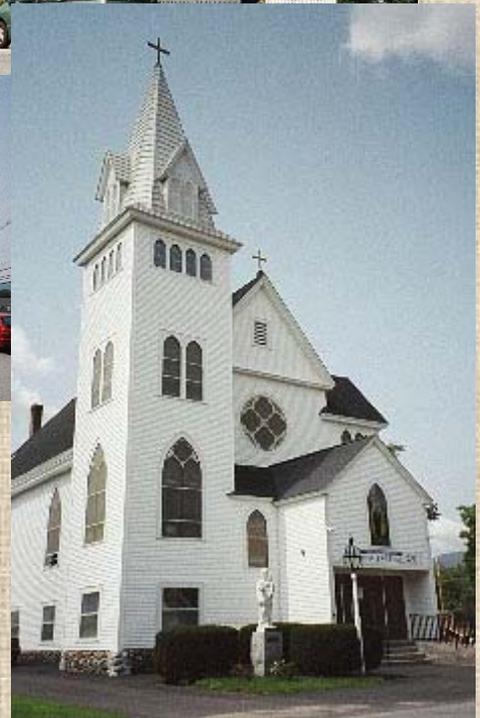


TOWN OF LINCOLN

MASTER PLAN



October 2003

Town of Lincoln Master Plan

Authored By: North Country Council

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CERTIFICATION OF ADOPTION

By New Hampshire State Statute (RSA 647:1), the Lincoln Planning Board is bound to “prepare and amend from time to time a master plan.”

The purpose of this document is to assist citizens, town officials, and the Planning Board in planning the future growth of Lincoln.

It must be understood that the Goals and Objectives do not represent the definitive course of action to be taken. These are recommendations only, which should be reviewed on a regular basis and amended or revised as situations may dictate.

This plan has no regulatory power. It has no direct control over anybody or anything. It is a guideline, a reference, and any action taken to implement any part of this plan will be decided by a citizen majority.

The following master plan has been adopted under RSA 675:6 by a majority vote of the Planning Board on October 8, 2003.

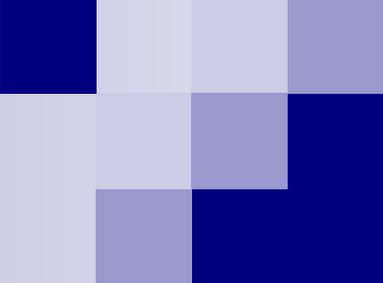
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Special thanks to **Ted Sutton**, **Tom Adams** and **Stacey Havlock** for their constant help, support and input.

This Master Plan was prepared for the Town of Lincoln by North Country Council, Bethlehem, New Hampshire.

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Town of Lincoln Master Plan

Chapter I - Vision

Authored By: North Country Council

A. INTRODUCTION

This chapter of the Master Plan provides guidance on the collective vision of Lincoln's future. The issues discussed in this chapter are based, to a significant extent, on the enactment of new legislation which outlines master plan requirements in New Hampshire (see RSA 674:2). The previous version of the statute required only two components in a master plan - a goals and objectives section, and a land use section. The revised statute requires that local land use and/or master plans include, at a minimum, "a vision section that serves to direct the other sections of the plan," and "a land use section upon which [other] sections shall be based." The revised statute also suggests a more comprehensive approach by recommending that other sections (such as economic development, transportation, housing, etc.) be included in local master plans. All of these recommended sections are included in this master plan.

The goals of the Master Plan not only direct the focus on the actual Master Plan preparation, they are also the basis for regulation changes, for capital improvements program funding, and for future planning priorities. The definition of a "goal," for the Master Planning purposes, is the general target to be reached through completing a series of tasks. These tasks are called "objectives" which are designed to meet the goal.

As described in subsequent chapters of this master plan, the Town of Lincoln has undergone significant changes over the past twenty to thirty years. As an outdoor, recreation and tourism destination, the character of the village and therefore the town as a whole, especially in terms of how land is used, will most likely continue to change in the future.

During the preparation of this master plan update, it was determined that an overall vision for the future of Lincoln should be identified. Outlined below is the overall vision statement of Lincoln.

VISION STATEMENT FOR THE TOWN OF LINCOLN

The purpose of this multifaceted plan is to: preserve and protect the cohesive nature of this town's character; reinforce and develop resources that strengthen both our sense of place and the bonds between our citizens; and continue to develop a town that promotes safety, comfort, convenience, beauty, and pride and enhances the quality of life through ongoing opportunities for employment, education, and community recreation.

B. GENERAL GOAL

Goal: The Town should preserve and enhance its unique design characteristics, features and identify the village, while at the same time creating locations in Lincoln which connect and bond all of the town residents.

Objectives:

1. Design and construct identifiable gateways that signify the entrance to Lincoln and the village along major roadways.
2. Recognize and address the issues and concerns of both year-round and seasonal residents.
3. Examine the feasibility and potential for the development of a centralized community gathering area and/or facility to be used as the primary location for major public events by all members of the community.

C. LAND USE

Goal: Maintain the rural and village center character of the town.

Objectives:

1. Preserve open space by encouraging the clustering of houses in new proposed developments.
2. Guard against commercial strip development along major roadways.
3. Encourage well-managed forestry and agricultural practices.
4. Protect the citizens from excessive noise and lighting and control the erection of signs and telecommunication towers.

Goal: Preserve the scenic landscape of the town.

Objectives:

1. Increase public awareness of the natural and cultural landscape elements that contribute to the scenic landscape.
2. Maintain scenic vistas of surrounding mountains and waterways.
3. Protect important wildlife habitats.

D. ECONOMIC DEVELOPMENT

Lincoln presently supports many commercial businesses but few scattered industrial businesses. The growth and reliance of Lincoln's economy on the service and trade sector creates a situation where it may be beneficial for the Town to investigate economic development incentives which encourage business diversification of the local employment and business establishment base.

Goal: Encourage economic diversity.

Objectives:

1. Encourage new and expanded services, commercial activities, industrial development, and resort and recreational opportunities.
2. Encourage development of economic activities in locations which will have minimal impact on municipal services.
3. Collaborate with regional interests, both public and private, to encourage new and expanded enterprise and employment opportunities.
4. Encourage home businesses and cottage industries to develop outside the village center.

Goal: Recognizing that the key economic character of the community is its tourism-based economy, future economic development initiatives should strive to diversify the employment and business establishment base within Lincoln.

Objectives:

1. As Lincoln's economy is focused across such narrow group sectors, it may be beneficial for the Town to investigate economic development incentives, which encourage some diversification of the local employment and business establishment base.
2. The Town should encourage new commercial development to be constructed on existing sites (infill), rather than on raw undeveloped land.

E. HOUSING

The citizens of Lincoln enjoy a variety of housing opportunities in both style and affordability. The housing goals listed below will continue to provide citizens with a variety of options.

Goal: Ensure the availability of a variety of housing types, which meet the needs of the Town's diverse residential population.

Objectives:

1. Encourage residential development in those areas, which have access to water and sewer services, roads, and sidewalks thereby minimizing impact upon the area's natural resources.
2. Encourage the preservation and use of existing structures for housing.
3. Foster safe and aesthetically pleasing housing.
4. Continue to provide housing for the elderly.
5. Provide affordable housing that will not adversely affect the character of the area.
6. Protect roadways from excessive traffic due to large, small-lot subdivisions.

Goal: Monitor the quantity and quality of housing and compare this to the demand and needs of the population.

Objectives:

1. Recognize diversity in housing size while respecting the overall character of the town.
2. Ensure quality housing for all citizens.
3. Maintain a strong building code and enforcement program.
4. Provide a variety of housing styles and developments.

F. TRANSPORTATION

Lincoln is fortunate to have many of its main roads be the responsibility of the state. It is therefore able to stretch its budget on the care and maintenance of local roads. (Please see Wilbur Smith Traffic Study, 2003 for more detailed recommendations.)

Goal: Maintain a transportation system that will meet the mobility needs of the residents and will provide safe and efficient movement of goods, services, and people through and within the town while preserving the rural atmosphere.

Objectives:

1. Reduce the damaging effect of through-traffic to the town's historical and cultural assets as well as the residents' quality of life.
2. Provide improved roads and bridges through a regular program of maintenance and reconstruction.
3. Continuously evaluate the transportation network to identify required maintenance and improvements.
4. Provide pedestrian access to all public buildings and facilities.
5. Investigate areas in which non-motorized forms of travel can be fostered.

Goal: The Town should use roadway improvements to enhance the character of Lincoln's village as well as introduce mechanisms and infrastructure to promote and encourage transportation system use by pedestrians and bicycle users.

Objectives:

1. Incorporate traffic calming measures in various locations throughout Lincoln to slow traffic and improve pedestrian safety and livability in high traffic neighborhoods.

Goal: Provide that environmental resources are considered in all transportation efforts.

Objective:

1. Promote good environmental practice and erosion control in all transportation efforts, whether during regular maintenance or transportation improvements.

G. PUBLIC FACILITIES

As towns grow, so do the needs for facilities and services. Lincoln has done well to serve its growing population, but we need to stay vigilant in planning for the future.

Goal: Continue to provide community residents with affordable and quality services to meet community needs.

Objectives:

1. Maintain and improve appropriate municipal services: fire protection, highways, parks and recreation, police, solid waste disposal, education, water and sewer.
2. Stabilize and contain the growth of the tax rate.
3. Extend water and/or sewer services in to areas where there are environmental limitations to on-site sewage disposal and/or wells.
4. Promote underground installation of utility conduits, cables and wires.
5. Protect the quality of surface and ground water to insure the public health of the community.

Goal: Coordinate future municipal facilities and services with the existence of federal, state and local financial resources.

Objectives:

1. Integrate the Town's annual budget process with long-range operational planning and the capital improvement program.
2. Maintain the level of coordination and cooperation between the Town of Lincoln and other public service authorities.

Goal: Coordinate and harmonize existing municipal services and infrastructure providers in order to provide citizens with a high quality and efficient infrastructure and service network.

Objectives:

1. Lincoln's population fluctuations, due to visitors and seasonal residents, places unique pressure on existing and future services and infrastructure. Planning for these fluctuations to ensure that adequate municipal services and infrastructure are maintained will be one component of an overall municipal system that will be needed to preserve Lincoln's existing high quality of life.

H. COMMUNITY FACILITIES & SERVICES

Goal: Continue to provide high quality, effective community services to the residents.

Objectives:

1. Encourage community volunteerism and participation.
2. Maintain strong working relationships between various boards and town representatives.
3. Encourage use of library and school resources for all residents.
4. Ensure that a high quality of affordable education is available to Lincoln children.
5. Provide a community center in Town.

I. RECREATION

The citizens of Lincoln understand and appreciate the outstanding recreational opportunities in this region with the White Mountain National Forest and the Franconia State Park. The town works hard to maintain its own recreational facilities and programs, and serves the people well through frugal budgeting and lots of volunteer hours.

Goal: Assure the availability of adequate recreational opportunities and facilities for residents and tourists of all ages and all income levels.

Objectives:

1. Increase public awareness of existing recreation resources in town.
2. Utilize existing town-owned recreation/conservation lands.
3. Preserve and expand the network of public trails for hiking, biking and walking purposes.
4. Assure that the town owns suitable land to allow for the expansion of recreational facilities.
5. Insist that all state road enhancement projects accommodate bicycle lanes.
6. Develop a multi-purpose path and riverfront park with links to Main Street for the enjoyment of residents as well as tourists.

J. NATURAL RESOURCES

As with many north country communities, the natural resources of Lincoln are an important asset for people to live here. The White Mountain National Forest, the Franconia State Park and the Pemigewasset Rivers with adjoining properties, and the landscape which affords beautiful views of the mountains, are all critical components in any description of the town. Therefore, it is essential that these be protected and preserved so that future residents and generations will be able to enjoy them as well.

Goal: Identify, preserve and protect the natural environment of Lincoln, providing access where feasible.

Objectives:

1. Continue to prevent the introduction of toxic waste into the environment.
2. Continue to protect the Town's present water supply and potential future supply areas.
3. Continue to identify and protect floodplains, steep slopes and areas with fragile soils from improper intrusions.
4. Identify and protect the aquifer in the town.
5. Protect the shoreline of all rivers and streams.
6. Preserve scenic views.
7. Protect important wildlife habitats.
8. Increase public awareness of the natural resource elements and the relationship between those elements and the rural character of the Town.

K. CULTURAL AND HISTORICAL RESOURCES

It is easy to lose historical buildings and landmarks as a small town grows to meet the needs of its residents. These places are important to a town's community heritage, sense of place and civic pride, and their preservation often contributes to the protection of property values. Lincoln's historic places and buildings are an important asset to the town and efforts should be made to protect them.

Goal: Preserve the town's historical, cultural and aesthetic characteristics.

Objectives:

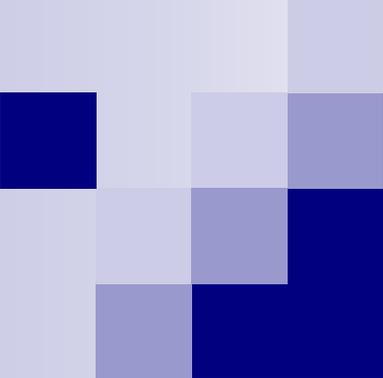
1. Work with government entities to perform a survey of historic properties that could potentially be listed on the State or National Register of Historic Places.
2. Work with government entities to preserve historic sites through grant monies or available funds.
3. Enhance historic education within schools and the community.
4. Promote historic preservation within the community.
5. Place historic markers and information on identified historic sites.
6. Conserve undeveloped countryside for use by local residents and visitors.

L. COMMUNITY DESIGN

Goal: Promote harmonious and aesthetically pleasing use of land and town character.

Objectives:

1. Provide clear, concise standards for land uses and evaluation of their impact on the community.
2. Encourage methods of establishing buffers between incompatible land uses.
3. Promote public and private cooperation in support of common village design elements.
4. Encourage commercial development and redevelopment in identified commercial districts, thereby preserving residential areas.
5. Reinforce power of the sign ordinance to further limit the number, size and appearance of signs along Main Street.



Town of Lincoln Master Plan

Chapter II - Land Use

Authored By: North Country Council

A. INTRODUCTION

Virtually every development related action, whether public or private, has some impact upon the way land is used. All of the following chapters of Lincoln's Master Plan which discuss natural resources, housing, economic development, transportation, public and community facilities, natural resources, natural hazards, cultural and historic resources, and community design relate in some fashion to land use. This chapter will discuss the existing land use patterns and future land use patterns.

The pattern of land uses that exist in a community has a direct effect on decisions concerning its future development. The location and extent of residences, open space, forests, businesses and industries, and their relationship to each other are important community features comprising not only the present "sense of place", but also serve as a model from which future development can be projected. The range of the road network and the location of various public facilities, cultural, and natural resources will be presented in their respective chapters. An analysis of land use within Lincoln serves to unite all of the varied components previously examined into a workable mechanism from which to make informed planning decisions.

The Lincoln of today is a tapestry woven by the interaction of human settlers on their inherited landscape that was replete with natural resources. The present community character is reflective of the traditional New England town settlement pattern. The village pattern of development has changed and is still changing. Originally evolving during an era when most families required land for their subsistence and livelihood, the advent of the railroad led to the development of more concentrated residential development as residents were engaged in commercial and industrial pursuits other than agriculture. The railroad also was the harbinger of the growth of seasonal development, as mobility increased. The widespread use of the automobile has caused further departures from the traditional village pattern, resulting in development taking several forms: strip development in a linear manner along existing roads, sprawl in a random manner in outlying areas, and suburban development resulting in rings of development around the village. Much of this traditional character with a distinct village center remains in Lincoln. However, development has spread along major roads in a more linear manner.

B. SUMMARY OF FINDINGS AND CONCLUSIONS

The following points summarize the existing and future land use conditions presented within this chapter. In terms of Lincoln's existing land use and development patterns, specific findings include:

- Lincoln's total land area is approximately 83,844 acres. Of that total, 78,041 acres are conservation land (White Mountain National Forest: 74,553 and Franconia State Park: 3,332) leaving about 5,803 acres or 7% of town and privately owned land.
- The largest land use in Lincoln, after the White Mountain National Forest and Franconia

State Park, is residential with approximately 750 acres of Residential (353 acres or 450 units) and Residential/Condominiums (401 acres or 1,000 units).

- Commercial land use accounts for only 4.3% or 247 acres of Lincoln's land base.

Based on the existing land use presented throughout the chapter, implications about how Lincoln could change in the future include:

- Based on the "snapshot" of existing land use conditions in town, it is clear that a substantial amount of Lincoln's land area will remain undeveloped. However, growth trends discussed in the Housing Chapter of this plan indicate that the town will have to make some important decisions about how the remaining land base will be used to support future growth. These decisions will determine whether or not the land is used in the most efficient way possible to accommodate expected growth, while also not detracting from the natural and scenic beauty, and perceived high quality of life associated with this open space.

C. BRIEF HISTORY

In 1764, Benning Wentworth granted the Royal Governor of the Province of New Hampshire 24,000 acres of land to a group of Connecticut residents. However, it was not until 1901 that the final and present boundaries were established making Lincoln the second largest town, in area, in New Hampshire.

The population remained very small for most of the 19th century, due to poor rocky soil that made farming very difficult. However, there were several small logging and lumber operations at various times. It was not until 1892 when the J.E. Henry and Son, Company moved their operations and employees to town that Lincoln had the industrial base to support a larger year-round population. J.E. Henry built the East Branch Railroad, the sawmill and the paper mill.

Like many other North Country towns during the Gilded Age, Lincoln had become a resort community with numerous hotels and boarding houses. These places mostly catered to summer vacationers, hunters and fishermen. As the mode of transportation changed from the train to the automobile and with improved highway access, motels and restaurants eventually replaced the large old hotels.

The tourist industry continued to be limited to the summer and early fall seasons until 1966 when the Loon Mountain Ski and Recreation Area started operation. This signaled the beginning of large numbers of winter vacationers to the area. With the arrival and growth of winter activities in town came the development of vacation homes, condominiums, retail shops and more restaurants.

Over the past 100 years Lincoln has survived many misfortunes; a fire in 1907 that destroyed 19 houses and several J.E. Henry Co. buildings, two depressions, a paper mill strike, the 1927 flood and the final closing of the paper mill in 1979. The closing of the mill left the town's economy primarily dependent on the tourist industry. Tourism in Lincoln grew rapidly during the 1980's.

The strong economic climate of the 1980's allowed for a period of rapid growth. The constructions of more than 1000 condominiums units and vacation homes as well as the development of several shopping centers, created a boomtown atmosphere.

D. EXISTING LAND USE PATTERNS

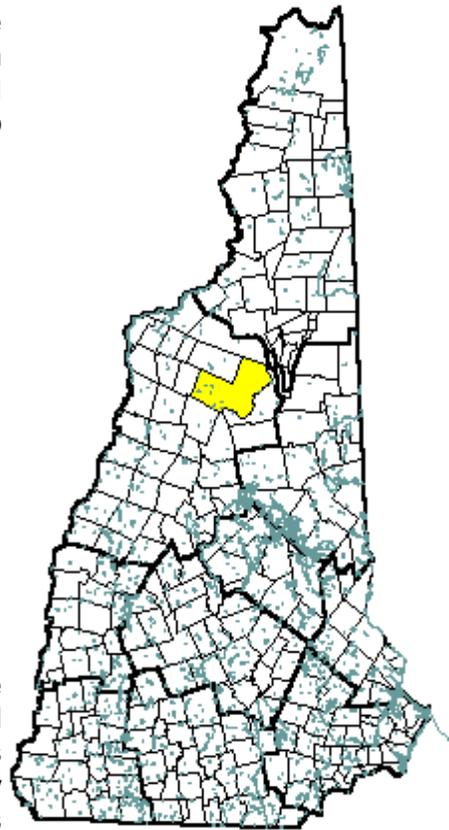
Lincoln is located in the northern center of New Hampshire (See map 2.1). Its early development was guided by the logging industry. In the past two decades, development has occurred at an accelerated pace greatly influenced by the major highways, the National and State Forests and Loon Mountain Ski Area.

The existing land use pattern in Lincoln consists of an elongated L-shaped developed area surrounded by the National and State Forests. Current land use conditions in Lincoln are illustrated on Map 2.2 and 2.3 Existing Land Use Conditions. The map separates the land uses into twelve major categories including:

- Residential
- Residential/Condominium
- Commercial
- Commercial/Recreation
- Institutional
- Industrial
- Town Services / Utilities
- Loon Mountain properties
- Conservation Land
- State Owned Properties
- Franconia State Park
- White Mountain National Forest

Additionally, the White Mountain National Forest and the Franconia State Park land are identified on the overall map 2.2. For the purposes of this analysis, this land is considered undeveloped. The undeveloped land category includes raw vacant land that may be zoned for various purposes, but is currently undeveloped or non-developable land.

Map 2.1: Lincoln's location in New Hampshire



General Land use Pattern

The most significant part of Lincoln's land use pattern has been developed along two major roads, Route 112 (The Kancamagus Highway) and Route 3. These developed areas have been divided into two sections. Map 2.2 displays the existing land use for the entire Town land that is not White Mountain National Forest and Map 2.3 (Village Center) is an insert of the village area. Each of the maps indicates the distribution of ten land use types. The definition of each land use type will be addressed in the following paragraphs.

The Town of Lincoln includes a total land area of approximately 83,844 acres. Table 2.1 identifies the generalized land use classes as currently found in this database. The Existing Land Use Maps illustrate the location of each land use.

Residential

Residential land uses have been developed throughout the Town and are not confined to one specific area. An estimated total of 754 acres of land are developed for residential uses in

Land Use	Total Acreage*	% of Total Land Area	% of Total Non-Conservation Land Area
Residential	353	0.4%	6.1%
Residential/Condominiums	401	0.5%	6.9%
Commercial	84	0.1%	1.5%
Commercial/Recreation	163	0.2%	2.8%
Institutional	3	0.0%	0.1%
Industrial	8	0.0%	0.1%
Town Services/Utilities	120	0.1%	2.1%
Loon Mountain	416	0.5%	7.2%
Conservation Land	156	0.2%	
State owned properties	77	0.0%	1.3%
Franconia State Park	3,332	4.0%	
WMNF	74,553	89.0%	
Vacant land	4,178	5.0%	71.9%
Total Land area in Town	83,844	100.0%	100.0%

*Note: This acreage represents an approximation calculated from GIS maps
Source: Town of Lincoln, North Country Council

Lincoln. **Residential** development accounts for 6.1% or 353 acres of the total non-conservation land area of the Town. Most of the residential development is located in the Village Center. There are also some residential developments along Route 3A, Route 3 and south of Route 112 close to Loon Mountain Ski Resort. (See Maps 2.2 and 2.3)

The majority of Lincoln's new residential or condominium developments are single-family homes and condominiums on 1/3 to 1 acre or larger lots. The remaining high density residential development include a four-story apartment building located on Connector Road in the Village Center, and Lincoln Green Apartments, which provides housing for the elderly.

Residential/Condominiums

The **Residential/Condominiums** or recreational residential type of use comprises 401 acres of Lincoln's land area. As Table 2.1 indicates, recreational residential use is about 6.8 percent of the total non-conservation Town Land. **Residential/Condominiums** use includes detached and attached single-family condominiums. The main concentration of those condominium developments can be found along Route 112 near the Loon Mountain area or north of the village center.

Commercial

An estimated 84 acres of land are developed for commercial uses in Lincoln. **Commercial** development accounts for 1.5% of the total land area of town. The vast majority of businesses are located along Route 112, from I-93 to the end of Pollard Road. This concentration of commercial uses within the Village Center gives resident and tourists easy access to

businesses.

Although the land area devoted to commercial uses is comparatively small, business uses appear to be far more extensive in Lincoln than the acreage suggests. The impact of commercial development on the landscape and character of Lincoln is accentuated by its development in a liberal fashion along much of the Town's most significant arterial roads. Such development patterns give Lincoln's Route 112 corridor an urbanized appearance.

Commercial uses in Lincoln include a wide range of business types, which serve the needs of the local community, tourists and residents of surrounding communities. Business establishments include: banks, offices, gas stations, restaurants, retail stores, convenience stores, and a movie theater, which are concentrated within several small shopping centers and individual buildings along Main Street.

Commercial/Recreation

The **Commercial/Recreation** category includes all tourism related establishments such as: hotels, motels, inns, sports centers and tourists attractions. They are mainly located along Route 3 and Route 112 and represent about 163 acres of the total town land. The Lincoln-Woodstock Chamber of Commerce estimates that there are a total of 45 hotels in Lincoln-Woodstock, of which 36 would be in Lincoln. This represents a total of approximately 10,500 rooms and between 20,000 and 24,000 beds in the Town of Lincoln. A survey of 9 lodges in the area, prepared by the Chamber of Commerce, shows that the occupancy rate is consistently more significant during the months of February, July and August, and much less significant during the months of April, May, June, November and December. The table below shows the results of this survey for the years 1999, 2000 and 2001:

	1999	2000	2001
January	52%	47%	56%
February	66%	67%	74%
March	53%	59%	63%
April	29%	27%	33%
May	29%	30%	27%
June	42%	43%	45%
July	71%	63%	61%
August	77%	76%	77%
September	57%	59%	53%
October	56%	57%	54%
November	38%	35%	35%
December	41%	46%	42%
Total	51%	51%	52%
 Highest occupancy rate  Lowest occupancy rate			
Source: Lincoln-Woodstock Chamber of Commerce			

Given that tourism is the main business and employment provider in Lincoln, these recreation facilities are numerous and essential for the survival of the area tourism industry. The opening of Loon Mountain Resort in the mid 1960s is one of the phenomena that have brought the expansion and proliferation of those commercial/recreation uses.

Institutional

Institutional uses include a childcare center, two churches and a medical center, for a total of approximately 3 acres. They are concentrated within the village center, around the old residential and commercial developments, and close to the schools.

Industrial

An estimated 8 acres of land are developed for industrial uses in Lincoln, accounting for less than 0.1% of the total non-conservation land area in Town. Lincoln's unique industrial development, FCI-Burndy Corporation, Inc. manufactures electrical connector components and employs 160 people. The enterprise is located off of Bern-Dibner Road, between Route 3 and I-93.

Town Services/Utilities

Most town services/utilities are situated within or close to the village center. In fact, the town offices, police station, fire station, schools, library, treatment plant, transfer station, etc. are located on Main Street or in the vicinity of the village center. This specific use represents only 2.1% of the total non-conservation land in town.

Loon Mountain

The Loon Mountain Recreation Area represents about 7.2% of the total land area in Lincoln, not including the area within the White Mountain National Forest. Its opening in the 1960's has greatly influenced the development patterns of the town, especially in the last two decades when the construction of many condominiums has occurred. The proposed South Loon Mountain development has finally been approved in 2002 and consists of new ski slopes and approximately 1,500 new housing units.

Conservation Land, White Mountain National Forest and Franconia State Park

The White Mountain National Forest represents about 89% of the total land area in the Town of Lincoln. The Franconia State Park encompasses 3,332 acres of land in Lincoln and other conservation land amounts to approximately 156 acres. Conservation land is by far the most significant type of land use in the Town of Lincoln.

State Owned Properties

The State of New Hampshire owns 77 acres on the west side of I-93. Currently, the state

highway garage is located on that property but occupies only a small portion of the land. There is potential for future development on this state owned property.

Vacant Land

Of the total 5,803 acres of land, identified as non-conservation land, approximately 71.9% or 4,178 acres are still vacant. Much of that vacant land is non-developable mostly because of steep slopes or soil conditions. (Refer to Maps 7.1 through 7.2 for details on soil and development conditions)

Existing Land Use Map 2.2

Existing Land Use Map 2.3

E. LINCOLN ZONING DISTRICTS

The Lincoln Land Use Ordinance is considered to be an example of “cumulative” zoning whereby, in general, uses permitted in more restrictive, or higher districts are permitted in the less restrictive or lower districts. For example, residential uses are permitted in the Village Center and General Use districts. This allows more flexibility and the provision of mixed uses such as retail or office building with apartments on the second floor. The Zoning Districts are: General Use (G.U.), Village Center (V.C.), Village Residential (V.R.), General Residential (G.R.), Rural Residential (R.R.), Mountain Residential (M.R.) and Small Business Development (S.B.D.).

Commercial/Business Districts

The Town of Lincoln provides three districts in which uses other than residential are generally permitted.

I. General Use (GU)

The General use district is the largest, after Rural Residential (RR), with over 500 acres zoned throughout town. Generally, properties along Route 3 and along Route 112 after the Village Center are zoned General Use allowing for a variety of uses: residential development, hotels, motels, restaurants, businesses, etc.

II. Village Center (VC)

The Village Center district is located on each side of Route 112 from Railroad Street to the Town Office Building. Most residential and commercial uses are permitted within this district and minimum front setback of 5 feet allow for businesses and residences to be built close to the street to maintain the density and village center feeling.

III. Small Business Development

The Small Business Development district is rather small with about 7 acres. It constitutes the tract of land where FCI-Burndy Corporation, Inc. is located between Route 3 and I-93, just off of Bern-Dibner Road. This district does not allow residential uses, but only more heavier commercial and business uses such as, Motor Vehicle Sales & Services, Gasoline/Fuel/Oil Sale & Storage, Manufacturing other than home business, etc.

Residential Districts

The Town of Lincoln provides four residential districts allowing different types of dwellings, public uses and some types of commercial uses.

I. Village Residential (VR)

The Village Residential district is located north of Main Street, but south of Pollard Road and encompasses lots on the east side of Maple Street all the way to the west side of the Lin-Wood School property. This district allows for lots as small as 8,000 sq. feet to maintain the village character of the area. Churches and other public uses are also found within this area. Multi-family housing, manufactured homes, as well as cluster types of residential development are

prohibited in this district.

II. General Residential (GR)

General Residential zoning can be found in the Connector Road area as well as further north along Maltais Farm Road just off of Route 3. Minimum lot sizes are slightly larger (10,000 sq. feet) than for the Village Residential district and again multi-family residential is not allowed.

III. Rural Residential (RR)

The Rural Residential district is the largest of all districts. It allows all types of residential development, except multi-family, as well as public uses and tourists attractions.

IV. Mountain Residential (MR)

Two residential developments in town have been zoned Mountain Residential; the Beechwood Acres and Loonwood Village. Multi-family uses are allowed within this district but only for five or more units. Most public and commercial uses are not permitted.

Land Use Categories	Zoning Districts
Residential	MR, VR, RR, GR
Commercial	GU, VC
Mixed-Use	MR, VR, RR, GR, GU
Industrial	SBD
Town Services/Utilities	All districts

Table 2.3 above presents the zoning districts that are most likely to be utilized within each of the land use categories for future development.

F. FUTURE LAND USE PATTERNS

Once an idea is established for how land is currently being utilized in a community, an examination is completed to discuss how land would be best used in the future. Factors to consider include road access and frontage, environmental constraints, already developed parcels, and state or federal land. Future land use is best illustrated in mapped form, which frames the basis for discussions. Maps 2.4 and 2.5 present Lincoln's Future Land Use.

The large acreage of the White Mountain National Forest has a profound impact on development patterns, yet Lincoln has little control over the future use of this land. Therefore, it is likely that future growth in Lincoln will follow the established patterns of development. The included Future Land Use maps begin to outline the character that Lincoln is looking for in the future, as more growth occurs.

Land Use	Total Acreage*	% of Total Land Area	% of Total Non-Conservation Land Area
Residential	1,064	1.3%	18.2%
Commercial	535	0.6%	9.2%
Mixed-Use	1,695	2.0%	29.1%
Industrial	26	0.0%	0.5%
Institutional	3	0.0%	0.0%
Loon Mountain	416	0.5%	7.1%
State Property	77	0.1%	1.3%
Town Services/Utilities	120	0.0%	2.1%
Conservation	156	0.2%	
WMNF	74,553	89.0%	
Franconia State Park	3,332	4.0%	
Unclassified	1,887	2.3%	32.5%
Total Land Area in Town	83,844	100.0%	100.0%

*Note: This acreage represents an approximation calculated from GIS maps
Source: Town of Lincoln, North Country Council

Future Residential Land Use

Future residential development is expected to increase in areas where residential uses are predominant. Those areas include: the north side of Route 112 after the Village Center, the south side of Route 112 after Loon Mountain, a large section of town north of the Village Center and smaller scattered areas along Route 3. These areas have already seen strictly residential development and they present great potential for condominiums or regular residential development.

Future Commercial Land Use

Future commercial uses are expected to intensify within the Village Center and along Route 3 where hotels, restaurants, tourists attractions, shops, etc. are already established. As mentioned in the Village Center Plan (2002), “a strong and healthy Village Center area will benefit all citizens of Lincoln.” In fact, a well-established commercial and business base within the Village Center, where people can access a variety of shops, restaurants, etc. can only benefit the Town as a whole by answering people’s needs.

Future Mixed-Use Land Use

Two large undeveloped areas have been identified as future mixed-use development: the area south of the Pemigewasset River, where the new South Loon Mountain Development has been proposed, and a large area north of the Village Center and east of I-93 (See Future Land Use Map.).

Incorporating a mix of uses to provide a variety of housing, employment, shopping, services and social opportunities for all members of the community constitutes an efficient way to plan for development. Enabling people to walk to shops or services has been recognized as a Smart Growth principle for many years.

Industrial

A small industrial area has been identified by the Planning Board for potential future development of small businesses. This area is located off of Connector Road, just west of I-93 and already includes FCI–Burndy Corporation, Inc. As mentioned in the Economic Development Chapter of this Master Plan, diversification of Lincoln economic base would be beneficial for the Town, which currently relies mostly on tourism based revenues. An increase in the number of non-tourism related businesses would benefit the Town by ensuring employment and revenues in slow tourism times. The identification of industrial land use areas in Lincoln associated with an effort to attract new types of business would certainly help.

The Future Land Use Map

A Future Land Use Map is intended to guide future decisions regarding potential zoning and land use changes in order to preserve the assets of the Town and make consideration for elements such as businesses, homes, and industries already established. As illustrated by the Existing Land Use Map, much of Lincoln’s existing road frontage has been developed.

With these considerations, the Future Land Use Map outlines the areas where future residential, commercial and industrial growth can occur. Interestingly, the configuration closely resembles the existing Zoning patterns, with future mixed-use areas identified on the Future Land Use Map. This Future Land Use can be a model for new growth and can serve to assist with the rezoning of districts in Town.

G. TECHNIQUES TO SHAPE FUTURE LAND USE

Impact Fees

An impact fee is a proportionate fee, based upon a scientific formula, charged to all new housing and/or commercial units at the time a certificate of occupancy is issued. All new construction, including residential, whether on existing or newly created lots, is subject. Fees earmarked specifically for schools, roads, pedestrian infrastructure, recreation and parks, libraries and other specific town services can be collected. Fees are uniform for all developments regardless of location and generally do not exceed \$4,000 per unit in total.

Impact fees are difficult to develop and administer. Under RSA 674:21, municipalities are permitted to charge impact fees, provided they have properly adopted both a master plan and capital improvement plan. If the collected impact fees are not used within six years, they must be refunded with appropriate interest. Municipalities must adopt an impact fee ordinance as part of the zoning ordinance. This ordinance should specify fees to be paid by all new construction based upon a professionally prepared study of capital costs associated with expansion of infrastructure.

A fee schedule is then developed which takes into consideration calculations and formulas based upon area population, school-age population, the number of bedrooms in a home, the road capacity, etc. Slow growing communities that adopt impact fees are more susceptible to successful legal challenges.

Incentive Bonuses

Often employed as part of a performance zoning ordinance, incentives encourage developers to build projects above and beyond baseline standards included in the Zoning Ordinance. Incentive zoning is a voluntary exchange of development incentives for public benefits between a community and a developer. There are three basic categories of incentive bonuses: (1) Intensity incentives, (2) use incentives, and (3) inclusionary incentives.

Intensity incentives allow developers a greater or more intensive use of the property. Such incentives usually allow developers to construct more units on a property, have greater amounts of impervious surface, or more square footage for commercial buildings. A typical example of an incentive usually included in this type of ordinance could be a density bonus in exchange for setting aside open space in a development for public use, construction of trails, or construction of recreational facilities.

Land use incentives permit mixing of uses in a development or provide for unspecified uses. For example, a convenience store may be permitted in a housing development, or residential units may be allowed as part of a retail development. In exchange for such benefits, developers are usually required to provide the Town with construction of public infrastructure, such as parks, boat ramps, swimming areas, recreational facilities, pedestrian infrastructure, public parking spaces, or open space.

Steep Slope Protection

As Lincoln continues to grow in the future, more desirable development locations, such as those with less restrictive soils and more gently sloped will be developed. As this happens, more development pressure will be focused towards locations that are more costly and difficult

to develop. Areas with steep slopes are such locations where development pressures will be focused and where protections will be needed to preserve those important resources. Reasons to protect areas with steep slopes are as follows: to promote public safety, to minimize flooding, landslides, mudslides, and erosion; to minimize soil instability and siltation of seasonal and year round streams and wetlands; to preserve natural drainage ways; to protect rare and critical environments, wildlife, fragile soils, and unique geologic features; and to protect and preserve the scenic character of hillside areas.

Steep slope regulations should contain restrictions on minimum lot size, grading restrictions, roadway placement and design, and slope easements should be required for all new subdivisions.

Erosion and Sedimentation Control

During site preparation of a residential or commercial development, pollution loads can increase, sometimes dramatically, as sites are excavated and developed. Soil is exposed during development as vegetation is removed and excavation takes place. Bare soils particles are dislodged by rainfall and can be carried downslope as sediment to streams, lakes, and wetlands. Runoff can increase and have a greater ability to transport pollutants and constructed impervious surfaces (roofs and pavements) reduce infiltration and can modify flow patterns. Higher runoff rates can result in flooding and erosion on previously stable streams and act as a vector for delivering much larger quantities of pollutants.

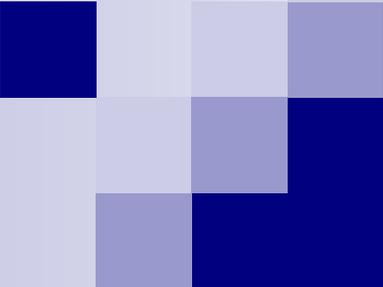
Erosion control and prevention plans should be submitted for subdivisions and site plans for verification that specific conditions will be met prior to the issuance of a building permit. The review and verification process for submitted plans will also determine whether or not a Site Specific Permit is required from the NH Department of Environmental Services. RSA 485-A:17, known as the Alteration of Terrain Program or "Site Specific Program," requires a permit from DES for any earth disturbance greater than 100,000 square feet, or 50,000 square feet within the protected shoreline area. The permit involves both temporary erosion control measures during construction and permanent controls on the impacts of stormwater effects following construction.

The Town should ensure that required siltation and sedimentation controls are in place prior to the start of any construction activity and that they remain functional during the entire construction process. Erosion and sedimentation control measures should be in accordance with "Stormwater Management and Erosion and Sediment Control Handbook for Urban and Developing Areas in New Hampshire," as prepared by the NH DES, Rockingham County Conservation District, and USDA Soil Conservation Service, August 1992.

At a minimum, developers and contractors need to demonstrate that they will provide pollutant control by professional planning, design, construction, and implementation of these BMPs. Designs and site plans should demonstrate measures to retain natural vegetation where possible, especially at waterbodies, wetlands and steep slopes. Developers and contractors should not only have a commitment to integrating BMPs into overall development plans but also for monitoring practices and adjusting, maintaining, and repairing periodically and after every storm.

H. IMPLICATIONS FOR THE FUTURE

Based on the “snapshot” of existing land use conditions in town, it is clear that a substantial amount of Lincoln’s land area still remains largely undeveloped. However, growth trends discussed in the Housing Chapter of this plan indicate that the town will have to make some important decisions about how the remaining land base will be used to support future growth. These decisions will determine whether or not land in Lincoln is used in the most efficient manner possible to accommodate expected growth, while not detracting from the natural and scenic beauty, and perceived high quality of life associated with this open space.



Town of Lincoln Master Plan

Chapter III - Economic Development

Authored By: North Country Council

A. INTRODUCTION

Economic growth in a community typically occurs as a result of external forces, such as expansion of the regional, state and national economy, that are usually beyond the control of the community. By contrast, economic development (the creation of new jobs, the attraction of private investment and the expansion of existing businesses) is something that a community can directly influence. In order to encourage and direct economic development, community officials and residents must have a clear understanding of state, regional and local economic trends and conditions.

Economic development is an issue that can directly affect the quality of life and image of a community. Overly aggressive economic development can lead to loss of community character, housing and labor shortages, and other social problems. At the same time, efforts not to diversify the employment base of the community can leave the community more vulnerable during economic down-turns. Therefore, a balance between community character and a diversified economic base must be achieved.

The first part of this chapter focuses on historical employment and business trends during the 1990s in Lincoln and compares them to both Grafton County and New Hampshire. The next section provides an analysis of employment and business patterns within Lincoln. In addition to providing the information on the trends and changes in total employment and business establishments, within major industrial sectors, a summary of Lincoln's commercial and industrial land uses and (employment) commuting patterns is presented.

B. SUMMARY OF FINDINGS AND CONCLUSIONS

The following points summarize the economic findings and conclusions presented within this chapter. Additionally, various implications associated with Lincoln's economic trends are discussed.

In terms of the state and regional economy, New Hampshire and Grafton County have experienced strong economies throughout the 1990s with most economic growth occurring during the later half of the decade. The indicators of the strong economy include:

- According to the U.S. Department of Commerce, between 1990 and 2000, the United States' Gross Domestic Product increased by 41.7%. The New Hampshire economy outperformed both the New England and United States' economies with an increase in Gross State Product of over 70% over the same time period.
- Between 1992 and 2001, the Plymouth Labor Market Area experienced unemployment rates which are on average in between the County and the state respective rates.
- Between 1992 and 2001, 70% of all employment positions created throughout New Hampshire were either trade or service related.

As the state and regional economy has experienced solid growth throughout the 1990s, so to has the local economy in Lincoln. As a tourist and retail destination, Lincoln's employment and business establishment base is concentrated within the service and trade sectors. Other economic findings include:

- Total employment in Lincoln has increased from 1,773 jobs in 1990 to 1,977 jobs in 2000 representing an increase of over 200 jobs (11.5%).
- Collectively, about 70% of the jobs in Lincoln are either service or trade related—approximately 14% more than the state average and 16% more than the county average.
- With the exception of FCI-Burndy Corporation and the Lin-Wood School all of Lincoln's largest employers are within the service and trade sectors.
- More than half of Lincoln's jobs in 1990 were filled by workers who commute in from outlying communities. Although the majority of the workers commuting to work in Lincoln live within Grafton County, about 11% of the workforce commutes in from outside of the region.

Based on the economic findings and conclusions presented throughout the chapter, implications about how Lincoln may change in the future include:

- The growth and reliance of Lincoln's economy on the service and trade sector creates a situation where it may be beneficial for the Town to investigate economic development incentives which encourage business diversification of the local employment and business establishment base. Without economic diversification across a range of sectors, the town may be susceptible to larger than average job losses and business closings during economic down-turns.

C. KEY EMPLOYMENT AND BUSINESS TRENDS

Throughout the mid to late 1980s, New Hampshire has experienced unprecedented economic growth which has been evident across wide range of economic indices including employment, per capita income, population and unemployment. New Hampshire has benefited from a diversified establishment base to outperform both the New England region and the country across many major economic indicators. For example, growth in gross state or domestic product is widely considered to be one of the leading benchmarks in which to evaluate an economy. According to the U.S. Department of Commerce, between 1990 and 2000, New Hampshire's gross state product increased by almost 71%. New Hampshire's growth in gross state product outperformed both New England and the nation by 30% and 29% respectively over the same time period.

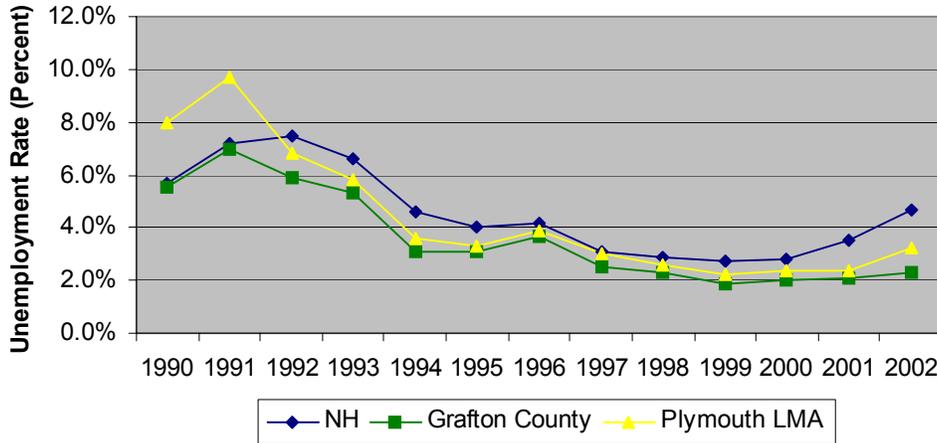
Most of New Hampshire's economic activity is focused within the southern portions of the state, primarily due to the close proximity to the large metropolitan market of the greater Boston region. However, the state's more northerly regions, including the Mount Washington Valley for example, have contributed to the state's vibrant economy.

As any local economy is dependent upon the greater regional, state and, to a certain degree, the national economy, the following section examines unemployment, employment and business establishment trends relative to the state and Grafton County throughout the 1990s. It is intended that framing the Lincoln economy within the context of the regional and state economy would be most beneficial for comparative purposes.

Unemployment Trends

As New Hampshire moved from the economic recession of the early 1990s and into a strong period of economic expansion throughout the later part of the decade, New Hampshire's unemployment rate declined rapidly. Since 1993, New Hampshire's unemployment rate has dropped by 2.7 percentage points from 5.5% to its current (2000) average of 2.8%. The state outperformed the nation in declining unemployment by 2.9 percentage points with the 2000 national unemployment rate of 4%. In terms of local unemployment trends, as of 2002, the Plymouth Labor Market area had an unemployment rate of 3.2% which is slightly higher than the rates for both Grafton County and the state (2.3%). As presented in Figure 3.1, throughout the 1990s, the Plymouth Labor Market area unemployment rate modeled the same declining trend as both Grafton County and the state. Between 1990 and 2002, the Plymouth Labor Market Area experienced unemployment rates which are on average in between the County and the state respective rates. However, between 1990 and 2002, the Plymouth Labor Market Area unemployment rate has declined by 4.8% - a decline that outperformed both the state (1%) and the county (3.2%) over the same time period.

Figure 3.1 Unemployment Trends: 1990-2000
Grafton County, State of NH and Plymouth LMA

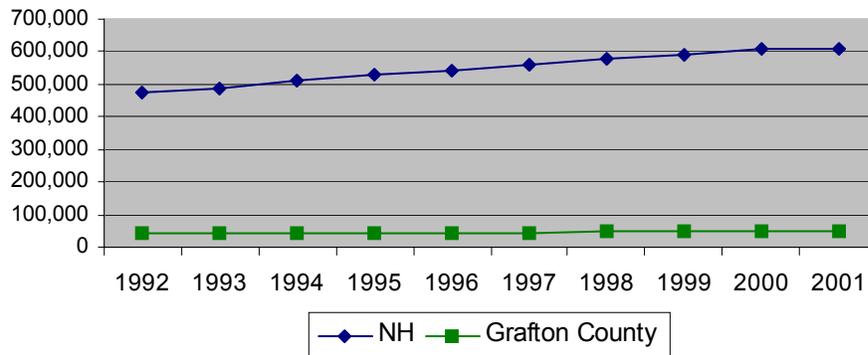


Source: NH Department of Employment Security

Regional Changes in Employment and Business Patterns

As indicated by data provided by the New Hampshire’s Department of Employment Security, between 1990 and 2000, total employment in New Hampshire increased from 476,476 to 610,446 jobs—representing an increase of approximately 133,970 jobs (28.1%). On a countywide basis, Grafton County’s 2001 employment base of 49,352 jobs represents an increase of approximately 9,325 jobs (23.3%) since 1990. Approximately 8% of New Hampshire’s employment base is located in Grafton County. Figure 3.2 shows the growth in total employment for both New Hampshire and Grafton County.

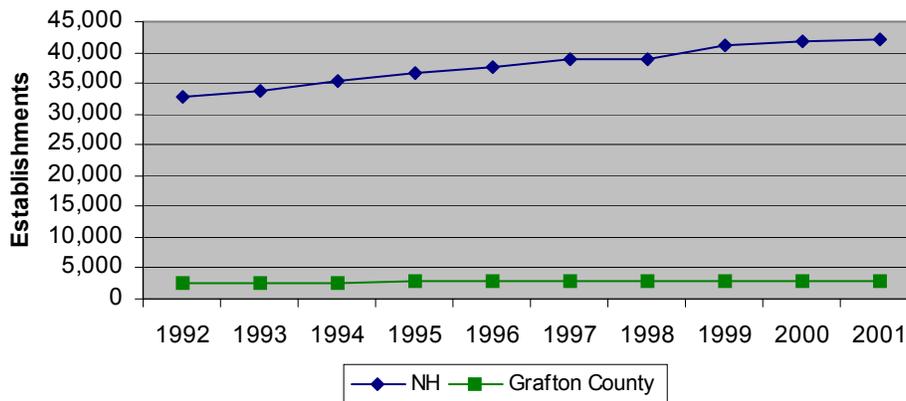
Figure 3.2 Annual Average Employment Trends: 1992-2001
New Hampshire and Grafton County



Source: NH Department of Employment Security

As job growth in New Hampshire experienced significant gains throughout the 1990s, so to did the number of new business establishments. The number of new businesses in New Hampshire increased by more than 9,387 from 1992 (32,851 businesses) to 2001 (42,238 businesses) - representing an increase of 28.6%. Grafton County experienced solid business establishment growth over the same time period increasing from approximately 2,498 businesses to 3,019 representing an increase of 521 businesses (20.9%). At approximately 3,000 businesses, Grafton County contains about 7% of the statewide establishment base. Figure 3.3 illustrates the growth in business formations for both the state and county.

Figure 3.3 Average Annual Establishment Trends: 1992-2001
New Hampshire and Grafton County

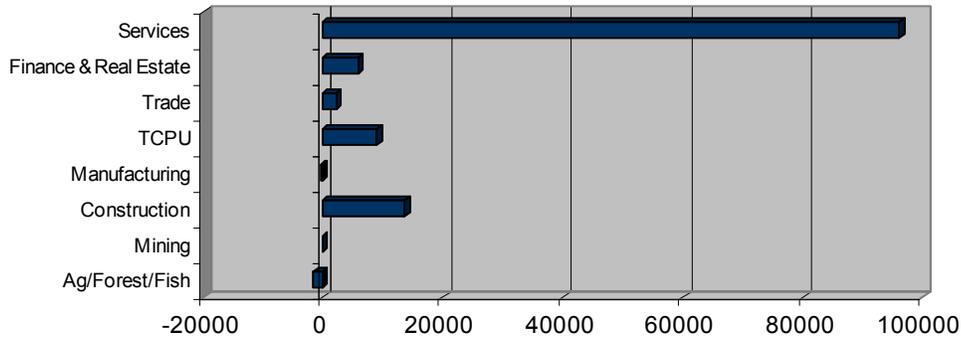


Source: NH Department of Employment Security

Although examining total job and establishment growth provides a good indication for economic direction, an analysis of the types of jobs and establishments created provides a clearer economic picture. Like many states, most of New Hampshire's jobs are concentrated within the trade and service sector. As of 2001, approximately 56% of New Hampshire's jobs were either service or trade related - representing an increase of 4% since 1992. As indicated in Figure 3.4 on the following page, between 1992 and 2001, approximately 94,000 trade and service jobs were created in New Hampshire representing 70% of the total employment positions created. Employment growth was also strong within construction (13,646 jobs), transportation, communication, and electricity/gas/sanitary (9,030 jobs) sectors over the same time period.

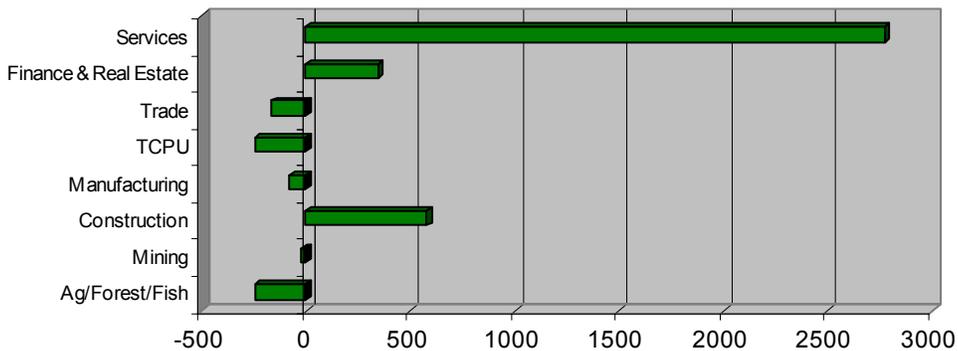
Similar to the growth within the service and trade sectors throughout the state, between 1992 and 2002, 30% of the jobs created in Grafton County fell within these industrial sectors. Significant employment gains were also experienced within the construction (580 jobs) and the finance & real estate (344 jobs) sectors. While these sectors experienced job growth, employment within the other sectors decreased by anywhere between 21 or 246 jobs. Interestingly, almost 54% of Grafton County's employment base is within the service and trade sectors—the same as the statewide average. The large percentage of jobs within the service and trade sectors is likely attributed to Grafton County being a primary destination for tourists. Figure 3.5 shows employment growth in Grafton County by industrial sector between 1992 and 2001.

Figure 3.4 Employment Change by Industry Sector: 1992-2001
New Hampshire



Source: U.S. Census 2000

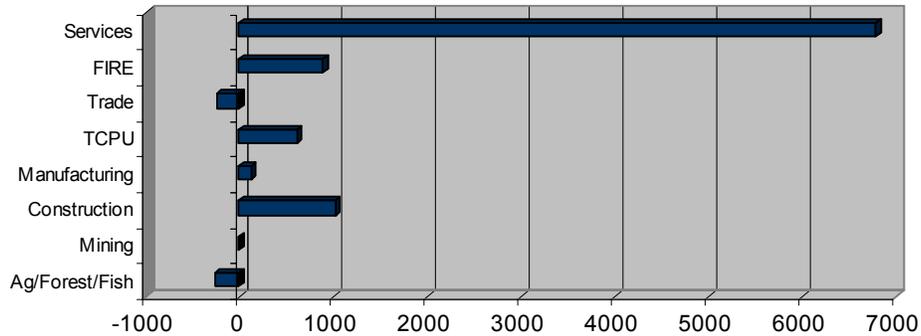
Figure 3.5 Employment Change by Industry Sector: 1992-2001
Grafton County



Source: U.S. Census 2000

A change in the number of new businesses in New Hampshire primarily reflects growth in statewide employment (see Figure 3.6). Similar to the statewide employment growth, three out of every four businesses that were created between 1992 and 2001 were service establishments. In terms of business distribution, currently 67% of business establishments statewide are service or trade related—representing an increase of 1% since 1992. Besides the growth in service establishments, New Hampshire’s construction, FIRE (Finance, Insurance & Real Estate) and TCPU (Transportation, Communication & Public Utilities) sectors also experienced significant growth increasing by 1021, 890 and 618 businesses respectively over the same time period.

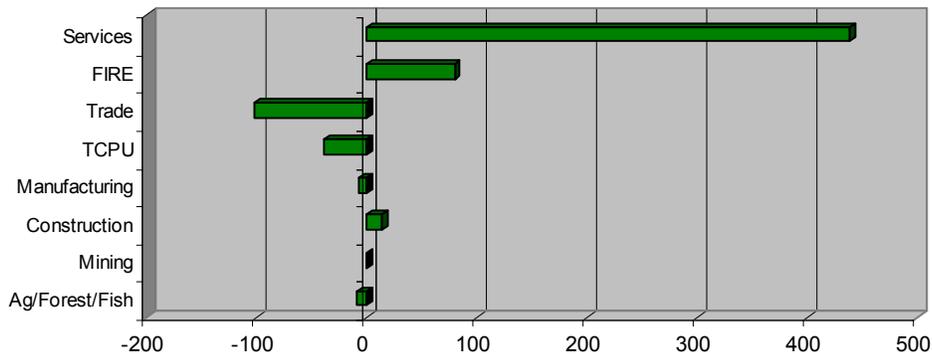
Figure 3.6 Establishment Change by Industry: 1992-2001
New Hampshire



Source: U.S. Census 2000

Of the 521 businesses created in Grafton County between 1992 and 2001, almost 84% (438) were service industry establishments. Other sectors that experienced significant growth include the FIRE (80 businesses or 14%) and construction (14 businesses or 2%) sectors. Interestingly, although the number of establishments in the construction sector has increased by only 14 (2%), the employment base increased by 7% between 1992 and 2001. This finding would potentially indicate that either the new businesses employ a large number of people or that existing businesses have significantly increased their activity. Figure 3.7 presents the growth in businesses by industrial sector for Grafton County between 1992 and 2001.

Figure 3.7 Establishment Change by Industry: 1992-2001
Grafton County



Source: U.S. Census 2000

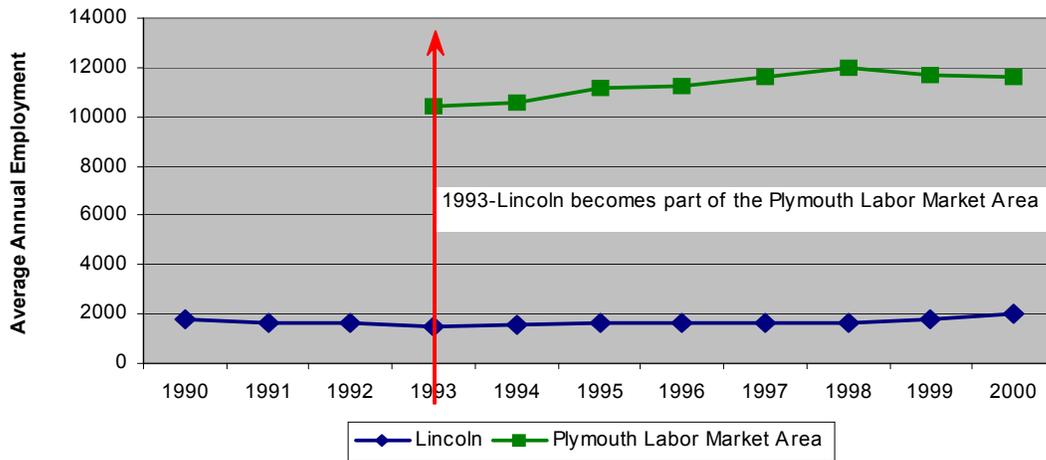
Change in Employment and Businesses Establishments in Lincoln and the Plymouth Labor Market

As noted earlier, employment in Grafton County steadily increased during the 1990s and Lincoln has benefited from these changes. Total employment in Lincoln has increased from 1,773 jobs in 1990 to 1,977 jobs in 2000 representing an increase of over 200 jobs (11.5%). Until 1992, Lincoln was part of the Littleton Labor Market Area, but was incorporated into the

Plymouth Labor Market Area in 1993. For the purpose of keeping this analysis simple, only the Plymouth Labor Market Area employment data has been included in Figure 3.8. Employment in the Plymouth Labor Market area has similarly increased by 11.6%.

Figure 3.8 Total Employment Trends: 1990-2000

Town of Lincoln and Plymouth Labor Market Areas

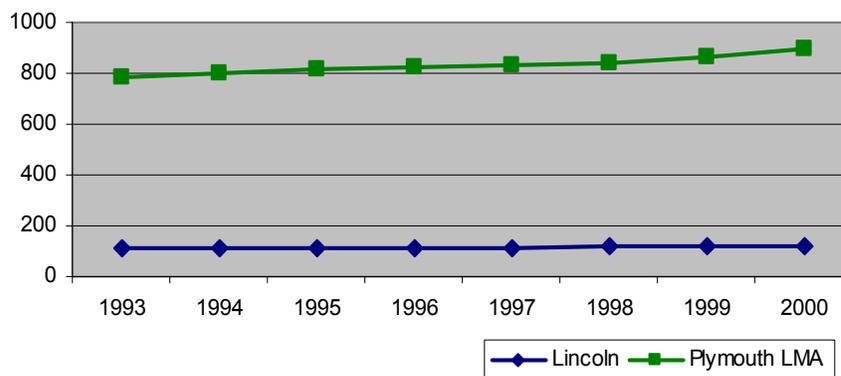


Source: 1990-1997 Employment and Wage Publication, NHES

The growth in business establishments in Lincoln and the Plymouth Market Area also modeled the business growth found throughout Grafton County. The total number of private establishments in Lincoln increased from 112 in 1993 to 122 in 2000 representing an increase of 8.9% or 12% below the county establishment growth rate. The total number of private establishments in the Plymouth Labor Market area increased from 782 in 1993 to 895 in 2000 representing an increase of 14.5% or 6.4% below the county rate. As noted in Figure 3.9, most of the growth in business establishments came with the upsurge in economic growth during the late 1990s.

Figure 3.9 Total Private Establishment Trends : 1993-2000

Town of Lincoln and Plymouth Labor Market Area



Source: NH Department of Employment Security

As illustrated in Table 3.1, it is not surprising that over 70% of the town's establishment base is concentrated within the trade and service sector, and most of the largest employers are all within these sectors. The only exceptions to this finding are the FCI—Burndy Corporation (electrical connectors) that is within the manufacturing sector and the Lin-Wood School District (education).

Employer Name	Product/Service	# Employees
Loon Mountain Recreation Corporation	Ski, recreation area	175+
FCI-Burndy Corporation	Electrical connectors	160
Beacon Inc.	Hotel, restaurant	100
Indian Head Motel & Resort	Hotel, restaurant, recreation	80+
Lin-Wood School District	Education	75
Lincoln Condo Associates	Condo Management	60
Scarborough Corporation	Restaurants	60
Source: U.S. Census 2000.		

D. CHARACTERISTICS OF RESIDENT WORKERS IN LINCOLN

Commuting Patterns of Lincoln Residents and Workers

Understanding where people live and work is a key factor in evaluating patterns of economic development. Although only 1990 Census data is available to describe employment commuting patterns in Lincoln, it is assumed that commuting patterns have not changed drastically between the 1990 Census and 2000. It is intended that 1990 commuting data should provide a basis for comparing where people who work in Lincoln live, as well as key employment locations for Lincoln residents.

As described in Table 3.2, of the roughly 1,344 employment positions in Lincoln, approximately two-thirds of the workers who fill those jobs commute in from outlying communities. Although the majority of the workers commuting in live within Grafton County, about 10% of the workforce commutes from outside of the region with many coming from Maine and Massachusetts.

Place of Residence		#	%
Within NH	Woodstock	276	30.4%
	Thornton	79	8.7%
	Campton	75	8.3%
	Bethlehem	52	5.7%
	Plymouth	52	5.7%
	Littleton	39	4.3%
	Franconia	37	4.1%
Bath	20	2.2%	
Outside NH	Maine	26	2.9%
	Massachussetts	28	3.1%
	Vermont	13	1.4%
	Other	30	3.3%
Total non-residents commuting in		909	
Total Lincoln Employment Base		1,344	
% of non residents commuting in		67.6%	
Source: NH Dept. of Employment Security			

In terms of resident employment commuting patterns, of the roughly 580 Lincoln residents who are employed, approximately 75% (435) work in Lincoln. As indicated in Table 3.3, the remaining 25% generally commute to neighboring communities (Woodstock, Plymouth and Campton) within Grafton County for work. Only about 5.5% of Lincoln residents who work outside of Lincoln are employed outside of New Hampshire.

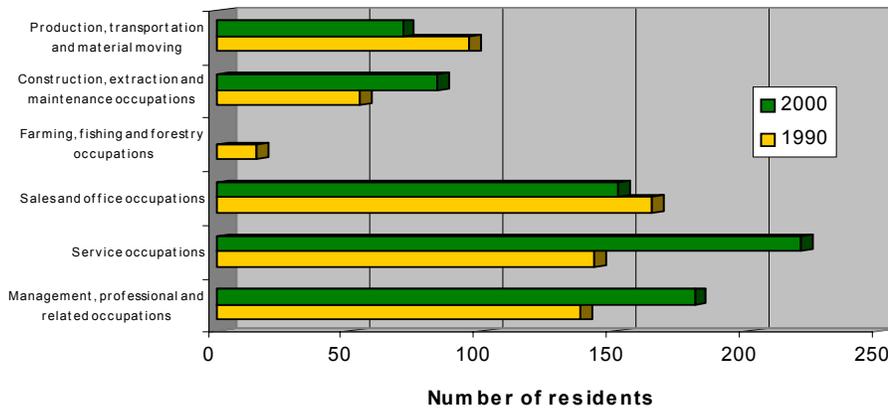
Estimated Residents Working		580	
Lincoln Residents Commuting to another town		145	
Commuting Rate		25%	
Work Destination		#	%
Within NH	Woodstock	68	46.9%
	Plymouth	14	9.7%
	Campton	10	6.9%
Outside of NH	Massachussetts	6	4.1%
	Vermont	2	1.4%
Source: NH Dept. of Employment Security			

Although the data is over ten years old, the information does reveal some trends that are probably still relevant today. For example, the presence of the Loon Mountain Recreation Area in Lincoln creates many tourism and services related jobs, which are mostly filled by non-residents. With continued upward price pressure and low supply of affordable housing within the Lincoln real estate market, it could be anticipated that workers who live outside of Lincoln could fill a higher percentage of Lincoln's employment positions in the future.

Resident Workers by Occupation

Changes in the occupation of Lincoln’s working residents between 1990 and 2000 are illustrated in Figure 3.10. In 1990, the principal occupational categories of Lincoln residents were in sales and office occupations, service occupations and management, professional and related occupations. Service occupations showed the largest net gain in total employment by occupation between 1990 and 2000 for Lincoln residents, followed by management, professional and related occupations. A relatively small increase in construction, extraction and maintenance occupations took place during the 1990s, and there was a decline in the number of people working in production, transportation and material moving, sales and office occupations, and farming, fishing and forestry occupations.

Figure 3.10 Number of employed Lincoln residents age 16+ by occupation: 1990-2000



Source: U.S. Census 2000.

The New Hampshire Department of Employment Security has issued projections of employment by occupation for the period 1996 to 2006 indicating the following estimates of the net change in jobs by occupational category. These projections represent totals for the state of New Hampshire.

Occupational Title	Change projected	Percent change	Share of total employment change
Executive, Admin. & Managerial	9,940	19.4%	11.2%
Professional and Technical	31,123	25.4%	35.0%
Marketing & Sales	8,938	11.1%	10.1%
Administrative Support & Clerical	7,794	8.7%	8.8%
Service occupations	15,887	17.2%	17.9%
Agriculture, Forestry, Fishing	424	8.6%	0.5%
Precisions Production, Crafts, Repair	6,171	10.6%	6.9%
Operators, Fabricators and Laborers	8,605	10.6%	9.7%
All Occupations	88,882	15.3%	100.0%

Source: NH Employment Security, August 1998, NH Job Outlook and Locator

Professional, technical and para-professional employment is expected to increase by over 25% during the period, including significant gains in such occupations as computer engineers, systems analysts and related occupations. Of the total change in positions projected, about 35% of the net change is expected within the professional and technical occupations. This trend is not expected to be seen as much in the North Country as in the southern portion of the state, where communities are closer to larger labor market and important cities.

Resident Workers by Industry

As of 2000, Lincoln had 704 residents age 16 and over who were employed. Predominant industrial sectors in Lincoln included the broad services category, followed by manufacturing and retail trade. Almost half of Lincoln residents (46%) were employed in arts, entertainment, recreation, accommodation and food services in 2000, which is much higher than in Grafton County (10.4%) and the State of NH (6.9%). The presence of the Loon Mountain Recreational Area certainly plays a major role in this phenomenon. Educational, health and social services is the most popular industry in both Grafton County and the state of NH, but ranks fourth in the Town of Lincoln.

A total of 46 Lincoln workers reported being self-employed in 2000, representing 6.5% of local workers age 16 and older, while 55 or 7.8% reported being government workers. Table 3.4 presents 2000 local employment by industrial sector.

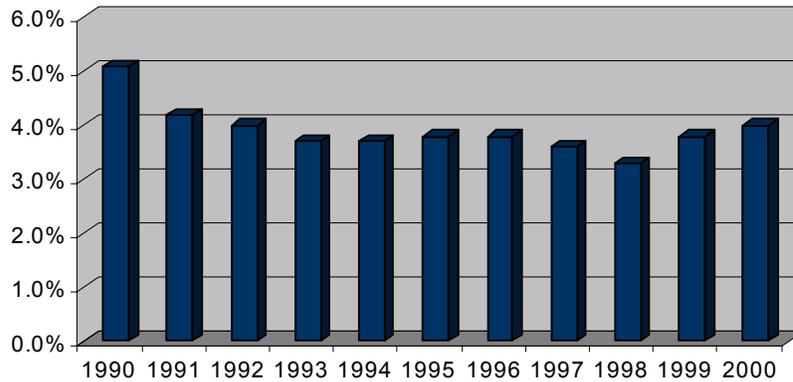
	Lincoln	Grafton County	State of NH
Agricultural services, forestry, fishing, hunting and mining	0.2%	1.8%	0.9%
Construction	6.4%	6.7%	6.8%
Manufacturing	9.1%	12.7%	18.1%
Wholesale trade	1.7%	2.1%	3.6%
Retail Trade	8.9%	12.8%	13.7%
Transportation and warehousing, and utilities	1.7%	3.6%	4.1%
Information	1.6%	2.4%	2.7%
Finance, insurance, real estate, and rental and leasing	6.7%	4.1%	6.3%
Professional, scientific, management, administrative, and waste management services	4.4%	6.2%	8.8%
Educational, health and social services	7.4%	30.3%	20.0%
Arts, entertainment, recreation, accommodation and food services	46.2%	10.4%	6.9%
Other services (except public administration)	3.4%	4.0%	4.3%
Public administration	2.3%	2.9%	3.8%
Total	100.0%	100.0%	100.0%

Source: U.S. Census

Lincoln is the location of approximately 4% of the County's jobs. The Town's share of Grafton County private and government wage and salary employment has decreased from 5.1% in

1990 to 4% in 2000. Figure 3.11 Illustrates, for each year between 1990 and 2000, Lincoln’s share of Grafton County employment.

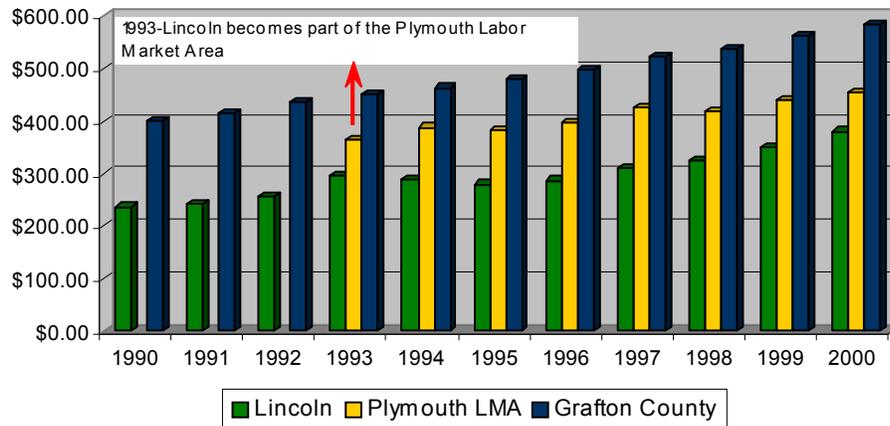
Figure 3.11 Lincoln Share of Grafton County employment 1990-2000



Source: 1990-1997 Employment and Wage Publication, NHES

Figure 3.12 compares average weekly wages in Lincoln, Plymouth LMA and Grafton County from 1990 to 2000. The average for all jobs in Lincoln was approximately \$380 per week for all sectors combined in 2000, the equivalent of \$19,760 annually. The average weekly wages for the Plymouth Labor Market Area and Grafton County were respectively \$453 (\$23,556 annually) and \$585 (\$30,420 annually). The State of New Hampshire average weekly wage in 2000 was \$667, the equivalent of \$34,684 annually.

Figure 3.12 Average Weekly Wages Trends - 1990-2000
Lincoln, Plymouth LMA and Grafton County

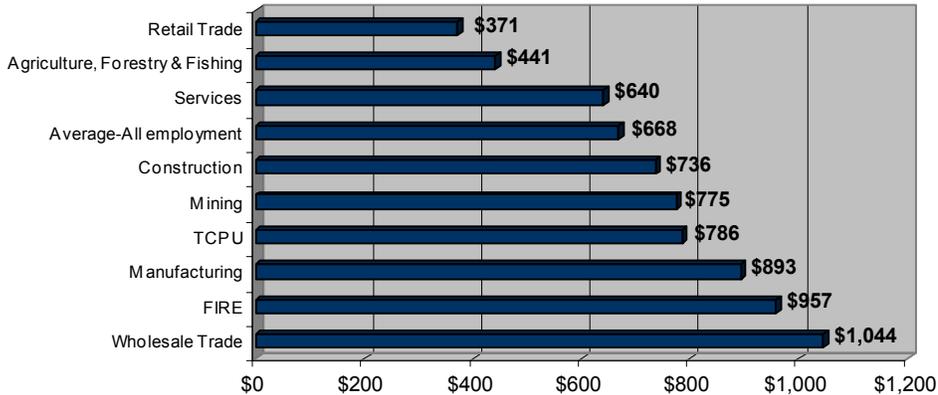


Source: 1990-1997 Employment and Wage Publication, NHES

In the State of New Hampshire, the highest weekly wages are derived from Wholesale Trade and Finance, Insurance and Real Estate services, closely followed by manufacturing. The Services and Retail Trade sectors, which employ 50% of New Hampshire’s workers, are also

part of the lowest paying sectors. The retail sector generates the lowest weekly wage; however, wages and employment in this sector often represent part time positions. Figure 3.13 illustrates the average weekly wages by industry for the State of New Hampshire.

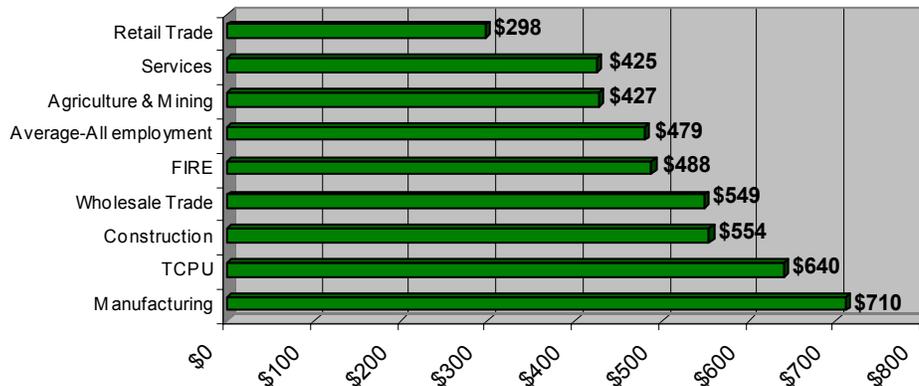
Figure 3.13 Average weekly wages by industry in the State of New Hampshire - 2000



Source: NH Employment Security, County Profile 2000

In Grafton County, the highest wages are derived from Manufacturing and Transportation, Communication & Public Utilities. Again, the services and retail trade sectors are the lowest paying sectors, but also the sectors that employ most of Grafton County workers. Figure 3.14 illustrates the average weekly wages by industry for Grafton County. This data is not available at the town level, however, it can be assumed that Lincoln wages for each industry sector is similar to the County's. As demonstrated by Figure 3.8 above in this chapter, almost half of Lincoln's workers are employed in the services sector. This reality could be one of the reasons why the average weekly wage in Lincoln is much less than the County's and the state weekly wage.

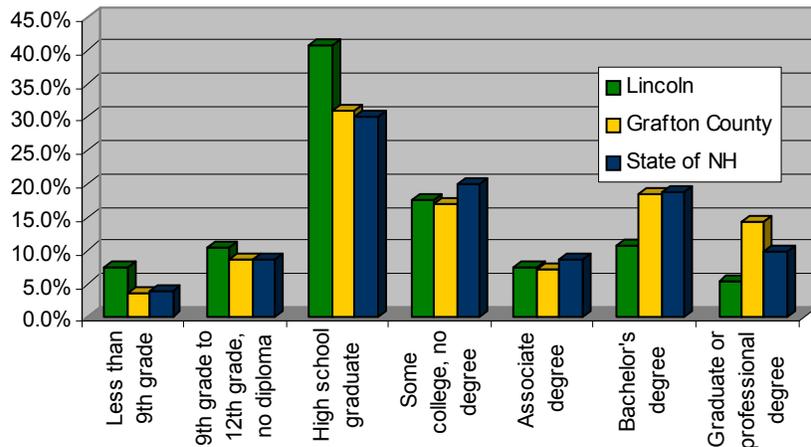
Figure 3.14 Average weekly wages by industry in Grafton County - 2000



Educational Attainment

Figure 3.15 illustrates the relative educational attainment of residents age 25 and over. Data is shown as cumulative percentages of the population at or above the indicated degree level. People with at least a high school degree represent approximately 82% of the age 25 and over population in Lincoln and about 87% in Grafton County and the State of New Hampshire. Those in Lincoln having a bachelor’s degree level education or higher averaged just over 16% in 2000, somewhat lower than the county (32%) and the state (28%) average.

Figure 3.15 Educational Attainment - Percent of adults age 25+ at or above selected degree attainment levels



Source: U.S. Census 2000

E. FACTORS INFLUENCING ECONOMIC DEVELOPMENT

Land Availability

As noted in the Land Use Chapter, Lincoln currently has approximately 535 acres of land, or 9.6% of the total community land area (Total land of the Town less WMNF and Franconia State Park), zoned commercial use. The Town has set aside some properties for commercial development in the village center and by Old Cemetery Road (6 acres). Most of the land available for commercial development is developable due to the lack of wetlands, floodplains or special easements.

Building Availability

Availability of commercial, industrial and office space is critical to the attraction and expansion of desirable businesses. Based upon information received from the Town offices, Lincoln retains some commercial and industrial building space. Though no formal statistics are available, it is generally believed that there is sufficient vacant commercial space available for rent in the village center, especially in the mall along Main Street.

One key component of a long-term economic development strategy requires the retention of some office and commercial space to be used as “incubator space”. Incubator space is generally small office or industrial building space that start up businesses, or expanding cottage industries, can occupy at reasonable rates.

Home Businesses

Home businesses are an important component of the local economy in Lincoln. Home businesses are regulated by Section F of the zoning ordinance. This ordinance allows home businesses as special exceptions or permitted uses in accordance with the land use schedule. No exterior display or storage is allowed on the property except for an identification sign that must conform with the Town sign ordinance. Parking shall be accommodated off-street and the traffic generated by the business should not exceed volumes normally expected in a residential neighborhood.

Land Use Strategies to Promote Economic Development

Tax Increment Financing (TIF): Tax increment financing (TIF) is an innovative tool that uses tax revenue from new developments within certain designated areas of communities to pay for new infrastructure to serve those new businesses, business expansions, and affordable housing projects. TIF is a planning concept that was created in the 1970’s and has been widely adopted by several states in the nation. As of 1985, 33 states had adopted TIF enabling legislation. The State of New Hampshire granted authority to municipalities to create tax increment finance districts in 1979 with passage of RSA 162-K: 1-15. Currently, nine communities in the State of New Hampshire have implemented tax increment finance districts. The most successful districts are located in the cities of Keene and Concord.

There are numerous legal and planning issues to consider when implementing tax increment finance districts. In New Hampshire, communities must adopt a TIF plan and development program to ensure that the community has a clear focus on what the TIF will accomplish. There are several legal considerations that communities must adhere to when instituting a tax increment finance district. These requirements are mandated by NH RSA 162-K: 1-15.

Also, before adopting a TIF, communities must establish the geographic boundaries of the proposed TIF district. In conjunction with this step, NH RSA 162-K: 6 requires that a development program be created for the proposed area. This program must contain “a complete statement as to the public facilities to be constructed within the district, the open space to be created, the environmental controls to be applied, the proposed reuse of private property, and the proposed operations of the district after the capital improvements within the district have been completed” (RSA 196-K: 6). Furthermore, state law requires that the development program “provide for carrying out relocation of persons, families, businesses concerns, and others displaced by the project, pursuant to a relocation plan, including the method for relocation of residents in decent, safe, and sanitary dwelling accommodations, and reasonable moving costs, determined to be feasible by the municipality (RSA 162-K:6).” Essentially, the program development plan is a master plan for the area to consider the broad social, environmental, and fiscal impacts of a proposed TIF.

The second major requirement of TIF enabling legislation is that communities must have a TIF

plan. Mandated by RSA 162-K: 9, the plan must contain the following: “costs of development programs, sources of revenue to finance those costs including estimates of tax increments, amount of bonded indebtedness to be incurred, and the duration of the program’s existence” (RSA 162-K: 9). The plan must also contain “a statement of estimated impact of tax increment financing on the assessed values of all taxing jurisdictions in which the district is located” (RSA 162-K:9). Prior to the adoption of this plan, State law requires that the County Commissioners and School Board or District be afforded the opportunity to meet with the governing body to voice concerns and understand how the tax burden will be shifted to maintain the revenue stream (NH RSA 162-K: 1-15).

Tax increment financing is attractive to communities, as it can provide incentives for economic development in the community, without taking resources away from other projects and community needs. However, TIF is legally complex and requires the knowledge of legal, planning and financial experts to make it successful.

Performance Zoning: This approach to zoning is an alternative to conventional zoning approaches. As opposed to developing a prescriptive zoning scheme, which dictates permitted uses and uses by special exception, performance zoning allows a wide range of uses, provided that such uses meet environmental, aesthetics and other performance standards. In addition to providing specific performance standards, such ordinances also include incentives for developers to develop better projects. Common examples include density, height, setback, and other dimensional bonuses in exchange for greater landscaping; donation of off-site property for a public purpose; location of parking to side or rear of buildings, or construction of public art.

Performance zoning is slowly being utilized in New Hampshire. Presently the Town of Bedford has adopted such an ordinance.

Fiscal Strategies and Resources

The following is a list of resources that could be employed by the Town to help encourage and promote economic development.

Community Development Block Grant (CDBG): CDBG funds are a valuable resource available for funding a variety of public needs. In addition to funding affordable housing programs and community centers, CDBG funds can also be used for economic development purposes, such as the expansion of public waterlines. In 2002, New Hampshire received over 10 million dollars in CDBG funds that, through the grant process, were allocated to communities across the State.

Community Development Finance Authority (CDFA): The Community Development Finance Authority (CDFA) was established by legislation (RSA 162-L) in 1983 to address the issues of affordable housing and economic opportunity for low and moderate income New Hampshire residents. The Authority is both a political body and a nonprofit corporation that is governed by an eleven-member board of directors that are appointed by the governor for five-year terms.

By statute, the board is composed of four representatives from community development

organizations, two from small business, one from organized labor, one from employment and education, two from the private financial community, and the Commissioner of the NH Department of Resources and Economic Development or his/her designee. The Authority does not receive an appropriation from the state.

The Authority provides financial and technical assistance to community development corporations, workers' cooperatives, and certain municipal entities. The Authority is unable to assist a for-profit business directly, but can work with non-profit partner.

CDFA administers a variety of economic development grant programs including the Economic Development Ventures Fund, Tax Credit Program, and various discretionary grants.

CDFA finances major community development projects primarily with the Community Development Investment Program. The program has proven to be a major source of support for affordable housing and economic development and is one of the most successful initiatives that CDFA has implemented. The Community Development Investment Program enables New Hampshire's businesses to donate funds or property, either in lump sum payments or pledged over a predetermined period, to fund economic development and housing projects throughout the state. Contributions made by these business donors entitle donors to a 75% state tax credit when the tax returns are filed with the New Hampshire Department of Revenue Administration. For example, a donor making a \$10,000 cash donation to CDFA on behalf of an approved project will receive a tax credit of \$7,500. This credit may be applied directly on a \$1: \$1 basis against the following state business taxes:

- 1) Business Profits Taxes imposed by RSA 77-A
- 2) Insurance Premium Taxes imposed by RSA 400-A
- 3) Business Enterprise Taxes imposed by RSA 77-E

CDFA charges the non-profit project sponsor a fee, typically 20% of the award, for participation in this program. The fees are used to support other CDFA community development initiatives and to cover CDFA's operating costs.

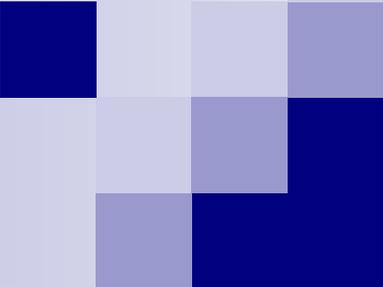
Capital Regional Development Council (CRDC): CRDC is a non-profit organization that has been promoting economic development for 45 years. Governed by a Board of Directors consisting of experts in the fields of banking, private development, business, law, and real estate, the organization serves Merrimack, Belknap, Grafton and Sullivan counties. The missions of CRDC are to create new and permanent jobs, enhance personal income of workers and expand community tax bases through private investment. CRDC meets these goals by developing land and through administration of various business loan programs, including the Small Business Administration (SBA) 504 debenture grant program. Since 1954, CRDC activities in the central New Hampshire region have created 4,000 new jobs and \$350 million dollars in private investment. In 1997 alone, CRDC projects created 244 new jobs and over 9 million dollars in private investment. CRDC could be a helpful resource for a community to tap to help encourage economic development.

F. IMPLICATIONS FOR THE FUTURE

During the past several decades, as obvious to most town residents, Lincoln's role within the state and the region economy has been one which has been based almost exclusively on tourism. Data and information presented within this chapter reinforces this notion and indicates that Lincoln's economy may have become even more reliant on tourism over the past decade, as most of Lincoln's employment and establishment growth has been within the service and trade sectors.

New Hampshire has been able to experience one of the most robust economies throughout the 1990s (mostly between 1995 and 2000) primarily because of a transition from an economy which was based on resource extraction and manufacturing, to one which is diversified across many industrial sectors. The diversification of New Hampshire's economy has helped the state "weather the storm" during economic downturns which have crippled other states that are reliant on a select few sectors. As Lincoln's economy is focused across such a narrow group of sectors, it may be beneficial for the Town to investigate economic development incentives which encourage business diversification of the local employment and business establishment base. A more diverse economy in Lincoln could alleviate some job losses and business closings during economic downturns. One area of focus may be to build upon the entrepreneurial spirit within the region with incentives to encourage the "incubation" of new manufacturers and the growth of the existing cluster of small manufacturers and light industrial operations.

If diversification of the local economy is one area where the Town identifies a need for attention, it may be beneficial to examine regional approaches to expanding the economic base.



Town of Lincoln Master Plan

CHAPTER IV - HOUSING

Authored By: North Country Council

A. INTRODUCTION

This chapter of the Master Plan examines the changing characteristics of Lincoln's housing stock, primarily over the past two decades. The section provides information on the changing environment associated with Lincoln's housing supply and residential real estate market. An overview is presented of total housing growth, changes in housing mix in terms of the types of housing units constructed and the effect that this housing growth has had on historical land use patterns. This is followed by an assessment of affordable housing needs for the town.

B. SUMMARY OF FINDINGS AND CONCLUSIONS

The following points summarize the population and housing findings and conclusions presented within this chapter. Additionally, various implications associated with housing changes are discussed.

- Between 1960 and 2000, Lincoln's population slightly increased overall. In fact, between 1970 and 1990, Lincoln's population decreased from 8.5%, which brings the overall increase to 4.1% between 1960 and 2000.
- The most significant portion of Lincoln's population growth occurred between 1960 and 1970, when the population increased by 113 individuals.
- The towns with the fastest percentage growth rates were generally located in the southern portion of Grafton County, while towns in the northern portion of the county had slower population growth rates.

The development of residential dwelling units in Lincoln has been strong over the past three decades.

- Lincoln currently has 2,339 housing units, which is an increase of 1,823 units (196.9%) since 1970. Between 1985 and 1990, Lincoln experienced a surge in residential construction with the number of housing units increasing by 1,045 (83.3%).
- Between 1990 and 1999, Lincoln issued the sixth largest number of residential building permits (113) for new construction when compared to other surrounding communities in Grafton County.
- Throughout the 1990s, the Town of Lincoln issued a larger amount of multi-family residential building permits (74%) compared to single-family (20%) and manufactured homes (5.8%).
- Of Lincoln's 2,339 housing units, 1,707 are for seasonal/recreational use – representing approximately 73% of the housing stock.

Throughout the 1990s, Lincoln households experienced a gradual shift out of lower income groups into higher income groups. Despite this change, there are still a significant number of low-income households within the community. Household income findings include:

- Between 1990 and 2000, a shift of households out of the lower income groups and into the upper income groups occurred in Lincoln. This is particularly evident in the under \$10,000 and \$10,000 to \$24,999 groups.
- Currently there are approximately 267 households (45.7%) in Lincoln that are classified as low income households (those which earn under \$25,000 per year – which represents about 50% of the median household income in rural New Hampshire communities.)

C. POPULATION TRENDS

During the past forty years the population of Lincoln, as determined by the U.S. Census Bureau, increased by 4.1% (43 people). In fact, the number of residents increased by 9.2% during the 1960s, but decreased by 2.1% in the 1970s and by 6.4% in the 1980s. The population of Lincoln finally stopped decreasing during the 1990s and increased by 3.4%. It is interesting to note that in 1940 the town's population reached its peak with 1560 residents. Then the town started to lose some of its population to reach its lowest point in 1960 with 1228 residents.

	1960	1970	1980	1990	2000	% Change 60-70	% Change 70-80	% Change 80-90	% Change 90-00
Lincoln	1228	1341	1313	1229	1271	9.2%	-2.1%	-6.4%	3.4%
Grafton County	48857	54914	65806	74929	81740	12.4%	19.8%	13.9%	9.1%

Source: U.S. Census 1960, 1970, 1980, 1990 and 2000.

Comparatively, Grafton County has experienced constant growth during the same period of time. Between 1960 and 2000, Grafton County's population increased by 32,883 residents – representing a growth rate of 67.3% or nearly twenty times the rate experienced in Lincoln over the same period of time. Population growth within the county, on a percentage basis, has been fairly consistent throughout the 1960s, 1970s and 1980s. However, the growth rate slowed down during the 1990s when it increased by only 9.1%.

Table 1.2 helps understand Lincoln's population growth as well as distribution of people throughout the County. It presents a summary of population change for all towns in Grafton County between 1960 and 2000. The Table indicates, as previously noted, that the County grew at a fairly constant rate between 1960 and 2000, supporting a mean population increase of 13.8%. What is noteworthy however is that the total population growth between 1960 and 2000 is not evenly distributed throughout the County. For example, towns with the largest population increase such as Waterville (797.8%), Ellsworth (697.2%), Groton (201.8%), Dorchester (178.7%), Bridgewater (176.4%), Thornton (164.7%), Orange (161.8%), Alexandria (157.7%), Grafton (154.2%) are located in the southern part on the County, closer to the Lakes Region, while towns with slower population growth such as Lisbon (-9.6%), Lincoln (4.1%), Littleton (15.9%), Landaff (31.7%), Lebanon (31.7%) and Woodstock (34.3%) are located in the northern part (See Map 1.1 on page 5 of this chapter). This finding suggests that the population growth experienced in the County's southern part communities has been influenced by quality of life factors in what is referred to as the Lakes Region of New Hampshire, as well as the economic growth and prosperity which has migrated north from the Greater Boston area into New Hampshire's southern and seacoast region.

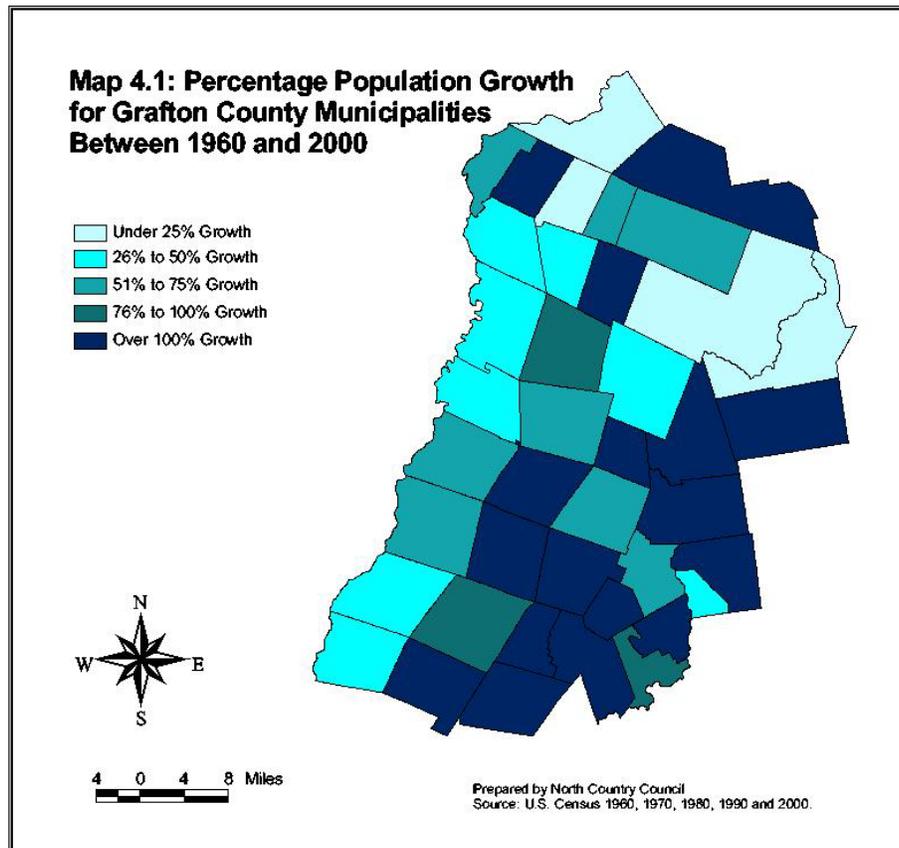
	1960	1970	1980	1990	2000	% Change 60-70	% Change 70-80	% Change 80-90	% Change 90-00
Alexandria	370	466	706	1190	1329	25.9%	51.5%	68.6%	11.7%
Ashland	1473	1599	1807	1915	1955	8.6%	13.0%	6.0%	2.1%
Bath	604	607	761	784	893	0.5%	25.4%	3.0%	13.9%
Benton	172	194	333	330	314	12.8%	71.6%	-1.0%	-4.8%
Bethlehem	898	1142	1784	2003	2199	27.2%	56.2%	12.3%	9.8%
Bridgewater	293	398	606	796	974	35.8%	86.8%	31.4%	22.4%
Bristol	1470	1670	2198	2537	3033	13.6%	31.6%	15.4%	19.6%
Campton	1058	1171	1694	2377	2719	10.7%	44.7%	40.3%	14.4%
Canaan	1507	1923	2456	3045	3319	27.6%	27.7%	24.0%	9.0%
Dorchester	91	141	244	392	353	55.0%	73.0%	60.7%	-10.0%
Easton	74	92	124	223	256	24.3%	34.8%	79.8%	14.8%
Ellsworth	3	13	53	74	87	333.0%	307.0%	39.6%	17.6%
Enfield	1867	2345	3175	3979	4618	25.6%	35.4%	25.3%	16.0%
Franconia	491	655	743	811	924	33.4%	13.4%	9.2%	13.9%
Grafton	348	370	739	923	1138	6.3%	99.7%	24.9%	23.3%
Groton	99	120	255	318	456	21.2%	112.5%	24.7%	43.4%
Hanover	7329	8494	9119	9212	10850	15.9%	7.4%	1.0%	17.8%
Haverhill	3127	3090	3445	4164	4416	-1.2%	11.5%	20.9%	6.1%
Hebron	153	234	349	386	459	53.0%	49.1%	10.6%	18.9%
Holderness	749	1048	1586	1694	1930	39.9%	51.3%	6.8%	13.9%
Landaff	289	292	266	350	378	1.0%	-8.9%	31.6%	8.0%
Lebanon	9299	9725	11134	12183	12568	4.6%	14.5%	9.4%	3.2%
Lincoln	1228	1341	1313	1229	1271	9.2%	-2.1%	-6.4%	3.4%
Lisbon	1788	1480	1517	1664	1587	-17.2%	2.5%	9.7%	-4.6%
Littleton	5003	5290	5558	5827	5845	5.7%	5.1%	4.8%	0.3%
Lyman	201	213	281	288	487	6.0%	31.9%	2.5%	69.1%
Lyme	1026	1112	1289	1496	1679	8.4%	15.9%	16.1%	12.2%
Monroe	421	385	619	746	759	-8.6%	60.8%	20.5%	1.7%
Orange	83	103	197	237	299	24.0%	91.3%	20.3%	26.2%
Orford	667	793	928	1008	1091	18.9%	17.0%	8.6%	8.2%
Piermont	477	462	507	624	709	-3.1%	9.7%	23.1%	13.6%
Plymouth	3210	4225	5094	5811	5892	31.6%	20.6%	14.0%	1.4%
Rumney	820	870	1212	1446	1480	6.0%	39.3%	19.3%	2.4%
Sugar Hill	-----	336	397	464	563	-----	18.2%	16.9%	21.3%
Thornton	480	594	952	1505	1843	23.8%	60.3%	58.1%	22.5%
Warren	548	539	650	820	873	-1.6%	20.6%	26.2%	6.5%
Waterville	14	109	180	151	257	678.6%	65.1%	-16.1%	70.2%
Wentworth	300	376	527	630	798	25.3%	40.2%	19.5%	26.6%
Woodstock	827	897	1008	1167	1139	8.5%	12.4%	15.8%	-2.4%
COUNTY	48857	54914	65806	74929	81740	12.4%	19.8%	13.9%	9.1%

Source: U.S. Census 1960, 1970, 1980, 1990 and 2000.

It should also be noted that for most communities in Grafton County, the 1970s represent the period when the largest increase in population happened, followed by the 1980s. Hanover is

the only town where the larger rate of population growth occurred during the 1990s. Furthermore, Lincoln, apart from Lisbon with an overall decrease (-9.6%) in population, is the town with the lowest growth rate between 1960 and 2000.

Although percentage growth rates are a useful tool for comparing relative growth among municipalities, it is equally important to examine the actual increase in population within a regional context. As previously stated, Lincoln's total population increased from 1228 in 1960 to 1271 in 2000. This represents only an additional 43 residents over the forty-year period, which represents the smallest actual increase (except for Lisbon which lost population overall) of any community in Grafton County.



D. COMPONENTS OF POPULATION CHANGE

Population growth is comprised of two primary components: natural increase (number of births less the number of deaths) and the net migration of people moving into or out of a community. As shown in Table 1.3, most of Lincoln's population increase during the 1990s was due to migration rather than natural increase. The relatively low natural increase of the population can be attributed to both the aging and movement of the baby boom generation out of the prime child-bearing years, as well as attractiveness of the quality of life in the Lincoln area to people living in other parts of New Hampshire or elsewhere.

	Population Change	Natural Increase	Net Migration	Net Migration as % of Pop. Change
1990-2000	42	7	35	83.30%

Source: NH Department of Health and Human Services

Another component of a town's population is the age distribution of its residents. As shown in Table 1.4, Lincoln is experiencing a general aging of the population caused by the progression of the large number of baby boomers into older age cohorts. Projections indicate that Lincoln will continue to age over the next couple of years.

	1990		2000	
	#	%	#	%
65 and over	199	16.3%	221	17.5%
55 to 64	104	8.4%	150	11.8%
35 to 54	302	24.5%	400	31.5%
25 to 34	218	17.7%	158	12.4%
20 to 24	75	6.1%	65	5.1%
5 to 19	267	21.8%	217	17.0%
Under 5	64	5.2%	60	4.7%
Total	1229	100.0%	1271	100.0%

Source: U.S. Census 1990 and 2000.

As illustrated in Table 1.4, the number of near seniors (55-64), as a percentage of Lincoln's total population, has increased from 8.4% in 1990 to 11.8% in 2000 – representing an increase of more than 3%. In terms of overall actual and percentage gains, there are approximately 150 near seniors in Lincoln, which denotes an increase of 46 (44%) since 1990.

The largest portion of Lincoln's population is the middle-age family (35-54) group, which is currently 31.5% of the total population: this represents an increase of 7% since 1990. In addition to representing the largest gains in terms of percent of the total population between 1990 and 2000, the middle-age family cohort experienced the largest actual and percentage growth of any group over the same period of time. Having a large number of middle-age families is usually beneficial to a community because members of this respective group are generally at the peak of their income earning potential and are on track to move into the near senior cohort, which typically puts very little fiscal strain on community infrastructure.

Interestingly, Lincoln has experienced a decline in the number of residents in the young families/singles (25-34) group over the past decade. Between 1990 and 2000, the number of residents in the young families/singles declined by 60, representing a decrease of 27.5%.

E. HOUSEHOLD CHARACTERISTICS

The population growth and age distribution of Lincoln's residents, combined with the nationwide trend of an increase in the number of single-parent households, has resulted in a corresponding impact on household growth and size. Currently, the average household in Lincoln is comprised of 2.18 persons. As shown in Table 1.5, this represents a decrease of 5.2% between 1990 and 2000, and 9.4% between 1980 and 1990. Grafton County households, although slightly larger, are shrinking at a similar pace as compared to Lincoln households. Households throughout the entire state experienced a similar reduction in size but are also much larger.

	1980	1990	2000	% Change 80-90	% Change 90- 00
Lincoln	2.54	2.3	2.18	9.4%	5.2%
Grafton County	2.83	2.51	2.38	11.3%	5.2%
State	2.85	2.62	2.53	8.1%	3.4%

Source: U.S. Census 1980, 1990 and 2000.

As a result of this reduction in household size, combined with a modest increase in population the number of households increased at a faster rate than population growth. For example, while Lincoln's population diminished by 6.4% in the 1980s and grew by only 3.4% in the 1990s, household growth, as shown in Table 1.6, increased by 3.3% and 9.2% over the same respective time periods.

	1980	1990	2000	% Change 80-90	% Change 90- 00
Lincoln	517	534	583	3.3%	9.2%
Grafton County	23221	27542	31598	18.6%	14.7%
State	323493	411186	474606	27.1%	15.4%

Source: U.S. Census 1980, 1990 and 2000.

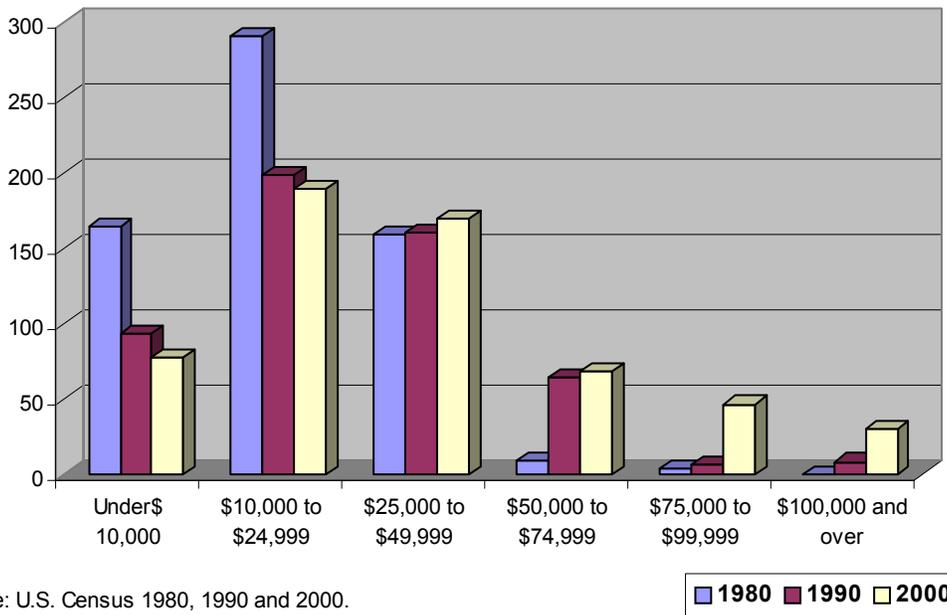
In terms of income trends, the Town of Lincoln currently has a median household income of approximately \$28,523, which represents an increase of about \$6,500 since 1990, and \$7,423 (50.9%) between 1980 and 1990. As shown in Table 1.7, Lincoln median household income is less than the County's median household income level for the time periods presented. In 1980, Lincoln's and the County's median household income were practically the same but it increased a lot more at the County level in the past two decades. In fact, between 1980 and 1990, Grafton County median household income increased 107% while Lincoln's only increased 50.9%.

	1980	1990	2000	\$ Change 80-90	% Change 80-90	\$ Change 90-00	% Change 90-00
Lincoln	\$14,577	\$22,000	\$28,523	\$7,423	50.9%	\$6,523	29.7%
Grafton County	\$14,523	\$30,065	\$41,962	\$15,542	107.0%	\$11,897	39.6%

Source: U.S. Census 1980, 1990 and 2000.

As shown in Figure 4.1, between 1990 and 2000, Lincoln experienced a gradual shift of households out of lower income brackets into higher income brackets. This is particularly evident in the under \$10,000 and \$10,000 to \$24,999 brackets, where we can witness a definite decrease from 1980 to 2000. Despite the gains, the total number of households with incomes below \$25,000, represents 45.7% of Lincoln’s population. Based on this percentage, it appears that there are still a significant number of households in financial need in Lincoln.

Figure 4.1 Distribution of Households By Income: 1990-2001
Town of Lincoln



F. HOUSING DEVELOPMENT PATTERNS

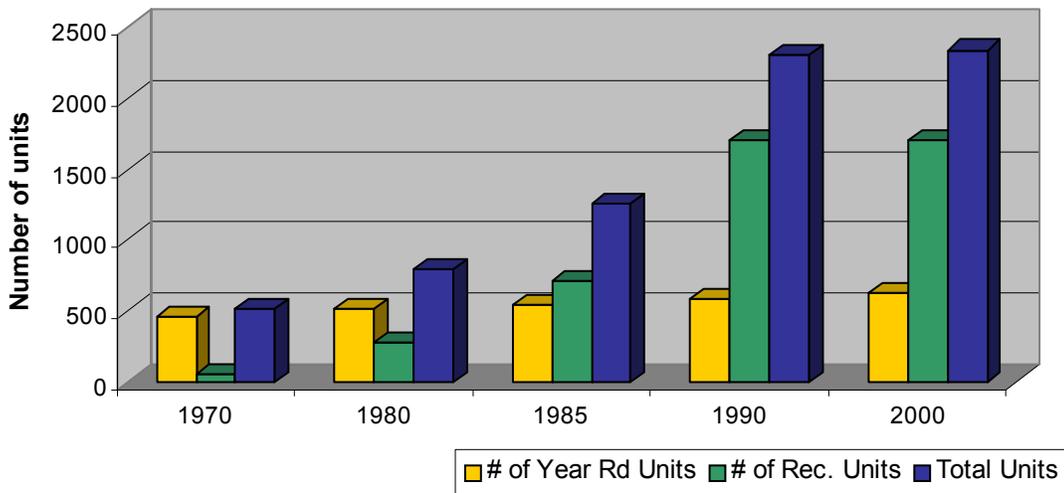
Single-family detached housing in Lincoln is primarily concentrated in the village center area, which is bounded by Pollard Road, the Pemi River and Interstate 93. In the last four decades, new residential developments, mostly condominiums, have been constructed along Route 112, east of Dodge Place all the way to Loon Mountain and beyond. These new developments are mainly composed of seasonal/recreational housing used by visitors and owners on an occasional basis. As demonstrated further, these seasonal housing units represent more than

half of the entire housing stock of Lincoln. In addition, there are a few smaller areas of residential development along Route 3 and other small developments of recreational housing scattered throughout the Town.

G. COMPOSITION OF THE HOUSING SUPPLY

As shown in Figure 4.2, the total number of housing units significantly increased in the Town of Lincoln between 1970 and 1990. However, this pace of growth significantly slowed down between 1990 and 2000, when only 39 new units (1.7% increase) were built. This graph also shows the difference between the number of year-round housing units and the number of recreational/seasonal housing units, which differs greatly. In fact, between 1980 and 1985 the number of recreational/seasonal units grew dramatically until the 1990's, becoming higher than the number of year-round units. The number of year-round units always followed a somewhat regular and slow increase.

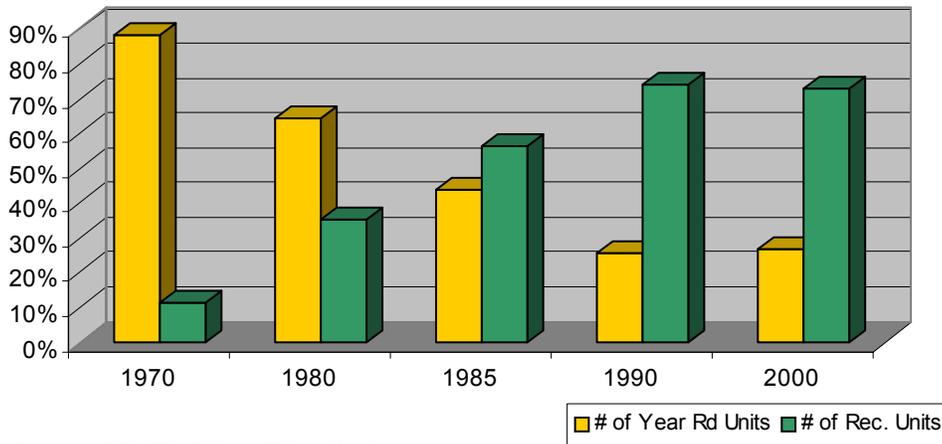
Figure 4.2 Early increase of Housing Stock
Town of Lincoln



Source: U.S. Census 2000.

Figure 1.3 helps understand this phenomenon by showing the change in the proportion of each type of housing during the same period of time. Again, 1985 represents the year when the number of seasonal units became higher than the number of year-round units and five years later, the difference was even more apparent.

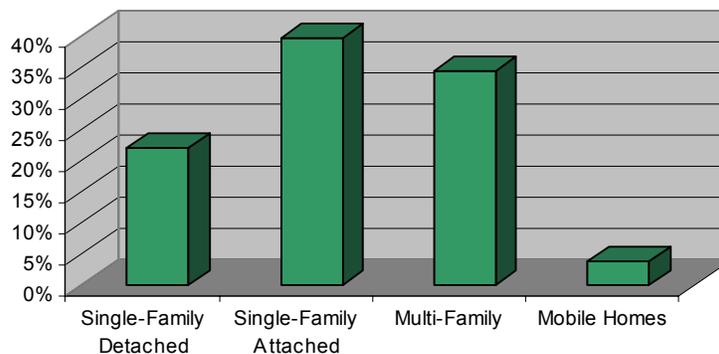
Figure 4.3 Proportion of Type of Housing
Town of Lincoln



Source: U.S. Census 1970, 1980, 1990 and 2000, NCC Windshield Housing Survey 1985 and Village Center Plan 1998.

Out of the total number of units 22% are single-family detached units, 39.7% are single-family attached units, 34.5% are multi-family units and 3.7% are mobile homes (Figure 4.4).

Figure 4.4 Type of Units in Structure - 2000
Town of Lincoln



Source: U.S. Census 2000.

H. SEASONAL HOUSING

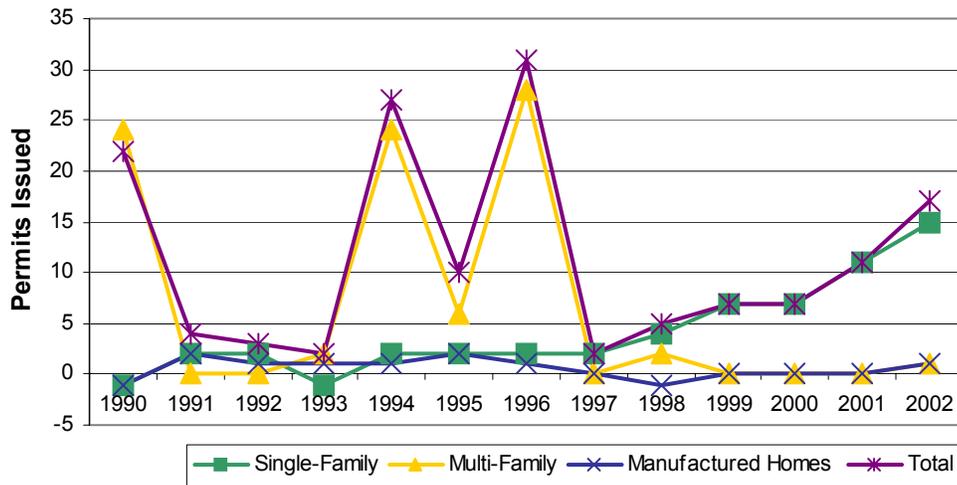
In addition to housing units that are occupied on a year round basis, Lincoln, as a tourist and vacation destination, has a significant portion of its housing stock that is only used on a seasonal basis. Typically, seasonal housing units are primarily used during the peak tourist season, which in many communities is summer. However, due to Lincoln’s niche as both a summer outdoor recreation and winter ski destination, many seasonal housing units in the town are used at different time periods throughout the year.

According to the 2000 U.S. Census, Lincoln had a total of 2,339 housing units of which 1,707 are designated seasonal use – representing about 73% of the total housing stock (see Figure 4.2). Based on Census data, Lincoln, between 1970 and 1990, experienced an increase of 1,649 dwelling units classified as seasonal. However, between 1990 and 2000, this increase in the number of seasonal units halted – representing a significant change. The drop in the number of new seasonal housing units could be attributed to the conversion of some of these dwellings to year-round units. However, the drop in the number of seasonal units may also be attributed to a change in the Census Bureau’s definition of a seasonal unit.

I. HOUSING SUPPLY AND CONSTRUCTION TRENDS

According to the NHOSP, between 1990 and 2002, 148 residential building permits were issued for new dwelling units in Lincoln. As shown in Figure 4.5, the total number of permits issued appears to spike heavily in 1990, 1994 and 1996 which is due to the issuance of a proportionately large number of multi-family permits. Excluding the 1990, 1994 and 1996 surge in multi-family building permits, the number of permits issued has remained relatively constant within a range of between 0 and 10 permits annually throughout the 1990s.

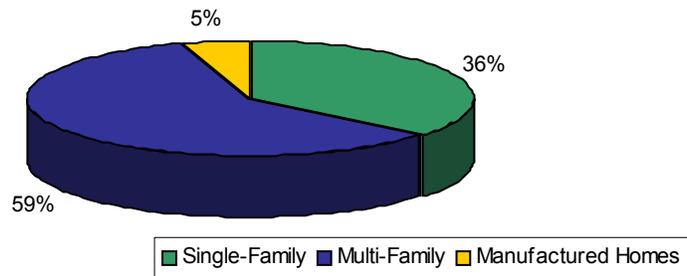
Figure 4.5 Building Permit Trends: 1990-2002
Town of Lincoln



Source: New Hampshire Office of State Planning, Current Estimates and Trends in New Hampshire’s Housing Supply, 1999.

In terms of the distribution of the total number of building permits issued throughout the 1990s and beginning of the next century, the proportion of single-family (36%) was smaller than multi-family (59%). The number of manufactured home permits issued stayed pretty much the same.

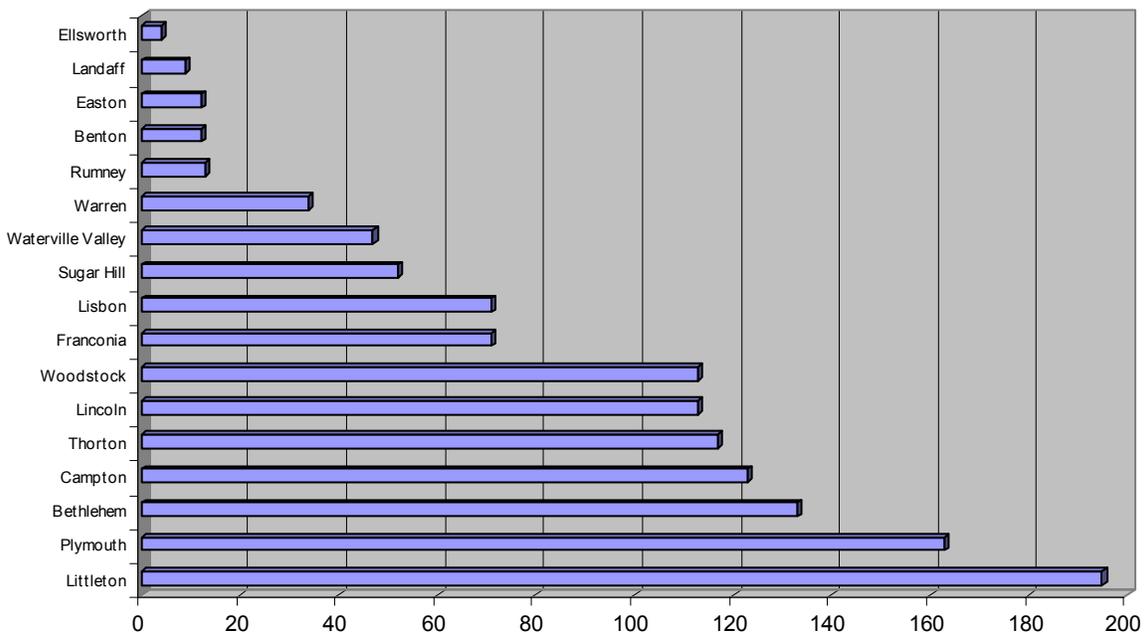
Figure 4.6 Distribution of Residential Building Permits Issued in Lincoln: 1990-2002



Source: New Hampshire Office of State Planning, Current Estimates and Trends in New Hampshire's Housing Supply, 1999.

From a regional perspective, Lincoln issued the sixth largest number of residential building permits for new construction over the last decade when compared to other surrounding communities in Grafton County. As shown in Figure 4.7, Lincoln is sixth after Littleton, Plymouth, Bethlehem, Campton and Thornton in terms of the total number of building permits issued between 1990-1999.

Figure 4.7 Total Residential Building Permits Issued: 1990-1999
Surrounding Communities in Grafton County

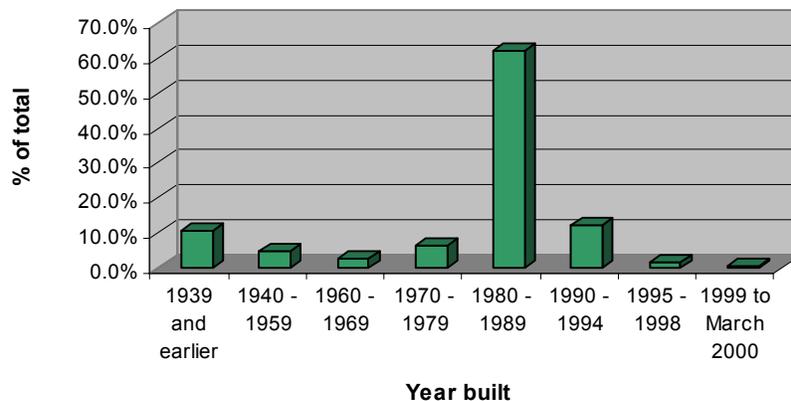


Source: New Hampshire Office of State Planning, Current Estimates and Trends in New Hampshire's Housing Supply, 1999.

J. AGE OF HOUSING STOCK AND GEOGRAPHIC DISTRIBUTION

The age of a community's housing stock can provide an indication about the condition, quality and safety of the housing units. Older units may have been constructed to standards, from the perspective of buildings codes and life safety requirements, that may not be as demanding especially in regard to multi-family units. As indicated in Figure 4.8, approximately 85% of Lincoln's housing stock could be considered relatively new having been built over the past 40 years (since 1960). Approximately 5% of the housing stock was constructed between 1940 and 1959, with the remaining 10% being constructed before 1940.

Figure 4.8 Age of Housing Stock
Town of Lincoln



Source: U.S. Census 2000.

As shown in Figure 4.8, approximately three out of five housing units in Lincoln were constructed during the 1980s, which coincides with the large increase in recreational/seasonal units. The building boom of the 1980s brought about the development of large subdivisions especially along Route 112. Residential growth in the 1990s continued with the build-out of existing subdivisions as well as sporadic small subdivision developments.

K. RENTAL COSTS VERSUS HOME OWNERSHIP COSTS

This section examines the cost of housing in Lincoln from both a rental and an ownership perspective. When the term *contract rent* is used, it indicates the price paid monthly by the tenant to the landlord. Contract rent is the advertised cost of the unit, and the utilities included in this payment vary from unit to unit. *Gross rent* indicates the sum of the contract rent and the prices of the utilities the tenant uses.

Rental and ownership costs include rent (or mortgage) and utilities. The median is defined as the middle value when numbers are arranged in increasing (or decreasing) order. In the following tables, median values were taken directly from Census or other records.

	Renter Occupied	Owner Occupied
Median Cost per Month	\$438	
With Mortgage		\$811
Without Mortgage		\$283

Source: U.S. Census 2000.

	Median value of owner-occupied housing
Bethlehem	\$85,900
Easton	\$136,200
Franconia	\$140,900
Lincoln	\$95,000
Thornton	\$106,600
Woodstock	\$93,900

Source: U.S. Census 2000.

Compared to abutting communities, Lincoln fell in the middle of the value of owner-occupied housing units in 2000. Contract rent is the amount paid to a landlord on a monthly basis. Lincoln's rental housing units rented at the lower range of those rents of abutting communities, with \$348 as Lincoln's median rent in 2000. The contract rent does not include utilities.

	Median Contract Rent	Median Gross Rent
Bethlehem	\$435	\$518
Easton	\$400	\$450
Franconia	\$461	\$525
Lincoln	\$348	\$438
Thornton	\$514	\$590
Woodstock	\$406	\$499

Source: U.S. Census 2000.

Table 4.10 depicts the median rent that people in Lincoln and surrounding towns' pay. Lincoln falls once again in the lower range of housing costs, according to the U.S. Census.

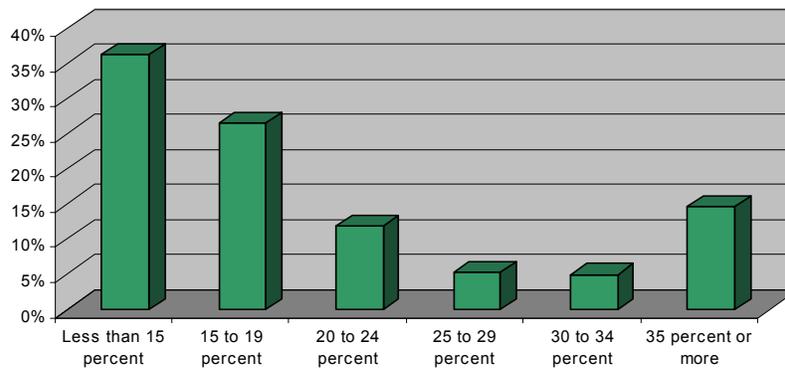
L. AFFORDABLE HOUSING

The issue of affordable housing has become one of the more contentious problems facing the state and local communities. The booming economic growth experienced throughout the state during the late 1990s and into 2000, fostered employment growth that resulted in an influx of workers into New Hampshire to fill newly created positions. However, although the expansion of the state economy produced positive economic indicators, these benefits have also contributed to skyrocketing home sale prices and rental rates and plummeting vacancy rates.

The lack of affordable housing is a significant problem not only for New Hampshire communities and resort towns, but also for many communities and resort towns around the country. Affordable housing is a problem for renters and homeowners, young families and elderly. In 1999, 45% of renters across New Hampshire could not afford the fair market rents in their area (*Feeling the Pinch*, The New Hampshire Housing Forum). The U.S. Department of Housing and Urban Development (HUD) defines affordable housing as that which does not exceed 30% of annual household income and which includes all expenses related to housing, including utilities and taxes. Any household spending more than 30% of its income on housing is considered cost-burdened. The standard does oversimplify reality in that some families find it harder to pay 30% of their income for housing than others, depending on total family income: low-income families are hit hardest. Thus, this oversimplification actually understates the housing problems of low-income families.

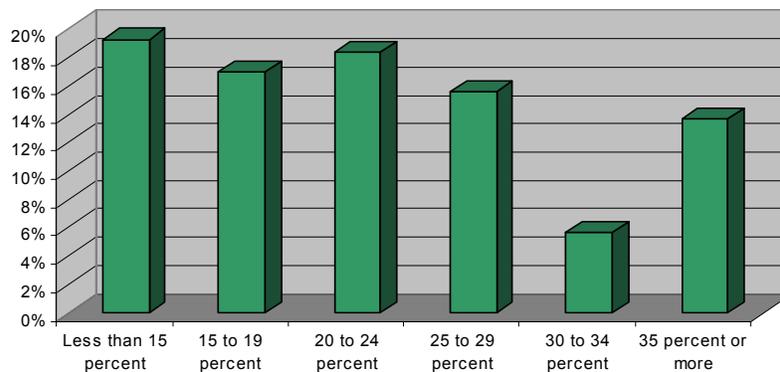
Using the Department of Housing definition as a basis for analysis, in 1999, 70% of renters (Figure 4.10) and 80% of homeowners (Figure 4.9) in Lincoln are living affordably, although taxes and utilities are not taken into consideration in the owner costs Figure 4.9.

Figure 4.9 Selected Monthly Owner Costs as a percentage of household income in 1999



Source: U.S. Census 2000.

Figure 4.10 Gross rent as a percentage of household income in 1999



Source: U.S. Census 2000.

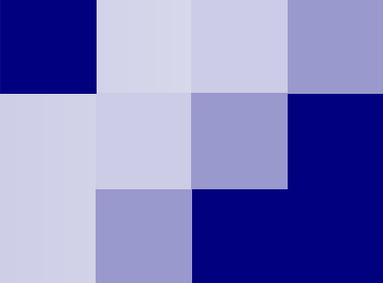
Affordable housing is an issue that is considered by all levels of government. The Federal Government has long been promoting affordable housing through various programs administered by the Department of Housing and Urban Development. State Government has promoted affordable housing through passage of several laws requiring communities to provide affordable housing. Furthermore, the State has also created several commissions and departments, such as the New Hampshire Housing Finance Authority, to examine and foster the development of affordable housing opportunities.

For some of those priced out of the expensive home purchase market, the only viable option is manufactured housing (“manufactured housing” includes both single-family mobile homes and prefabricated homes set on permanent foundations, either of which having been transported to the home site in one or more sections.) Manufactured housing can be organized in three types of locations – individually owned lots, investor-owned parks and cooperatively owned parks.

NH RSA 674:32 stipulates that all communities that have adopted land use regulations shall allow manufactured housing as an allowed use. Of the total land area zoned for residential use, manufactured housing must be permitted on a majority of that land area. The State has provided communities with two options for the development of manufactured housing. First, communities may permit the development of manufactured housing on individual lots. No special exception requirement is allowed for this type of development pattern, unless a special exception is required for the construction of traditional dwelling units on individual lots, or traditional subdivisions. Secondly, communities may encourage the development of manufactured housing in a park atmosphere. The law requires that reasonable densities and expansion potential must be permitted to these types of development. Communities need to ensure that no undue barriers to the development of affordable housing have been created by special requirements for manufactured housing.

According to the 2000 U.S. Census, there are 85 manufactured homes in Lincoln. There is one park (called Larue’s) located on Route 3 between Maltais Farm Road and Old Route 3, and the other manufactured homes are scattered throughout town.

Like many other small towns in New Hampshire, Lincoln has a growing number of senior citizens. Housing for seniors is crucial for those who cannot take care of themselves, afford taxes or have the resources to upkeep their homes. Seniors now comprise 17.5% of the total population of the Town. Within the next ten years, that number is expected to increase considerably as baby boomers will move into the senior age category (Table 1.4). Currently, Lincoln has one elderly housing complex (Lincoln Green) located on Connector Road in the heart of the village center. Lincoln should consider alternatives to accommodate its seniors within the next decade.



Town of Lincoln Master Plan

CHAPTER V - TRANSPORTATION

Authored By: North Country Council

A. INTRODUCTION

How people and goods move from one place to another is a fundamental issue that needs to be addressed when planning and managing growth in Lincoln. As the community continues to attract new commercial and residential development, and existing businesses expand, adequate transportation infrastructure and services must be provided.

The primary focus of this chapter is to identify local and regional issues and opportunities to enhance and diversify the transportation network through expansion, maintenance, land use regulations and policy. The areas of transportation addressed in this chapter include: Transportation Law, Road Transportation Network, the Existing Transportation Network in Lincoln, Traffic Circulation & Capacity Issues, and Transportation and Tourism.

In order to obtain data and information for this chapter, several different sources were contacted including the New Hampshire Department of Transportation, Lincoln Planning, Police Department and Department of Public Works (DPW). Additionally, several previous studies and reports that examined Lincoln transportation projects and issues were used during this process.

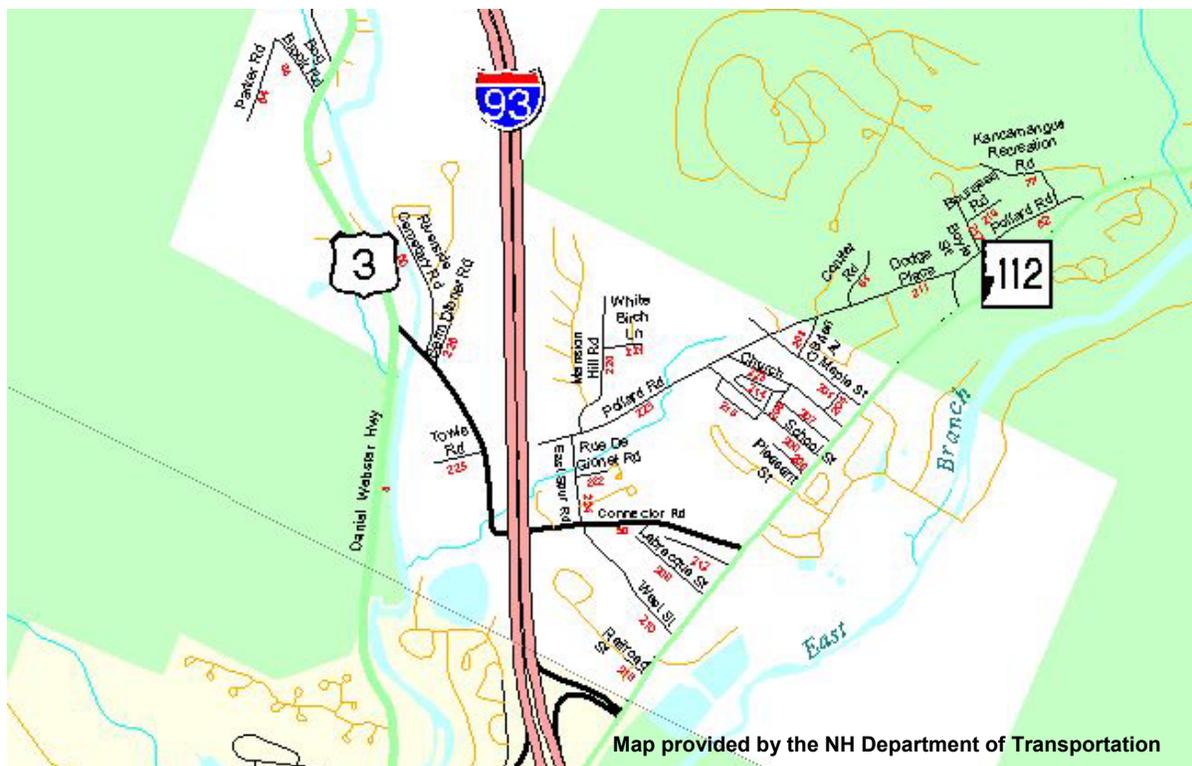
B. SUMMARY OF FINDINGS AND CONCLUSIONS

Federal Roads	I-93, Route 3
State Roads	Rt. 112, Rt. 118
Local Roads	Many roads totaling 7.3 miles
Nearest Interstate Exits	I-93 (Exit 32 and 33)
Distance	Local access
Public Transportation	Statewide & Shuttle bus at Loon in the winter
Nearest Airport	Whitefield
Runway	3,500 feet
Lighted	Yes
Navigational Aids	Yes
Nearest Commercial Airport	Laconia
Distance	45 miles
Source: NH Employment Security, Community Profile	

The following points summarize the transportation findings and conclusions presented within this chapter.

- Lincoln is located at the confluence of three major state highways, Interstate 93, the Daniel Webster Highway (Route 3) and the Kancamagus Highway (Route 112). These routes constitute approximately 80% of the road network in Town.

- Other forms of regional transportation, such as air and rail, have not been a major factor in moving people or goods in and out of the Lincoln Region.
- The Town has approximately 7.3 miles of local roads. The vast majority of these are Class V roads and subject to regular local road maintenance.
- Local public transportation is non-existent in Lincoln. However, a couple of shuttle services are offered in Town for people or for businesses that subscribe.
- Parking is a growing concern and a balance of well distributed public and private spaces, with appropriate management to accommodate the needs of residents and visitors alike, needs to be determined.
- There are dedicated bicycle lanes located along portions of Route 3 and Connector Road. Two paths exist in Lincoln; one parallels Connector Road from Route 112 to East Spur Road and the other runs along Route 112 from Pollard Road to the Village at Loon Mountain.
- Because of tourism in Lincoln, traffic volumes are more important in the fall and summer, but are also significant in the winter (because of the skier population). Accidents are also more frequent during those seasons when tourists are more likely to travel through town.



C. TRANSPORTATION LAW & FUNDING

The greatest change in state legislature affecting transportation planning is the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). ISTEA brought about several changes to the way the state, the region and the towns plan for future transportation needs. The Act includes several sub-categories, which are increased public involvement, statewide planning factors, management and monitoring systems, and federal transportation funds.

Federal transportation funds include interstate, transit, bridges, National Highway System (NHS), Congestion Mitigation and Air Quality (CMAQ), and the Surface Transportation Program (STP). The STP was established as a means of distributing federal transportation dollars. The program calls for a certain amount to be set aside for transportation enhancements and a certain amount to be set aside for safety issues. The rest of the funding is distributed among the towns for various transportation projects. There are processes towns must follow in order to apply for the funding. All projects accepted for funding will become a part of the New Hampshire Department of Transportation's Ten Year Plan. The Town of Lincoln is currently in the 10 Year Plan for two I-93 projects and one railroad reconstruction project. One of the I-93 projects is a cold plane, overlay with fabric and 2" pavement from the US 3 bridge to the Whitehouse Bridge and is currently scheduled to be completed in 2007 and the second I-93 project is a reclaim and overlay project from Exit 32 to Exit 33 that is currently scheduled to be completed in 2010. The reconstruction of the railroad crossing Rt. 112 is schedule to be completed in 2006.

Additional state legislation that affects the way Lincoln plans for its transportation needs arose in 1997 with a revision to New Hampshire State Statutes. As of July 1, 1997, "the legislative body of a municipality may vote to collect an additional fee for the purpose of supporting a municipal and transportation improvement fund, which shall be a capital reserve fund established for this purpose . . . for cities and towns, respectively". The fee can be used in part or wholly for "improvements in the local or regional transportation systems including roads, bridges, bicycle and pedestrian facilities, parking and inter-modal facilities and public transportation. The funds may be used for engineering, right-of-way acquisition, and construction costs of transportation facilities, and for operating and capital costs of public transportation only." The Town of Lincoln could consider additional fees for road improvement projects not funded or eligible for funding through the transportation funding programs or as a funding match for these programs.

D. ROAD TRANSPORTATION NETWORK

The regional highway network is comprised of six classifications as defined by the New Hampshire Department of Transportation (NHDOT) and shown in Table 5.2 below.

Class	Description
I	Existing or proposed highways on the primary state highway system.
II	Existing or proposed highways on the secondary state highway system.
III	Recreational roads leading to, and within, state reservations designated by the legislature.
IV	Highways with the compact sections of designated municipalities.
V	All other town maintained roads.
VI	All other public ways, including closed roads and roads not maintained in condition suitable for travel for five or more years.

Source: NHDOT

New Hampshire's highway classification system can be divided into two broad categories – state highways and municipal highways. Class I, II, III highways are those controlled and maintained by the New Hampshire Department of Transportation (NHDOT). Class IV, V and VI highways are controlled by and maintained by local governments.

I-93, Route 3 and Route 112 are maintained by NHDOT as part of the federal-aid primary system. The primary and secondary classes are defined by NHDOT according to whether a road is considered to be major or minor and the amount of population served by it. Lincoln is the confluence where several state and regional highway corridors merge. The Interstate 93 and Route 112 corridors are critical links in the highway systems. A substantial amount of inter-regional and recreational traffic moves through Lincoln along these corridors to points north, east and south.

Class	2002	Remarks
I	15.2	I-93, Route 3
II	14.2	Route 112
III	N/A	
IV	N/A	
V	7.3	All regularly traveled town roads
VI	N/A	
Other	1	
Total	37.8	

Source: NHDOT

E. THE EXISTING TRANSPORTATION NETWORK

The Town of Lincoln is divided into two transportation areas by Interstate 93. One is located along U.S. Route 3, the other is along NH Route 112. Route 3A (also known as Connector

Road) joins these two roadways at the southern edge of Lincoln. Pollard Road joins Connector to Route 112 at the eastern edge of Lincoln. The following summarizes roadway characteristics in the study area.

Regional Transportation Network

Road Network

Interstate 93

Interstate 93 is the major north-south corridor through the state from Massachusetts to Vermont and Canada. It provides easy access to the area for trucking and visitors. The ease of access that the interstate allows for tourists has been a major factor in Lincoln's growth during the 1980's and 1990's and will continue to be one of the major reasons for its continued growth in the future.

Route 3

Route 3 is a corridor that serves popular tourist destinations such as Clark's Trading Post, Whales Trail Water Park and Franconia Notch State Park. Route 3 also contains a mix of residential and commercial uses. Route 3 from the Woodstock town line to Connector Road is wooded and undeveloped. This section of Route 3 is a two-lane roadway with one travel lane in each direction. From Connector Road to Exit 33 the roadway configuration remains two-lane in each direction. This section of Route 3 is of mixed use including residential and commercial facilities.

Exclusive left-turn lanes are present where the Exit 33 entrance/exit ramps come into Route 3. There is four foot detached sidewalk that runs on the west side of Route 3 from the southbound exit ramp to the northbound entrance ramp.

Route 3 from Exit 33 to The Flume Visitor Center has many overnight lodging facilities and several commercial tourist attractions. There are also some private residences in this area. The roadway configuration is primarily two lanes with one travel lane in each direction. For approximately one-half mile, within a commercialized area, Route 3 transitions to a three lane section, losing the shoulder on the east side and gaining a second northbound lane. The roadway then transitions back to a two-lane section with shoulders on both sides. All intersections along Route 3 are controlled with stop signs, with Route 3 having a free through movement.

NH Route 112

Route 112 is also another important part of Lincoln's transportation network as it provides an important link to the Conway area. This is one of the most scenic byways in all of New

England and provides year round access for vacation travel. It serves as a local road (Main Street) within the town, but is also known as the Kancamagus Scenic Byway and offers access to the Loon Mountain recreation area and condominium developments.

NH Route 112 in Lincoln transitions quickly from a two-lane rural highway (east-west orientation) in the area of the I-93 Interchange (Exit 32), to a two-lane urban street (Main Street) in a built-up area, with on-street parking, crosswalks, and high driveway density. Continuing easterly, it switches back to a rural two-lane highway (Kancamagus Highway), with passing zones and extends to and beyond the Ski Area at Loon Mountain. Land uses adjacent to the highway in the developed sections are predominantly retail/commercial and lodging establishments that cater to skiers (winter) and tourists (spring/summer/fall). Residential areas are generally concentrated to the north of the highway, and along many of the intersecting side streets. The posted speed limit on NH 112 is 30 mph in the downtown area, 40 mph east (0.2 miles) of Pollard Road, and 50 mph west (0.75 miles) of the Main Loon Mountain Access Road.

This roadway exhibits characteristics of a downtown village with pedestrian activity, on-street parking, and frequent turning movements. In areas where no on-street parking exists there is a wide shoulder available.

This highway system makes Lincoln the primary gateway community to the White Mountain National Forest and provides many unique business opportunities as well as regional responsibilities. It is vital to Lincoln's long-term growth that these important links to other parts of the State and southern New England be maintained in good condition.

Major Intersections along NH 112

NH 112/I-93 Southbound Ramps – NH 112 provides a single through lane per direction, with a left-turn lane in the eastbound direction and a right-turn lane in the westbound direction, for vehicles destined for points south on I-93. The southbound off-ramp from I-93 provides a single approach lane to NH 112 for left and right turning vehicles. This T-intersection operates under STOP sign control on the off-ramp approach.

NH 112/I-93 Northbound Ramps – This 4-way intersection operates under traffic signal control. The Visitor Information Center driveway intersects NH 112 directly across from the northbound ramps. Both the driveway and off-ramp have single approach lanes to the intersection from which all turns are made. In the eastbound direction, NH 112 provides an exclusive left-turn lane (for vehicles destined for points north on I-93) and one shared through/right-turn lane. The westbound approach provides a shared left-turn/through lane and a shared through/right-turn lane.

NH 112/NH3-A – This 4-way intersection is located approximately 0.6 miles east of the I-93 Interchange, and operates under traffic signal control. NH 112 provides an exclusive left-turn lane and a shared through/right-turn lane on the eastbound and westbound approaches to the intersection. The northbound Linwood Plaza approach consists of a narrow shared through/left-turn lane and an exclusive right-turn lane which are separated from the ingress lane by a small raised driveway median island. The southbound NH 3-A approach provides a single lane from which all turns are completed. On-street parking is prohibited in the area of this intersection.

NH 112/Mill at Loon/ School Driveway – This 4-way intersection is located approximately 0.2 miles east of the NH 3-A intersection, and operates under STOP sign control on the side streets. An intersection Control Beacon, with flashing red (for the side streets) and flashing yellow (for NH 112) indications, is

suspended over the center of the intersection. NH 112 provides a shared left-turn/through lane and an exclusive right-turn lane for eastbound vehicles, and a single approach lane (shared left-turn/through/right-turn lane) for westbound vehicles. The Mill driveway provides two approach lanes: a shared left-turn/through lane, and an exclusive right-turn lane for vehicles turning toward the ski area. The school driveway approach consists of one ingress and egress lane. On-street parking is prohibited at the intersection, however parking spaces are present in advance of the intersection on the westbound approach, and along both departure legs.

NH 112/South Mountain Access Road/Lincoln Square Driveway – This 4-way intersection is located approximately 0.2 miles east of the Mill Driveway and operates as an uncontrolled intersection. The Access Road runs behind the Mill complex and to an existing bridge over the East Branch. This route provides access to the South Mountain parking lot and the private Access Road that runs to the Main Loon Mountain. This Access Road is used for overflow parking at South Mountain, when ticket sales exceed the capacity of the parking at the Main Mountain. A shuttle bus system is used to transport skiers to the Main Mountain. The lane arrangement on NH 112, and on both side streets, consists of a single approach lane from which all turns are completed. Except for a short “no parking” zone on the westbound approach, parking is permitted on both sides of the highway, in marked parking spaces (north side) and in the wide paved shoulder area (south side).

NH 112/Main Loon Mountain Access Road – This T-intersection is located approximately 2.9 miles east of the I-93 Interchange (Exit 32) and is the primary access point for the Ski Area at Loon. This intersection is controlled by a STOP sign on the Access Road approach, however a uniformed officer from the Lincoln Police Department is present during the departure peak period to direct traffic on an as needed basis. NH 112 provides a single approach lane in the westbound direction, and an eastbound through-lane and exclusive right-turn lane for vehicles entering Loon Mountain. The Access Road approach to NH 112 flares out sufficiently between the bridge and the highway to provide one lane for left-turns exclusively, and an area for right-turning vehicles to travel around the left-turning vehicles.

New Proposed South Mountain Access Road/NH 112—This option is proposed as part of the South Loon Mountain development and involves construction of a new access road to the South Loon Mountain base area. The new road would begin directly across NH 112 from the northbound I-93 ramps. It would expand on and utilize the access road into a state information area. The access road would then turn north and parallel an old railroad grade along the sewage lagoons. The road would then intersect the existing road to Lincoln’s solid waste management area and utilize this existing road for a short distance, branching off to follow the railroad right-of-way. The access road would then swing around the mall building near the old Mill, and then north to the existing road in the mall complex, which presently connects directly to the South Loon Mountain base area. (These intersections descriptions were excerpted from the Final Environmental Impact Statement of the Loon Mountain Ski Area, South Mountain Expansion Project)

Air Transportation

Presently there is no air transportation to the immediate area. In fact, there is no longer an airport in Lincoln and the closest airport is in Whitefield. Lincoln had an airport until the interstate was built which took most of the land on which the airport was located. For the past 6 to 8 years, the Town of Lincoln has contributed \$600 a year to the development fund of the Jefferson Airport in Whitefield.

Local Transportation Network

Local Roads

Locally owned and maintained roads comprise only about 20% of the Town's road system. This low percentage of roads for the Town to maintain is due to the fact that the major arterial roads through the Town are State owned roads, and that all of the roads within recent private residential developments are maintained as private roads.

Route 3-A (Connector Road)

Connector Road joins Route 112 and Route 3 at the southern end of town. It is primarily undeveloped, consisting of only a few commercial and residential properties. Connector Road is a two lane roadway with one travel lane in each direction. The shoulders on Connector Road are marked for use as bike lanes.

Pollard Road

Pollard Road is a residential corridor that links Connector Road and Route 112. Pollard Road is a two lane roadway with one travel lane in each direction. No shoulders are delineated on the pavement. Pollard Road traffic encounters stop signs when it meets both Route 112 and Connector Road. One flashing red/yellow beacon is present on Pollard Road where it intersects Church Street.

Parking

Generally, there is an ample supply of parking within Lincoln's downtown. At peak times during the ski season, several of the ski shops utilize a significant amount of on-street parking, but this has yet to become a significant problem. During fall and summer, when tourism is at its peak, the lack of parking can become an issue during certain periods of the day. On-street parking is generally recognized as a healthy and important component to a vibrant downtown. Most recent developments provide all necessary parking on site. However, such developments provide parking for not only average daily demand, but also for peak times. The result is that approximately half of the paved parking areas remain unused except during peak times.

As mentioned in the Village Center Plan, prepared in 2002, in order to encourage through traffic to stop as well as to improve pedestrian activity within the Village Center area, the Planning Board has established as a policy the concept that a series of smaller size municipal parking lots scattered throughout the Village Center area is preferred to fewer, larger parking lots. In conjunction with nearby Municipal Parking Lots, on-street parking is desired along Main Street (NH Route 112) wherever possible without undue sacrifice of highway design standards. Such parking serves the various purposes of providing parking to the Main Street business community, slowing down automobile traffic, and further establishing the Village Center as a pedestrian oriented district.

Pedestrians

There are several problems within Lincoln which do not encourage pedestrian access. The development of strip malls discourages people from walking when developments should encourage pedestrian traffic flow.

Pedestrian traffic is beneficial to the Town of Lincoln in several ways. It reduces people's dependence upon the car to get from one store to another. This can significantly reduce traffic congestion. If developments are built so that pedestrian traffic is encouraged this can be extremely beneficial to business. Tourists and most people find village centers more visually pleasing and enjoyable to visit than a strip of small outlet malls. Providing enjoyable surroundings for local residents and tourists alike can only help to promote the Town and the area.

The Village Center Plan (2002) has the main goal of transforming the downtown area into a pedestrian/non-automobile friendly district. In fact, pedestrian access for all developments throughout the Town should be encouraged. Developments should be designed to be pedestrian friendly, providing access within and between subdivisions as well as between downtown developments. New developments should be designed so that Route 112 and Route 3 are not impacted by high counts of traffic moving from one development to another. The Traffic Study prepared by Wilbur Smith (see APPENDIX A) proposes many pedestrian improvements to Main Street and other major roads in Lincoln.

Public Transportation

Public transportation within Lincoln presently does not exist. The Shuttle Connection is a taxi type shuttle service which provides on-call public transportation services for a per mile fee.

In the winter, Loon Mountain runs a shuttle bus between the mountain and those businesses or condominium projects which participate in the shuttle program. This shuttle program only runs in the winter.

Bike Path

According to the traffic study performed by Wilbur Smith, five to ten foot shoulders are present along most of Route 3 and Connector Road, and are marked for use as bike lanes. However, for approximately one-half mile in the northern section of Route 3 a second northbound lane replaces the shoulder on the east. This half-mile loss of bike lane breaks the continuity of the intended bicycle access from downtown Lincoln to the Flume Visitors Center. Furthermore, the wide cross section of Route 3 contributes to excess speed throughout the corridor, endangering bicyclists and pedestrians.

A sidewalk parallels Connector Road from Route 112 to East Spur Road. The path is located approximately 20 feet off the north edge of Connector Road; it is paved and has its own lighting structures. Another multi-use trail meanders alongside Route 112 beginning near the Village at Loon Mountain recreation area and continues to Pollard Road where it meets city

sidewalk. However, the downtown section of Route 112 does not accommodate bicyclists.

Bridges

The Town of Lincoln owns one bridge, the Loon Mountain Bridge, which crosses the Pemigewasset River at the entrance to Loon Mountain Ski Area. Reconstruction of the bridge was completed in December 1989. The bridge was widened to three lanes, structurally rebuilt and re-supported, and a sidewalk was added.

F. TRAFFIC CIRCULATION & CAPACITY ISSUES

Average Annual Daily Traffic Counts (AADT)

Historical daily traffic volumes for Lincoln were obtained from the Office of North Country Council. In addition to three permanent (year round) count stations, NHDOT maintains a database of short term counts which are performed on a less frequent basis. The historical data from count stations is summarized in Table 5.4. The volumes noted in the table are Average Annual Daily Traffic (AADT) volumes. Annual traffic in terms of vehicles per year is used for determining annual traffic in a given geographic area. One of the major uses of annual traffic volumes is to indicate trends in volumes which in turn are related to future traffic growth. For the permanent count locations, the AADT is a number computed by adding all daily volume (for 365 days) and dividing by 365. For other locations, traffic volume counts were conducted over several days and then factored to produce an estimated AADT. This is an important distinction, because many AADT values within Lincoln are estimated and illustrate negative growth patterns for some streets. A summary of each location's traffic counts is noted as follows:

	1997	1998	1999	2000	2001
US 3 South of Indian Head	2,700	*	2,200	*	2,400
US 3 Below I-93 Overpass at Exit 33	*	3,900	2,500	*	
NH 112 East of Loon Mountain	*	4,500	*	*	2,400
NH 112 East of Pollard Road	5,000	*	5,300	*	4,100
Connector Road East of US 3	2,900	*	*	2,400	*
I-93 SB/NB North of NH 112 Exit 32-33	6,700	5,700	4,300	9,000	8,300
I-93 SB/NB 0.5 miles south of Franconia					
Town Line	7,500	8,200	9,500	10,000	9,600
I-93 between Exit 33 and Parkway Exit 1	6,963	7,630	8,546	8,171	8,404
Source: NH DOT					

A more specific AADT count for the I-93 at Exit 33 permanent count station is presented in Table 5.5 below.

AVERAGE ANNUAL DAILY TRAFFIC COUNTS I-93 AT EXIT 33 - LINCOLN						
YEAR	AVG. SUNDAY	AVG. WEEKDAY	AVG. SATURDAY	ADJUSTED AVG. DAY	TOTAL VEHICLES	GAIN LOSS
1997	9,100	6,293	8,217	6,967	2,542,772	
1998	9,669	6,842	8,811	7,526	2,746,784	8.0
1999	9,997	7,685	9,599	8,287	3,024,837	10.1
2000	9,811	7,564	9,512	8,172	2,990,713	-1.4
2001	10,312	7,694	9,775	8,364	3,052,708	2.4

Source: NHDOT, Automatic Traffic Recorder Reports and North Country Council.

The assessment of existing safety conditions within the study area was based upon reported accidents from the most recent available five-year period. Accident statistics were obtained from the Lincoln Police Department for the period 1998-2002. Table 5.1, of the Wilbur Smith Traffic Study (page 15), summarizes the accident statistics within the study area. A majority of the accidents in Lincoln occur on Friday, Saturday and Sunday. These are days typically thought of as recreation days, when more people are apt to be traveling through Lincoln to take advantage of the activities available in the area. A greater amount of accidents also take place in the winter and summer months, times when there are lots of drivers in the Lincoln area who are unfamiliar with the town. Approximately half of the accidents occur in inclement weather.

Future Traffic Conditions

Background traffic growth in Lincoln was based upon a review of historic traffic volume growth at various locations within town. The growth projections were based upon the development of a simple linear trend model. As noted in the traffic study performed by Wilbur Smith (2003), traffic is projected to increase from between 10% to 56% over the next ten years. On average, traffic is expected to grow by 2.9% per year.

Traffic growth associated with the Loon Mountain Expansion project was based upon the Traffic Impact and Site Access Study prepared by Stephen G. Pernaw & Company dated May 1998 with appendices dated July 2000. According to the study, the expansion plan will increase the "Comfortable Carrying Capacity" of the Ski Area from 6,100 people presently to 9,000 people, and generate 493 new trips. The expansion plan will include enhancements to the Main Loon Mountain, new ski lifts and trails at South Mountain, and several new parking lots.

The Town of Lincoln developed a list of potential future developments that could impact traffic volumes.

- Forest Ridge, Pollard Brook – Phase IV, Beacon, Kancamagus Motor Lodge, Campers World, Clearbrook, Coolidge, East Pemi, Bunker Hill, The Village at Loon Mountain and the Loon Mountain Recreation Corporation. (See Wilbur Smith Traffic Study in APPENDIX A for further information on traffic generation from these developments)

Information taken from the Traffic Study prepared by Wilbur Smith shows that existing traffic volumes in 2002 were increased by the background growth factor of 2.9% and traffic from both the Loon Mountain Expansion and the Planned or Pending projects were added. Traffic volumes were developed for both winter and summer conditions. For summer conditions, traffic from the Loon Mountain Expansion was not included, and 60% of the planned or pending development traffic was added to account for less usage of Loon Mountain residential dwelling units in the summer.

G. TRANSPORTATION AND TOURISM

Tourism is the largest industry in the Town of Lincoln and the ease of access has been a major factor in the Town of Lincoln continued growth. In fact, Lincoln's prime location within the White Mountain National Forest attracts visitors during all seasons for a variety of activities. Each season brings different traffic concerns to the Town of Lincoln. Visitors in the winter come to ski and influence traffic volumes in the late afternoon when the ski slopes close. Visitors in the summer generally come to hike, bicycle, or attend one of the many tourist attractions in the area and drive from activity to activity throughout the day.

From the seasonal data analyzed in the Wilbur Smith Traffic Study, conflicting accounts have been seen of when the highest traffic volumes actually occur in Lincoln. The permanent count stations indicate the highest traffic volumes occur during the summer. However, the intersections counted along Route 112 in Lincoln indicate traffic is heavier in winter. The permanent stations reviewed are located on Route 112 east of Lincoln and I-93 north of Lincoln. Route 112, a scenic roadway, typically gets high volumes of traffic in summer from people enjoying the White Mountain National Forest and other tourists attractions. In the winter this roadway is not used as much since it doesn't provide a quick, direct connection to any winter activities from major population centers. I-93 is a major interstate facility that provides access to many areas of the White Mountain National Forest, however it receives more travel in summer than winter. Based upon the data reviewed, the following conclusions have been determined.

- Because of the influence of winter recreation activities particularly from Loon Mountain, roads located in the downtown area experience their greatest volume demand during the winter.
- Other roads in Lincoln, particularly Connector Road and Route 3 experience their greatest traffic volume demand during the summer time period, when destinations such as Clark's Trading Post and the Flume Visitor Center are in operation.

White Mountain Trail Scenic Byway (Kancamagus Highway)

The Kancamagus Highway plays a definite role in the high number of tourists coming to town, especially during the fall period. In fact, the Kancamagus Highway is undoubtedly one of the most scenic routes through the White Mountains. "The Kanc", as locals call it, climbs to nearly

3,000 feet on the flank of Mt. Kancamagus. It meanders through some of the most beautiful deciduous forests in New Hampshire which yield a stunning array of colors in the fall. In fact, many believe the route to be one of the top fall foliage trips in the world. The Town of Lincoln is encouraged to become a strong proponent and participant in the Scenic Byway Program being implemented through North Country Council. Lincoln is in an enviable geographic position in that it is included in nationally known scenic byways.

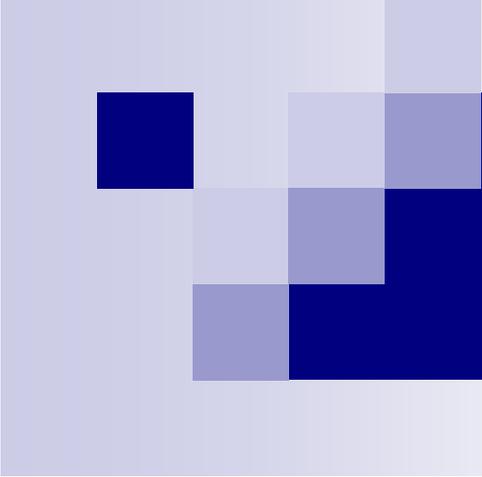
In 1997, North Country Council in coordination with the NH Office of State Planning with assistance from the Federal Highway Administration ISTEA funding prepared a Corridor Management Plan for the White Mountain Trail Scenic Byway. Following below are some of the recommendations from the Corridor Management Plan to the towns along the White Mountain Byway.

Scenic Enhancement Recommendations

- Selective clearing to open view and maintain existing viewsheds.
- Obtain easements for scenically or culturally important areas to preserve views and open space.
- Ban billboards and promote the removal of existing billboards.
- Residential and commercial development should maintain a scale, materials and simplicity of design which characterizes the New England Village Theme.

Land Use Recommendations

- Adopt a shared driveway provision, increase commercial frontage requirements or require interior streets as methods of limiting curb cuts and strip development on the byway.
- Consider the advantages of creating a byway overlay district to preserve the character of the corridor.
- One approach to avoiding strip development is to require that large commercial developments with 600' (or another appropriate footage) of road frontage be required to provide interior streets for better traffic circulation and access.
- Consider the addition of interconnected network of multi-use paths easily available by pedestrians, bicyclists and skaters alike. This option would give residents and tourists an additional travel option for the enjoyment of the Town's Village Center and recreational areas.



Town of Lincoln Master Plan

Chapter VI - Public & Community Facilities, Utilities Recreation

Authored By: North Country Council

A. INTRODUCTION

Population and housing growth often results in a corresponding increase in the demand on municipal services and infrastructure systems. Planning for this growth from a municipal services standpoint is important in order to spread the cost of capital expenditures over a period of time and ensure that an adequate level of service is maintained for residents and businesses. Additionally, as Lincoln is a tourist destination, municipal services and infrastructure capacity and fiscal planning must take into account the increased demand for services created by the influx of seasonal residents and tourists.

This chapter examines Lincoln's municipal services from the perspective of facility and equipment needs of the various town departments to support existing and projected demand. Additionally, staffing levels are also discussed for each respective department. The facilities include the Town Hall, police services, fire and emergency services, library, public works and the school district. Map 6-1, located at the end of this chapter, provides the location of each of the facilities and fire districts/precincts described. In addition, the capacity and condition of public infrastructure systems (water & sewer) are also examined.

Much of the information presented in this chapter was obtained through interviews with town department heads and representatives from each respective public infrastructure system. Where applicable, recent studies of infrastructure systems were reviewed and are cited within this chapter.

B. SUMMARY OF FINDINGS AND CONCLUSIONS

The following points summarize the municipal service and infrastructure findings and conclusions presented within this chapter. Additionally, various implications associated with Lincoln's municipal services and infrastructures are discussed.

In terms of Lincoln's various facilities and buildings, many are in generally good condition considering the age and continual use that they are subjected to. Specific infrastructure and building findings include:

- The Lincoln's Town Office Building is in very good condition. Currently available space is adequate for all departments housed in the Town Building.
- Based on a study done by the New Hampshire Chief of Police, Lincoln's Police Department should hire 6 additional officers in order to meet its current needs. The communications department, which is attached to the Police Department, has old and inadequate radio system and might soon become unreliable.
- In order to meet its future needs and efficiently serve the population of Lincoln, the Fire Department needs a new van and a new fire truck.
- The combined populations of Lincoln and Woodstock are sufficient to support a full-time

physician, a physician's assistant and one dentist. They all operate from the Lin-Wood Medical Clinic located on Main Street in Lincoln.

- The Cemetery is well maintained and should meet the needs of Lincoln for the next thirty years.
- The enrollment trend at the Lincoln-Woodstock Cooperative School District has been particularly stable over the past five years, therefore, school facilities should be adequate for at least the next ten years.
- Future possible needs for the Lincoln Public Library include an extension of the building for a meeting room and tele-conferencing capabilities.

Providing public service is an important element in protecting the health, safety and welfare of the community. Lincoln's community facilities are physical manifestations of services for local residents. The need for community facilities is determined largely by existing and future population growth, land use patterns and the need for replacing outdated facilities.

This chapter is divided into sections, each addressing a specific facility or service:

Community Services: Town Office Building, Police Services, Communications Department, Fire and Emergency Services, Health Care, Elderly Services, Cemeteries.

Utilities and Public Services: Solid Waste, Department of Public Works, Public Water and Wastewater Distribution and Treatment Systems.

Schools: Lin-Wood School.

Cultural and Recreation: Library, Recreation Department.

*Please see Map 6.1 at the end of this chapter for the location of the facilities discussed in this chapter.

C. COMMUNITY SERVICES

Town Office Building



The Lincoln Town Office Building, rebuilt in 1998, is located on Route 112 across from Church Street in the village center. Most of the Town services have their office in the Town Building. The first floor houses the Town Clerk/Tax Collector's office, the Town Manager's office, the Finance Department, the Planning Department, the auto registration services and the Recreation Department. The Police Department and Emergency Management Office are located on the lower

level. Other than offices, the town building has storage space, a large conference room, a vault, a kitchen and public restrooms.

Currently, the available office space is adequate, but there is a definite need for more storage space. As the demand for Town services increases with population growth, the services housed in the Town Hall will require more office and storage space. The completion of the attic and stairway renovation will provide the storage space needed.

Police Services

The Lincoln Police Department is housed in the lower level of the Town Office Building, in the Village Center. The Department maintains four administrative offices and three cells for temporary detainment.

The Department employs 6 full-time officers and 2 part-time. The recent change in town government with the appointment of a town manager was instrumental in developing a positive work environment within the police department. In 2002, the department hired several new people and the police department not only was able to rebuild itself, but also began to work actively with the other town departments to resolve joint problems and build a better working relationship.



The number of calls for police service increased in 2001, when compared to the previous year, but has dramatically decreased in 2002. In fact, Table 6.1 shows the important changes in the distribution of the number of offenses and arrests for those three consecutive years. Between 2000 and 2002, total offenses diminished by 37% while the total arrests went down from nearly

40%. It is also essential to mention that the total numbers of calls went down from 15,106 in 2001 to 12,278 in 2002.

Town of Lincoln			
	2000	2001	2002
Offenses			
Total Offenses Committed	851	971	534
Crime Related Offenses	502	511	419
Non Crime Related	N/A	144	109
Arrests			
Arrests	126	137	97
Warrant Arrests	114	167	62
Summons Arrests	41	54	11
Total Arrests	281	358	170

Source: Town of Lincoln Annual Report, December 31, 2002

The Police Department was supported by an annual budget of about \$500,000 in 2002, which represents an increase from 2001. However, overall the annual budget for the Police Department decreased by about \$60,000 in the past five years and the number of officers went down from 9 to only 6. A study done by the New Hampshire Chief of Police shows that in order to meet the current needs, Lincoln Police Department should have 12 full-time officers.

The Lincoln Police Department has mutual aid contracts with many towns in the region: Franconia, Thornton, Campton, Woodstock, Waterville Valley and Plymouth. However, it has been pointed out that better communication between the different police departments in the region is necessary and would greatly improve the quality of service as well as helping officers in their investigation.

The Police Department will expand its services as the needs of the population growth dictates. The department will also continue to maintain high standards and will continue to work on community issues that are important to the citizens of the town.

Communications Department

The communications department is a separate department within the town government under the supervision of the Police Department. The communications department employs five full-time and four part-time employees. The communications department is located within the police department in the lower level of the Town Building.

The radio system, which the center operates, is inadequate. The base system operated for the police frequencies is over 30 years old. This piece of equipment will soon become unreliable and the availability of parts is already a problem. The second base unit used for the fire department and the ambulance squad is 22 years old and underpowered.

Fire and Emergency Services

Lincoln's Fire Station is located on Church Street and contains four bays to park fire trucks, office space and a training room. The Lincoln Fire Department responded to 169 calls in 2002. These calls consisted of chimney fires, auto fires, motor vehicle accidents, rescue with the tower truck, and many alarm activations. The department currently owns two water trucks, a tower truck and a rescue truck.

Lincoln has about fifteen volunteer firefighters and one junior volunteer firefighter receiving compensation for time spent on duty. Three firefighters are taking Fire Level 1 courses in Woodstock, which is a 180-hour course. Also three firefighters are taking Fire Inspection 1, a course that deals with fire codes and place of assembly permits. The course is held in Littleton and runs for 10 weeks. The Lincoln Fire Department has mutual aid contracts with the town of Waterville Valley and Woodstock.



The fire department receives an annual budget of about \$50,000 from the Town. The budget has increased by \$2,000 in the past year. In order to meet its needs for the future and efficiently serve the population of Lincoln, the Fire Department needs a new van and a new fire truck.

Health Care

A full scope of health and welfare facilities is available to residents on a local and regional basis. The following is a summary of these services:



On the local level, the combined populations of Lincoln and Woodstock are sufficient to support a full-time physician and a dentist. In 1974, the Lin-Wood Medical Clinic was organized and constructed, with funds provided by the Hill-Burton Act, on Main Street in Lincoln. It serves Lincoln and Woodstock residents mainly, as well as some Thornton residents, second homeowners, tourists and skiers.

The present facility is adequate to meet current needs. All of the professionals occupying the building are tenants of the center and pay rent.

The center is also home to a branch office of the North Country Home Health Agency. This

agency provides services that include visiting nurses, physical therapists and other health services to people unable to handle daily tasks following surgery, illness or injury.

The Lin-Wood Medical Center operates the local ambulance service. The two ambulances are respectively 6 and 1 year old. They are adequately equipped and in fair condition. There are presently two full-time EMT's who operate the ambulance and eighteen part-time volunteers to supplement them.

On a regional basis, Lincoln is equidistant between Littleton and Plymouth, both communities with hospitals. The Ambulance service is associated with the Plymouth Hospital.

Grafton County Senior Citizens Council, Inc. is a private nonprofit organization that provides programs and services to support the health and well being of our older citizens. The Council's programs enable elderly individuals to remain independent in their own homes and communities for as long as possible.

The Council operates eight senior centers in Plymouth, Littleton, Canaan, Lebanon, Bristol, Orford, Haverhill and Lincoln and also sponsors the Retired and Senior Volunteer Program of the Upper Valley and White Mountains (RSVP). Through the centers and RSVP, older adults and their families take part in a range of community-based long-term services including home delivered meals, congregate dining programs, transportation, adult day care, chore/home repair services, recreational and educational programs, and volunteer opportunities.

During 2002, one or more of the Council's programs offered through the Linwood Area Senior Services served 126 older residents of Lincoln:

- Older adults from Lincoln enjoyed 1,298 balanced meals in the company of friends in the senior dining room.
- They received 4,489 hot, nourishing meals delivered to their homes by caring volunteers.
- Lincoln residents were transported to health care providers or other community resources on 1,921 occasions by lift-equipped buses.
- They received assistance with problems, crises or issues of long-term care by a trained social worker on 296 occasions.
- Lincoln's citizens also volunteered to put their talents and skills to work for a better community through 144 hours of volunteer service.

The cost to provide Council services for Lincoln's residents in 2002 was \$59,053 (services were funded by: Federal and State programs 51%, Municipalities, Grants & Contracts, County and United Way 14.3%, Contributions 10.9%, In-Kind donations 16.2%, Other 2%, Friends of GCSCC 5.6%).

Cemeteries

The Cemetery is located on Riverside Drive and it is well maintained. In 1990, the cemetery was expanded by two acres, with which the expansion should meet the Town's needs for the next thirty years. Basic maintenance activities, such as steam cleaning of headstones and cement footings so stones won't fall, are and will be required in the future.



D. UTILITIES AND PUBLIC SERVICES

Solid Waste

The Towns of Lincoln and Woodstock have formed a cooperative that run a joint facility to dispose of the solid waste generated by the two Towns. The Lincoln-Woodstock Solid Waste Facility is located behind McDonald's on Recycle Road in Lincoln. In 2002, 325 bales of cardboard, 73 bales of newsprint and 30 bales of aluminum cans have been shipped. This represents approximately 11 tractor-trailer loads of 1.38 bales per day. They also shipped out 10 tractor-trailer loads of scrap steel this past year. The following table shows the distribution of waste for the year 2002.



**Table 6.2 Solid Waste amounts by type
Town of Lincoln - 2002**

	Amount
Co-Mingle	125/tn
MSW	953/tn
C&D	477/tn
Newsprint	55/tn
Scrap Steel	220/tn
Cardboard	165/tn
Aluminum Cans	8140/lb
Textiles	8/tn
Brush	65/yd
Waste Oil	1000/gal
Fryolator Grease	1328/gal
Compost	180/tn

Source: Town Annual Report, 2002.

The remaining waste that is not recyclable at the Lincoln-Woodstock transfer station is handled by Waste Management, Inc. on a contractual basis. They transport and dispose of the waste either in Bethlehem, NH or Rochester, NY. The facility employs three full-time people and runs with an annual budget of almost \$250,000.

Public Works

Lincoln's Department of Public Works' highway garage is located off Cemetery Road. The building is able to store indoors at least four large trucks or loaders, and also contains an office and workspace. The Department also stores salt and sand in a shed located next to the highway garage. The Department consists of a supervisor and a three-man crew. An additional part-time crew-member joins the team during the summer months mostly for grass mowing.

Major equipment maintained by the department includes:

- 1986 Caterpillar IT 18 loader
- 1993 ½ ton Ford pick-up
- 1991 tractor (Holder snow blower and mower)
- 1996 2 ½ ton International dump truck
- 1998 Chevy 1 ton dump truck
- 1999 Chevy 1 ton pick up truck
- 1999 Caterpillar 416 rubber tire backhoe
- 2000 Chevy ¾ ton pick-up



The Department is responsible for maintenance, repairs and construction of local roads, sidewalks, Town buildings, and Town property as well as maintenance of the cemetery and burials. The department also devotes the services of one crew-member daily to operate the sewer plant and water facilities.

Table 6.3 shows the distribution of the Department of Public Works annual budget:

Highway Department	\$180,966
Sewer Department	\$178,629
Water Department	\$192,602
Cemetery	\$7,769
Source: DPW Superintendent	

Replacement of deficient equipment, such as the 1986 Caterpillar IT 18 loader, has been planned for in the town's budget and should meet the needs of the Department of Public Works for the next couple of years.

Public Water and Wastewater Distribution and Treatment Systems

Water System Demand

From the Preliminary Engineering Report – Lincoln Water System, performed by Provan & Lorber in 2000, the Lincoln water system provides domestic water supply and fire protection to approximately 1,600 service connections. Due to the resort nature of the community and the large number of tourists that frequent the area, water demand fluctuates significantly throughout the year. The current average daily demand on the system (mid-week and off season) is 500,000-600,000 gallons per day. In the summer months or during winter peak times (e.g. Christmas, New Year's and February school vacation) the demand often approaches or slightly exceeds 1,000,000 gallons per day.

As discussed in Chapter IV – Housing, population data indicates a 15.6% increase in population in Lincoln in the last ten years. Assuming that this trend continues, the population is estimated at 1,900 individuals in 2020. The baseline anticipated population growth coupled with the need to service areas that will likely be developed over the next twenty years will increase demand on the system. The future growth directly attributable to the future expansion of Loon Mountain Ski Area will add about 1,500 new housing units plus commercial businesses. Based upon this information, the average daily demand (ADD) at the end of a twenty-year planning period to 2020 is estimated to increase thirty percent to 715,000 GPD. For purposes of this study we have assumed that the maximum day demand (MDD) is approximately two times the ADD, 1,100,000 GPD currently, and 1,430,000 GPD in 2020.

Water Supply

The water system is supplied by a surface water treatment plant adjacent to Loon Brook and a series of six gravel wells known as the Cold Spring Wells adjacent to the Pemigewasset River. The Clearbrook Well, a bedrock well located off the Kancamagus Highway, is currently off-line. The water treatment plant was constructed in 1993 and has a design capacity of 2.0 MGD but is currently fitted with two (2) 0.5 MGD Trident filters, with provisions for two additional filter units in the future. The facility draws its raw water from two sources; a gravity supply from a small impoundment adjacent to the plant on Loon Brook and through an infiltration gallery and pump station on the East Branch of the Pemigewasset River.

The well system at Cold Springs has a capacity of approximately 265,000 gallons per day, somewhat less than its original yield of 350,000 gallons per day. The central well vertical turbine pump and 40 HP drive was overhauled in 1996. The pump in Well #4 was replaced and surging in 1999 rehabilitated all wells. Water quality from the wells has historically been good.

Storage

The Lincoln system has three gravity water storage tanks with a combined capacity of 1,650,000 gallons. The Forest Ridge tank, a 1,000,000 gallon pre-cast concrete tank, is located off Charkarohen Drive in the Forest Ridge development and represents the primary storage for the system. The Village on Loon Mountain tank is a pre-cast concrete tank with a capacity of 500,000 gallons. The Flume tank, constructed in the 1960's, is located at the north end of the system off Route 3 and serves the Indian Head high service area with a capacity of 125,000 gallons. There is also approximately 250,000 gallons of storage available in the

clearwell at the water treatment plant.

Treatment

Treatment of the source water includes filtration of the surface water and disinfections using sodium hypochlorite. Corrosion control is provided at the water treatment plant using sodium hydroxide.

Sewer

The majority of the Town is sewered and hooked up directly to the Lincoln Waste Water Treatment Facility. The Lincoln Waste Water Treatment facility was originally constructed in 1967 and has been upgraded as needed in the past. The most recent plant expansion was designed and permitted in 1988 for a capacity of 1.5 million gallons per day. This system can be expanded to a capacity of 1.8 million gallons per day as long as certain water quality criteria are met in the discharge. The 1988 upgrade included deepening the lagoons by adding height to the dikes. The bottom of the lagoons was disturbed to adjust the pipes to reduce short-circuiting in the system. The 1988 upgrade also included adding additional baffling to increase treatment efficiency and added a dechlorination plant to the system.

The Lincoln sewerage lagoons do experience a significant amount of exfiltration. Exfiltration has been occurring at the lagoons for many years however the amount of exfiltration increased after the 1988 upgrade. Most lagoon systems experience some exfiltration when they are first constructed, but tend to self-seal as sludge builds up on the bottom. Lincoln's lagoons experienced above average exfiltration rates and sealing of the bottoms has been slow. Testing of exfiltration has indicated that its water quality is as good if not better than the discharge from the outflow pipe.

E. SCHOOLS

Lin-Wood School



The Town of Lincoln is a member of the Lincoln-Woodstock Cooperative School District. The student population for the school district is 374. The 2002-2003 operating budget amounted to \$4,749,000. Lincoln is responsible for approximately 62% of this budget. The proportion of the budget, which Lincoln pays, is based on a formula, which uses the equalized valuation of the Town and the average daily membership.

The Lincoln-Woodstock Cooperative School District now has two buildings on Main Street in Lincoln called the Lin-Wood Public Schools. The school is located on a 40 acre site with room for expansion, outdoor recreation and parking. One half of the middle/high school building is thirty-eight years old, the other half opened in 1984. The elementary school building opened in 1991.

Personnel for the 2002-2003 school year include 43 teachers, 25 support staff including,

nurses, bus drivers, secretaries and others, 3 administrators, 2 guidance counselors and 1 speech pathologist. Also available are a behavioral consultant and an occupational and physical therapist.

Table 6.4 below shows the enrollment trends in the Lincoln-Woodstock Cooperative District from 1998 to today.

School year	Amount
1998-1999	397
1999-2000	383
2000-2001	374
2001-2002	378
2002-2003	374

Source: School superintendant

As enrollment has remained fairly stable over the past five years, enrollment is not expected to increase significantly during the next five years. School facilities should be adequate for at least the next ten years.

F. CULTURE AND RECREATION

Library

The Lincoln Public Library is located on Church Street. It serves the Town of Lincoln and works closely with the Moosilauke Public Library in Woodstock. It is a well-maintained facility within an approximately ninety-year-old building. The building was renovated and expanded in 1996, which tripled the size of the library. In fact, the Lincoln Public Library remains a vital and well-utilized department of the Town of Lincoln, one that many of the citizens and visitors to the area use on a daily basis.



The Library has a total collection of approximately 12,672 volumes, including videos. In 2002, the circulation statistics went as follows:

Adult Fiction	5,511
Adult Non Fiction	1,815
Juvenile Fiction	2,445
Juvenile Non Fiction	846
Videos	5,585
Audios	1,933
Inter-library loan (borrowed)	428
Inter-library loan (loaned)	270
Total	18,833

Source: Town of Lincoln Annual Report, December 31, 2002

The Library also sponsors varied programs for children and families of the area. Examples of these are children's story time, lectures on North Country history, craft classes, and a summer reading program for elementary school students. Specifically, in 2002, Lincoln received *The Great Experiment: George Washington and the American Republic* for a six-week period. Furthermore, the summer reading program entitled "Lions and Tigers and Books, Oh My!" was a huge success and was made possible by co-sponsorship from the Lincoln and the Moosilauke Public Libraries. Also, several community members have organized the "Friends of the Lincoln Public Library," a non-profit group, that works toward public awareness of the importance of the library and literacy. Future needs for the Lincoln Public Library include an extension of the building for a meeting room and tele-conferencing capability.

Recreation Department

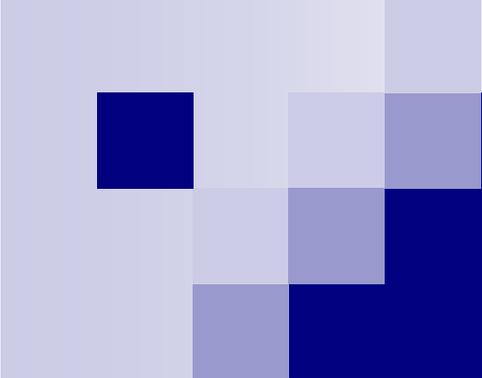
The Town of Lincoln Recreation Department serves both the towns of Lincoln and Woodstock. The 2003 operating budget amounts to \$113,000. Lincoln is responsible for 100% of this budget but should later receive 50% as revenue from the Town of Woodstock. Besides the Recreation Director, who is the only full-time employee, the department employs about 21 seasonal staff members; 10 for the ski area during winter and 11 for summer camp.



The Kancamagus Recreation Area is owned and operated by the Town of Lincoln located behind Pollard Road, and is available for use by all Town residents of Lincoln and Woodstock. The Kancamagus Recreation Area consists of a small ski slope, little league baseball field, basketball courts, ice-skating rink, picnic area, playground, and a two-story building.

The Recreation Building contains about 1,300 sq. ft. of usable space. It contains a small activity room upstairs, and a large room on the ground floor. The first floor is used as a base lodge/warming hut in the winter when the ski slope is open. It also serves as a meeting room for the boy scouts, girl scouts and other community groups. In the summer when the department runs a summer camp, it is used for indoor activities. Since 1996, the towns of Lincoln and Woodstock have been allocating money for a potential ball field and an agreement has been signed with Lin-Wood School for construction on their property.

In 2002, the Recreation Department has offered 35 programs and 9 events for all ages of the community. New programs included Jr. NBA and Jr. WNBA Basketball, and summer art classes for juniors and adults. The Recreation Department also offered four senior citizen trips this year. Program use percentages for 2002 were: Lincoln 53% and Woodstock 47%. The Lincoln-Woodstock Friends of Recreation also offered many annual community events during 2002 and will continue to do so in the future. Also for children in Town, the school is available for softball, basketball, soccer and gymnastics.



Town of Lincoln Master Plan

CHAPTER VII - NATURAL RESOURCES

Authored By: North Country Council

A. INTRODUCTION

Lincoln enjoys an abundance of environmental features and natural resources, which contributes to the high quality of life associated with the town. Arguably the prime attraction for year-round and seasonal residents as well as tourists visiting Lincoln is the abundance and access to the natural environment of the White Mountain National Forest. Despite having an urbanized node along Route 112 and linear development along Route 3, much of the town's landscape can be classified as rural in nature. Planning based on natural features is motivated by the desire to conserve and protect important areas, but also by the belief that development of any kind can be best located, with less present expense and future problems, if based on an understanding of natural constraints.

The natural environment of Lincoln provides clean air and water, and a beautiful landscape of mountains and streams. Environmental characteristics have affected the Town's settlement: dense forests provided abundant resources for sawmills and a wood product industry, a mountain side provided slopes for a ski industry, scenic beauty provided for tourism opportunities.

What role do these natural resources have in Lincoln today and in the future? This chapter examines the natural features found in the Town of Lincoln. Inventory and analysis is provided for water resources, hazardous materials and contaminated sites, floodplains, soils, wetlands, protected and conservation lands, and forest resources.

B. SUMMARY OF FINDINGS AND CONCLUSIONS

The following points summarize the natural resource findings and conclusions presented within this chapter. Additionally, various implications associated with the natural resources relative to growth and development within Lincoln are discussed.

Lincoln's water bodies (ponds, rivers, brooks and streams) serve a multitude of uses including a utility function (the Town's water supply source), a snowmaking function for Loon Mountain Ski Resort (will be discontinued in the near future), an economic stimulus through its attraction of tourists and seasonal residents, and an aesthetics resource, which improves the quality of life of residents. Other water resource findings include:

- A total of 6 major water bodies have been identified in Lincoln.
- Lincoln has approximately 128 acres of surface water contained within rivers and ponds.

Every community has areas which have been subject to negative environmental impacts, such as spills of hazardous materials and chemicals. Most of Lincoln's environmental liabilities are located within close proximity to major arterial roadways and near prominent commercial nodes. Hazardous material findings include:

- There are about 38 sites or areas within Lincoln that are either contaminated with hazardous material or are currently registered for potential contamination monitoring according to the New Hampshire Department of Environmental Services (NHDES), .
- The majority of Lincoln's contaminated sites involve leaking underground.

As water resources, in particular the Pemigewasset and the East Branch of the Pemigewasset Rivers, are dominant features on Lincoln's landscape, floodplains are almost non-existent. Findings on Lincoln's floodplains include:

- Floodplains represent a non-significant constraint to growth and development in Lincoln. In fact, flooding has occurred rarely in the past, even during the worst flood events.

Soils and slopes present a planning and development challenge in Lincoln due to the undulating topography throughout the entire town. Findings on soil and slopes within Lincoln include:

- The majority of Lincoln's soils fall within the glacial till group. Soils within the glacial till group consist of either loose till (soils with a loose or granular consistency) or hardpan (a dense subsurface stratified soil layer).
- The majority of Lincoln's developed areas contain slopes that are less than 15%. Other areas with 15% to 35% present relatively important development constraints but could possibly be developed for low density residential type of uses.

The attraction of Lincoln to many is that it has a superior quality of life and character that is typically defined by its environmental features such as ponds, river, forestland and scenic views. Protected lands, which contain these environmental features are an asset to the Town and have contributed to Lincoln's high quality of life. Protected and conservation findings include:

- Lincoln has approximately 78,500 acres of land protected for conservation purposes by the Forest Service, representing more than 90% of the Town's land area.
- Most of the protected land is part of the White Mountain National Forest (88%) and the Franconia State Park (4%).

Based on the natural resource findings presented throughout the chapter, implications about how Lincoln may change in the future include:

- As so much of Lincoln's character, quality of life and economic base are associated with the abundance and accessibility of environmental features, it is crucial that the Town encourages the permanent protection of environmentally significant lands. Failure to encourage the permanent protection of these lands could lead to the incremental deterioration of qualities, which have historically made Lincoln a desirable community in which to live and work.

- The influence of topography on Lincoln's natural form has created a situation where the most desirable and feasible development locations for residential, non-residential and roadways are located on flat parcels at relatively low elevations with gradual slopes. Coincidentally, these same locations are, in general, already developed.

C. CLIMATE

Lincoln's climate is created largely as a result of its latitude, topography and geographic location on the east coast of North America. Continental air masses that affect Lincoln's climate originate over Canada bringing cold, dry air and over the Gulf Coast bringing warm, moist air up the east coast. Although the Canadian air mass dominates in winter and the maritime air mass rules the summer months, the boundary between air masses shifts as storms pass through the region creating typical New England fluctuating weather.

The nearby Woodstock weather station temperature and precipitation data were used to develop estimates. The average daily temperature in Lincoln is a cool 44 degrees Fahrenheit or 7 degrees Celsius. January consistently has the coldest temperatures (averaging 19 degrees F or -7 degrees C) and July is the warmest month (67 degrees F or 20 degrees C).

Annual precipitation totals 44 inches. The average annual snowfall is 97 inches. The least precipitation occurs during the winter months of January, February and March; July, November and December have consistently been wettest.

D. WATER RESOURCES

The ponds, rivers, brooks and streams of Lincoln are one of the most visually dominant features of the Town's landscape. Their scenic beauty and recreational appeal contribute both to the Town's quality of life and economic health. The water bodies are one part of the "scenic package" that contributes to the significant draw for the tourism industry, which is the basis for the current local economy. The East Branch of the Pemigewasset River, the Loon Pond and the Cold Spring Wells are the primary source of potable water for the Town of Lincoln. In addition to surface water, groundwater is an important water resource as it is the secondary water source for Lincoln residents. With these many competing uses for the Town's water resources, a balance must be maintained between the use and protection of the resource. With proper management, plentiful clean water will always be available for domestic and commercial consumption, as well as for recreational enjoyment in Lincoln. A study of community water resources is an integral part of the land planning process.

For many communities in New Hampshire, water resource issues have become one of the most important environmental issues over the past five to ten years. Traditionally, communities across New England have taken an infinite supply of inexpensive, clean water for granted. However, many communities are now realizing that a limitless supply of affordable, uncontaminated water is something that is not a "given" and can have a very significant financial burden. For the purposes of this section, water resources have been defined as surface water bodies (ponds and rivers) and groundwater.

Surface Water

Surface water is precipitation that does not soak into the ground, but runs off. On the average, one-third of the annual precipitation runs off the land directly into rivers and streams.

There are two main rivers in Lincoln. The Pemigewasset runs parallel to Route 3 from north to south and the East Branch of the Pemigewasset flows from the northeast in to the southerly flowing "Pemi." Most of the development in Lincoln has occurred along the rivers' valleys. Lincoln does not have an abundance of ponds. There are three ponds (Bog, Loon and Black) and one lake (Lonesome) in the entire town. In addition, all but one of them, Lonesome Lake, is within the White Mountain National Forest (Lonesome Lake is located within Franconia Notch State Park.)

According to the Legislative Classification of Surface Waters, most surface waters are Class B waters, except Boyce Pond Brook, Gordon Pond Brook and Loon Pond that are Class A waters. Thus, most of Lincoln's surface water is of exceptionally good quality.

Because of the manner in which precipitation flows from the land into drainage networks, there is a direct relationship between land use and surface water quality. This relationship is especially critical where land and water meet – at the streambank (which is the location of much of the developable land in Lincoln.) If Lincoln wants to retain its high water quality, the interface areas must be protected.

Groundwater

The precipitation that does not runoff or evaporate infiltrates the soil and bedrock to recharge the groundwater supply. The water table is commonly 5 to 25 feet below the surface.

Groundwater is usually of better quality than surface water because it is purified as it percolates through the soil and rock materials. However, it is more susceptible to contamination by human activity – e.g. septic systems, landfill sites and leakage from sewer lines. Because water moves through the ground very slowly, groundwater contamination is a serious, long-term problem. Once it occurs, it is difficult to clean it up. Therefore, it is important to protect Lincoln's groundwater aquifers.

E. HAZARDOUS MATERIALS AND CONTAMINATED SITES

According to the New Hampshire Department of Environmental Services (NHDES), there are 38 sites or areas within Lincoln that are either contaminated with hazardous material or are currently registered for potential contamination monitoring. As shown in Map 7.2, the majority of these sites are located within close proximity to major arterial roadways near prominent commercial nodes and large recreational facilities. The purpose of identifying and monitoring contaminated or potentially contaminated sites is to protect groundwater sources from pollutants. As shown in Table 7.1, the majority of Lincoln's contaminated sites involve leaking underground storage tanks. Many of the other listed sources in Table 7.1, are registrations for underground storage tanks and potential sources of groundwater contamination including large septic system and above-ground storage tanks.

Table 7.1: Most Common Existing and Potentially Existing Contaminated Sites

Town of Lincoln		
Contamination Source	# sites	Description
Above-ground storage tank	1	Registration of above-ground storage tank
Underground storage tank	27	Registration of underground storage tank
Holding tank	2	Non-Hazardous, non-sanitary holding tank registration
Underground storage tank	6	Leaking underground storage tank
Leaking Heating oil tank	3	Leaking residential or commercial heating oil tank
Septic System	1	Registration of sub-surface septic system receiving >20,000 gallons/day
Underground Injection Control	4	Discharges of benign wastewaters not requiring a permit or a request to cease a discharge

Source: New Hampshire Department of Environmental Services

Other sources of potential and existing threats to groundwater quality found within Lincoln include:

- Superfund Site;
- Hazardous waste sites;
- Waste disposal grounds and stump disposal areas;
- Oil spill release areas;
- Septic lagoons; and,
- Spray irrigation sites.

F. FLOODPLAINS

For the purpose of determining floodplains for the Pemigewasset and the East Branch of the Pemigewasset Rivers, information was taken from the U.S. Department of Agriculture (USDA) Soil Conservation Service (SCS). As mentioned previously within the Water Resources section, the dominant water features in Lincoln are the Pemigewasset and the East Branch of the Pemigewasset Rivers as well as the smaller tributaries (Bog, Loon and Black Ponds, etc.).

As indicated by Map 7.1, most of the floodplains within Lincoln are located along the two rivers, generally in developed areas. The figure indicates the floodway (river course) as well as the soils of frequent flooding and occasional flooding.

Frequent Flooding – Flooding is likely to occur often under usual weather conditions; more than a 50 percent chance of flooding in any year or more than 50 times in 100 years, but less than a 50 percent chance of flooding in all months in any year.

Occasional Flooding – Flooding is expected infrequently under usual weather conditions; 5 to 50 percent chance of flooding in any year or 5 to 50 times in 100 years.

None – No reasonable possibility of flooding; near 0 percent chance of flooding in any year or less than 1 time in 500 years.

Floodplains represent a non-significant constraint to growth and development in Lincoln. In fact, flooding has occurred rarely in the past, even during the worst flood events.

G. GEOLOGY

Bedrock

Lincoln's underlying bedrock, frequently called "ledge", was formed along with the rest of the Appalachian Mountain chain hundreds of millions of years ago. Strong forces within the earth caused thick layers of ocean sediments to be squeezed into sedimentary rocks, which were further squeezed and folded (metamorphosed) and pushed upward to form the mountains. These layers of schists and quartzites are named the Littleton Formation. Into these layers, rocks moved magma from deep underground chambers. This magma cooled and hardened into two different types of granite, the Kinsman Quartz Monzonite and the Concord Granite. The rocks of the Littleton Formation, generally harder than the granites and more resistant to erosion, form most of Lincoln's mountains.

Surficial Geology

The last period of glaciations ended almost ten thousand years ago. While some of the effects of glaciations may be significant, the basic topography of a mountainous area like Lincoln looks much the same as it did before the Ice Age. The most substantial change to the landscape occurred in the river valleys where melted water enlarged the river channels, and sand and gravel, brought down from areas to the North, were deposited. The very extensive deposition of till by the glacier itself tended to smooth out the rough features of the landscape.

The sand and gravel deposits are valuable for three reasons: 1) as an economic resource for the local construction industry; 2) as a groundwater resource for municipal water supplies; and 3) for maintenance of the river flow and quality.

H. SOILS

Soil is the layer of earth, which lies directly over the bedrock. It is the layer through which rain and nutrients filter, upon which crops and trees grow and houses and roads are built. Geology, climate, vegetation, relief, and time interact in varying ways to create many types of soils. Thus, soils and their ability to serve different functions can vary greatly from place to place. The many different functions characteristics of Lincoln have all contributed in some way to the development of nearly sixty different soil types in Town. Understanding the characteristics and capabilities of these soils is very useful for planning the kinds, locations and intensities of future land use activities.

Soils differ because of different topography, even though they formed from the same kind of parent material. A soil's parent material is the disintegrated and partially weathered rock from which the soil has formed. Parent materials for soils are grouped under five categories including:

Alluvial – Parent material such as sand, silt, gravel or clay that has been deposited on land by recent rivers and streams.

Outwash – Parent material is stratified material (chiefly sand and gravel) removed or “washed out” from a glacier by melt-water streams and deposited in front of or beyond the end moraine or the margin of an active glacier. The coarse material is deposited nearer to the ice.

Glacial Till – Parent material is dominantly unsorted and unstratified drift, generally unconsolidated deposited directly by and underneath a glacier without subsequent reworking by melt-water and consisting of a heterogeneous mixture of clay, silt, sand, gravel, stones, and boulders.

Anthropogenic – Parent material is human influenced.

As indicated on Map 7.3, the majority of Lincoln’s soils fall within the glacial till group. Soils within the glacial till group consist of either loose till (soils with a loose or granular consistency) or hardpan (a dense subsurface stratified soil layer). Outwash represents the second largest parent material category with outwash soils being typically described with a high sand content. Alluvial deposits are found within scattered pockets along the rivers. The smallest percentage of soils within the Town fall within the anthropogenic parent material category which are essentially human influenced.

Soils are defined in more narrow classes than parent materials to provide more detailed identification that provides a better understanding of their characteristics. These characteristics are applicable for proper soil management and/or for development or construction purposes. The classification of soils, referred to as the soil survey, is prepared on a county-wide basis by the U.S. Department of Agriculture (USDA) Soil Conservation Service (SCS). Field work for the last soil survey in Grafton County was completed in the late 1990’s. As the survey covers the entire county, soil surveys are generally considered a “broad brush: a type of analysis suitable for large scale and municipal planning purposes and therefore may not be an accurate representation of soils at small scales (development parcels) at the neighborhood or village level.

Drainage

Natural soil drainage refers to the rapidity and extent of the removal of water from the soil, in relation to incoming water. This is especially true of water removal by flow through the soil to underground spaces. Soil drainage, as a condition of the soil, refers to the frequency and duration of periods when the soil is free of saturation or partial saturation.

A drainage class applies to the soils in their natural condition without artificial drainage. With artificial drainage such as tile drains or open ditches, the depth to the water table may be quite different than it is when the soil is undrained. However, subsoil colors and mottles that may be present prior to the establishment of artificial drainage persist for many years after installation of a drainage system. Natural drainage classes range from very poorly drained (wettest class), to excessively drained (droughty) as described below.

Excessively Water is removed from excessively drained soils very rapidly.

Somewhat excessively Water is removed from somewhat excessively drained soils rapidly.

Well Water is removed from well drained soils readily, but not rapidly.

Moderately well Water is removed from moderately well drained soils somewhat slowly so that the water table is within 1-1/2 to 3 feet below the ground surface for a small, but significant part of the time (3-6 months).

Poorly Water is removed from poorly drained soils so slowly that the water table remains at or near the ground surface for a large part of the time (6-9 months)

Very poorly Water is removed from very poorly drained soils so slowly that the water table remains at or on the ground surface for the greater part of the time (9-10 months).

As shown on Map 7.4 "Drainage Class", the majority of land in Lincoln is excessively drained, somewhat excessively drained or well drained. In fact, most of the developed land in Lincoln is located in very well or well drained areas; only small scattered portions of land are moderately well or poorly drained. The excessively drained areas generally correspond to the outwash soil type shown on Map 7.3 and the anthropogenic soil type is usually in the "not rated" drainage class.

Land Developability

In order to assist users in determining the relative suitability of soils for a given use the State Conservation Committee in cooperation with Grafton County Conservation District have developed soil potential ratings. These ratings have been adopted as a means of providing a common set of terms, applicable to all kinds of land use, for rating the quality of soil for a particular use relative to other soils in the area.

In fact, the kind of soils present within a community can greatly influence the types of activities that can take place in specific areas. Some areas, such as wetlands and steep slopes, have inherent limitations to development as well as soils limitations. The potential for development based on soil conditions are defined as follows:

Very High Potential – Site conditions and soil properties are favorable for development with few or no soil limitations.

High Potential – Site conditions and soil properties are not as favorable for development. Costs of measures for overcoming soil limitations are slightly higher than those soils with very high potential.

Moderate – Site conditions and soil properties are below the reference soil (a soil with properties that have the most favorable characteristics for that particular use).

Low – Site conditions and soil properties are significantly below the reference soil condition.

Very Low Potential – There are severe soil limitations. Measures to overcome limitations are extremely high or prohibitive.

More specifically, soil potential for development is high for soil that:

- Does not flood
- Is not wet (good drainage)
- Has adequate permeability
- Has suitable texture
- Has relatively deep water table
- Has adequate depth to bedrock
- Has a mild slope

And soil potential for development is low for soil that:

- Floods
- Is wet (poor drainage)
- Is not very permeable
- Has fine texture
- Has high water table
- Has shallow depth to bedrock
- Has a steep slope

In combination with soil types, the topography, in particular the slope, is a condition that is typically factored into the development potential of a respective area. Depending on the region of the county and the type of development, site development regulations generally put limitations on development on slopes over 10% to 15%. As shown in Map 7.6, the majority of the undeveloped land in Lincoln contains slopes that are more than 15%, and therefore present some limitations to development. In fact, slopes play a major role in the determination of which land is developable or not.

Map 7.5 shows the potential for low density development in Lincoln. The data used in the creation of this map comes from the Soil Potential Ratings for Low Density Development, Interim Report. Low density development includes single family residences with basements and comparable buildings and septic tank absorption fields. Paved roads in developments are also considered. When examining together Map 7.6 (Slope Analysis) and Map 7.5 (Potential for Low Density Development), one can easily recognize that areas with slope over 25% fall under the category of very low potential for development.

I. PROTECTED AND CONSERVATION LANDS

The attraction of Lincoln for residents, seasonal residents and tourists is the quality of life associated with the area. As such, undeveloped land that has been protected from possible future development and conserved through various protection mechanisms is commonly perceived as contributing to a community's quality of life. Quality of life in a community is generally one of the factors that influence people to move to, and stay in a community. Part of Lincoln's character is its environmental features such as ponds, rivers, brooks, forestland, wetlands and scenic views. All of these combinations of features represent open space.

Therefore, if the assumption is made that Lincoln's quality of life is, in some form or fashion, associated with the abundance of environmental features, preserving the open space must be considered important in protecting the town's quality of life.

According to the data provided in Chapter II – Land Use, Lincoln has about 78,000 acres of land protected for conservation purposes, representing more than 90% of the Town's total land area. It should be noted that most of the conservation land within Lincoln is part of the White Mountain National Forest (74,553 acres) and the Franconia State Park (3,708 acres). Please refer to Table 2.1 in Land Use Chapter for more details.

Lincoln is home to a large portion of the White Mountain National Forest (WMNF). Federal legislation mandates that the National Forests be managed for multiple uses, including timber harvesting, wildlife management and recreation, and the land and resource management plans be prepared to guide this multi-purpose management.

J. FOREST RESOURCES

As Lincoln has become more developed, increasing pressure has been exerted to convert undeveloped areas of the Town into a variety of man-made land uses. Forested land is one of the resources that is continually being transformed into the developed land areas of the Town.

Aside from its economic benefit as a scenic resource for seasonal residents and tourists and recreational activities, forestland provides a host of environmental benefits such as:

- Stabilizes soil, especially on hillsides where deforestation diminishes soils ability to absorb and hold water and results in erosion of slopes sedimentation in streams and lakes, and more frequent and severe flooding;
- Supplies wood for fuel, building and other wood products;
- Absorbs carbon dioxide and provides oxygen to the air;
- Acts as a dust filter;
- Stabilizes the water table which protects watersheds and drinking water supplies;
- Provides support and protection for numerous wildlife species;
- Provides shade in summer and wind protection in winter, and;
- Screens or buffers sights, sounds and wind;
- Provides natural beauty and scenic views for both residents and tourists, especially in the fall.

Vegetation extends from ground level to shrubs and trees encompassing countless species. Because of Lincoln's generally steep slopes and good drainage of upland area, northern hardwoods (sugar maples, beech, paper birch and associated species) dominate. Where the soil and drainage conditions are different, there are stands of mixed white pine, hemlock and spruce. Fortunately, most of the forested lands in Lincoln are state and federally protected.

Map 7.7 shows the forest cover in the Town of Lincoln as being mostly hardwood (Beech, Oak, Birch, Aspen). Mixed forest and softwood (Pine, Spruce, Fir, Hemlock) are found in areas

farther away from the village center, mostly on mountain tops.

The variety of plant life in Lincoln is quite extensive; plants struggling to gain hold on mountain ledges, grasses and sedges common in what fields remain and the various water-related species near the rivers' banks.

K. WILDLIFE

Lincoln has at least three types of environments, which support or are capable of supporting unique and important wildlife species; ledges or peaks, the river and brook corridors, and water bodies and wetlands not associated with the rivers and brooks. These are all critical habitats, particularly for birds and waterfowl. Equally productive as habitat are rivers and streams, ponds, marshes and bogs. Big game such as deer, bear and moose, as well as fox, bobcat and lynx are found in the undeveloped areas of Lincoln.

Furthermore, in general, areas that are totally forested provide suitable habitat for about 18 species of wildlife, while open areas of the forest provide suitable habitat for about 35 species. However, the combination of forested and open areas provides habitat for approximately 144 wildlife species, although not all of these would be expected to occur at one location at one time. Therefore, the species diversity and wildlife numbers increase substantially in areas where permanent forest openings are found adjacent to closed forest canopy.

Because of development in the middle of wildlife habitats, the Town of Lincoln should create ordinances to protect wildlife and to teach residents how to live around wildlife habitats without affecting them negatively.

The conservation and encouragement of wildlife has several benefits to the town. Conserving and encouraging wildlife and wildlife habitat:

- Helps maintain the rural character of the town;
- Provides areas for education and recreational activities;
- Provides hunting, fishing, trapping opportunities – positive economic and recreational benefits to the Town;
- Helps maintain nature's balance;
- Provides flood protection;
- Provides natural buffers from sights, sounds and wind.

L. IMPLICATIONS FOR THE FUTURE

The natural resource findings discussed in this chapter provide insights as to how Lincoln has historically developed. The following are potential implications of the natural resource findings on the future growth and development in Lincoln. As Lincoln's economic base is heavily reliant on the capture of spending from tourists attracted by the area's environmental features, how the Town of Lincoln chooses to balance economic development and natural resource protection will be one of the most important issues facing the Town over the next decade.

The influence of topography on Lincoln's natural form has created a situation where the most desirable and feasible development locations for residential, non-residential and roadways are flat parcels at relatively low elevations with gradual slopes. Coincidentally, these same locations represent most of the developed land in Lincoln. In order to ensure that future development does not compromise the environmental integrity, the Town should adopt development guidelines and policies which ensure that the development of environmentally sensitive areas is avoided as much as possible. Furthermore, many federal and state regulations have been created for this sole purpose. The Federal Storm Water Program is one example of such regulations and below is a short summary of the new policy and its implications for local communities.

Federal Storm Water Program (Phase II)

The new Storm Water Management regulations put in place by the Environmental Protection Agency (EPA) addresses the preservation of environmentally sensitive areas. Storm water is one of the leading causes of water pollution nationally, and urban runoff is the top category of non-point source pollution in the New Hampshire Non-point Source Management Plan. Storm water is regulated by the U.S. EPA under the Clean Water Act.

As of **March 10, 2003**, construction activity that disturbs **one** or more acre of land, including that conducted by a municipality, needs the Construction General Permit (CGP). This is different from the current requirement that construction activity that disturbs **five** or more acres of land needs the CGP. What EPA considers "construction activity" includes: clearing, grading, excavation and other land disturbance activities related to projects such as landscaping, demolition, and building homes, office buildings, factories, roads, etc.

These regulations are aimed at protecting the natural environment by preventing erosion, controlling sediment loss and keeping other pollutants from running off the site when construction occurs.

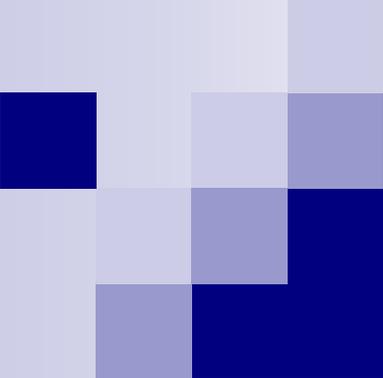
The South Mountain Expansion Project at Loon

For many years, the Loon Mountain Recreation Corporation has been planning the expansion of the South Mountain, located in the White Mountain National Forest. This expansion would bring 2,900 additional skiers during the winter and approximately 1,093 new housing units on Loon property. Potential impacts of the Loon's proposed development on the environment have been evaluated in an Environmental Impact Statement prepared by USDA-Forest Service.

An irreversible commitment of a resource is one that cannot be changed once it occurs. An irretrievable commitment is one for which the resource cannot be recovered or reused without great expense. The expansion of the South Loon Mountain would create no long-term irreversible commitments of physical or biological resources. The area could be restored to its present condition, heavily forested, in the future. Most of this area of New Hampshire was logged several times and it has recovered. Short-term losses of soils, vegetation and wildlife would occur, but they would also be quite small. The change in the human resources due to increased growth of Lincoln-Woodstock, the altered visual character of the land, and the

change in the intensity of recreation use of the area, would all be irreversible, at least in the short term. The character of the area would change from a human perspective, and this would be considered both bad and good by various people.

In summary, the expansion into South Loon Mountain would only create some short-term irreversible or irretrievable commitments of resources, with the major change being the change in the character of the area due to increased growth, but none of the natural resources of the area would be permanently impacted.



Town of Lincoln Master Plan

Chapter VIII - Cultural and Historic Resources

Authored By: North Country Council

A. INTRODUCTION

Historic resources generally include buildings, bridges, farms, cemeteries, and sites with archeological interest. These resources are often demolished, destroyed, or irrevocably altered as growth and new development occurs, and Lincoln has been no exception to this phenomenon.

There are many reasons for preserving historically significant resources and their surroundings. Among the most compelling are psychological ones, reasons that are associated with the continuity and quality of life. Older buildings provide us with tangible links with the past; they give us a sense of the continuity of time and place. Just as important, they become part of our own lives. These historic, cultural and architectural riches frequently bear a relation to events, years or people in history which help to define use as a cultural group.

Gradual and pervasive erosion of the historical character can happen with the accumulation of incremental changes to buildings and places. It is our challenge to ensure that this does not happen in Lincoln. Preservation should not be a reaction to a crisis, but part of the planning process. Preservation does and should be thought of as prevention.

This chapter highlights local historic and cultural resources, describes why they are significant, and looks to provide the resources, recommendations, and tools to plan for the preservation, protection and enhancement of those resources.

B. CRITERIA FOR IDENTIFYING HISTORIC RESOURCES

The National Register of Historic Places is the national standard for identification and recognition of historical resources. The eligibility for properties to be included in the National Register is based on fulfillment of one or more of the following four criterion:

- Criterion A: Association with events that have made a significant contribution to broad patterns of national, state, or local history.
- Criterion B: Association with the lives of persons significant in national, state, or local history.
- Criterion C: Embodiment of distinctive characteristics of a type, period, or method of construction; or representative of the work of a master; or possessing high artistic values; or representative of a significant and distinguishable entity the components of which lack individual distinction (i.e. a district).
- Criterion D: Has yielded or is likely to yield information in prehistory or history (i.e. archeological site).

While the actual listing in the National Register confers a universal recognition of a property as historic, the determination of a property as eligible for the National Register also provides that

property an elevated status for review and avoidance of impacts from federal projects and actions.

C. NATIONAL REGISTER OF HISTORIC PLACES

Under terms of the National Historic Preservation Act of 1966, the U.S. Department of Interior's National Park Service maintains the National Register, which lists the Nation's cultural resources worthy of preservation. The National Register is the Nation's roster of properties that are important in history, architecture, archeology, engineering, or culture. Properties may be nominated individually, in groups, or by Districts. The nomination process requires careful documentation as to a site's historical significance. In addition to buildings and bridges, other categories—such as Main Streets and roads, villages, parks, and monuments—can be listed.

There are a number of benefits for properties listed on the National Register. These include the provision for special review and mitigation of a road widening, or other project using Federal funds, if undertaken in the vicinity, and the possible eligibility for Federal benefits. These include charitable deductions for donations and easements, grants for preservation, and investment tax credits for the rehabilitation of income-producing buildings.

No additional regulative restrictions are placed upon those properties that are listed on the National Register; but instead, a listing in the Register recognizes the property's significance, encourages the stewardship of the property or resource, and stimulates local pride, appreciation, and commitment to preservation.

The Town of Lincoln has two covered bridges that are eligible for listing on the National Register:

- The Flume Bridge, located east of Route 3 over the Pemigewasset River at the junction of Route 175 and Route 3. There has been much discussion about where this bridge was actually built. Some say it was built, used elsewhere, and later moved to this spot where it was needed more than at its previous location. However, many believe it was built for its present location in 1871 when the Lincoln Turnpike Company, created by an act of Legislature, obtained the right to build the road from the main highway, U.S. Route 3, to a point near the foot of the Flume. It was originally covered with half-inch boards cut in about 30-inch lengths and put on like shingles. These were called shakes and served until a new covering was needed to stop leaks. Modern shingles replaced these shakes in 1951. The bridge is used by buses bringing visitors to the Flume and maintenance vehicles.



- The Sentinel Pine Bridge located east of Route 3 over the Flume Gorge at the pool in Lincoln. The Society for the Protection of New Hampshire Forests built this bridge in 1939 and maintained it until it was transferred to the state in 1948. The tall pine that gave the bridge its name once stood near the rear of the pool as if it were a sentry on guard. The great tree was over ninety feet tall, five feet in diameter, and estimated to be 100 years old when it was blown over in the 1938 hurricane. Workmen took a sixty foot piece of the tree and placed it over the river forty feet above the water just north of the pool. Taking other trees that were blown down, they made the footbridge over the pine to protect and preserve it. The bridge is put together with wooden pegs. The shingles were handmade by John G. Welch and Old Joe Poloquin, who was also known as Indian Joe.



D. STATE REGISTER OF HISTORIC PLACES

The New Hampshire State Register of Historic Places is one part of the state's effort to recognize and encourage the identification and protection of historical, architectural, archeological and cultural resources. These irreplaceable resources may be buildings, districts, sites, landscapes, structures or objects that are meaningful in the history, architecture, archeology, engineering or traditions of New Hampshire's residents and communities. The State Register is administered by the New Hampshire Division of Historical Resources (NHDHR), which is the state's Historic Preservation Office.

Listing in the State Register can contribute to the preservation of historic properties in a number of ways, which include:

- Public recognition that a property is significant to a community;
- Consideration and advocacy in the planning of local and state funded or otherwise assisted projects;
- Qualification for state financial assistance for preservation projects, when funds are available;
- Special consideration or relief in the application of some access, building and safety code regulations; and
- A complimentary one-year membership to the New Hampshire Preservation Alliance.

Property owners can nominate properties to the State Register by submitting a completed inventory form for the resource to the Division of Historical Resources. These forms can be prepared by property owners or by a consulting architectural historian or archeologist at the

owner's request. NHDHR staff then review the nominations and make suggestions for editorial changes or additional research. If the property meets the State Register criteria and the inventory form is complete, the NHDHR recommends the property for listing to the State Historical Resources Council. The Council, composed of professionals in the fields of American History, architectural history, architecture, prehistoric and historic archeology and other related disciplines, meets quarterly and gives final approval to all nominations.

Following Council approval, NHDHR will present property owners with a letter and certificate confirming that their property is listed on the State Register of Historic Places. Information on the property will be entered into NHDHR's database and files, and the owners can sign up for a mailing list to receive the Division's newsletter and pertinent information on workshops, publications and other preservation events and topics.

Inventory forms are also completed as part of many state and local planning processes, such as environmental review for transportation projects, and through the efforts of town heritage or historical commissions. Owners of private property listed on the State Register are free to maintain, manage, or dispose of their property as they choose, without oversight or comment from the NHDHR, provided that no state monies or permits are involved.

All properties listed on the State Register are documented and evaluated against the following criteria. These broad criteria are designed to guide individuals, local governments and others in evaluating potential entries in the State Register. Properties not specifically described in the text below may still be eligible.

- Properties may be listed on the State Register for the story they tell.
- Properties may also be meaningful for their associations with people who made important contributions to a community, profession or local tradition.
- Properties may also be listed on the State Register for their tangible merit, either as a well-preserved example local architecture, design, construction or engineering, or as long-standing focal point in a neighborhood or community. These types of resources need not be extraordinary or the best example in town; they often can be a common, although irreplaceable, feature on the New Hampshire landscape.
- Identified, but unexcavated and unevaluated archeological sites may also be listed on the State Register of Historic Places.

As noted above, historic resources listed on the State Register can be buildings, districts, sites, landscapes, structures and objects. Examples of these types of resources include, but are not limited to:

- Buildings: houses, stores, barns, garages, boathouses.
- Districts: downtown's, mill complexes, railroad corridors, neighborhoods, agricultural properties.
- Sites: mill or building foundations, parade grounds, the location of a Native American Indian camp.
- Landscapes: cemeteries, parks, town forests.
- Structures: bridges, stone walls, fire towers, dams.
- Objects: watering troughs, signs, light posts, boats, fountains.

The Town of Lincoln currently has no site on the State Register of Historic Places. The Town should look into the realization of a survey for potential sites to be listed on the State or National Register. The New Hampshire Department of Historical Resources could help in this process and provide input regarding the preservation of important historical properties in Lincoln.

E. STRATEGIES TO MEET HISTORIC AND CULTURAL RESOURCE NEEDS

Lincoln has a rich historical legacy that is evident in its buildings, landscapes, and patterns of development. These resources contribute to the quality of life in the community and provide a sense of identity that many residents enjoy and find important. The strategies listed below can help ensure that these resources are protected and preserved for future generations to enjoy and learn from.

Certified Local Governments Program: The “Certified Local Governments” (CLG) program, enacted by the National Historic Preservation Act Amendments of 1980, is a partnership between municipal governments and the State historic preservation program, to encourage and expand local involvement in preservation-related activities. To be certified, a town must:

- Enforce appropriate state or local legislation for designation and protection of historic properties (this means that the community must have a legally-adopted Historic District, and adequate regulations for administering the District Ordinance);
- Establish an adequate and qualified Historic Preservation Review Commission (Historic District Commission or Heritage Commission, with Historic District responsibilities) under state law and local ordinance;
- Maintain a system for the survey and inventory of historic properties;
- Provide for adequate public participation in the local historic preservation program, including the process of recommending properties for nomination to the National Register of Historic Places; and
- Satisfactorily perform the responsibilities delegated to it by the State of Historic Preservation Officer under P.L. 96-515.

Local governments that are certified have specific responsibilities for review of National Register of Historic Places nominations for all properties within their community, not just within a historic district; they participate in the development of regional and statewide historic preservation goals; and they are eligible to apply for federal matching grants from a special “pass-through” fund set aside for the exclusive use of CLGs.

Citizens for New Hampshire’s Land and Community Heritage: A coalition of organizations that are working to protect the special places that define our state. Technical assistance, outreach, and education are available to communities.

Cooperative Ventures with Private Organizations: When the interests of the Town to conserve historic or cultural resources match with the interests of a private organization, the potential for a cooperative partnership exists. This tactic will require some creative thinking and introductory discussions by Town officials with area organizations that have, or could develop, an interest in conserving such resources.

Grants from Foundations: The Town should research available grants and develop proposals to seek funding to conserve particular pieces of property or types of historic resources within Town. Funding could be sought from foundations at the local, state, regional, and national level.

Land and Community Heritage Investment Program (LCHIP): This State fund is designed to assist communities that want to conserve outstanding natural, historic, and cultural resources. There will be the requirement that the Town match the State money from this fund with a 50% match from other sources, some of which can be an “in kind” match, as well as funds from other sources.

Land Trust: The Town should support non-profit land trusts that accept and pursue property and easements for land of local historic and cultural concern.

New Hampshire Main Street Center: Dedicated specifically to maintaining, strengthening, and revitalizing the physical, economic, and cultural characteristics of the state’s traditional and historic downtown urban and village centers by supporting and working with Main Street programs. The Center provides technical assistance, education, and outreach to interested communities.

New Hampshire Preservation Alliance: The Alliance was founded in 1985 and works to preserve New Hampshire’s historic buildings, landscapes, and communities through leadership, advocacy and education.

Preservation Easements: Preservation easements are initiated by landowners who wish to protect their land from future development, while still retaining owner’s rights. Farms, buildings and scenic and historic areas all have the right to be protected by an easement. Perpetual easements protect the land or structure through subsequent owners, while term easements have a set time period agreed to by the town and current owner. Perpetual easements often reduce the estate tax on large amounts of property, though the decision to award tax relief is officially decided by State Law, local officials and town assessors.

Revolving Funds: Revolving funds help protect and preserve publicly significant historic properties by using options of purchase, direct acquisitions, or deeds of gift to acquire threatened or endangered properties. Profit from the sales are rolled back into the fund to help save other endangered properties and perpetuate the fund. The National Preservation Loan provides loans to establish or expand local and statewide preservation revolving funds.

State Historic Markers: The Historical Marker Program is one way that New Hampshire remembers its past. The New Hampshire Division of Historical Resources is responsible for approving the subject, location, wording, and accuracy of the state markers. The authorizing official of the historical markers program is the Commissioner of Transportation, who has the power to erect up to ten markers per year. The only way a marker can be placed in a Town is in response to a proposal and petition of twenty signatures from concerned citizens. These markers can be erected on State and Local roads. However, the initial costs of the markers and on-going maintenance are local responsibilities.

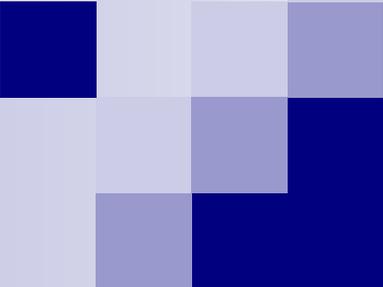
Tax Rehabilitation Credits and Incentives: Income tax deductions may be granted for two types of historic properties, a historically important area, or a certified historic structure. A twenty percent tax credit is given by the government for rehabilitation of certified historic structures. The Bank of America Historic Tax Credit Fund grants equity investments for the rehabilitation of historic commercial and residential properties eligible for the federal and state historic tax credit, as well as the 10% non-historic federal tax credit.

Transportation Enhancement Funds (TE): Funding for the TE program is slightly more than \$3 million dollars annually. These funds are provided in an 80/20 match, with the State paying for the majority of the project cost. Typical examples of projects eligible for TE funds include:

- Acquisition of scenic easements and scenic or historic sites;
- Scenic or historic highway programs;
- Historic preservation;
- Rehabilitation and operation of historic transportation buildings, structures, facilities;
- Preservation of abandoned railway corridors;
- Archeological planning and research; and
- Establishment of transportation museums.

F. HISTORIC PRESERVATION RECOMMENDATIONS

- Compile an inventory of historic resources from all available sources.
- Evaluate the potential for historic districts and develop draft ordinances as necessary.
- Consider National Register nominations for local historic properties and districts.
- Consider the public acquisition of easements or the fee title for important historic properties to ensure the protection of the same.
- Apply for designation as a Certified Local Government and seek grants to assist in preservation related activities.
- Consider establishing a Heritage Commission.



Town of Lincoln

Chapter IX - Community Design

Authored By: North Country Council

A. INTRODUCTION

In order for the guidelines and principles presented in this chapter to be useful, a community must first form a community vision. A vision is a philosophy generated at the local level that summarizes community values and ideals that will shape future development. Through the visioning process, a community is able to evaluate present conditions, identify problem areas and begin to build consensus on how to address problems and manage future change. The community visioning process is closely tied to the design process. A good design is the best solution to a problem within the context or limitations of a given situation. The design process is a series of actions through which one attempts to find the best solution in a particular set of circumstances. When one considers design at the community level, one must consider the product, the physical form of the community and the process through which the community will determine the most appropriate form for future community growth.

This chapter of the Master Plan examines community design features within the Town of Lincoln. It presents potential realistic design elements and options for the Town of Lincoln as a whole as well as presenting an analysis of existing community design conditions in town.

B. SUMMARY OF FINDINGS AND CONCLUSIONS

The following points summarize the community design features presented within this chapter. Additionally, various implications associated with Lincoln's community design are discussed.

In terms of community design features, issues, ideas and concepts, numerous concept, issues and ideas have been presented. Selected recommended design concepts include:

- Improve lighting standards within planning regulations and policies to reduce ambient light pollution.
- Evaluate the current sign regulations and consider incorporating basic sign design guidelines in terms of form, materials and color, graphics and lettering, illumination and signage themes.
- Develop a streetscape master plan to identify opportunities to improve community design.

Based on design concepts presented throughout the chapter, implications about how Lincoln could change in the future include:

- In terms of community design issues a variety of conceptual design elements have been discussed throughout the chapter for the town as a whole. As a tourist destination, the Town of Lincoln needs to pay special attention to existing design features throughout the community and provide approaches for considering design related impacts during the review of development proposals which may need more design consideration. This attention may come in the form of amendments to planning regulations (land use ordinance, etc.) and policies, devoting additional resources and investment to improve

community design, and establishing partnerships with local business establishments, non-profit agencies and community groups to work through design issues on a local level.

C. WHY IS DESIGN IMPORTANT IN A COMMUNITY?

Design is a process that we use throughout our lives to organize and carry out daily activities, to resolve problematic conditions, to plan for future activities, and to arrange our environment. We are all designers, and regardless of background and training, all members of a community are entitled to make decisions about the way we use, modify or consume space.

Design is a process of problem identification and the creation of solutions that display how a situation is to be organized and constructed. The results of the design process can be a plan, product, idea or place. The specifics of design include attention to such details as form, color, type and texture or materials, balance and symmetry/asymmetry, height, scale and density. Broader design details include the siting of a building within the landscape, natural factors such as wind, water, soil, sun and shade; and transportation considerations such as public transit, pedestrian and vehicular access, and relationships between different modes of transportation.

Design can accomplish the following:

- Towns and cities are more livable, enjoyable, and economically stable;
- Communities and neighborhoods are easier to navigate and identify;
- Transportation is more efficient;
- Parks and recreational areas are more pleasurable;
- Downtowns are more lively and economically stable;
- The “everyday life” of residents is improved.

The community design process should be on-going, acknowledging that the needs, circumstances, priorities, and patterns of living in a community will change over time. The design of public spaces is a complex process in that it involves many different disciplines: from sociology, and political science, to engineering and applied environmental sciences, to the fine arts. These disciplines must coordinate to address the changing community needs and priorities.

D. GENERAL AESTHETICS ISSUES & COMMUNITY DESIGN IDEAS

The following sections present general aesthetic issues and community design ideas for the Town of Lincoln as a whole. Furthermore, current regulations will be assessed in order to determine what design principles and ideas are already addressed in the town ordinances.

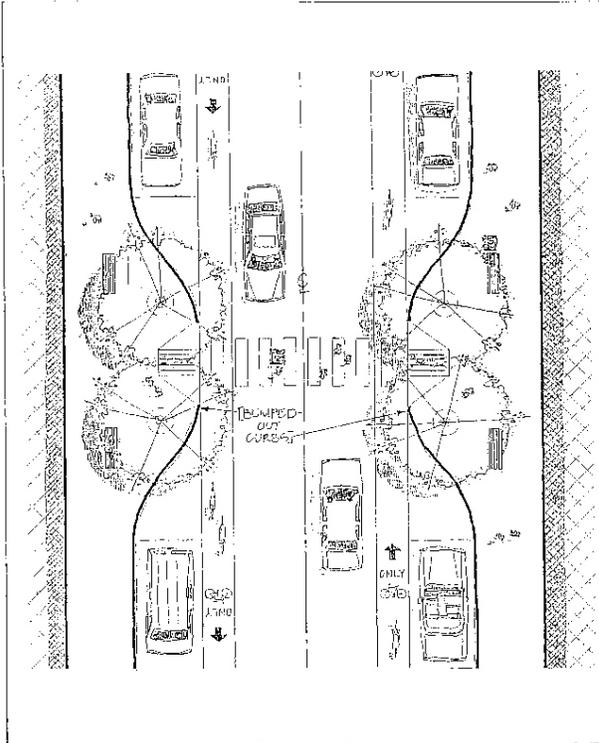
Placement of Buildings

When new development takes place in the landscape, the relationship of the new buildings to roadways must be carefully considered. Some important considerations in Lincoln include aesthetic value and desired visual character of towns and villages, the frequency of vehicles turning on and off major roadways to access new buildings, and the preservation of the rural landscape in town.

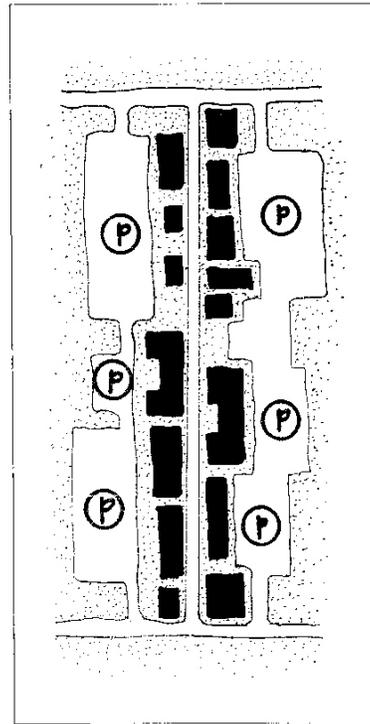
This section will address the placement of commercial and residential buildings in the landscape, access management principles and will briefly describe the importance of

establishing architectural and site plan review guidelines in Lincoln.

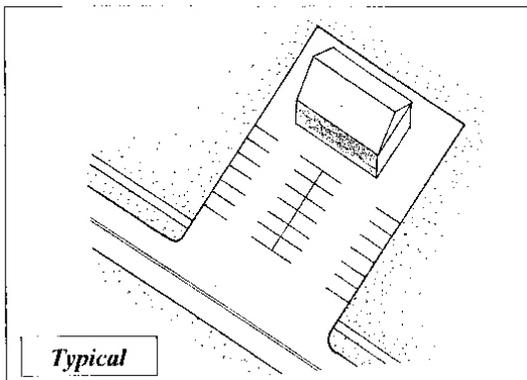
Commercial Development Considerations



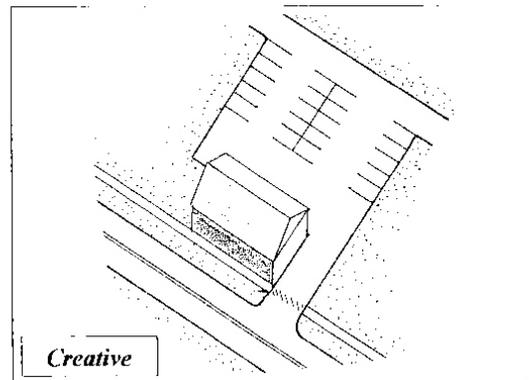
Downtown "Main Street" Commercial Business District qualities typically include zero setback from the lot line, on-street parking, and pedestrian amenities such as sidewalks, crosswalks, etc.



In a downtown Commercial Business District, additional parking is located behind buildings. Signage directs cars to these parking areas.

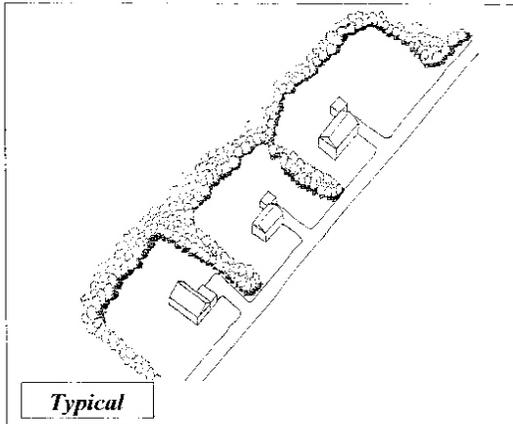


A building with a large setback, large parking lot in front of the building, and wide curb cut presents safety and aesthetic problems.

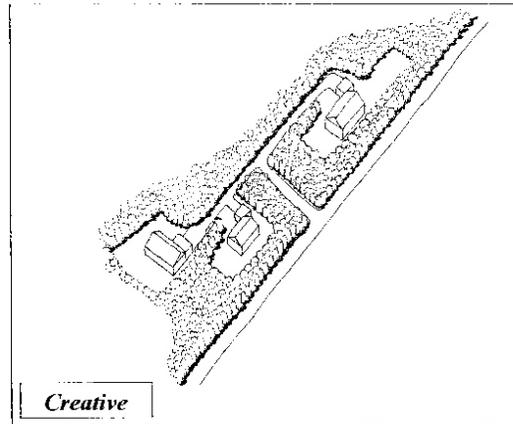


Moving the building closer to the road increases visibility of the business to drivers, controls access into the lot, and hides the parking behind the building.

Residential Development Considerations



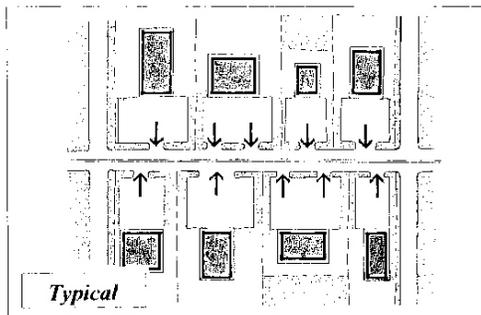
Typical
Residential development along a roadway, each with individual driveways and lawns that extend to the roadside.



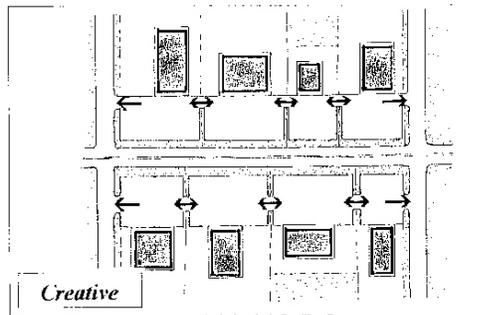
Creative
The residences are set back from the road and the existing roadside vegetation is preserved, maintaining the desired rural roadside character. The residences share a common driveway and an increased sense of quiet and privacy in their distance from the roadway

E. ACCESS MANAGEMENT PRINCIPLES

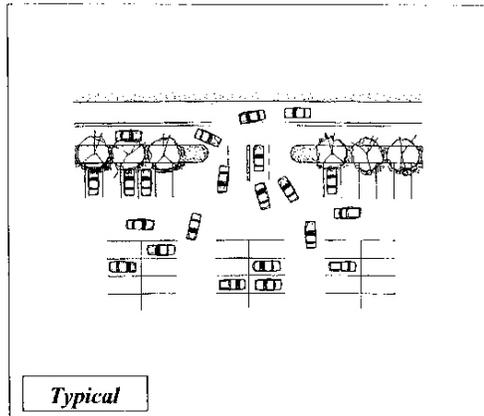
Access management is a tool to ensure the safe and efficient movement of vehicles by striking a balance between property access and mobility. Access management attempts to limit the number of places where vehicles are turning and entering the roadway, to reduce the deceleration of vehicles in travel lanes, and to remove turning vehicles from travel lanes. New development should carefully consider the movement of vehicles to and from local roadways. The access management techniques presented should be discussed in future development projects in Lincoln.



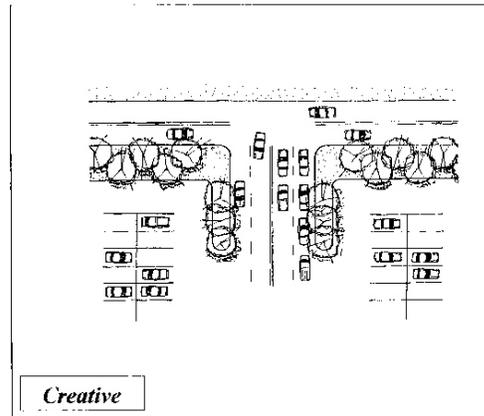
Typical
Each business has one or more access points to the main roadway. This can create confusion for drivers and an increase in accidents from the entering and exiting traffic.



Creative
When businesses share driveways, traffic is only entering and exiting the main roadway from two collector roads, making the traffic patterns clear to the motorists and increasing the safety of the main roadway.

*Typical*

Access drives (“curb cuts”) to parking lots should offer a collection area for entering and exiting traffic. The access drive shown above does not offer a clear pattern for entering and exiting traffic, causing confusion and safety hazards in the parking lot.

*Creative*

Designing the entry/exit area of a parking lot with a sufficient “throat” helps to control the movement of vehicles into and out of the parking lot. Also, cars are able to line up in a clear and orderly pattern as they are waiting to exit the lot.

Town of Lincoln Regulations

Zoning ordinance

Current regulations in Lincoln encourage “smart growth” principles, protect natural resources, and scenic views and aesthetic enhancement in several ways. For example, a cluster type of development is allowed in four zoning districts and permit the preservation of the natural and scenic qualities of the open land in Lincoln. It does so by allowing reduced lot size requirements and the preservation of the remaining undeveloped land as open space or forest land. In addition, minimum lot size requirements call for relatively small lots, especially in the Village Residential district, which provides greater flexibility in building and lot use and density.

In most zoning districts the minimum frontage requirement is 15 feet except in the Village Center, which is 5 feet and the Mountain Residential, which is 25 feet. Again, those requirements provide flexibility in the placement of buildings and maintain the existing character of the town, especially in the Village Center.

Mixed use and village character are protected through the following zoning district regulations:

General Use District (GU): Permitted uses include: residential structures including home businesses, tourist homes, most types of public uses and commercial uses. Special exceptions are provided for airports, adult book/video store, campgrounds, live adult entertainment and junk yards.

Village Center (VC): Several mixed-use opportunities are also provided within this district. Most types of residential uses are allowed and most commercial uses are allowed or possibly permitted as a special exception.

F. TRAFFIC CALMING

What is Traffic Calming?

Traffic calming permits high volumes of traffic to move through a town at the speed limit, employing road design features that encourage such behavior. Traffic calming uses curves, hills, trees, and narrowing techniques to make the roadways less comfortable at higher speeds, thereby causing motorists to drive more slowly and with increased caution.

The objective of traffic calming include:

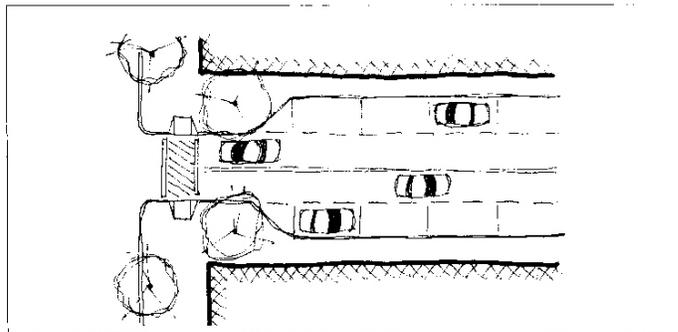
- Achieving slower, safer speeds for motor vehicles, requiring drivers to observe speed limits.
- Reduce collision frequency and severity.
- Improving the safety for non-motorized users of the street, such as pedestrians and bicyclists.
- Reducing the need for police enforcement of speed violations.

Design Considerations for Traffic Calming

Many communities like Lincoln are sure to benefit from traffic calming devices, especially if community goals encourage pedestrian activity. The identification of the constituents of a particular street or neighborhood (such as children and shoppers, for example) may help to give the term “pedestrian” a more human face and voice, to achieve a greater level of respect between drivers and pedestrians through a given area.

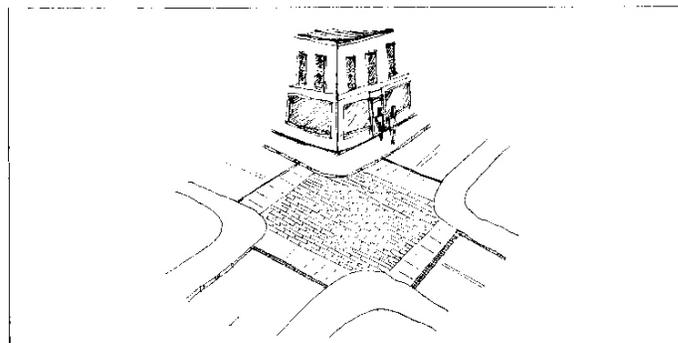
BLOCK ENDS:

- ◆ Constrict vehicle lanes to force drivers to drive more slowly through intersections.
- ◆ Provides more room for pedestrians to gather on the corner while they wait to cross the street.
- ◆ The crosswalk is shorter for pedestrians.
- ◆ Provides more room for benches, street trees, plantings, or for snow storage in the winter.



INTERSECTIONS:

- ◆ The entire intersection can be repaved with a tactile surface, such as granite cobble or other pavers, to encourage slow speeds through the intersection.
- ◆ The crosswalks of the intersection can be repaved with a tactile surface, such as granite cobble or other pavers, to encourage slow speeds through the intersections and to emphasize pedestrian movement.

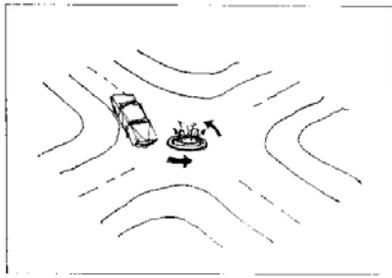


24 Traffic Calming

Traffic calming techniques, however, may not be necessary or appropriate for every segment of road in Lincoln. While traffic calming techniques do result in decreased traffic speed, it is important to keep in mind that Route 112 is the major east-west transportation corridor in Lincoln and that careful consideration of commuter and commercial traffic is essential.

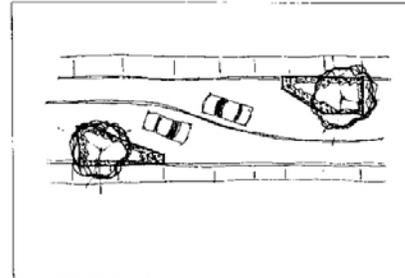
A very important consideration in implementing traffic calming measures is how the traffic calming device affects the travel time of emergency response vehicles in an area. Communities should assess the impacts on response times for certain traffic devices, comparing those impacts with the benefits of traffic calming on reducing speeding problems, to determine if traffic calming will result in a net benefit to the community or a potential liability.

Several traffic calming measures allow for landscaping and other edge treatments along roads. Landscaping adjacent to a road can provide a vertical element along the road that helps accentuate the traffic calming device to drivers and enhances the visual quality of the area.



ROUNDBABOUTS

- ◆ Cause vehicles to slow speed at intersections and navigate around a small island, which can be planted or filled with community-identifying markers. These features can act as a "gateway" element at the edges of a residential or commercial district.



CHICANES

- ◆ These diagonal diverters can be installed along an existing street to require vehicles to slow speeds and navigate around them.
- ◆ Provides areas for planting and contain parking.

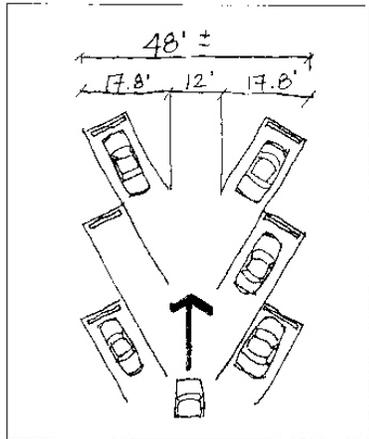
G. PARKING

One of the most common questions that communities, especially downtown areas, address when considering and discussing their design and planning issues is, "Where will people park?" Not only is it essential that actual parking areas exist to accommodate the visitors to a business or commercial district, but the perception of parking availability by the visitor must be considered seriously in the establishment of a parking management system.

In the design and planning of downtown areas, or Main Streets, parking should not be considered case by case or one business at a time. Parking throughout Lincoln should be considered as an interrelated system throughout the entire town that can accommodate different volumes of visitors on a given day during different times of the year.

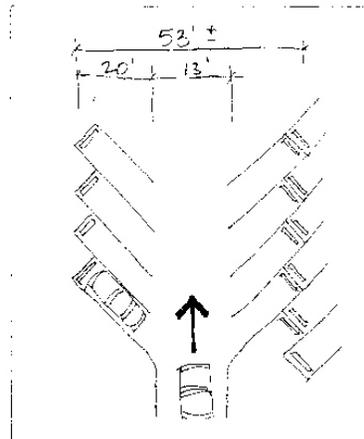
Many towns claiming to have a parking problem typically have a parking management problem. The vacant lots often found behind buildings along Main Street present opportunities to expand parking potential beyond the available spaces or meters present on Main Street. Beyond the simple identification of potential future parking areas within the village center, communities must consider the promotion, or advertising, of these available parking areas

through a signage system in town to direct both the frequent and first-time visitor to these public parking areas.



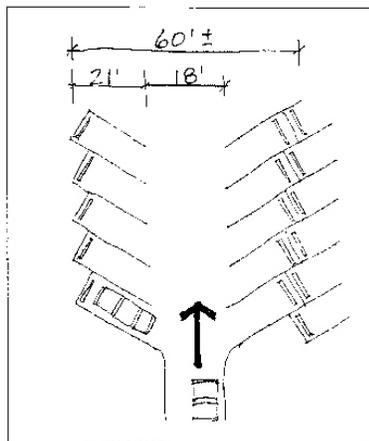
30 DEGREE PARKING LOT ORGANIZATION:

- ◆ Easy access in and out of stall.
- ◆ Large space requirements for lot.



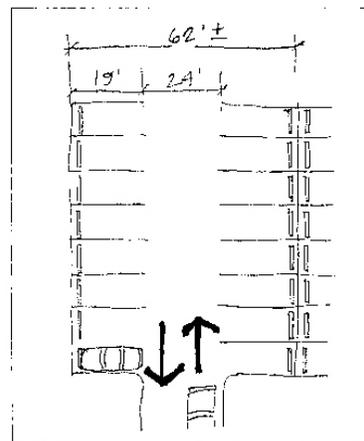
45 DEGREE PARKING LOT ORGANIZATION:

- ◆ Easy access in and out of stall.
- ◆ Adjacent rows can be organized in a herringbone pattern.



60 DEGREE PARKING LOT ORGANIZATION:

- ◆ Easy access in and out of lot.
- ◆ Of angled parking alternatives, this layout allows for the most cars.

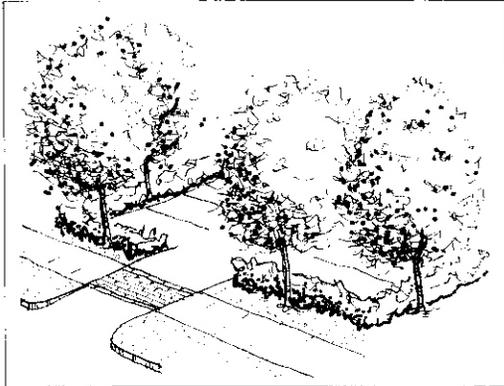


90 DEGREE PARKING LOT ORGANIZATION:

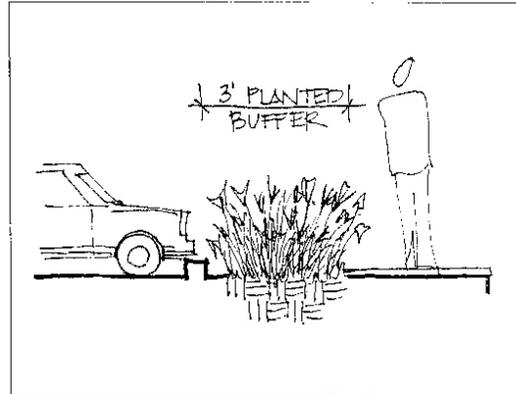
- ◆ Lot can handle the most cars of the 4 alternatives.
- ◆ Aisles permit 2-way traffic flow.
- ◆ Typically less confusing to motorists in terms of wayfinding.

Parking Lot Vegetation Recommendations

The visual quality of parking lots can be easily improved through landscape improvements and the planting of trees and vegetative buffers. Yaro et al. recommend that for every eight spaces, for lots larger than 10 spaces, one tree is planted and surrounded by a minimum of 40 square feet of unpaved, permeable surface. This type of requirement can be included in site plan review guidelines.



Parking lots can be screened with vegetation to improve the aesthetics of the lot. Sidewalks and pedestrian crossings within parking lots should be carefully considered to minimize vehicle-pedestrian conflicts.



Parking lots and sidewalks should be designed with a physical buffer between the lot and sidewalk to avoid barriers to pedestrian or wheelchair movement.

Promoting and Managing the Parking System

Management of parking in small towns and villages is typically lacking, but it is imperative to move beyond the perception that a community has a “parking problem”. If a town official or other qualified individual is assigned to organizing, promoting, and managing the town’s parking system, problems and perceived problems can be addressed effectively.

The National Trust for Historic Preservation’s Main Street Center and the Institute for Transportation Engineer’s *The Parking Handbook for Small Communities* lists the following recommendations for a successful downtown parking system:

- Involve private sector input—including property owners, business operators, employees and customers.
- Encourage consistent enforcement of parking system—typically a public sector responsibility.
- Encourage long-term maintenance—both fee collection as well as the cleanliness and safety of the parking lot(s).
- Maintain a promotion program and install signage directing motorists to designated parking areas—parking information should be readily available, clear and concise.
- Establish a budget to support the program at the local level.

Town of Lincoln Parking Regulations

Parking requirements for the Town of Lincoln are covered in both the *Zoning Ordinance*, Article V, Section A and in the *Site Plan Review Regulations* under Article XV, Section C (1). Off-street parking is required for commercial uses at the following rate: 1 space for each unit for hotels, motels and other lodging accommodations; 1 space for each 300 square feet of public area for businesses; 1 space for each 4 seats for restaurants; 3 spaces per repair bay for customer's cars plus 1 space per bay for employees for auto service stations; etc. For residential uses, parking requirements are as follow: 2 spaces for each residential unit. Where the development will provide for mixed uses, including residential units, the Planning Board waves the two parking space requirement per residential unit and only require one additional space per residential unit, but only in the case that the Planning Board finds that the off-street parking proposed is adequate for the intended use.

Site Plan Review Regulations also regulate parking by allowing the Planning Board to permit the installation of surfaces other than paved as long as they will not lead to dust and erosion, and impact adjacent properties. Parking areas for new buildings should be located on the side or rear of the structure, helping to promote pedestrian access between and within various developments. In addition, there is a landscaping requirement for parking lots with more than 30 spaces.

In order to encourage through traffic to stop as well as to improve pedestrian activity within the Village Center area, the Planning Board established as a policy the concept that a series of smaller size municipal parking lots scattered throughout the Village Center area is preferred to fewer, larger parking lots. This concept was supported at the Town Meeting of 2001 by adoption of Amendment No. 1 to the Lincoln Land Use Plan Ordinance. (Village Center Plan, 2002, p. 9)

H. PEDESTRIAN AMENITIES AND UNIVERSAL DESIGN

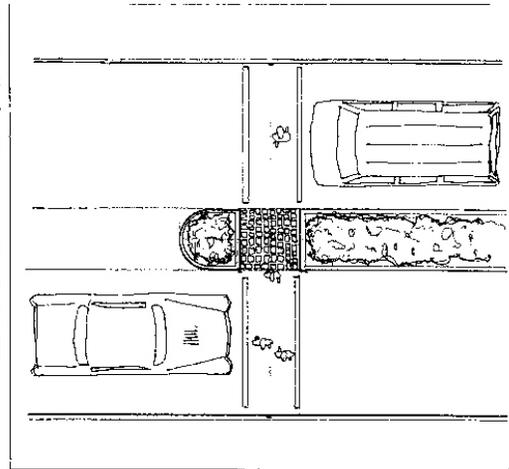
The village center and other scenic areas in Lincoln are best experienced when people are encouraged to get out of their cars and walk around. Economic development and activity in the village center depend on pedestrian traffic, but often what is found in village centers is neglect for the pedestrian. Recent development trends resulting in suburbanization and sprawl have given priority to vehicles over people, which has resulted in ambiguous crosswalks, developments without sidewalks between individual businesses, and generally undesirable and unsafe places to walk.

Creating a Pedestrian Friendly Community

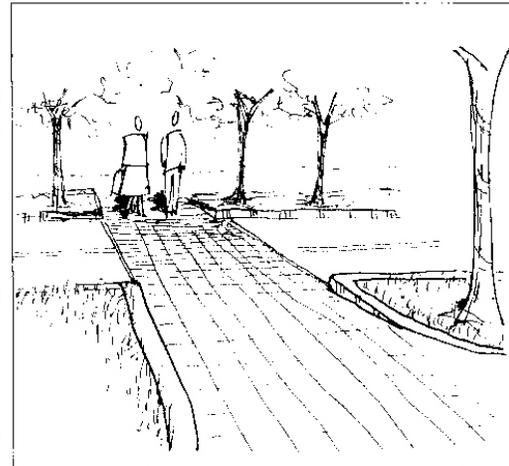
Encouraging pedestrian activity in the village center promotes economic development and activity by providing access, parking and improving the overall village environment. Shopping experiences are enhanced by improved pedestrian safety when walkers are separated from moving traffic.

Untermann's *Accommodating the Pedestrian* identifies seven easily implemented changes to town centers that can benefit pedestrians:

- Install new intersection and mid-block crosswalks with “bumped out” curbs.
- Require a minimum number of trees in parking lots.
- Install accessible sidewalk curb cuts and ramps.
- Locate new buildings close to the street.
- Reduce or eliminate the number of drive-in services within the downtown.
- Establish a detailed village sidewalk and bike lane plan.
- Reduce the speed of traffic traveling through town.



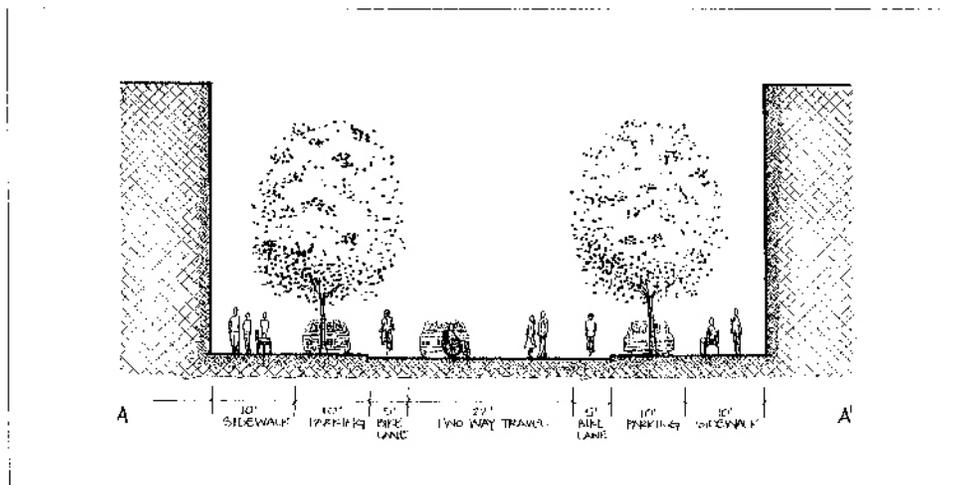
A crosswalk with a planted median in the middle of the street provides a “safety zone” for wide street crossings.



The texture of the crosswalk can be different from that of the street, by installing pavers or other tactile surface, to emphasize the crosswalk as a pedestrian area.

I. BICYCLE TRAVEL AND MULTI-USE TRAIL NETWORKS

Bicycles are a mode of transportation for many people and a recreational activity for others. Both needs should be considered when designing bicycle trails throughout Lincoln. By encouraging non-motorized modes of travel for short-range trips, such as bicycling and walking, we can help reduce local traffic volumes and possibly relieve congestion problems in some areas. This requires not only the installation of the appropriate infrastructure, but a promotional campaign to encourage drivers and bicyclists alike to respect each other's safety concerns and needs. If drivers and cyclists in a community adopt the mindset of road sharing, over time both motorized vehicles and bicycles can coexist and travel safely and efficiently throughout town.



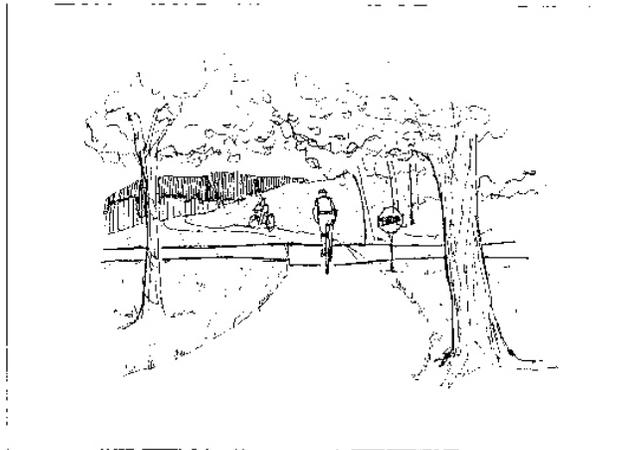
Bicycle lanes should be incorporated in downtown areas to encourage bicycling as an alternative mode of transportation.

Trail systems in Lincoln and the region must accommodate a variety of potential uses, such as hiking, bicycling, cross-country skiing, horseback riding, snowmobiling, etc. With different recreational activities taking place on the same trails, a management system must be considered to minimize conflict on these trails in order to keep users safe, to minimize negative impacts to natural resources and to provide high-quality visitor experiences.

Moore's *Conflicts on Multiple-Use Trails* identifies actions that should be considered to minimize conflicts on multi-use trails. Some of these include:

- Clear and strategically placed signage.
- Educating the variety of user groups to understand and respect other user groups.
- Expanding facilities.
- Enforce regulations with a designated ranger patrol.
- Posting speed limits.
- Marketing/advertisement/public service campaign to educate and inform public.

When considering the interconnection of multi-use trails in your community, you must not only consider the trail network between villages within your town's boundaries, but you must also consider how those trails link to adjacent towns. Considering the interconnection of recreational trails throughout Lincoln and the region will enhance the experience of the recreational users and will also promote economic vitality to Lincoln.



Bicycle paths should interconnect with bike lanes along roadways to create a network of bicycle trails.

J. SIGNAGE

In Lincoln, both traffic control signs and signs advertising commercial businesses communicate messages to drivers, directing them to their intended destination in a clear and safe manner. Signs offer information on highway routes, directions, destinations, and points of interest. With increased development along Route 112 and Route 3, however, the increase in signage along the roadways has become a primary concern for many residents and visitors who treasure the natural landscape and character of the village center.

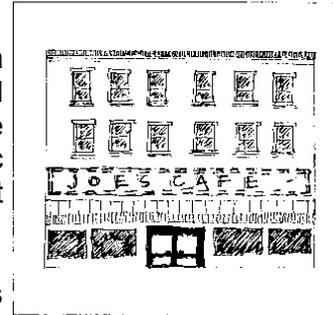
While Route 112 is well known for its high scenic quality, it is also well known for commercial establishments that serve both permanent residents and tourists. The placement of signage is imperative for most businesses to attract customers, especially those first-time visitors unfamiliar with the Route 112 corridor. When rapid commercial development takes place along a roadway however, the roadway often becomes overrun and cluttered with signage; each sign competing with the next for the motorist's attention. This visual clutter can confuse and perhaps overwhelm motorists traveling through an area, possibly resulting in accidents and frustration.

Commercial signage exists in many shapes and sizes for the purpose of attracting customers into businesses. Through the community visioning process, a town or village can determine which types of signs add to or detract from the desired community aesthetic.

Design Considerations for Signage

When selecting or approving the signage for a given site within a community, care should be taken to select signage that will promote the safety, comfort, and well-being of the users, reduce distractions and obstructions that could adversely affect traffic safety, discourage excessive visual competition and ensure that signs aid in orientation and preserve town/village character.

Scale: Appropriate dimensions are relative to the sign type and its location and placement. The size of the sign should relate to the context and always consider the intended viewer’s location and travel speed.

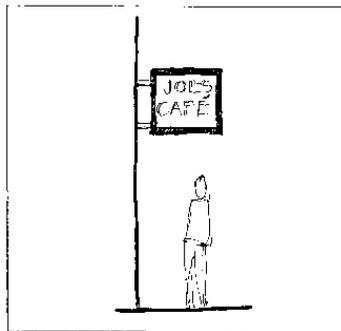


Wall signs - signs painted on or attached flush with the wall of a building.

Positioning: As can be seen below, there are many different placement alternatives for many signs. It is up to a community to determine how the positioning of signs contribute or detract from their community’s character, and establish standards for control.

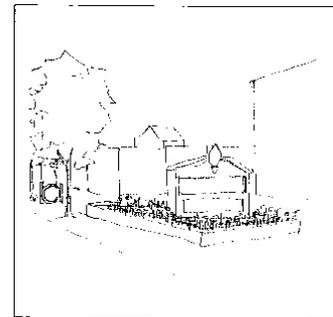
Content: To be legible and quickly understood by the general public, it is important to keep the messages on signs simple. Legibility can be enhanced by the use of graphics such as pictures, symbols and logos.

Balance/Rhythm/Unity/Harmony: A well designed sign is a composition of different, but related, pieces of information. Text should be arranged in a hierarchical manner that is visually pleasing, with the most important text receiving the largest, boldest text weight.

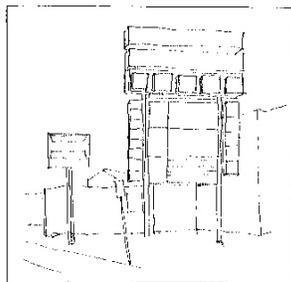


Projecting sign - sign installed perpendicular to or at an angle to a building or wall.

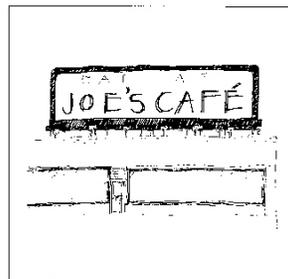
Materials: Whenever possible, efforts should be made to select sign materials that are consistent with the surrounding context. Architectural styles of adjacent buildings and existing desirable signage should be considered when selecting new signs. In a historic district, for example, the use of wood signs may better complement the existing architecture than plastic or metal signs.



Freestanding-ground sign - the entire bottom of a ground sign is generally in contact with or in close proximity to the ground.



Freestanding-pole sign - sign supported by a pole and otherwise separated from the ground by air.



Roof sign - freestanding sign on a rooftop.

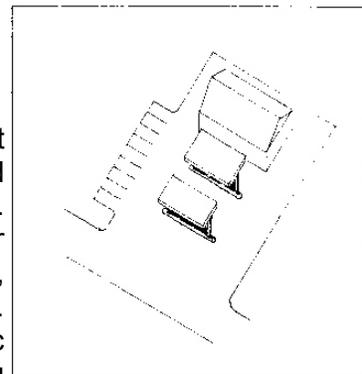
Town of Lincoln Sign Ordinance

Sign ordinances attempt to control or restrict the type, size and location of signs as well as the materials used in the construction of signs. Signage should not destroy or detract from scenic vistas, compete unnecessarily with the natural environment, or saturate the landscape through competitive advertising campaigns. Community sign ordinances or regulations encourage use of street graphics which are compatible with the community character, legible and non-distracting to motorists, and well maintained.

The Town of Lincoln sign ordinance is a stand-alone document with the purpose of permitting such signs that will not, by their reason, size, location, construction or manner of display, endanger the public safety of individuals; confuse, mislead or obstruct the vision necessary for traffic safety; or otherwise endanger public health, safety and morals. It includes information on permitted signs, prohibited signs, exempt signs, placement standards and dimensional and display requirements. A typical sign ordinance would also include illumination standards, safety standards and a section on how to deal with non-conforming signs. It can also include a section on materials of signs and design standards.

K. LANDSCAPE ELEMENTS

Landscape elements refer to decorative or functional items that either complement or detract from the existing context and emphasize the sense of place associated with Lincoln. Landscape elements can include street trees and other vegetation, site furniture (benches, planters, trash receptacles, etc.) and the aesthetics issues related to overhead utility wires. Oftentimes, landscape elements are considered on a site-specific basis. The Town of Lincoln may want to consider establishing some level of consistency to help address the aesthetic issues that are identified as problematic.



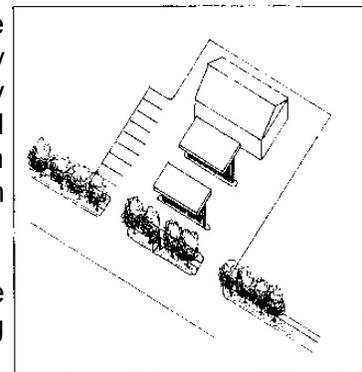
Typical service station along roadway with wide curb cut and no plantings.

Vegetation and Plantings

The use of vegetation in the landscape helps to enhance site design, increase privacy, separate and screen potentially conflicting land uses, encourage protection of ecologically sensitive areas, control runoff, prevent soil erosion, and avoid pollution of water sources. In terms of the aesthetic quality in Lincoln, vegetation works to integrate the built environment with the natural environment.

Trees offer many benefits to communities. According to the International Society of Arboriculture, trees offer the following benefits:

- Social benefits: trees make life more pleasant by adding beauty to our landscape.



Same service station with road-side plantings and planting strip to control access and improve visual quality.

- Community benefits: urban trees can create privacy, emphasize or screen views, reduce glare and reflection, direct pedestrian traffic, provide visually pleasing backgrounds and complement architecture.
- Quality of life benefits: trees bring natural elements and wildlife into urban settings, thereby increasing quality of life for residents.
- Environmental benefits: trees moderate climate, improve air quality, conserve water, harbor wildlife.
- Economic benefits: trees increase property values and reduce energy costs.

Selecting and Planting Trees

Before selecting the species of tree you want to plant, some functional and aesthetic issues must be resolved. You will want to consider the physical features of the site where the tree is to be planted (soil conditions, size and location of planting site, snow storage, salt concentrations), the intended purpose of the tree (shade, screen, fruit, aesthetics), and the required maintenance to ensure the long-term health of the tree. The following four principles should help in your selection of the perfect tree for the site you are working with:

- Function: shade, beauty, privacy, windbreak, fruit, wildlife, reduce glare from pavement, reduce runoff, add oxygen, filter out pollutants in soil, improve appearance of built environment.
- Form and Size: should complement the desired function, the mature tree size and growth pattern of the tree must be approximated to ensure there is enough room for the tree to grow, the surroundings should be taken into consideration to avoid conflicts with utility wires, buildings, etc.
- Site Conditions: soil conditions, sun exposure, wind exposure, drainage, space constraints, hardiness zone, human activity.
- Pest Problems: consult a certified arborist or tree consultant to determine the potential for insect and disease problems.

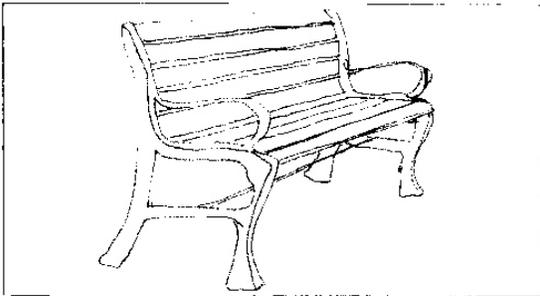
When planting a tree, it is best to consult with a landscape architect, the nursery that provided the tree, or a tree expert for guidance on preparing the site in which it will be planted. Typically, it is best to plant either in the fall after the trees drop their leaves, or in spring before the new leaves develop. When trees are planted in Lincoln, you will want to develop a detailed maintenance system to ensure the long-term health and growth of the new trees.

Roadside Vegetation Management

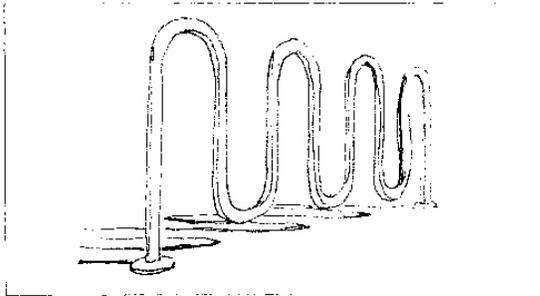
The New Hampshire Department of Transportation employs full-time Roadside Vegetation Managers and Highway Maintenance Managers who are responsible for highway and facility landscaping and maintenance. The NH DOT Roadside Vegetation Program is also involved in wetland landscaping, the lilac program, and the wildflower program. The Wildflower Establishment Program was adopted in 1991 by NH DOT to include wildflower plantings in conjunction with Interstate rehabilitation and other construction projects. This effort coordinates the cooperative efforts of local-level service clubs, schools, businesses and individuals in the planting of wildflowers.

Site Furniture

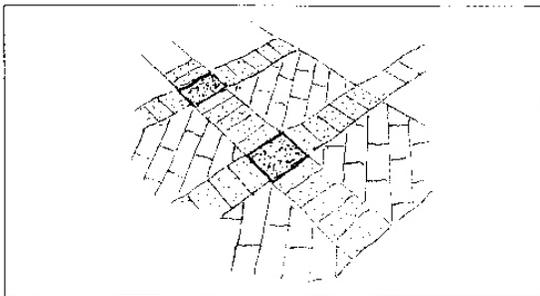
Site furniture, simply stated, includes design elements that enhance the aesthetic and functional purpose of the street. These elements can include benches, planters, pavers, lampposts, bollards, tree grates, bicycle racks, pavilions, fountains, trash receptacles, kiosks and newspaper boxes. Many commercial product sources and service providers, offering different styles of these elements, exist and offer catalogs from which you can select the design and color of furnishing that is appropriate for the site. Below are some general considerations for several different site furniture categories.



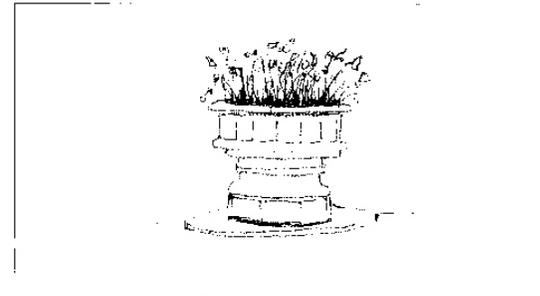
BENCHES



BICYCLE RACKS



PAVERS



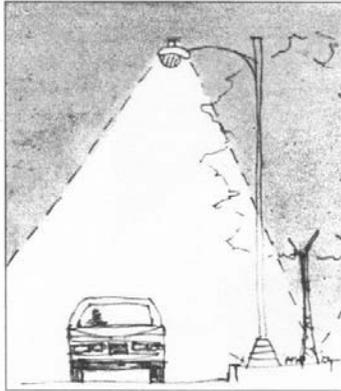
PLANTERS

L. LIGHTING

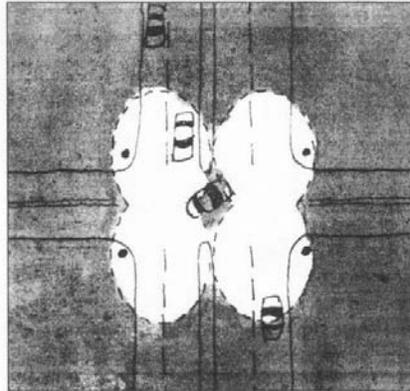
Outdoor lighting is important along major roads because it provides better visibility as well as increased safety and security. Lighting aids the motorist in navigation and orientation by improving the legibility of high activity areas, signage, and other traveler amenities, facilitates the safe movement of pedestrians and vehicles, and encourages nighttime use of an area by highlighting the important features of a site. If outdoor lighting is poorly designed, the result can be harmful to the beauty and safety of the nighttime environment.

General Principles of Lighting

In lighting design, the first consideration should be the intended purpose of the lighting. You may be illuminating a parking lot, a walkway, or a sign or monument. Whatever the case, you will want to choose your lighting source carefully, making sure that the light fixture meets the intended goals without causing unexpected problems in the long run.



The height and orientation of roadway lights may vary depending on the light distribution desired on the roadway.



Street lights should be present at major intersections to alert the motorist to slowing and turning traffic.

Controlling “Light Pollution”

Light pollution refers to any adverse effect of man-made light. If outdoor lighting is poorly designed, it can result in the following:

- Glare: intense and blinding light that hinders visibility.
- Light trespass: light falling where it is not wanted or needed.
- Clutter: numerous lights that are in a state of disorder, easily causing confusion.
- Wasted energy: resulting from the inefficient use of light or light fixtures.
- Sky glow: the brightening of the night sky as a result of manmade lighting.

What is good outdoor lighting?

Lighting is designed and installed to benefit the users of a particular space. Controlled and efficient lighting will enhance the beauty of a space, while offering visibility, safety and security. The following are characteristics of good outdoor lighting:

- Use of only the amount of light needed to meet your goal and avoiding light trespass.
- Installation of uniform lighting and light fixtures that minimize glare.
- Minimization of “up-lighting” - light fixtures should be carefully examined before order and installation because different lights offer different lighting patterns.
- Efficient use of light to save energy whenever possible—lights equipped with motion detectors can save on operating costs and will provide light only when needed.

Outdoor Lighting Ordinances

Outdoor lighting ordinances are intended to reduce the problems created by poorly designed outdoor lighting, such as glare, light trespass, wasted energy and associated financial costs. An outdoor lighting ordinance provides a detailed description of the regulations which control the area that certain types of outdoor lighting can illuminate and by limiting the total allowable illumination of lots located in the town. The ordinances encourage businesses, residences, neighborhoods, etc. to prevent unnecessary direct light from shining onto abutting properties or streets.

M. ARCHITECTURAL CHARACTERISTICS

Most of the buildings that comprise Lincoln's downtown are one and two-story structures. Not all the buildings share the same orientation. In fact, many are not oriented to street and are designed for vehicular traffic. However, most of the buildings share the same basic architectural character and are New Englandish in style, i.e. they have pitched roofs of various shapes and planes, utilize clapboard siding or other wood or natural materials, and have a variety of window and door styles.

Although there is not a common period to the building styles such as colonial or federal, the fact that many of the buildings have similar characteristics reflects the general theme of a northern New England Village character to the downtown.

The continued development and redevelopment of buildings to satisfy this general theme will improve the aesthetic image of Lincoln's downtown. In general, many of the older buildings have been upgraded, either during the mid-1980's or the past few years, and are generally in good condition. Some housing still exists along Main Street and downtown, primarily several older mill style homes. The condition of many of these homes is poor. It is anticipated that in the future many of these homes will be razed or remodeled in order to allow for the continued redevelopment of Lincoln's Village Center.

The Site Plan Review Regulations were amended in August 1993 to include a section on Site Plan and Architectural Characteristics. This section describes preferred architectural features and details for the Village Center.

N. BEFORE AND AFTER EXAMPLES

Example #1

Before



BEFORE:

- ◆ No street vegetation.
- ◆ Overhead wires create visual clutter overhead.
- ◆ Street lights address vehicles instead of pedestrians.
- ◆ No defined crosswalk.
- ◆ No street furniture such as benches, trash receptacles etc.

After



AFTER:

- ◆ Bumped-out curbs allow room for street trees and benches.
- ◆ Crosswalk is well-defined and clearly marked.
- ◆ Overhead wires have been buried underground.
- ◆ Street lights have been replaced with human-scale lampposts that provide light to pedestrians, and are sensitive to light pollution concerns.
- ◆ On-street parking is well defined and contained.
- ◆ Benches and trash receptacles cater to pedestrian needs along the street.

Example #2**Before****BEFORE:**

- ◆ Road is in poor condition.
- ◆ Lack of curbs on either side of the road result in haphazard parking patterns and eroded grassy shoulders.
- ◆ Sidewalk condition is poor.
- ◆ Crosswalks are not clearly marked.
- ◆ Road appears wide due to lack of vertical elements (such as street trees) on either side.
- ◆ Overhead wires create visual clutter.

**After****AFTER:**

- ◆ Road has been repaved and curbs have been installed to separate sidewalk from street.
- ◆ Grassy strips between sidewalk and street have been planted with street trees. This makes the road seem less wide, and may help to slow traffic speeds through this area.
- ◆ The intersection has been raised and a textured pavement has been installed to cue motorists to drive slowly through this intersection.
- ◆ Crosswalks are clearly marked and handicap accessible.
- ◆ Sidewalk condition has been improved.
- ◆ Overhead wires have been buried underground.

**O. A REALISTIC APPROACH TO IMPLEMENTATION**

The question “How will we pay for it?” comes up consistently in community planning and design. After developing a community vision, the tendency is to feel overwhelmed by the steps needed to carry out the goals and objectives established in the visioning and design process.

One Step at a Time...Phasing Projects

The key to developing a realistic action plan is to phase the projects outlined in the community vision plan. When reviewing the “big ideas” generated from the vision planning process, identify which projects seem the most manageable and affordable in the short term.

The vision plan can be broken down into a realistic phased plan that reflects community goals and fiscal realities. The formation of at least 2-year, 5-year and 10-year plans will allow a community to organize specific projects according to the target date of completion. Through this phasing, it will also be beneficial to reassess the community vision along the way, making sure that the original vision applies to changes in circumstances and priorities.

The decision of which projects will be completed first is influenced by costs, availability of resources, visibility, and community support. In determining which project to undertake first, a community may want to consider the public’s response to the completion of that first project. The successful implementation of one small project can build confidence throughout the community and encourage long-term support for future projects.

Maintaining Community Involvement

A very important factor to remember throughout the entire process is that the most valuable resource a community has is people. The continued involvement of residents, business people, and local officials provides potential links to a variety of funding sources and will help maintain the enthusiasm and momentum of the community design and planning process.

P. IMPLICATIONS FOR THE FUTURE

In terms of community design issues a variety of conceptual design elements have been discussed throughout the chapter for the town as a whole. As a tourist destination, the Town of Lincoln needs to pay special attention to existing design features throughout the community and provide approaches for considering design related impacts during the review of development proposals which may need more design consideration. This attention may come in the form of amendments to planning regulations (land use ordinance, etc.) and policies, devoting additional resources and investment to improve community design, and establishing partnerships with local business establishments, non-profit agencies and community groups to work through design issues on a local level.

Recommendations from the Village Center Plan

Currently, the utility poles are along the south side of Main Street for its entire length. The poles contain many wires not only for electricity, but for cable and telephone. The great number of wires located along these poles make them very unsightly and detract from the appearance of Main Street. It was concluded that relocation of the wires underground or rerouted around the downtown area would be beneficial to the community. However, the greatest concern pertaining to this project is the cost.

There was also discussion about the location of benches and trash cans as well as the crea-

tion of “sitting areas” along Main Street. This project could be a low cost way of improving on the appearance and pedestrian nature of Main Street. If possible, the benches selected should represent a historical theme of the community. The benches could be the same or similar to the ones which are placed at the Mill, which utilize old railroad trucks. It was also concluded that some tree planting along Main Street would enhance the street’s appearance. Some effort should be made to encourage businesses and the school to plant a variety of native trees along the street.

The best surface material for sidewalks, in terms of conveying an attractive incentive to pedestrian tourists, is the brick surface, which is the primary surface treatment of many unique historic communities or larger cities with downtown areas catering to tourists. As an example of proof that cost-effective maintenance of brick surface sidewalks is possible in Lincoln, the entrances of the Millfront Marketplace should be viewed.

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Studies

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Stephen G. Pernaw & Company, ***Traffic Impact and Site Access Study: Proposed Loon Mountain Expansion - Alternative 6***, Lincoln, New Hampshire, May 1998.

USDA-Forest Service, ***Loon Mountain Aki Area - South Mountain Expansion Project: Final Environmental Impact Statement***, Lincoln, New Hampshire, October 1992.

USDA-Forest Service, ***Loon Mountain Aki Area - South Mountain Expansion Project: Revised Draft Environmental Impact Statement***, Lincoln, New Hampshire, January 1991.

Village Center Plan, Town of Lincoln, New Hampshire, August 2002.

North Country Council and NH Department of Transportation, ***Route 16 Corridor Protection Study***, January 1999.

Websites (Local, State and Federal Government - for data collection)

Natural Resource Conservation Service (NRCS)

The NRCS is an agency of the US Department of Agriculture. They are a technical agency that provides trained soil conservationists, technicians, soil scientists, and other experts to help landowners and land users with conservation.

Website: www.nh.nrcs.usda.gov

New Hampshire Department of Environmental Services (NH DES)

The protection and wise management of the state of New Hampshire's environment are the important goals of the NH Department of Environmental Services. The department's responsibilities include ensuring high levels of water quality for water supplies, ecological balance, and recreational benefits.

Website: www.des.state.nh.us

New Hampshire Employment Security (NHES)

NH Employment Security offers information and data on the unemployment and employment situation for communities around the state.

Website: www.nhes.state.nh.us

New Hampshire Department of Resources and Economic Development (NH DRED)

Division of Forests and Lands

The Division of Forests and Lands protects and promotes the values provided by trees and forests.

Website: www.nhdf.org

Division of Parks and Recreation Bureau of Trails

The Bureau of Trails administer multi-use trails on state, federal and private lands. They assist organizations, municipalities, and trail clubs with the development of trails on both private and public lands. They have also published the guide, Best Management Practices for Erosion Control During Trail Maintenance and Construction, to address wetland and erosion concerns during trail construction.

Website: www.nhparks.state.nh.us/trbureau.html

New Hampshire Department of Transportation (NH DOT)

Bi-annually, the NH Department of Transportation publishes Status Reports for Transportation Enhancement Programs, which describes selected projects. These reports can be viewed at the above listed website.

Website: Webster.state.nh.us/dot/contactus.htm

National Scenic Byways Program

The National Scenic Byways Program is part of the U.S. Department of Transportation, Federal Highway Administration. The program is a grass-roots collaborative effort established to help recognize, preserve and enhance selected roads throughout the United States.

Website: www.byways.org

New Hampshire Division of Historic Resources

The Division of Historic Resources promotes the use, understanding, and conservation of historic, archaeological, architectural, and cultural resources in the state of New Hampshire.

Website: www.state.nh.us/nhdhr

NH Geographically Referenced Analysis Information Transfer (NH GRANIT)

Administered by Complex Systems Research Center at the University of New Hampshire, GRANIT is a GIS information clearinghouse for the State. Information is provided to GRANIT by state and federal agencies for downloading or distribution on request to local and private entities.

Website: www.granit.sr.unh.edu

New Hampshire Office of Energy and Planning (NH OEP)

The Office of Energy and Planning is a data repository for the Towns in the State. It collects and distributes Census data, administers Community Development Block Grants, and provides

technical assistance on planning issues.

Website: www.state.nh.us/osp/

US Census Bureau

The Bureau's mission is to be the preeminent collector and provider of timely, relevant and quality data about the people and economy of the United States.

Website: www.census.gov

US Department of Housing and Urban Development (HUD)

The Federal Department of Housing and Urban Development (HUD) has been fostering affordable housing in many of the nation's communities since its inception in 1965. HUD administers numerous programs to provide housing for low to moderate income families.

Website: www.hud.gov

New Hampshire Housing Finance Authority (NH HFA)

Created in 1981 by the State Legislature, the NH Housing Finance Authority (NH HFA) is a non-profit entity committed to developing affordable housing opportunities in New Hampshire. NHHFA is funded through the sale of tax exempt bonds. The authority has created several multi-family housing development programs which provide investors with incentives such as tax credits, deferred mortgage payments, low interest loans, and grants. In recent years, the NHHFA has been involved in the creation of Mobile Home Park Cooperative, as well as construction and rehabilitation of rental housing and single family homes.

Website: www.nhhfa.org

NH Municipal Association (NHMA)

The NHMA assists member municipal governments with issues concerning rights and responsibilities, provides human resources support, and hosts annual training sessions on planning and zoning topics.

Website: www.nhmuni.home.virtualltownhall.net/nhmuni_home

University of New Hampshire Cooperative Extension

Cooperative Extension provides citizens, town governments, and organizations alike with educational materials, workshops, and assistance for agriculture, forestry, wildlife, and youth and family issues.

Website: www.ceinfo.unh.edu/mrmkhome.htm

Publications and Planning References

Comprehensive Shoreland Protection Act, New Hampshire RSA 483:11.

Conservation Design for Subdivisions, Randall Arendt, Island Press, 1996.

Does Open Space Pay?, Philip A Auger, University of New Hampshire Cooperative Extension.

Minimum Impact Development Partnership "MID Toolbox", The Jordan Institute,
www.nhmid.org/toolbox.htm.

Rural by Design, Randall Arendt et al, American Planning Association, 1994.

Grafton County Soil Survey, US Department of Agriculture Soil Conservation Service, US Government Printing Office, 1965.

APPENDICES - (SUPPLEMENTS)

Over the past couple of years, the Planning Board has assiduously worked on the following documents, which were adopted by the Planning Board and approved by the Town of Lincoln:

- 1. Lincoln Townwide Water Study (by Provan & Lorber), completed July 2001.**
- 2. Village Center Plan, adopted August 2002.**
- 3. Lincoln Townwide Transportation Study (By Wilbur Smith Associates) adopted August 2003.**

These documents are a significant part of this Master Plan 2003, and are available for review through the Planning Administrator.