CHAPTER 2: TRANSPORTATION

Adopted: July 6, 2011

Photo Compliments of: Leigh Sharps, Little Squam Lake, Ashland, NH

2.1 Introduction

A transportation system is a key planning consideration for rural communities for several reasons. One reason is that transportation and land use are very closely related. Future development can only occur where roads exist. When development occurs it affects the quality of the transportation system. Ashland is somewhat unique in that the primary travel routes through the center of town are state owned (NH Route 3/25 and NH Route 132) which depending on how you are entering town starts at Interstate 93 Exit 24 or is a continuation of NH Route 3 from Plymouth. Secondary streets that come off this main route are either town owned or private streets and are generally designed to carry low or moderate amounts of traffic. Exploring existing transportation system conditions provides the framework for assessing local needs and allows for the coordination with regional and state plans, as outlined in RSA 674:2 III.a.

Another reason that transportation is a key planning concern is that road maintenance and construction expenditures constitute a significant portion of the town budget. In 2010 highway maintenance and general expenses represented 19 percent of the municipal budget, which includes a warrant article for road maintenance. The town annually receives state Highway Block Grant Aid funds. In state fiscal year 2011 the funds distributed to the town, based on population and miles of town maintained roads, totaled $55,718. These funds are currently being used in Ashland to offset payments for a highway project bond. Although the cost of the highway system is a significant part of the town's budget, the need for an efficient, well-maintained road system is critical to safe, quality transportation.

Planning, construction, and maintenance of all town owned roads and public transportation are the responsibility of the Ashland Highway Department under the guidance of the town road agent. The Ashland Road Agent is an appointed position. Annual summer maintenance consists of street sweeping, roadside mowing and trash pick up, brush cutting, line painting, road grading, and cold patching. Yearly winter maintenance consists of checking road conditions between storms, checking culverts for freeze ups, and keeping equipment ready for possible winter storm conditions. Culverts are checked on a yearly rotating basis for the need to remove debris or brush. The old culverts are metal and they are replaced with plastic pipe when needed.

2.2 MODES OF TRANSPORTATION

The primary mode of transportation is the automobile. According to US Census Bureau data 75 percent of the Ashland workforce commutes to work alone by automobile. Approximately 27 percent of workers live and work in Ashland while the 73 percent that work outside the community average a 23.3 minute commute to work. In 2008, the annual average labor force in Ashland consisted of 1,092 employed residents of which approximately 60 walked to work.[1]

While walking and bicycling are not the most popular means of travel to work, pedestrian activity in Ashland is promoted by conveniently spaced businesses and municipal services in the village. Recommended on-road bicycle routes identified on the New Hampshire Bicycle Map: Lakes Region include: NH Routes 175 and 132, US Route 3/NH Route 25, and North Ashland Road.

[1] Source: http://www.nh.gov/nhes/elmi/htmlprofiles/pdfs/ashland.pdf (accessed 11-12-10).

The town of Ashland applied for and was awarded a Safe Routes to Schools start-up planning grant in 2009. The start up planning grants provide communities with up to $5,000 to develop a local committee to explore local challenges and opportunities to provide a safe walking and bicycling experience for kindergarten through eighth grade students from home to school. Often the local Safe Routes to Schools Committees are comprised of a combination of school administration and staff, municipal officials, and parents who work to develop a Travel Plan that identifies school aged populations, existing and proposed routes from home to school, and makes recommendations for safety improvements in five programmatic areas:" education, encouragement, enforcement, engineering, and evaluation. The NH Department of Transportation has hosted five grant rounds to fund locally identified infrastructure and non-infrastructure projects. On average, $1 million has been awarded in each grant round. Communities with a Travel Plan are currently eligible for up to $250,000 grant awards. While the promotion of bicycling and walking is specific to elementary and junior high school students, the benefits can be great for the for the community as a whole.

The Ashland Road Agent conducted a sidewalk inventory and condition assessment for town and state routes. The assessment of sidewalk conditions is based on a five point scale where 1=Poor, 2=Fair, 3=Good, 4=Very Good, 5=Excellent. All sidewalks in Ashland are Americans with Disabilities Act (ADA) compliant. The over-all sidewalk network rating is Good (2.96) with several sections in Fair condition and in need of repair.

Figure 2-1: Sidewalk Inventory and Conditions Assessment

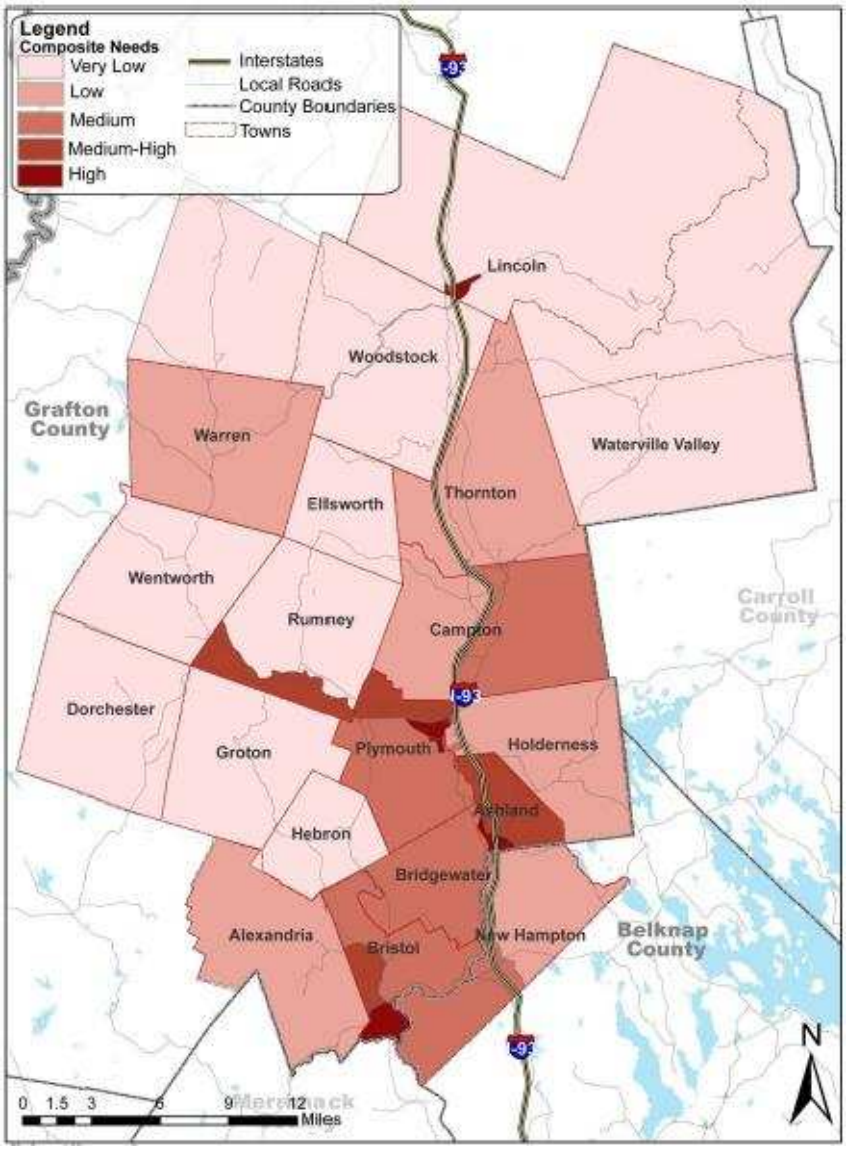
Town and State Routes with Sidewalks	ADA Accessibility	Sidewalk Condition Rating
Town Road		
Cottage Street*	Y	3
Gordon Street	Y	3
Hill Avenue	Y	5
Mill Street	Y	3
Pleasant Street	Y	2
School Street*	Y	4
Washington Street	Y	2.5
Winter Street*	Y	3
Summer Street to Lyford*	Y	2
State Highway		
Route 132 from Library to railroad on Depot Street	Y	3
Main Street from Thompson Street to Mobile Station	Y	3
Main Street from Cumberland Farms to Winter	Y	3
Riverside Drive to Summer Street	Y	3
Riverside Drive from Meredith Village Savings to Jackman	Y	2
* partial sidewalks		

2.3 PUBLIC TRANSPORTATION

Ashland is one of 19 communities covered in the *Plymouth Area Transit Feasibility Study* completed in 2010. The purpose of this study was to explore existing and future regional public transportation needs and to develop recommendations to address those needs. The study shows the highest

concentrations of transit dependent populations in the study area: Ashland, Bristol, Lincoln, and Plymouth. Transportation dependent populations include older adults (65 years of age and older), persons with disabilities, and persons with low incomes. The Map 2-1 displays the 19 communities in the study area and specific areas with varying levels of transit needs based on concentrations of transit dependent populations.

Figure 2-2: Composite Public Transit Needs - Plymouth Area Feasibility Study



The study, sponsored by Transport Central a Plymouth based non-profit, includes several recommendations to improve transit services, many of which will require municipal or private funding to match federal program funds.

An aging population in Ashland will increase future demands for public transportation services, volunteer driving networks, and other alternatives to driving. Like other rural New Hampshire communities, a fully developed public transportation system complemented by a choice of private transportation providers does not exist. Existing public transit in the Ashland area is limited to a small group of service providers and volunteer drivers:

Concord Coach Lines - Offers daily service from Plymouth to Logan Airport with a stop in Concord. The route goes through Plymouth twice each day, 8:00AM and 2:00PM, with returns from the airport at 10:45AM and 8:30PM.

Grafton County Senior Citizens Council (GCSCC) - Provides transportation for those who can no longer drive to medical or other appointments, shopping centers, and the senior centers. GCSCC has ten handicap accessible vans; of the three stationed at the Plymouth Senior Center, one is dedicated for service primarily in the towns of Ashland, Campton, Plymouth, and Thornton. This van operates Monday through Friday from 8:00 AM to 3:00 PM on a phone reservation system that generally requires 24 hours advanced notice, though some same day requests are accommodated dependent on the schedule. In addition to transportation provided by bus, volunteer drivers also are available to help elderly friends and neighbors. Thanks to the generosity of volunteers, some senior centers also are able to offer long-distance medical transportation to those who need to reach a specialist or a major medical center not located in their local community.

Transport Central - A non-profit organization formed to develop and deliver transportation services in the Plymouth area. While Transport Central currently does not own or operate vehicles for transport, it has the long-term goals of providing three basic types of transportation services:

- Scheduled transportation to medical facilities at Dartmouth Hitchcock Hospital, Lakes Region Hospital and Concord Hospital.
- Scheduled service with multiple stops within the Plymouth area, including medical services and shopping.
- An on-call system to provide local transportation in the 19-town area as well as to coordinate with the fixed-route services.

2.4 LOCAL TRANSPORTATION NETWORK

2.4.1 Administrative Classification of Roads

All public roads and highways in New Hampshire are grouped in six administrative categories which relate to the governmental jurisdiction of roads as outlined in NH RSA 229:5. Class I, II, and III roads are owned by the state. State owned roads in Ashland consist of Class I - State Primary and Class II - State Secondary highways. Class III - Recreational highways do not exist in town. These roads provide access to and within state owned land such as state campgrounds.

The last three administrative classes of roads are owned by the town. Class IV - Urban Compact roads only exist in the Lakes Region in Gilford, Franklin, and Laconia. Class V - Town roads are roads owned and maintained by the town and Class VI roads are unmaintained. The administrative classifications of roads in Ashland are displayed in Figure 2-3 (located at end of chapter).

In Ashland there is a total of 19.6 miles of town maintained roads of which 88 percent is paved (17.3 miles) and approximately 12 percent is unpaved (2.4 miles). In addition, there are 9.7 miles of private roads, 14.6 miles of state primary roads, and 2.4 miles of state secondary roads.

Figure 2-4: Miles of Paved and Unpaved Roads by Classification

Road Classification	Paved Miles	Unpaved Miles	Total Miles
Primary State Highway	14.6	-	14.6
Secondary State Highway	2.4	-	2.4
Town Road	17.3	2.4	19.6
Class 6 (unmaintained)	0.1	0.3	0.4
Private Road	4.8	4.9	9.7
Total Miles	**39.2**	**7.6**	**46.8**

Figure 2-5: Percentage of Road Network by Administrative Classification

Road Classification	Percent of Total Transporation Network Miles
Primary State Highway	31%
Secondary State Highway	5%
Town Road	42%
Class 6 (unmaintained)	1%
Private Road	21%
Total	100%

2.4.2 Traffic Volumes

Traffic counts are conducted by the regional planning commissions and seasonally adjusted by NH Department of Transportation (NH DOT) to reflect annual average daily traffic counts (AADTs). Figure 2-6 displays historic AADT counts from several Ashland locations. Typically these counts are conducted on a three-year rotation. Noteworthy, are the decreasing traffic volumes from 2006 to 2009 and a decrease in traffic on secondary highways and town roads over time. This is a generally consistent trend in much of the Lakes Region where historic high levels of traffic were experienced around 2006.

Figure 2-6: Historic Annual Average Daily Traffic Counts 2002 - 2009

Location/Year	2002	2003	2004	2005	2006	2007	2008	2009
I-93 Between Exits 24 (US3 / NH25) and Exit 25 (NH175A)	19,000	-	19,000	-	-	-	17,600	-
I-93 Between Exits 23 (NH104 / NH132) and Exit 24 (US3 / NH25)	19,000	-	17,000	-	-	-	17,100	-
US3 / NH25 east of I-93 exit ramps	-	9,200	-	-	9,300	-	-	7,300
US3 / NH25 west of I-93 exit ramps	-	-	4,400	-	4,400	-	-	2,900
US3 / NH25 north of Highland Street	-	-	5,600	-	4,700	-	-	4,200
US3 / NH25 at Ashland / Holderness town line	-	-	4,000	-	3,900	-	-	3,700
NH 132 over Squam River	-	3,900	-	-	4,000	-	-	3,000

2.4.3 Scenic Roads

The town of Ashland designated approximately 1.6 miles of town road as Scenic Roads by town vote in 1987 and 1988 as outlined in RSA 231:157. The designation of Sanborn Road (1.13 miles) and Owl Brook Road from Moo Corners to the Ashland-Holderness town line (.5 miles) also identified the Ashland Conservation Commission as the governing body for local oversight. The town uses the requirements outlined in RSA 231:158 when managing these designated roads. These requirements include planning board approval prior to roadway repairs, maintenance, reconstruction or paving that necessitates cutting, damage, or removal of trees (15" inches in circumference), or removal or destruction of stonewalls. While these standards apply to the state, municipality, and utility companies, land owners are not affected.

Ashland is part of the Lakes Region Tour Scenic Byway which is a state designated scenic route (see Figure 2-7 located at end of chapter). Approximately 0.8 miles of the byway on NH Route 175 is located in Ashland. State designated byways require corridor management plans similar to a master plan and an active byway committee. This program is community-based and can be used to effectively promote archaeological, cultural, historic, natural, recreational, and scenic qualities. The work of the byway committee relates directly to quality of life, coordination of local land use planning among byway communities, and the economic well-being of the region.

2.4.4 Bridges

The bridge over Squam River at the foot of Little Squam Lake is a covered bridge completed in 1990 by Milton Graton a long time resident of Ashland who at the time of his death in 1994 was described as "the last of the covered bridge builders". For nearly four decades, Mr. Graton built bridges the old-fashioned way, using traditional methods and only products that originate in the woods. As CBS newsman Charles Kuralt said in a memorable TV profile, "In an age when we do many things fast and wrong, Milton Graton still does things slowly and right."[2] At present the town has done only small projects in regards to updating and maintenance of this bridge.

The twenty-one foot town owned bridge at the junction of Scenic View Road (US 3/NH 25) and River Street is currently on the state Transportation Improvement Plan for reconstruction funded by tax revenue and state bridge aid. This and the 64 foot town owned bridge on the northern portion of River Street are "Red List Bridges" requiring more frequent inspections due to known deficiencies, poor structural conditions, weight restrictions, or the type of construction (such as a replacement bridge installed on a temporary basis). Also, added to the Red List in 2009 is the state owned bridge on US 3/NH 25 over Owl Brook, reported to have a poor deck which will require an estimated $1.2 million for rehabilitation. Municipally owned bridges require approval of a state application to be eligible for state-aid; as outlined in NH RSA 234:10 the costs are 20 percent municipal and 80 percent state funded. Although Red List bridges are perceived by some people as those being in the worst condition, this is not always true. The Red List identifies those bridges that require additional inspection efforts, as indicated above. Some of these bridges are historic, such as covered bridges, and will always remain on the Red List.

[2] The Boston Globe, *Milton Graton, fan and builder of N.H. covered bridges; at 85*, March 17, 1994

Figure 2-8: Ashland Bridges by Owner and Length

Owner	Location	Length in Feet
NHDOT	US 3 over NH Pemigewasset River	800
NHDOT	North Ashland Road over I-93	287
NHDOT	I-93 SB over Collins Street / Squam River	179
NHDOT	I-93 NB over Collins Street / Squam River	179
NHDOT	I-93 southbound over railroad	139
NHDOT	I-93 northbound over railroad	139
NHDOT	I-93 SB over US 3/NH 25	70
NHDOT	I-93 NB over US 3/NH 25	70
NHDOT	US 3/NH 25 over Owl Brook*	64
NHDOT	NH 132 over Squam River	28
NHDOT	NH 132 over Ames Brook	16
Town	River Street over Squam River *	64
Town	Collins Street over Squam River	57
Town	Winter Street over Squam River	34
Town	River Street over Squam River*	21
Town	Mill Street over Ames Brook	18

* Red List bridge

2.4.5 Road Conditions

The Road Agent subjectively evaluated and recorded the conditions of the town road network on a five-point scale in the summer of 2010 (1=Poor, 2=Fair, 3=Good, 4=Very Good, 5=Excellent). The over-all average for the paved town owned and maintained (Class V) road network was 2.9 (good) based on the Road Agent assessment. Unpaved town roads and state highways brought the over-all network average down by scoring 2.3 (fair) and 2.5 (fair/good) respectively. The results of *the 2009 Community Master Plan Survey* indicated that 85 percent of the respondents consider the roads in Ashland to be in fair to poor condition.

Figure 2-9: Unpaved Town Roads Inventory and Condition

Unpaved Class V Road Name	Length in Feet	Condition Rating
Amsden Road	252	2
Dump Road	2,100	3
Lambert Road	1,302	2
Total Unpaved Feet	**3,654**	
Average Rating		**2.33**

Figure 2-10: State Highways Inventory and Condition

State Highway Names	Length in Feet	Condition Rating
Highland Street (Riverside Drive to Summer Street)	1,874	3
Highland Street (Lyford to Peters properties)	1,510	2
Total State Highway Feet	**3,384**	
Average Rating		**2.5**

Figure 2-11: Paved Town Roads Inventory and Condition

Paved Class V Road Name	Length in Feet	Condition Rating
Ames Drive	262	4
Avery Street	597	3
Carr Avenue	752	3
Cedar Lane	610	4
Church Street	463	4
Collins Street	3,256	2.5
Cottage Place	710	3
Cottage Street	762	3
Cross Road	685	4
Elm Street	376	4
Firehouse Lane	180	2
Glove Street	677	3
Gordon Street	331	3
Hicks Hill Road	4,682	3
High Street	606	2.5
Highland Street (town portions)	7,755	4
Hill Avenue	726	4
Hillside Avenue	1,094	3
Howe Road	1,030	3
Leavitt Hill Road	6,057	2.5
Libby Lane	463	4
Mechanic Street	502	2
Mill Pond Lane	520	2
Mill Street	1,904	3
Moo Corners	345	3
Mountain Ridge Road	986	3
Murray Street	208	4
North Ashland Road	16,000	4
Nash Drive	752	4
North Avenue	636	4
Owl Brook Road	8,911	3.5
Partridge Road	440	3
Peppercorn Road	3,729	3
Pleasant Street	504	3
Prospect Street	573	4
Reed Street	231	4
River Street	8,009	2.5
Sanborn Road	5,992	2
School Street	1,683	4
Short Street	185	4
Smith Hill Road	1,336	2
Spring Street	569	2
Squam Point Lane	546	4
Summer Street	568	4
Thompson Street	6,275	2
Valley Lane	582	3
Wadleigh Road	906	4
Washington Street	1,362	3
West Street	1,975	2.5
Winter Street	1,901	3
Total Paved Feet	**100,204**	
Average Rating		**2.95**

2.4.6 Challenges

Main Street in the town of Ashland is also a state road (US3 / NH25) and is the main route from Interstate 93 Exit 24 to the Squam Lakes Region. This causes considerable traffic congestion in the downtown area because cars are parked along Main Street.

Sight distance issues have been identified at the junctions of Main Street and Gordon Street; Howe Road and Scenic View Road (US 3/ NH 25); River Street and Scenic View Road; Cross Road and Scenic View Road.

Public parking has been identified at the following areas: town hall parking lot, Mechanic Street parking area, Memorial Park parking area, Booster Club parking lot and along Main Street (all are restricted during the winter season).

2.5 TOWN ROAD STANDARDS

A recent trend has placed more emphasis on road design that minimizes lane width based on traffic volume, road purpose, and desired vehicle travel speeds. One result is increased space for wider shoulders, bicycle lanes, sidewalks, and other amenities within the right of way. Another result is a roadway of appropriate scale for the site where vehicle and non-vehicle uses are safely accommodated. Scale and context road planning are consistent with the community's desire to maintain rural character. Variable design standards are often described in a community's regulations based on anticipated traffic volumes. New road construction and existing road improvement standards are outlined in the Ashland Subdivision Regulations. Last updated in May 2008, the regulations outline acceptable road widths based on the anticipated volume of traffic the road will carry.

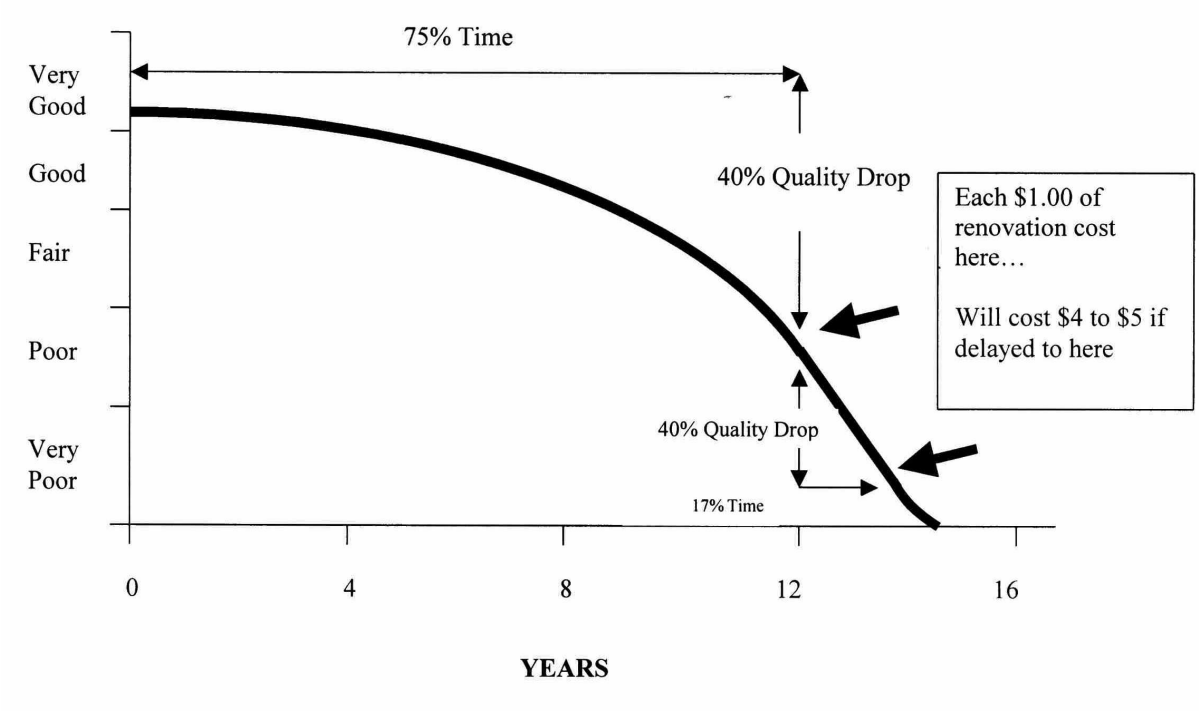
2.6 TRANSPORTATION IMPROVEMENTS PLANNING

Caring for roadway infrastructure is a great expense for a small community. An aspect of roadway care is the good timing required to maintain a repair schedule that minimizes costs. Pavement management is based on the pavement deterioration curve displayed in Figure 2-12, which illustrates that: roads in good shape cost less to maintain than roads in bad shape. A reality of small town road maintenance is that many communities allow their roads and streets to deteriorate through deferred treatment. Though built at a considerable cost, many roads show signs of major distress and if not corrected, the cost to bring the road to an acceptable condition can be many times more than the cost of timely repair. As roads worsen, maintenance budgets need to increase, possibly resulting in more deteriorated streets each year with the cost per mile increasing disproportionately.

The basic premise is that paved roads have a "service life", generally about 15 years, without maintenance. After the first 75 percent of a surface's service life, the performance level only drops from excellent to fair – a 40 percent drop in quality. In other words, after 10-12 years, it is still in satisfactory condition. However, in the next 12 percent of life, the quality of the surface drops an additional 40 percent, from fair to poor. More importantly, a surface that would cost $1 to renovate

at 75 percent of its life will cost $5 to $8 to renovate at 87 percent of its life. Allowing the condition of the surface to deteriorate from fair to poor will increase repair costs five times.

Figure 2-12: Paved Road Service Life



The town of Ashland does not currently maintain an annual road maintenance fund or road improvement capital reserves fund. Key decisions to fund timely road repairs are made at town meeting by the voters that may favor other expenditures in a given year, or to defer road maintenance in favor of lower taxes. The development of a local transportation improvement program that outlines prioritized road improvements over a ten year period can serve to illustrate the annual average amount of funding that is required to maintain a satisfactory network-wide level of service.

Currently the town makes annual payments on a ten-year, $400,000 road reconstruction bond issued in 2003. Roads improved through the bond are approaching the critical point in their service life where, as illustrated in Figure 2-12, timely maintenance can have the impact of extending road life at a reduced cost. Figure 2-13 shows the annual road improvements made in Ashland from 1983 to present. Additional water and sewer projects that led to road improvements include Pleasant Street, Hill Avenue, and Cross Road. These and other projects that affect the transportation system should continue to be coordinated between town departments and project sponsors to maximize timeliness. Future priority improvements include:

Thompson Street –reconstruction (3,300 feet)

Smith Hill Road – reconstruction (1,330 feet)

Funding is needed to maintain previously rebuilt roads which should be sealed or overlaid within five years of construction.

Figure 2-13: Historic Town Road Improvements

Year	Location	Reconstruction	Paving	Chip Seal
2003	Prospect Street	555'		
	Summer Street	547'		
	Highland Street	4,283'		
	Owl Brook Road	3,200'		
	Peppercorn Road	3,624'		
	Valley Lane	605'		
	Partridge Lane	415'		
2002	Owl Brook Road	1,600'		
	Sanborn Road	1,800'		
	Wadleigh Road		900'	
2001	Collins Street	1,800'		
2000	River Street	8,260'		
1999	Thompson Street	*		
1997	North Ashland Road			15,921'
	School Street	*		
	Gordon Street	*		
	Highland Street	*		
1996	Mill Street	*		
	Elm Street	*		
	Glove Street	*		
	Murray Street	*		
1995	Washington Street	1,320'		
	North Ashland Road		2,500'	
1994	Leavitt Hill Road	*		
	High Street	*		
	Highland Street			4,283'
	Owl Brook Road			3,200'
	Thompson Street			5,017'
1993	Leavitt Hill Road	*		
1992	Avery Street	*		
1991	Sanborn Road	2,500'		
1990	Cottage Street	*		
	Cottage Place	*		
	Thompson Street	*		
1989	Howe Road	*		
	Smith Road	*		
	Hicks Hill Road	*		
	North Ashland Road		*	
1988	Carr Avenue	*		
	Thompson Street	1,975'		
	North Ashland Road		*	
1987	Thompson Street	1,800'		
1984	Spring Street	*		
	School Street	*		
	Cottage Street	*		
1983	Collins Street Bridge	*		

2.7 RECOMMENDATIONS

- Encourage the care of Main Street (US Route 3/NH Route 25) as it pertains to the State of New Hampshire.
- Strongly support a more aggressive program to upgrade the town's roads.
- Strongly encourage the State of New Hampshire to upgrade their portion of Highland Street.
- Evaluate the parking along Main Street, and, if necessary make changes to increase safety.
- Develop a transportation system/network that supports alternative modes of travel.
- Support the maintenance and reconstruction of sidewalks in town.
- Encourage the development of safe pedestrian and bike pathways.
- Assess Safe Routes to Schools Committee progress and interest in Travel Plan development. Work with regional planning commission staff on grant applications for planning and implementation grant funding.
- "The sidewalk improvement program should be continued. Adequacy and conditions of existing sidewalks should be determined and priorities set for improvement and extension." (*Ashland Municipal Enterprise Plan Ashland, NH 1996-1997*)
- "Formalize a pavement maintenance program, listing all town streets and roads, indicating existing conditions of each and priority for maintenance, major improvements or reconstruction for each roadway within the town's system." (*Ashland Municipal Enterprise Plan Ashland, NH 1996-1997*)
- Explore sidewalk expansion and crosswalk to ball field, Route 3 to River Street, and along Main Street to West Street.

Figure 2-3 Administrative Classification of Roads

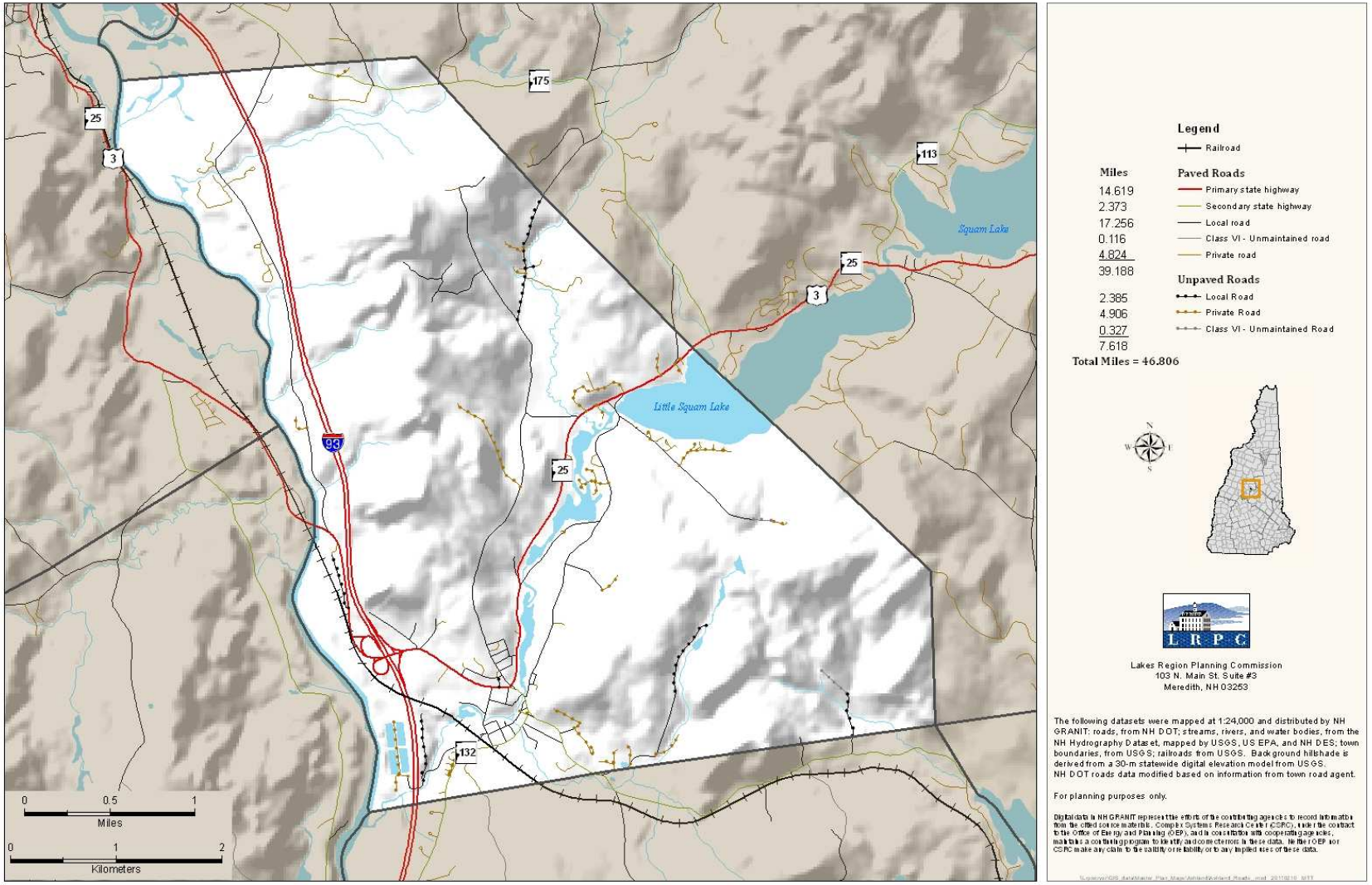


Figure 2-7 Ashland Scenic Roads