads in Groton as scenic as possible while providing for safe and efficient circulation. The best way to do this is through modifying the road construction standards (primarily design speed and paved width).

The design speed of a road is the speed that the road is designed to be capable of handling. It is typically higher than the posted speed limit. A higher design speed results in roads that are wider, flatter, and straighter. As a result of the road design speed, motorists often feel that it is safe to exceed the posted speed limit. Still, roads must meet some minimum design standards to allow for traffic safety.

Road Standard Recommendations

	Current Design Speed	Current Right-of-Way Width	Current Pavement Width	Proposed Recommendations
Arterial (Thorough-fare)	50 MPH	60-100'	40-44'	None
Collector	45 MPH	60'	34-40'	Reduce design speed to 35 MPH and allow paved width of 30'
Access	30 MPH	50'	30'	Reduce design speed to 25 MPH and allow paved width of 24'
Village Road	25 MPH	50'	26'	Reduce design speed to 20 MPH and allow paved width of 22'
Sub-Village Road	25 MPH	40'	20'	Reduce design speed to 20 MPH and allow paved width of 18'

While it is important to recognize existing scenic roads, efforts also need to be devoted towards ensuring that new roads built in Groton are the scenic roads of the future. During the planning period, current road construction standards should be reviewed and revised to allow streets to follow existing terrain more closely and create the potential for more scenic roads. Possible changes to allow more scenic roads in new developments are identified in the sidebar.

Recommendations

1. Review local road construction standards to promote the construction of more scenic roads as part of new developments.
2. Continue to designate local roads as scenic roads in order to protect and enhance community character.
3. Publicize and promote the “adopt-a-road” program with local organizations in order to promote litter control and enhance community character.

Scenic Roads

Scenic roads are one element that significantly contribute to Groton's character. As development of the community continues, scenic roads may be increasingly threatened by adjacent development or increasing traffic volumes.

Groton adopted a scenic road ordinance in 1989 and two roads have since been designated by the Town Council as scenic roads:

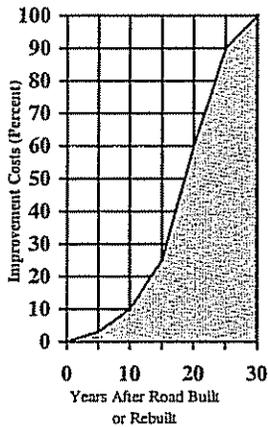
- River Road
- Sandy Hollow Road

For a local road to be designated as a scenic road, it must not have intensive commercial development or high volumes of traffic and meet one or more of the following criteria:

- unpaved
- bordered by mature trees or stone walls
- no more than 20 feet in width
- have scenic views
- blend naturally into the surrounding terrain
- parallel or cross over brooks, streams, lake or ponds

See the map on page 57 for a listing of roads classified as scenic roads in Groton.

Continue to Maintain and Improve Roads



Roadway maintenance is similar to tending a garden. Regular maintenance minimizes the total amount of work required and its cost. On the other hand, deferred maintenance means that significant efforts and expenditures are required to restore the original integrity.

For this reason, Groton should continue to make regular road improvements on local roads. Incremental maintenance (as and where needed) helps to efficiently and cost-effectively maintain road conditions and helps avoid expensive road reconstruction projects that can result from deferred maintenance.

In addition, Groton should continue to work closely with the Southeastern Connecticut Council of Governments (SCCOG) and Connecticut Department of Transportation (CTDOT) regarding transportation issues and improvements in town. In particular, continued spot improvements to state highways should be encouraged.

The Town is currently using a pavement management system for planning road reconstruction and repairs on the 93 miles of roadway it maintains (this excludes Navy, City of Groton, and Groton Long Point streets). The system has been in place for the past two to three years. The key issue with regard to the pavement management system is that it be adequately funded in order to maintain the local road system.

Recommendations

1. Continue to make roadway improvements to address safety and capacity issues.
2. Increase the funding for road maintenance and improvements in order to adequately maintain existing roads.
3. Continue to work closely with the SCCOG and CTDOT regarding transportation issues and improvements.
4. Encourage continued spot improvements to state highways, where necessary.
5. Continue to evaluate how possible future transportation projects may benefit the community.

Address Unaccepted and Private Streets

Despite efforts over the years, Groton still has some unaccepted streets that have houses along them. This can be an issue for both the Town and the property owners along the road in terms of maintenance responsibility, liability, and other issues.

A 1989 task force recommended a policy toward these roads, a priority list for their improvement, and suggested funding for the paving of these streets and the installation of drainage improvements. Twenty-four of the unaccepted streets at that time were placed on the priority list, generally ranked by the number of houses along them. In addition, the Task Force suggested allowing roads to be accepted by the Town with a lower level of improvements (paved width, pavement depth, right-of-way width) than is required for new roads.

While little progress on this issue has been made in the last ten years, efforts to address unaccepted streets should continue. In addition, the standards for acceptance of such streets should be reviewed to ensure they are reasonable for both the community and the neighborhood.

While all unaccepted streets are privately-owned (i.e. they are not owned by the Town of Groton), the term "private street" can also be used to identify streets built to public standards that are owned by the abutters for privacy or other reasons.

Although some communities allow private ownership of streets provided they are built to public standards, the long-term implications of this are unclear. For instance, if the abutters do not adequately maintain these roads, there may be pressure on the Town to accept these roads into the Town road system at a later date.

Since this may pose a future liability for the Town, private roads should be discouraged in Groton unless this future liability can be placed upon the abutters. A "development marketing strategy" should not become a future liability for other Groton residents when it is convenient to do so.

Recommendations

1. Continue efforts to address unaccepted streets, including standards and procedures.
2. Discourage establishment of private streets unless issues of liability for future improvement are clearly specified.

Road Acceptance

To become part of the Town of Groton road system, a street must be accepted as a public street by the Representative Town Meeting (RTM), after recommendation for acceptance by the Directors of Planning and Public Works and the Planning Commission.

Some roads in Groton have not been accepted over the years since they predate current regulations and do not comply with current standards. As a result, the current property owners must maintain these roads.

Sidewalk Requirements

Unless waived by the Planning Commission:

- four-foot wide sidewalks are required on local roads
- five-foot wide sidewalks are required on arterial and collector roads or any road classification bordering industrial, commercial or multi-family housing

The current policy is to only consider waiving the installation of sidewalks on one or both sides of local streets in low density subdivisions (RU-40 and RU-80) depending on:

- the number of lots along the road
- the length of the road
- whether a through street or a cul-de-sac

Sidewalks are required on collector and main streets serving these areas and where the Commission determines that a linkage is necessary for the overall sidewalk network.

Opportunities to receive fees-in-lieu of sidewalks should be explored before any sidewalk installation is waived.

Create an Overall Pedestrian Network

An important transportation recommendation in the Plan is to increase efforts to create an overall pedestrian network. Sidewalks and trails provide for safe pedestrian circulation, an important element in creating and maintaining an active and vital community. In addition, these pedestrian routes provide an alternative to vehicular transportation. With more sidewalks and trails, the number of trips that require automobiles may be reduced and the opportunities for recreational use increased.

Sidewalks

Groton has a concentration of sidewalks in the City and the Mystic section of town. In addition, there are sidewalks along one or both sides of Route 1 from Interstate 95 to Groton Long Point Road. Sidewalks also exist in other areas of Groton where they have been installed as part of commercial developments or residential subdivisions.

In Groton, the installation of sidewalks occurs in two main ways:

- the zoning and subdivision regulation require the installation of sidewalks for new projects
- the Town undertakes sidewalk construction projects, through the Capital Improvement Program, to extend and connect sidewalks throughout the community

These policies and efforts should be continued. To help guide these efforts, a sidewalk inventory and improvement plan should be established and maintained so that opportunities for pedestrian circulation are maximized in accordance with the following community priorities:

- install sidewalks within and between activity nodes (identified on the map on page 73)
- complete the sidewalk network on arterial roads as opportunities present themselves
- establish sidewalks on collector roads
- establish sidewalks in commercial and multi-family areas
- establish sidewalks (and/or trails) in residential and industrial areas

It will also be important to select the appropriate type of sidewalk for the appropriate location. While some communities have a standard concrete sidewalk design, Groton is too diverse a community for such a simple standard.

Sidewalk Standards

The Historic District Commission has looked at different types of sidewalk placements in historic areas to help enhance the overall character of these areas. They have suggested the following:

Country Lanes with Rural Vistas – no sidewalks or curbs

Contoured Land such as Antique Victorian Berms – minimal blacktop pathways with no curbing is preferred and the land contours should not be disturbed.

Downtown Residential or Commercial Area – prefer concrete sidewalks with cut granite curbing. Cast concrete curbing may be an acceptable alternative. Brick or cobblestone is generally not an appropriate historic sidewalk material in Groton.

Private Property with Public Access – should be treated as above if visible from a public way or be reviewed by the Historic District Commission.

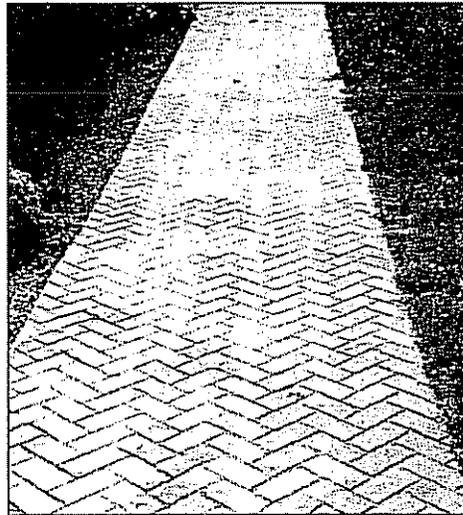
Concrete Sidewalk



Asphalt Sidewalk



Brick/Stone Pavers



Gravel/Stonedust Paths



Photos by William Carlebach

Trails

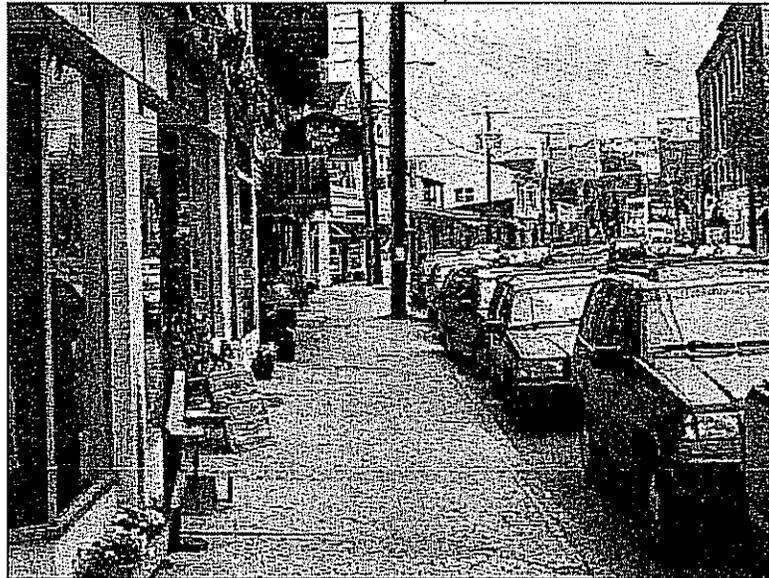
As previously indicated in the Open Space section of the Plan, trails within open space and greenbelt areas will greatly enhance the value of these areas and provide transportation and recreation opportunities. In fact, Groton has the opportunity to establish one of the premiere trail networks in the state.

Opportunities to create less formal walkways (such as stonedust paths) should also be explored where feasible and desirable. The eventual goal should be to interconnect all of the pedestrian walkways in Groton (sidewalks, paths, trails) into a cohesive overall system.

Recommendations

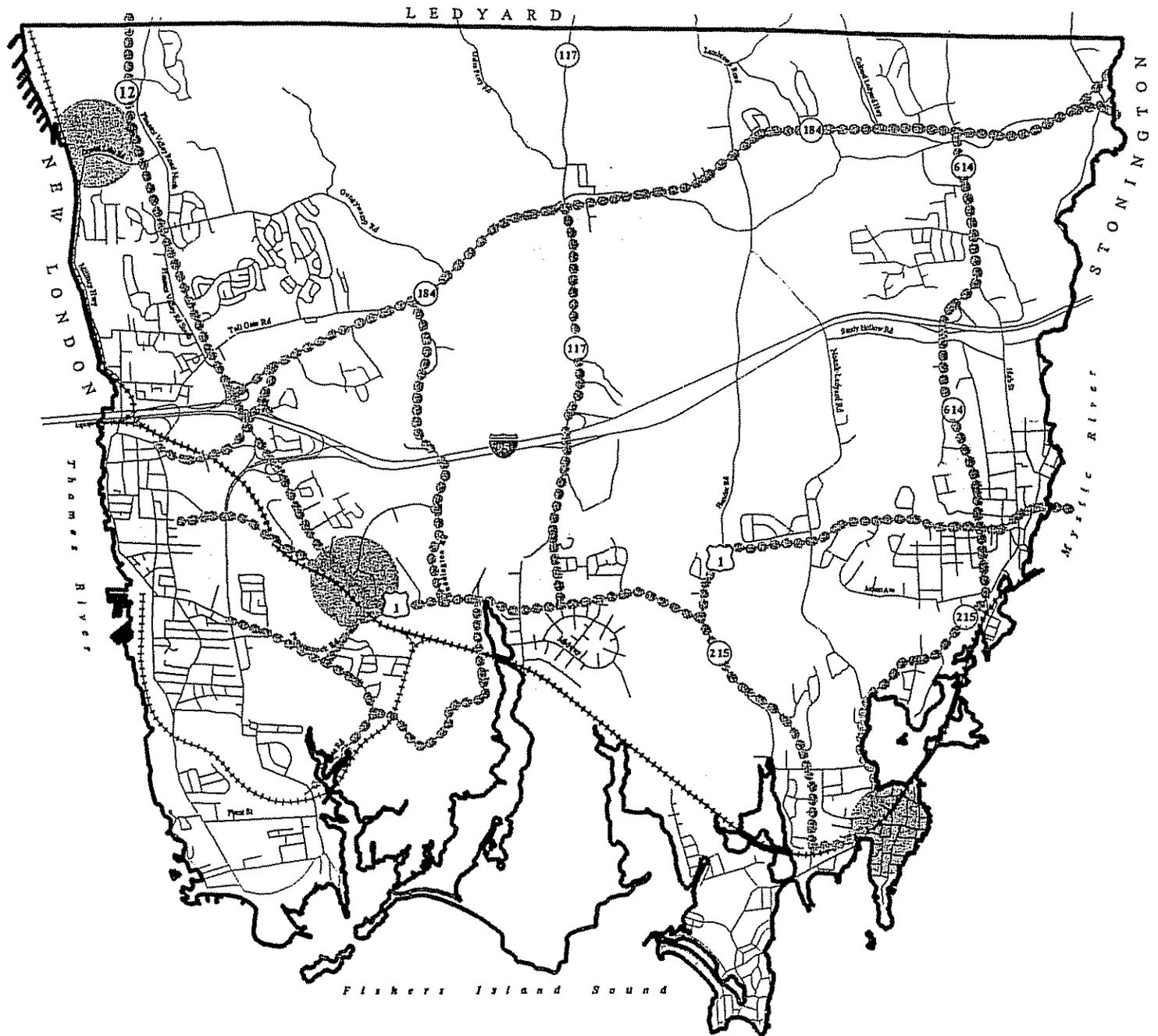
1. Continue to improve and extend the sidewalk network in and around Groton.
2. Maintain the zoning and subdivision regulation that require the installation of sidewalks for new projects.
3. Continue to appropriate municipal funds to extend, connect, and repair sidewalks throughout the community.
4. Consider the possibility of enacting a “fee-in-lieu-of sidewalk” regulation to support the overall development of sidewalks in Groton.
5. Establish and maintain a sidewalk inventory and improvement plan to extend and connect sidewalks where most needed (such as within major activity areas and on the major travel routes that lead to those centers).
6. Continue to develop, improve and extend the trail network throughout Groton.
7. Allow for multi-use trails (bicycles, pedestrians, rollerblades, etc.).
8. Modify the zoning and subdivision regulations to require the installation of trails in new projects.
9. Appropriate municipal funds to extend and connect trails throughout the community.
10. Establish and maintain a trail inventory and improvement plan to extend and connect trails where most needed.
11. Explore opportunities to create less formal walkways where feasible and desirable.
12. Strive to interconnect all of the pedestrian walkways in Groton (sidewalks, paths, trails) into a cohesive overall system.

Sidewalk In Mystic



Sidewalks and Walkways Plan

Town of Groton, CT



Legend

Sidewalks / Walkways

-  Priority network
-  Neighborhood sidewalk infill
-  Community sidewalk infill
-  School walking distance infill

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Bicycle Facilities

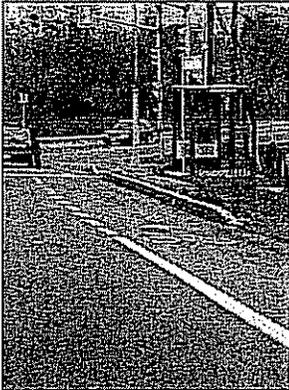
Bicycle routes can include "transportation" routes (for specific trips) and "recreational" routes. While there may be more initial interest in recreational routes, focus should also be directed towards establishing transportation routes.

The types of bicycle facilities that may be appropriate in Groton include:

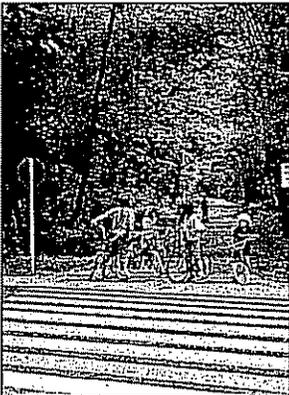
- shared roadway
- wide curb lane
- shoulder bikeway
- bike lanes
- multi-use path

Better signage and marking of bicycle routes is an important step towards reducing conflicts and encouraging more bicycle use.

Shared Roadway Lane



Multi-Use Path



Establish a Bikeway Network in Groton

A Bikeway Plan for Groton was adopted in 1975 that detailed a number of routes contained within existing road rights-of-way. The 1990 Plan of Conservation and Development identified a need to expand the network of bikeways in Groton. This has not been done.

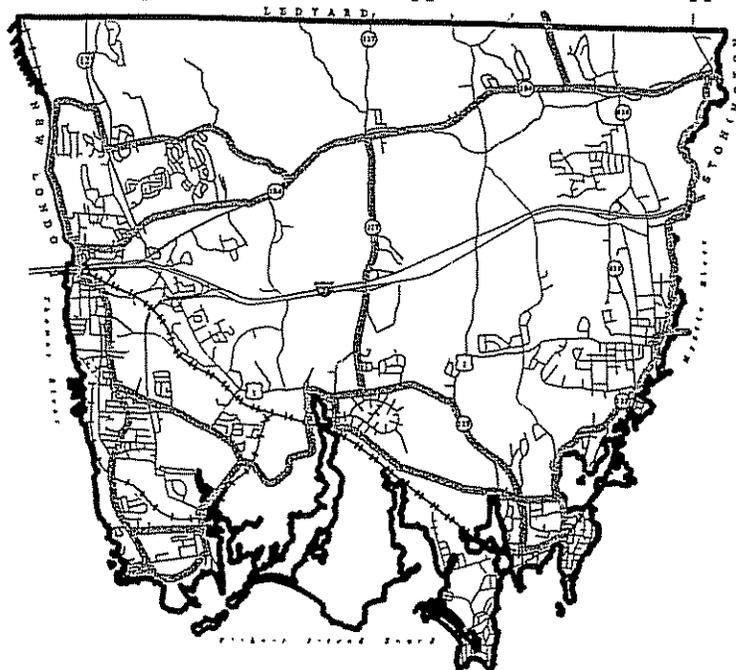
At the present time, there are few formal bicycle routes in Groton. Any existing bicycle routes rely predominantly on roads and streets and conflicts can arise between bicycle and vehicular use. Groton should develop a network of bicycle trails along major streets and in open space and greenbelt areas.

When improvement work is undertaken on major roads, bicycle use should be considered and the suitable type of bicycle facility (as indicated in the sidebar) provided, where appropriate. Priority consideration should be given to establishing bike trails along major roads that service areas of local activity (business areas, schools, parks, etc.).

The eventual development of a system of bicycle routes appropriately designed, signed and marked to ensure the safety and enjoyment of Groton residents will be facilitated by the preparation of an overall concept plan as soon as possible.

Recommendations

1. Develop an overall concept plan for bicycle routes in Groton.
2. Provide appropriate, safe, convenient bicycle facilities (including signage, pavement marking, and Town maps) when improvements are undertaken on major roads in Groton.
3. Give priority to bicycle trails along major roads that service areas of local activity (business areas, schools, parks, etc.).
4. Provide for bicycle racks and other support facilities, where appropriate.



Enhance Transit Service

As previously indicated, a better balance is needed in Groton between different forms of transportation. Groton is fortunate that several alternative forms of transportation are available in the community. During this planning period, efforts need to be devoted to supporting and enhancing transportation options.

Transit service in and near Groton is provided:

- by the Southeast Area Transit (SEAT)
- by the Town's dial-a-ride service for the elderly and disabled
- by Pfizer to transport employees between their facilities
- by local hotels and assisted living facilities for residents and guests
- in downtown Mystic via a shuttle service
- by Foxwoods Resort and Casino for employees

In addition, there is discussion of providing a trolley system to interconnect tourist attractions in Mystic (aquarium, seaport, downtown) in the future.

Despite all these transit services, the quantity and quality of transit for Groton residents are modest. The SEAT service is infrequent and follows a fixed route. The other transit services are generally unavailable to the general population.

Local and regional transit services should be supported and enhanced where feasible to help meet the needs of Groton residents and businesses and to help achieve Groton's housing, employment, and economic development objectives. During the planning period, the Town should work with SEAT and other local transit providers to enhance local bus services and explore ways to provide better service that meets the needs of the community.

During the planning period, consideration should be given to supporting and expanding other bus transportation services (vehicles, hours, days) to serve:

- residents (youth, workers, shoppers, commuters) and visitors
- the anticipated increase in the number of senior citizens

Recommendations

1. Devote efforts to supporting and enhancing transportation options.
2. Coordinate and integrate the various public and private transportation systems operating in Groton.
3. Encourage preparation of a multi-modal transportation study in Mystic.
4. Create, support, and enhance local bus transportation that helps achieve Groton's housing, employment, and economic development objectives.
5. Continue to work with SEAT to enhance local bus service for residents, commuters, tourists, and others.
6. Explore expanding other bus transportation (Pfizer, Foxwoods, Town dial-a-ride) to more days and to serve more residents.
7. Consider enacting a "fee-in-lieu-of-parking" regulation to help support transit development in major activity areas.

Bus Transit

SEAT provides transportation service that is available to the most people in Groton. Local service is provided south of, and including, Route 184. Express bus service runs along Route 12, Route 184 and Route 1.

Overall ridership on SEAT has been modest due to the limited schedule (one bus per hour) and fixed routes.

While more frequent bus service has been discussed, low ridership levels make it difficult and it is unclear what type of improvements will be made in bus service by SEAT during the planning period.

Address Parking Needs

Parking Requirements

Groton has a variety of parking requirements for different land uses. Overall, many of these standards appear fairly reasonable given available information about parking utilization, both in Groton and nationally.

However, as was pointed out in the Lane, Frenchman and Associates study of Downtown Groton (1984) and parking studies in the Mystic area (1982 and 1992), inappropriate parking requirements can hinder the appropriate development of an area and detract from community character.

In order to promote the most appropriate patterns of development, especially in the proposed nodes, a comprehensive review of parking requirements should be undertaken during the planning period to ensure that appropriate standards are in place. In particular, it may make sense to evaluate whether reduced parking requirements (similar to the “5/8ths rule” in Mystic) may be appropriate in other mixed use areas (such as Downtown Groton). Where required, parking should be incorporated at the rear (and possibly side) of buildings and minimized so that buildings can be brought closer to the sidewalk and the street.

Reducing the amount of paved surface can also reduce negative impacts on water quality. While reducing parking standards may be the most obvious way to reduce water quality impacts, innovative approaches also include the use of grass or other pervious surfaces for overflow parking, utilization of shared parking to minimize parking areas, use of tire stops instead of curbs at parking area edges, and the use of vegetated islands and more shade trees throughout parking lots.

Commuter Parking

Groton has one State-owned commuter parking lot for car-pooling and van-pooling located near the Interstate 95 and Route 117 interchange (Exit 88). This commuter parking lot should be maintained in order to facilitate carpooling and vanpooling by Groton residents. Additional commuter parking lots, with amenities such as bus shelters, telephones, portable toilets, and newspaper racks, should be considered for locations that are appropriate within Groton.

Recommendations

1. Undertake a comprehensive review of parking requirements during the planning period to ensure appropriate standards are in place for different uses and areas and water quality impacts are minimized.
2. Consider allowing or providing stand-alone parking lots where they will meet a need, facilitate transit, not hinder the appropriate development of an area, and not detract from community character.
3. Maintain and, if necessary, expand commuter parking lots to facilitate car-pooling and vanpooling by Groton residents.

Monitor Rail and Airport Operations

Rail Service

While the main Northeast Rail Corridor travels through Groton, the nearest stations are in New London and Stonington. This rail line was recently changed from diesel service to electric (with catenary poles and wiring) for the introduction of high-speed Amtrak rail service between Boston and New York.

Providence and Worcester (P&W) provides freight rail service to Pfizer and Electric Boat Corporation within the City and along the Thames River north of Interstate 95. However, this service is presently underutilized. There is the potential for passenger rail service on the P&W line for excursions and commuters. Any efforts to bring visitors and employees to or from Groton along this route should be encouraged.

Rail services should be carefully monitored due to the potential impacts (both positive and negative) on local residents and businesses.

Airport

The Groton - New London Airport, operated by the Connecticut Department of Transportation (CTDOT), is the fourth largest airport in the state. With recent service improvements at Bradley International Airport (Hartford) and T.F. Green Airport (Providence), it is unlikely that there will be a market to expand scheduled passenger service at the airport. On the other hand, efforts should be devoted to maintaining the level of service presently offered.

While the Master Plan recommends reconstruction of runways and taxiways, these plans are being evaluated. While the airport continues to provide a valuable service to area residents and businesses, activities at the airport tend to be controversial since about half of its operations involve flight paths over residential areas. Due to the potential impacts (both positive and negative) on local residents and businesses, activities at the airport should be closely monitored.

Recommendations

1. Support maximum passenger rail service to the Mystic and New London stations.
2. Encourage efforts to reduce fares for local Amtrak service to reduce vehicles using I-95.
3. Support revival of passenger service on the P&W line.
4. Continue to closely monitor rail service activities due to the potential impacts (both positive and negative) on local residents and businesses.
5. Continue to closely monitor activities at the airport due to the potential impacts (both positive and negative) on local residents and businesses.
6. Undertake partnerships with the airport and CTDOT to enhance the economic potential of the airport facilities.

Airport Benefits

Groton - New London Airport offers scheduled passenger service to Philadelphia and connections from there to over 80 destinations. The airport is also home to National Guard, corporate aviation, charter, and general aviation operations.

CTDOT estimates that the airport provides about \$167 million of economic benefits to the southeast Connecticut region each year.

Maritime Transportation

Groton has a great maritime tradition and the Thames River and Mystic River are still used for commercial and recreational maritime transportation.

Support Marine Transportation Services

Groton has a tradition of maritime operations that continues to the present day.

Without question, the biggest marine operations in Groton are the United States Navy and the Electric Boat Corporation, a division of General Dynamics on the Thames River. Groton is often referred to as the Submarine Capital of the world due to the presence of these two operations. The Thames River channel has been dredged to provide adequate depth for submarines and other vessels.

In addition, the Thames River is still heavily used by the following operations:

- Hess Oil
- Pfizer
- Block Island Ferry
- Martha's Vineyard Ferry
- Long Island Ferry
- Fishers Island Ferry

The Mystic River was another location for maritime operations in Groton's history. While once a center for shipbuilding and fishing, the primary use of this area today is for moorings and marinas for pleasure craft.

With Groton's strategic maritime location and varied resources, there is the potential for water taxi services for recreation and other purposes. The potential for this service should be explored and be balanced with the potential land-side impacts.

Marine businesses are an important part of Groton's history. While Groton does not really manage the maritime transportation needs of these businesses, attention should be paid to their land-based transportation needs as well.

Recommendations

1. Continue to monitor the land-based transportation needs of Groton's marine businesses.
2. Encourage waterfront uses for maritime commerce, not residential or other uses that are not water-related.
3. Explore the concept of water taxi services (in areas such as Noank, Mystic, New London, Groton, Ledgelight lighthouse) and carefully manage any land-side activities.
4. Support regional efforts to increase usage of the State Pier in New London as a way to reduce truck traffic on I-95.

ADDRESS COMMUNITY FACILITY NEEDS

14

Overview

Community services and facilities include such governmental functions as education, public works, public safety, and recreational services. Such services contribute significantly to Groton's community character and its quality of life. The Plan reviews these facilities to ensure they are appropriately located and sized to meet community needs during the planning period and beyond.

Groton is unique because there are multiple organizations and agencies that provide services for different geographical parts of the community. While information is provided for most operations, the primary focus of this booklet is service providers to the Town of Groton.

While specific locations for future community facilities are not mapped at this time, the Community Structure Plan (page 73) and the Future Land Use Plan (page 151) provide guidance as to potentially appropriate locations.

Community facilities and services are important to the overall quality of life in Groton ...

Fitch High School



Future Education Needs

In addition to the current need for educational facilities, Groton will need additional school facilities in the future as the community grows towards 60,000 residents.

Additional information on planning for future school sites is presented on page 135.

Address Current Community Facility Needs

Educational Facility Needs

While many other towns in Connecticut are in the middle of a major enrollment increase, school enrollments in Groton have been relatively stable since the mid 1980s. However, the school system is very close to capacity and constraints on programs and space have been identified. Educational planning is constrained by the fact that enrollments are planned only one year in advance rather than the ten years that is customary.

Groton School Facilities Summary

Type	No. of Schools	Grades	00-01 Enrolled	Capacity Range	Enrollment/ Capacity
Pre-Kindergarten	-	PK	120	-	-
Elementary	10	K - 5	3,193	2,930 - 3,453	92% - 109%
Middle	3	6 - 8	1,320	1,240 - 1,460	90% - 106%
High School	1	9 - 12	1,277	1,241 - 1,460	87% - 103%
Total	14	PK-12	5,910	5,411 - 6,373	93% - 109%

School capacity information from memorandum titled Groton Public School Capacities, December 3, 1998.

The Town of Groton established a Blue Ribbon Facilities Task Force to look at school buildings and other facilities in Groton. The Task Force found that, while school buildings are generally well maintained given the age of some of the buildings, there are a number of maintenance and enhancement issues that should be addressed during the planning period.

In addition, the Blue Ribbon Task Force has recommended changes in school configurations and construction of additional space.

Recommendations

1. Undertake longer term enrollment planning (10 years, for example) and better understand the dynamics behind local enrollment (owners, renters, Navy personnel).
2. Continue to evaluate educational facility needs and implement recommendations of the Blue Ribbon Facilities Task Force supported by residents.

Fire and Emergency Medical Response

The Town of Groton has ample fire protection to meet the community's needs. The Town has nine separate fire districts, ten station houses, over 30 fire-fighting vehicles, and over 200 paid and volunteer firefighters. In addition, Groton has two ambulance services.

Volunteer staffing is the biggest issue in all districts. Due to training requirements, it is becoming increasingly difficult to attract volunteer firefighters and ambulance personnel. Day-time response is the biggest concern. A reliable volunteer department is more cost-effective than a paid fire or ambulance department. Volunteer compensation plans and similar programs should be considered for all fire and ambulance districts.

Recommendations

1. Undertake programs to attract and retain volunteer public safety personnel (fire and ambulance).

Noank Fire District Facility



Groton Fire Services

The nine fire districts in Groton include:

- Center Groton Fire District
- City of Groton Fire District
- Groton Long Point Fire Department
- Mystic Fire District
- Noank Fire District
- Old Mystic Fire District
- Poquonnock Bridge Fire District
- US Navy Base Fire Department
- West Pleasant Valley Fire District

Fire services are also provided by:

- Pfizer fire service
- Electric Boat fire service
- Airport fire service

On separate occasions, local fire staff reported that Groton had more fire equipment than Providence, Hartford, or New Haven.

Volunteer Assistance

In order to encourage and maintain local volunteer programs and services, the General Assembly recently passed legislation that allows a community to provide a tax rebate or credit or other compensation to local public safety volunteers.

Town Beach

During public outreach portions of the planning process, the “lack” of a Town beach was the most significant community facility issue that arose.

Of course, the Town of Groton already has a Town beach at Esker Point but it is generally considered unacceptable due to weed growth, bottom texture, and water characteristics. The City of Groton has a beach at Eastern Point but its use has been restricted to City residents. It is ironic that, in a community with more than 20 miles of coastline (the most in Connecticut), there is no acceptable community beach for all Groton residents.

Some of this has to do with the type of shoreline in Groton. Along Long Island Sound, where residents most want a Town beach, land areas are already committed to other uses, there are few areas for a sandy beach, or the water characteristics are not acceptable.

At one time, a Town Beach was located on the east side of the Poquonnock River near the old railroad trestle. While many residents have fond memories of this location, its use was lost due to airport expansion.

To address this issue, the most appropriate step may be to establish a Groton Beach Committee to evaluate all options for a beach location and determine the steps required to establish an appropriate Town Beach.

Recommendations

1. Establish a Groton Beach Committee to identify and prioritize all options for a beach location and determine the steps required to establish an appropriate Town Beach.

Town Beach at Esker Point



Plan For Mid-Range Needs

Recreation Facilities

An analysis of local recreation facilities indicates that additional recreational facilities will be needed in the future. At the present time, the Recreation Department is restricted in its programming due to space conflicts at school facilities and a lack of facilities to meet program interest.

While the use of indoor space can be resolved through coordination between the Recreation and Education Departments, the lack of outdoor field space can be a larger issue. This results in less time for maintenance and "field rotation" at facilities. Additional fields could be constructed (such as at the Copp property) or lighting could be installed on existing fields to address this issue. Expanded use of school facilities may also be warranted.

During the planning period, research should continue into how to best meet the recreational needs of residents and how and where to provide additional facility space (time and/or location).

Recommendations

1. Provide additional recreational facilities to meet local needs.
2. Continue to coordinate facility usage with the schools to meet local needs.
3. Explore the possibility of cooperation with other facilities in Groton (such as Grasso Tech) that will allow the Town to use existing facilities and contribute to their maintenance and improvement.
4. Consider developing a recreation center with pool, gym, fitness center, and youth area.

Playing Soccer



William Carlbach

Specific Recreation Needs

The Recreation Department has identified the following facility needs:

- baseball and little league fields
- football and soccer fields
- a running track
- skating pond
- additional picnic areas
- a Town beach

However, these are primarily active recreation facilities.

Over the planning period and beyond, there is expected to be increased demand for individual and passive activities such as:

- Walking
- Riding
- Rollerblading
- Multi-purpose trails

In fact, a survey conducted regarding future use of the Copp Property found that the facilities most wanted by residents were for passive activities.

These survey results seem to indicate that residents want a balance between active recreational facilities (the historic focus on ballfields) and passive recreational facilities (such as trails).

Public Works

The public works complex is located on Groton Long Point Road. The site contains a vehicle maintenance garage, a vehicle storage garage, the public works building, and the Town refueling station. Construction of a new vehicle maintenance facility is recommended due to the inefficient layout of the existing building. Additional sand and salt storage facilities are recommended to provide the Town with the ability to store adequate materials for local needs.

In terms of waste disposal, the current disposal arrangements with the regional resource recovery facility in Preston will continue for the next 20 years. Recommendations in the recent study related to bulky waste disposal should be evaluated and implemented.

Recommendations

1. Construct a new vehicle maintenance facility at the public works facility.
2. Establish additional sand and salt storage facilities at the public works facility and at satellite locations.
3. Address the long term policy issue of proper disposal of road sand sweepings.
4. Undertake programs to educate residents about waste management (recycling, household hazardous wastes).
5. Establish facilities for composting, bulky waste disposal, and a "swap" facility to help meet community needs.
6. Consider establishing a more permanent facility for household hazardous waste collection where chemical spills can be contained.
7. Address the animal shelter, including the possibility of inter-municipal or regional sharing of a facility.
8. Promote waste stream reduction, re-use, and recycling of materials.

Housing Authority

The Housing Authority maintains 175 units of affordable housing for elderly and disabled citizens at:

- Grasso Gardens (70 units) located on Route 117
- Pequot Village (105 units) located on Poquonnock Road

Since there is a waiting list for both facilities and demographic projections point toward an increasing elderly population, study of the need to construct additional units should be undertaken during the planning period.

Recommendations

1. During the planning period, investigate the need to construct additional affordable housing units for elderly/disabled persons.

Community Center/Campus

At several points in the planning process, strong interest was also expressed in establishing a community center / recreation center facility. Groton already has the basic foundation for such a facility that could be expanded to meet this need.

The Groton Public Library and the Senior Center already share a site and parking area on Route 117. While the library was expanded in 1996, additional expansion may be desirable as the community grows. Recent expansion of the Senior Center provided handicapped bathrooms, a revised fitness area, an improved computer lab, storage, dance and aerobics areas.

The Library/Senior Center site could be configured to meet future needs and provide space for indoor recreation facilities, indoor swimming pool, gym, a health club / fitness center, a youth center, meeting rooms, performing arts space, and other facilities. Such facilities would provide for a Town-wide community center at the site.

Careful planning will be required at this site to maximize the opportunities for establishment of such a complex. While the site has adequate space for future expansion of each facility, acquiring adjacent property may be prudent in order to allow expansion of the community center / campus at this site.

Recommendations

1. Investigate establishing a community center / recreation center complex on Route 117.
2. Undertake careful planning to maximize the opportunities for establishment of such a complex at this site.
3. Consider acquiring adjacent property in order to allow expansion of the community center / campus at this site.

Libraries

Groton has three libraries with different levels of funding from the Town:

- the Groton Public Library on Route 117 (95% Town funded)
- the Bill Memorial Library in the City (10% Town funded)
- the Mystic and Noank Library in Mystic (33% Town funded)

Governance is different for all three libraries. It may be beneficial in the long term if all three libraries coordinate to avoid unnecessary duplication of services and help meet community needs.

Recommendations

1. Investigate and implement opportunities to coordinate all three libraries to avoid unnecessary duplication of services and help meet community needs.

Social Services / Youth and Family Services

The Social Services Department administers the General Assistance program, two State-funded block grants, energy assistance, housing and outreach programs, discretionary funds and a food locker for the City and the Town.

Youth and Family Services is a social service agency that provides intervention and prevention services for at-risk children, youth, and families. The department operates family support centers on Central Avenue and at Colonial Manor in the City of Groton.

Both agencies have indicated the need for additional meeting and storage space. The need for a family shelter in Groton was addressed with the opening of a church-sponsored shelter in the spring of 2000.

Recommendations

1. Investigate ways to provide additional meeting and storage space for the Social Services and the Youth and Family Services agencies.

Fire and Emergency Medical Response

Groton has nine separate fire districts, ten station houses, over 30 fire-fighting vehicles, and over 200 paid and volunteer firefighters. In addition, Groton has two ambulance services.

With the amount of fire and emergency medical equipment and facilities, it will make sense in the future to move towards consolidation of fire districts and ambulance associations. This will help assure that community needs are met in the most cost-effective way and that equipment, personnel, and facilities are utilized in the most efficient manner.

Recommendations

1. Investigate and implement opportunities to consolidate fire districts and ambulance associations in order to meet community needs in the most efficient and cost-effective way.

Prepare For Future Needs

Develop An Overall Land Acquisition Strategy

As Groton grows, there will be many situations where the community will need land area for community facilities and activities. It will be more cost-effective to acquire land as soon as possible for future needs. In addition, Groton is more likely to reserve the best sites for future facilities if they are acquired now.

Consider possible future school needs in Groton. School enrollments are a function of overall demographic trends such as the “baby boom” (peak in 1970) and the “baby bust” (low in 1990). If Groton becomes a community of 60,000 people and if the school enrollment ratio increases to 17 percent, school enrollment might exceed 10,000 pupils. This represents a significant increase over the 6,000 students in the system today.

Thus, while additional school space may need to be added for short-term enrollments during the planning period, additional school facilities will be needed for eventual enrollment peaks in the long term. Acquisition of future school sites should be considered during the planning period.

Open space is another example. If Groton waits until a property is proposed for development or it is decided that more open space is needed, the community may miss the best open space parcels or pay excessively for them. A prudent overall land acquisition strategy can help to avoid this situation.

Recommendations

1. Develop an overall strategy to identify possible future facility needs.
2. Strive to acquire land as soon as possible for future facility needs.
3. Identify and acquire future school sites during the planning period.
4. Use the Community Structure Plan (page 73) and the Future Land Use Plan (page 157) to provide guidance as to potentially appropriate locations.

School Enrollment Ratios

School enrollment ratio is calculated by dividing school enrollment by total population. It indicates the percentage of population enrolled in local schools.

<u>Year</u>	<u>Groton</u>	<u>State</u>
1970	24%	22%
1980	17%	17%
1990	14%	14%
2000 (proj.)	13%	16%

Another “baby boom echo” is not expected until after the year 2010 and another enrollment peak is not expected until after the year 2010.

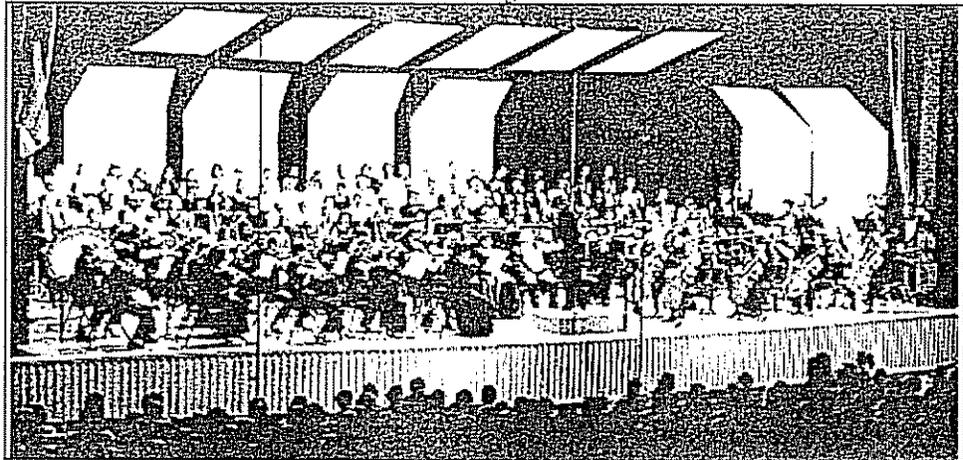
Cultural Facilities

In the longer term, facilities that will contribute to Groton's character and quality of life could include cultural facilities such as a performing arts center, a theater, and similar facilities. Such facilities can be used to provide for plays and concerts on a year-round basis for residents of Groton and the surrounding area.

Recommendations

1. Investigate ways to establish cultural facilities such as a performing arts center, a theater, or similar facility.

Possible Performing Arts Center?



ENHANCE INFRASTRUCTURE

15

Overview

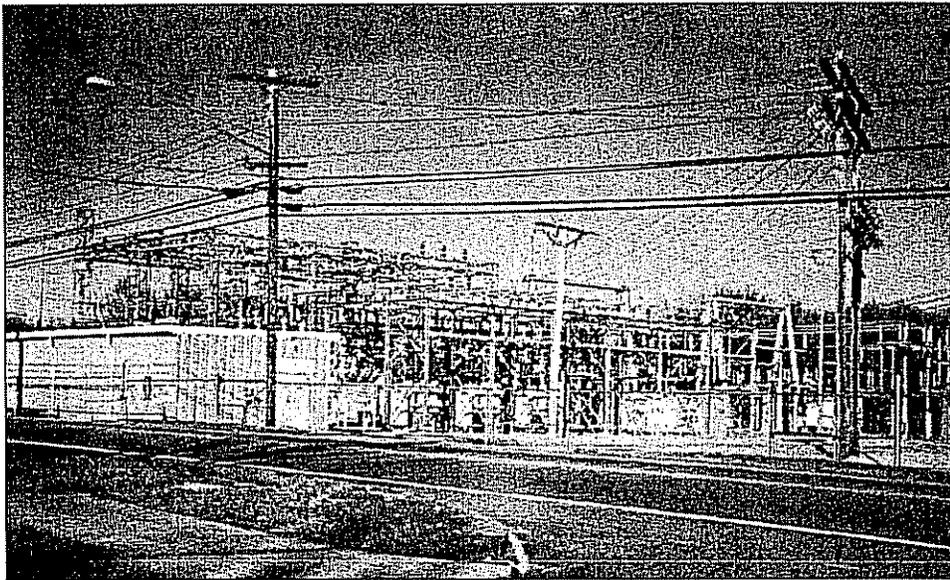
Webster's Dictionary defines infrastructure as "the basic facilities needed for the functioning of a system." In the Plan of Conservation and Development, the term infrastructure refers to utility services such as:

- piped utilities (public water, sewer, storm drainage, and natural gas)
- wired utilities (electric, telephone, and cable)
- wireless communications

Groton's overall infrastructure philosophy is that these facilities should serve, support, and encourage the current and desired future land use pattern for Groton rather than a rationale for a major change in Groton's land use structure.

Adequate infrastructure will help support the desired structure and land uses of Groton ...

Electrical Sub-Station



City of Groton Utilities

The City of Groton water system was established when the most intensive development was located in the City and the surrounding areas did not need or want to participate in developing a public water supply.

In fact, the water system is one of the reasons for the formation of the City of Groton as a separate governmental entity.

Water Providers

Groton is presently served by four different water companies:

- City of Groton Utilities
- Connecticut-American Water Company
- Groton Long Point
- Noank Water Company

However, the City of Groton and the Connecticut American Water Company are the main water providers with the City providing water to Noank and Groton Long Point by contract.

Sewer Expansion

The Town's Water Pollution Control Facility presently treats an average of about 4.0 million gallons per day (MGD) of wastewater.

Plans are underway to upgrade and expand the facility to accommodate an average flow of 7.5 MGD.

This is expected to be adequate for a 20-year period.

Guide Piped Utilities To Meet Community Needs

Public Water

Public water service can supply adequate potable water for fire protection, residential, and business needs, and support the desired development pattern.

In terms of the adequacy of the water supply, both major water companies (City of Groton Utilities and Connecticut-American Water Company) will need to identify and develop additional water sources during the planning period or decrease consumption to accommodate long range needs. The Connecticut American Water Company (serving parts of Mystic) is in the process of identifying and developing new water supplies in Stonington and North Stonington to ensure an adequate supply.

While City of Groton Utilities feels they have excess water at the present time, they are in the process of identifying additional supply sources to support uses in their service area and possible expansions into Ledyard. The most feasible solution appears to be diverting stream flow and/or developing well sites on Haley Brook.

Recommendations

1. Continue to encourage the provision of adequate potable water for fire protection, residential, and business needs.
2. Make public water expansion decisions on the basis of supporting the desired development pattern rather than vice versa.
3. Encourage efforts to identify and develop adequate sources of water supply to the extent consistent with community needs.

Public Sewer

Public sewer service can provide safe and efficient sewage disposal for residential and business needs, protect public health, and support the desired development patterns.

Groton is presently served by two different sewer systems. Sewage service in the City is provided by City of Groton Utilities with a sewage treatment facility located on the Thames River. Sewage service is provided in some other parts of Groton (including the Navy Base) by the Town. The Town's Water Pollution Control Facility is located on Gary Court and discharges through a five-mile main routed through the City of Groton to the Thames River.

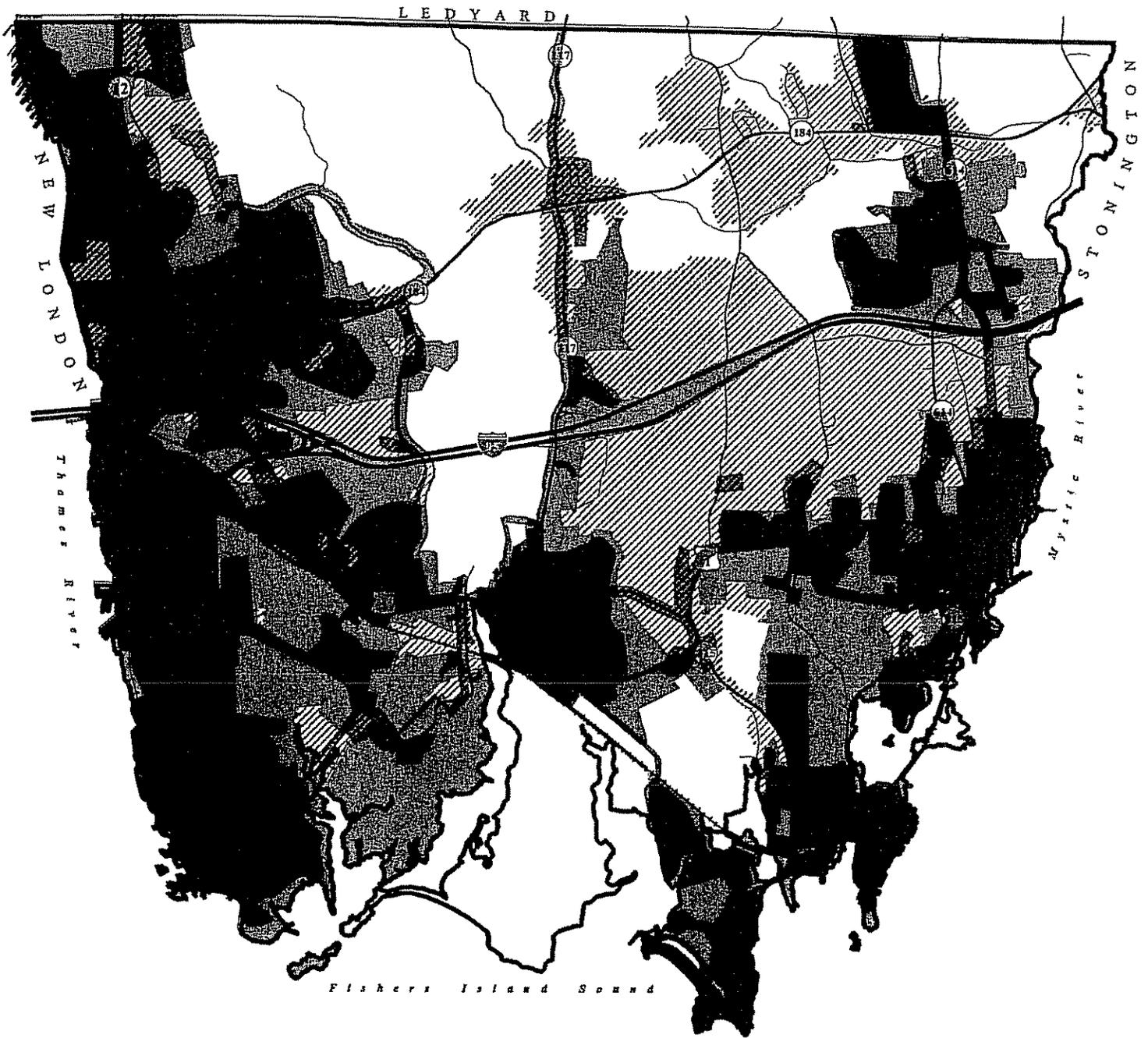
Planned upgrade and expansion of the Town's Water Pollution Control Facility will provide adequate capacity for anticipated growth over a 20-year period.

Sewer Service Area

Town of Groton, CT

Water Service Area

Town of Groton, CT



Legend

-  Existing sewer service area
-  Possible future service area
-  Sewer avoidance area

Legend

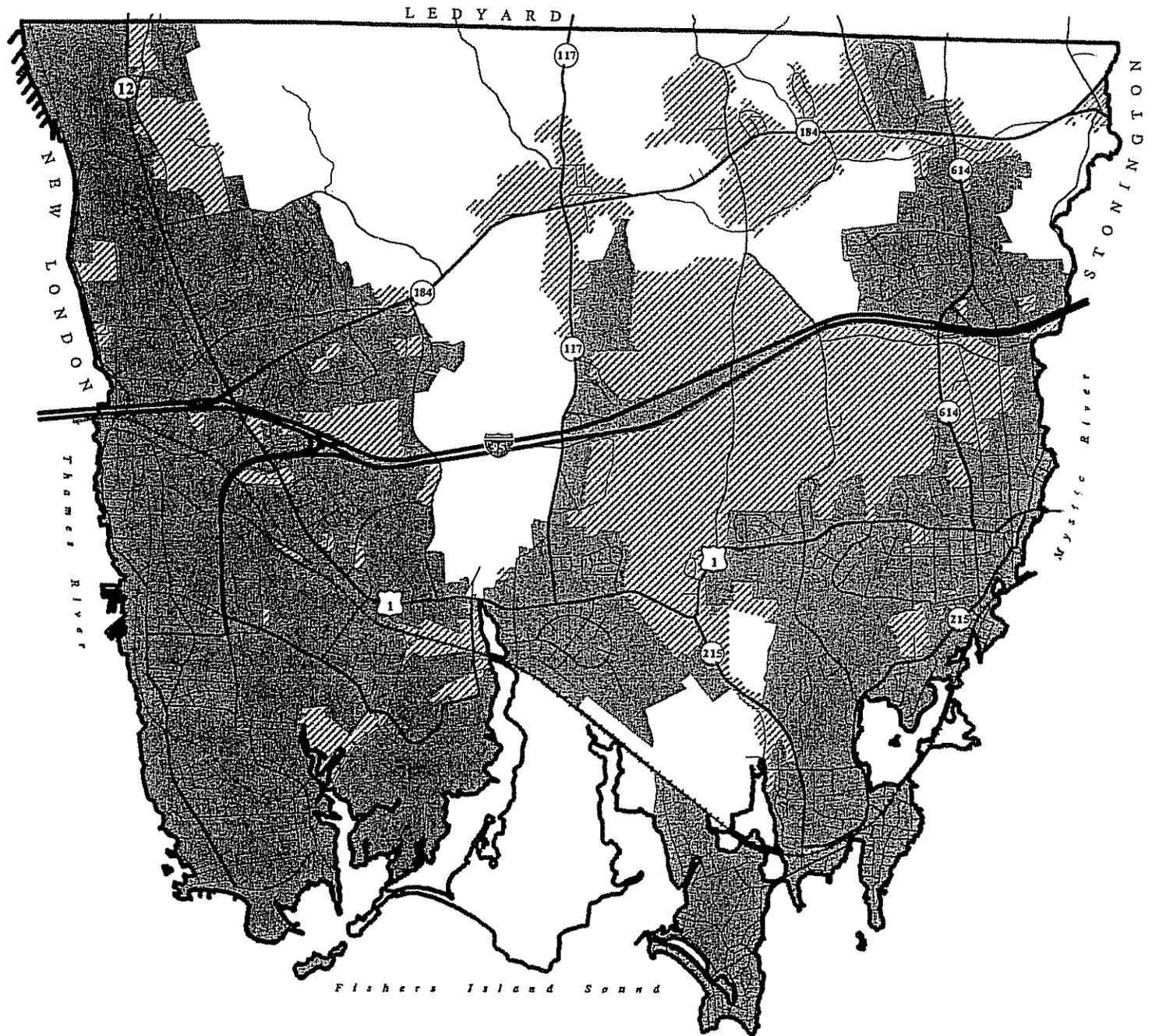
-  Existing water service area

0 5000 Feet



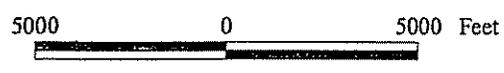

Sewer Service Area

Town of Groton, CT



Legend

-  Existing sewer service area
-  Possible future service area
-  Sewer avoidance area



In addition, the Plan of Conservation and Development supports the recommendations of the 1995 Master Sewage Plan:

- Sewer avoidance and sewer service areas should be clearly defined.
- All industrial areas should be developed with sewers rather than on-site systems.
- Sewer pipes with significant sources of inflow (unwanted water entering the sewer system) should be corrected and repaired.
- More frequent inspection and cleaning of sewer pipes to avoid capacity problems.
- Capacity improvements at pump stations to avoid capacity problems.
- Review of septic designs by all departments prior to approval.
- Encourage the Ledge Light Health District to develop a program to guide property owners in sewer avoidance areas.

Recommendations

1. Continue to encourage the provision of safe and efficient sewage disposal to protect public health and address residential and business needs.
2. Make public sewer expansion decisions on the basis of supporting the desired development pattern rather than vice versa.
3. Complete the planned upgrade and expansion of the Town's Water Pollution Control Facility.
4. Continue to implement the recommendations of the 1995 Master Sewage Plan:
5. Clearly define sewer avoidance and sewer service areas (including all industrial areas).
6. Address capacity issues related to inflow, pipe inspection and cleaning, and pump stations.

Sewage Treatment Facility



Storm Water Drainage

While most major storm drainage issues have been addressed, the management and control of storm water drainage and water quality is important in Groton.

During the planning period, a Town-wide program to enforce EPA's Phase II stormwater regulations should be undertaken. In particular, an assessment should be made of ways to improve water quality at storm drainage outfalls (such as sedimentation basins or other techniques) since water quality can be adversely affected.

Recommendations

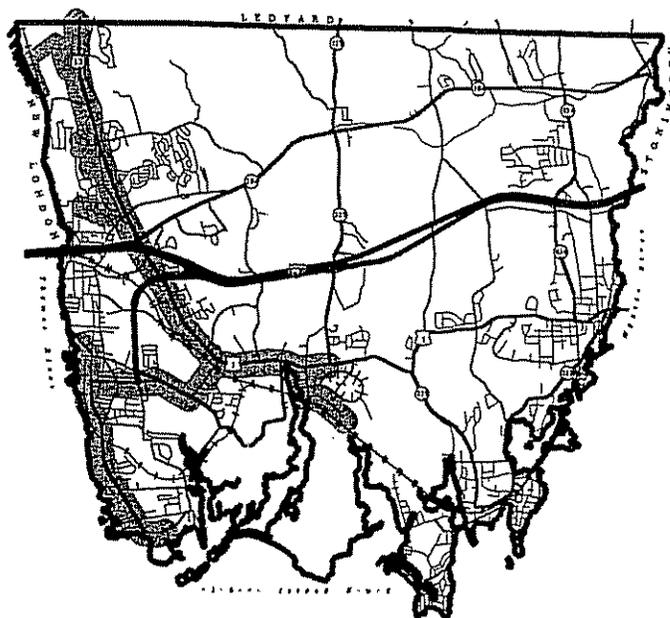
1. Implement a Town-wide program to enforce EPA's Phase II stormwater regulations.
2. Perform an assessment of ways to improve water quality in storm drainage systems (such as source reduction of pollutants) to protect water quality.

Natural Gas

The Yankee Gas Company provides natural gas service to the Navy Base, Pfizer, Electric Boat Corporation and areas along Route 12, Route 1, Eastern Point Road, Rainville Avenue, Chester Street, and Depot Road. Service capacity and pressure are good to excellent and the system has the capability to support substantial expansion.

Recommendations

1. Continue to encourage the provision of natural gas service for residential, business, and industrial needs and to support the desired development pattern.



Drainage / Water Quality

Storm drainage systems convey rainfall and groundwater to storm drainage outfalls. While concern has been expressed about these outfalls, it is the drainage area as a whole that must be the focus of concern.

For example, the entry of road sand into catch basins and storm drainage systems has resulted in sedimentation in the boat basin at Steamboat Wharf in Mystic.

Similarly, high nutrient levels at a drainage outfall may signify septic failures or excessive fertilization in upstream areas.

Underground Utilities

The idea of burying overhead utility lines in Groton has been raised in the past.

Utility companies will bury their utility lines provided that the company is reimbursed for the cost of work. Since the costs to retrofit an area are typically high, such work has usually only been done in conjunction with major redevelopment projects.

Street Lights

The Road and Drainage Standards require street lights in all new subdivisions at every street intersection, at the end of cul-de-sacs, and at intermediate distances that vary depending on the road classification.

In addition, the pole height and illumination levels vary depending on the road classification.

Guide Wired Utilities To Meet Community Needs

Electric Service

Groton is also unique because it is served by two electric utility companies - the City of Groton Utilities Department and the Connecticut Light and Power Company. The City of Groton does not generate its own power but purchases power on a wholesale basis from generators. The City does maintain the electrical network and service connections within their service area.

Electrical capacity and reliability are key considerations. Capacity on individual circuits in Groton is not reported as a major problem and system upgrades are continually being planned to address such issues. Conservation strategies are also available to reduce electrical use and maintain capacity. Reliability involves reducing electrical outages associated with equipment malfunctions, weather, accidents, or intrusions. Local providers are also addressing these issues as well through circuit breakers, automatic reclosers, system upgrades, and tree trimming.

As electricity deregulation begins, it is difficult to anticipate how these changes will affect the residents and businesses of Groton. As a municipal utility, Groton Utilities may enjoy some special protection preventing other electricity providers from coming in and serving customers (such as Electric Boat Corporation or the Navy Base). While Groton electric customers may enjoy a competitive advantage today in terms of lower electrical costs, it is unclear whether these costs may increase in the future and become a competitive disadvantage.

The important objective is to ensure that residents and businesses are able to obtain ample, reliable electrical service at competitive prices wherever development exists or is planned.

For residents, one of the biggest issues related to electrical services is the use of overhead wires and poles to support much of their distribution network. As development occurs and electrical needs increase due to new technologies, more wires are being strung on poles throughout Groton (and elsewhere). As a result, local streets are becoming "cluttered" with poles and wires. This is an unfortunate side-effect of technological growth that can be minimized by encouraging or requiring that all new or replacement utility services be placed underground.

A corollary issue relates to the tree-trimming that is practiced by utility companies in efforts to maintain reliability. Such work is done on an occasional basis to minimize cost to the utility companies and, as a result, aggressive tree-trimming can be done to avoid the need for re-trimming within a five- to ten-year period. Such activities can have a significant impact on community character and the Town should work with utility companies to establish a reasonable tree-trimming schedule that balances reliability and community character issues. In addition, the Town should work with utility companies to select plantings that can be installed in new developments that will be compatible in proximity to overhead power lines.

Recommendations

1. Promote overall energy conservation to reduce energy needs and maintain capacity.
2. Amend existing regulations to require that all new wired utility services be placed underground.
3. Encourage all replacement wired utility services be placed underground.
4. Work with utility companies to establish a reasonable tree-trimming schedule that balances reliability and community character issues.
5. Work with utility companies to select plantings that can be installed in new developments at locations compatible with overhead wires.
6. Encourage electrical system improvements for capacity and reliability in accordance with the above criteria.

Telephone/Cable Communications

Telephone and cable communications typically have less impact on land uses and development intensity. However, the availability of communications is becoming increasingly important to quality of life and community character.

Telephone and cable communication (television) service is available to serve new development as it is proposed and developed in Groton. However, a high priority for the Town should be to encourage the development and implementation of the highest capacity and quality communications technology to meet the needs of local businesses and residents.

With the expansion of the Internet, the Town should encourage that high-speed Internet access be made available to all businesses and residents in Groton. In addition to encouraging economic development, this would also enhance the quality of life for Groton residents. City of Groton Utilities is in the process of establishing a 32-mile network of fiber optic cable for this purpose and they or other cable communication companies (such as SNET/SBC or CATV) should be encouraged to continue this network throughout Groton.

Recommendations

1. Encourage improvements in communication infrastructure to meet the needs of residents and businesses.
2. Encourage the implementation of the highest capacity and quality communications technology to meet the needs of local businesses and residents.
3. Encourage local utilities to make high-speed Internet access available to all businesses and residents in Groton.
4. Continue to monitor changes in communications technology.

Communications Issues

An interesting issue to observe during the planning period will be the anticipated competition between:

- traditional telephone companies as they expand into entertainment programming
- cable companies as they expand into communications

The Town should continue to monitor these developments.

Why Wireless?

Communications are evolving to a system of "where people are" rather than "where a phone is".

It is all a matter of convenience. While already strong among young people, demand is also increasing among older people as well.

As a benchmark, consider that wireless communications have reportedly achieved a 30 percent market penetration in the United States while countries in Europe have reportedly achieved a 70 percent market penetration.

Address Wireless Communications

Wireless communications are another important development that Groton needs to consider and address. Just as telephones have evolved from wired handsets to portable phones within homes and businesses, the next major evolutionary change will be the expansion of cellular phones and personal communication services (PCS).

As more people learn of the convenience of wireless communications, there will be an increasing demand for such services and a proliferation of towers and equipment. While there is some resistance to tower aesthetics at the present time, increasing market penetration may cause people to be more concerned with call quality and system capacity.

While cellular communications (analog technology) and tower siting decisions are presently regulated by the Connecticut Siting Council at the Department of Public Utility Control, tower siting for personal communication services (digital technology) occurs at the local level. To address these issues, Groton needs to monitor technological changes in cellular communications and maintain reasonable regulations related to the siting of communications towers.

Recommendations

1. Anticipate the growth in wireless communications and the corresponding interest in providing more antennas.
2. Continue to monitor evolving technologies to efficiently address local needs.
3. Maintain and enhance local regulations related to the siting of communications towers and other wireless communication facilities, especially with regard to co-location on communication towers.

Wireless Communication Towers



ENHANCE GOVERNMENT STRUCTURE

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Overview

Of all the 169 municipalities in Connecticut, Groton has to be one of the most intricate in terms of its overall government structure. As an amalgamation of different organizations established over the years, Groton represents an interesting case study on local government organization.

Appropriate government structures will help Groton achieve important goals ...

Enhance Government Coordination

During the planning process, many residents commented on the current government organization and lack of coordination. Some people feel that Groton has "too much government."

Review of available information found that there are over 400 elected and appointed officials in Groton serving a population of about 44,000 people. As has been previously stated "Groton is both too large and too small to support that kind of government."

The greatest impact may be the duplication of services which adds cost and inefficiency into the government process. A compilation of the budgets of all of the local governmental service units found that there is a considerable local expense associated with all of these organizations. In fact, a comparison with similarly-sized communities found that Groton residents may be spending as much as \$8 million more per year than residents of other communities.

Information from other similarly-sized communities does not allow for a complete comparison of whether the costs of government in Groton are unreasonable. If it was possible to objectively measure service levels across different communities, the comparisons could be made. Does a community that is spending more get better service or just pay more for it?

Despite this difficulty, it is pretty clear that the taxpayers in Groton pay more money for having at least nine separate governments rather than a lesser number. This finding is relevant to this Plan since it may be possible for Groton residents to have up to \$8 million annually available for spending on important community projects without raising taxes.

Government Entities

Unlike most other communities in Connecticut, Groton is not one governmental unit. There are, in fact, at least ten governmental units within the Town of Groton:

- the Town of Groton,
- the City of Groton,
- the fire districts of Old Mystic, Mystic, Noank, Center Groton, Poquonnock Bridge, and West Pleasant Valley,
- Groton Long Point Association
- the United States Naval Base.

The Town refers to the entire geographic area of what is known as Groton. The City, which was established as a borough in 1903 and re-designated as a City in 1964, is a sub-area of the Town.

The fire districts and associations are distinct geographic sub-areas, exclusive of the City, which provide services.

The Navy Base is a separate area that provides many of its own services.

Groton Long Point and Noank also provide some services.

Consider Alternative Governmental Structures

While many features of existing governmental arrangements are attractive to local residents and taxpayers, there appears to be dissatisfaction with other features. Realistically, there are only five options that appear to be available:

- separation
- maintain the current structure
- intra-municipal cooperation
- inter-municipal cooperation
- consolidation

Separation is not a realistic option in that it would introduce greater inefficiencies than presently exist.

Maintaining the current structure entails continuing the current arrangements into the foreseeable future. It has worked in the past and there is no reason apparent why it cannot continue to work in the future.

Cooperation (whether within the community or with other communities) involves sharing those governmental functions that can benefit the most from shared resources. The process can be approached incrementally and the benefits that result will accrue to everyone in the community.

Consolidation may represent the most opportunities for efficiency and economy but also creates the most fear in people. Although there is precedent in Groton for consolidation (ten separate school districts were consolidated in 1941), it is unclear whether there is adequate support at the present time in any of the sub-areas to initiate the process.

Based on the combined costs of local government and the overall duplication of services, there is little doubt that cost savings would result from more cooperation or consolidation. For example, consolidation of police and/or public works and/or park and recreation services might result in significant cost savings.

Find Effective Solutions

The current governmental structure in Groton is inefficient, but it works. Certainly more efficient structures are available. Whether the structure should be changed is a question for Groton residents.

Other communities around Connecticut have consolidated in order to improve the overall structure or efficiency of local government. Recent examples include Colchester, Putnam (1983) and Willimantic/Windham (1983).

Summary of Inter-Governmental Options

	Potential Advantages	Potential Disadvantages
SEPARATION		
Community	<ul style="list-style-type: none"> • resolve inter-jurisdictional conflicts 	<ul style="list-style-type: none"> • small governments acting separately may not efficiently and effectively address future issues
Sub-Areas	<ul style="list-style-type: none"> • control over local issues and taxes. 	<ul style="list-style-type: none"> • may increase cost or deteriorate service quality with loss of economies of scale • loss of access or use of certain facilities by other sub-areas
Synopsis	<ul style="list-style-type: none"> • often talked about but not considered realistic due to cost and service level issues 	
MAINTAIN CURRENT STRUCTURE		
Community	<ul style="list-style-type: none"> • overall entity finances and delivers community-wide services not economical for sub-areas (education and assessment) 	<ul style="list-style-type: none"> • inefficiency from lack of coordination • inter-jurisdictional differences, • multiple governments.
Sub-Areas	<ul style="list-style-type: none"> • sub-areas provide for local control over local issues • services are more localized • residents determine the type and level of services that they desire and can afford 	<ul style="list-style-type: none"> • cost of services may be higher • level and quality of services may be lower • inter-jurisdictional squabbles occur • sub-areas cannot use services of other sub-areas (such as parks)
Synopsis	<ul style="list-style-type: none"> • Not the most efficient but may allow for "tuning" of local service levels • residents appear willing to accept tax, service efficiency, and/or lack of responsiveness 	
COOPERATION (intra-municipal or inter-municipal)		
Community	<ul style="list-style-type: none"> • may result in lower costs and/or higher service level and quality • relatively easily to implement 	<ul style="list-style-type: none"> • benefits that require an investment may be deferred due to temporary nature of agreement
Sub-Area	<ul style="list-style-type: none"> • more efficient and cost-effective services in areas considered appropriate 	<ul style="list-style-type: none"> • may remove some issues from neighborhood control • may "homogenize" service levels between sub-areas
Synopsis	<ul style="list-style-type: none"> • Can occur voluntarily to explore the level of benefits available 	
CONSOLIDATION		
Community	<ul style="list-style-type: none"> • should result in lower costs and/or higher service level and quality 	<ul style="list-style-type: none"> • may have lengthy transition, both before and after consolidation occurs
Sub-Area	<ul style="list-style-type: none"> • should get more efficient and cost-effective services with one-stop shopping 	<ul style="list-style-type: none"> • may remove some issues from neighborhood control • may "homogenize" the level of services between sub-areas
Synopsis	<ul style="list-style-type: none"> • Must occur cooperatively due to enabling legislation • may not occur until a crisis occurs (loss of tax base, reductions in revenue) • Town charter provides that any sub-area can propose a consolidation (governing body or resident petition) 	

It is ironic that, in this day and age of mergers and consolidations of private corporations for greater efficiency and shareholder value, the opportunity for greater cooperation between municipal corporations in Groton that share so many interests have not been achieved.

The private sector would never accept the type of inefficiencies that surely result from the current structure. Why do Groton residents accept it? The bottom line is that the perceptions, personalities, and politics affect people's perspectives. Clearly, if it were easy, it would have been done already.

It is unlikely that the current structure will be changed until some major crisis causes reconsideration. While these crises could include losses in tax base or revenue in any of the sub-areas, it may also result over time from the incremental increase in the costs of providing services in small sub-areas.

Unfortunately, the greatest losses from not cooperating or consolidating may never be fully appreciated until the various jurisdictions have an opportunity to work together. Only then will the direct and indirect savings in costs and improvements in services be realized. For example, with a more coordinated approach to service delivery and policy implementation, a focused strategy of economic development could be pursued that would result in additional benefits to all Groton residents.

The Plan makes no recommendations of what sort of structure should be established. After all, that is a decision to be made by Groton residents and leaders. However, the greatest opportunities for building a successful community are likely to be realized when the organizational and governmental structure is configured to respond quickly and efficiently. This type of structure can prevent resources from being squandered and opportunities being lost.

This issue is relevant to both existing operations and future operations. If a new program or service is to be established, efforts should be devoted between the different governmental units to provide services in the most efficient way. Conversely, the Town government should seek to avoid supporting services that could benefit from some sort of consolidation.

Recommendations

1. Strive to enhance government efficiency.
2. Consider alternative government structures.
3. Strive to find effective solutions to organizational and governmental issues.
4. Reduce or minimize duplication of services.