New Hampshire State Rail Plan 2001

New Hampshire Department of Transportation
Bureau of Rail and Transit
Concord, New Hampshire

April, 2001

New Hampshire State Rail Plan
2001

Project of: **New Hampshire Department of Transportation**
Bureau of Rail and Transit
Concord, New Hampshire 03302-0483

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April, 2001

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LIST OF ACRONYMS

CCRR – Claremont Concord Railroad
CFR – Code of Federal Regulations
CMAQ – Congestion Mitigation / Air Quality
DEIS – Draft Environmental Impact Statement
DRED – Department of Resources and Economic Development
EOTC – Massachusetts Executive Office of Transportation and Construction
EPA – Environmental Protection Agency
FHWA – Federal Highway Administration
FRA – Federal Railroad Administration
GACIT – Governor's Advisory Commission on Intermodal Transportation
GMRC – Green Mountain Railroad
GRS – Guilford Rail System
IRAP – Maine DOT's Industrial Rail Access Program
LRFA – Local Rail Freight Assistance Program
LRSTP – Long Range Statewide Transportation Plan
MBRX – Milford Bennington Railroad
MBTA – Massachusetts Bay Transportation Authority
MGTM/M – Million gross ton miles per mile
MIS –Major Investment Study
MPO – Metropolitan Planning Organization
NECR – New England Central Railroad
NEGS – New England Southern Railroad
NHCR – New Hampshire Central Railroad
NHDOT – New Hampshire Department of Transportation
NHN – New Hampshire Northcoast
NHRRA – New Hampshire Rail Revitalization Association
RPC – Regional Planning Commission
RRIF – The Railroad Rehabilitation and Improvement Financing Program
SLR – St. Lawrence & Atlantic Railroad
ST – Springfield Terminal Railway
STB – Surface Transportation Board
STIP – Statewide Transportation Improvement Program
TEA-21 – Transportation Equity Act for the 21st Century
TIP – Transportation Improvement Program
TSRR – Twin States Railroad

Executive Summary

This report is the 2001 update to the New Hampshire Statewide Rail Plan, which was last updated in 1991 and amended in 1993. The Rail Plan presents an overview of the current status of the New Hampshire Rail System, who operates it and how it is utilized. The Rail Plan report describes the New Hampshire Rail Planning Process, applicable federal regulations and how the plan fits in with the New Hampshire Long Range Statewide Transportation Plan. Additionally, a process is provided in which potential rail related investment projects can be analyzed to determine if they provide net benefits to the state. This plan fulfills Federal Railroad Administration (FRA) requirements that each state establish, update and revise a State Rail Plan in order to receive federal funds.

This plan provides a snapshot of the current state rail system. It provides the base line data on which to build public-private cooperative efforts that would advance both public initiatives and benefit the private rail operators. The goals of the statewide planning process and this plan are:

1. To provide and maintain a safe, efficient and viable railroad network, within New Hampshire, that is essential to help stabilize its economic health and to preserve and expand employment.

2. To develop and implement a program of sound railroad investment, based on an approved benefit/cost analysis methodology and to assure continued safe and quality rail service to New Hampshire.

3. To assist in the reestablishment of commuter and inter-city rail passenger services, and tourist operations.

4. To keep railroad lines in the private sector by utilizing qualified short line operators in areas where lines are subject to abandonment or discontinuance of service.

5. To administer programs and allocate Federal, State and Local funds that are available to assist the state's rail system in a manner producing maximum overall benefit.

6. To encourage businesses to continue or increase their use of rail service whenever this results in effective utilization of resources and promotes social and economic growth and development.

7. To recognize the importance of rail service and include rail planning in the State's overall transportation planning process and policies.

8. To minimize adverse social and economic impacts of past and present changes in rail service and to anticipate trends that may affect the future of the rail industry in New Hampshire.

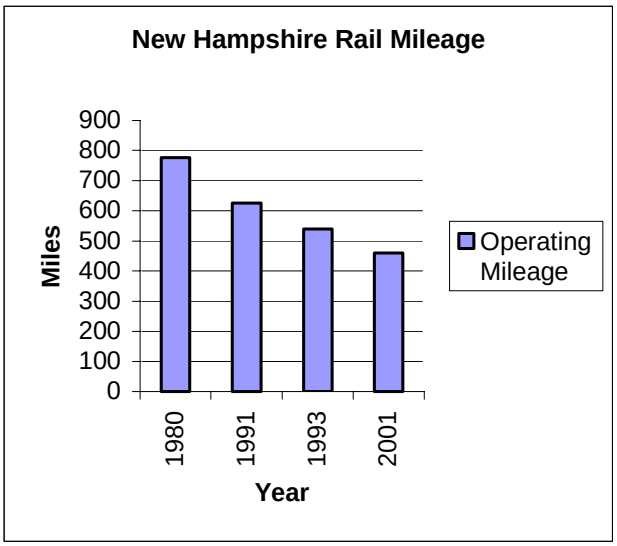
9. To preserve abandoned railroad corridors having potential for future transportation or public uses.

10. To continue to pursue the objective of operating the State-owned rail lines in a manner to realize a profit.

The New Hampshire Rail System

The New Hampshire rail system, depicted in The Statewide Rail Map (Appendix A) is comprised of one regional railroad (Guilford Rail System), nine local railroads, one terminal railroad and five passenger/tourist rail operations. The local railroads range in size from fairly small intrastate railroads to carriers that haul in excess of 3 million gross tons on the lines that pass through New Hampshire. The New Hampshire rail lines comprise a 2001 State operating rail system of 459 miles. This mileage of operating rail lines is owned and/or operated by 17 separate entities. As shown in Figure E-1, this is a reduction of 77 miles or 15% of the system since 1993, the date of the last Statewide Rail Plan amendment. This reduction is consistent with past trends toward rationalization of the system and reduction of repetitive routes.

Figure E-1
New Hampshire Rail Mileage



A summary of the mileage of railway owned and operated by various entities is presented in Table E-1.

Table E-1
New Hampshire Railroads 2001

Railroad	Railroad Mileage			
	Owned	%	Principally Operated*	%
Berlin Mills Railway	5	1%	0	0%
Claremont Concord Railroad	2	0%	5	1%
Green Mountain Railroad	1	0%	1	0%
Milford Bennington Railroad	0	0%	18	4%
New England Central Railroad	24	5%	24	5%
New England Southern Railroad	0	0%	85	19%
New Hampshire Central Railroad	0	0%	47	10%
New Hampshire Northcoast	42	9%	42	9%
Guilford Rail System	129	28%	111	24%
St. Lawrence & Atlantic	53	12%	58	13%
Twin State Railroad	0	0%	6	1%
State of New Hampshire	193	42%	0	0%
Tourist Excursion	10	2%	62	14%
Total	**459**		**459**	

*The Freight Rail Operator (or passenger rail operator on lines where no freight is moved) that is the primary freight rail carrier over a section of track or line.

Freight Movements

The State's rail system handled over 8,286,922 tons of freight in 1999 representing a 25 % increase since 1994. This shows a substantial increase during the same period that the total track mileage in the state has decreased. Figures E-2, E-3, and E-4 depict the amount and trends found in the flow of freight rail traffic in the state.

Total reported tonnage moved by rail in the State of New Hampshire can be seen in Figure E-2. This chart shows the general trend over the past six years toward increased movements of freight by rail.

Figure E-2
Total New Hampshire Freight Rail Traffic

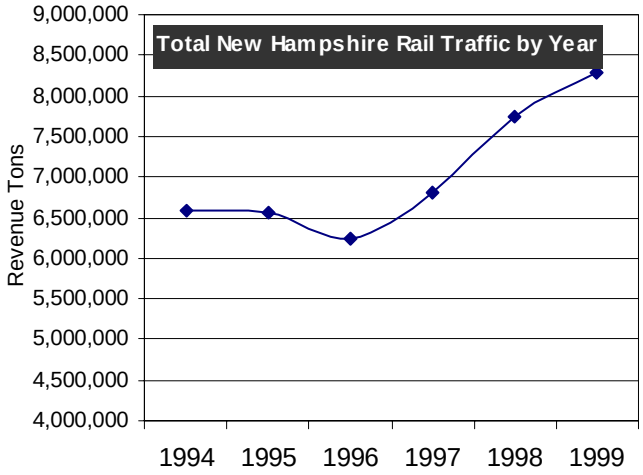
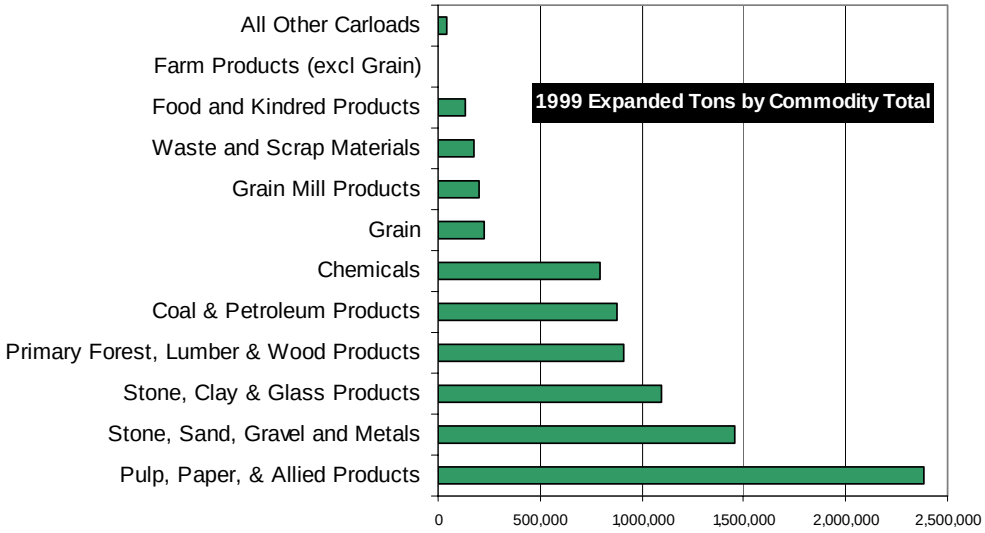


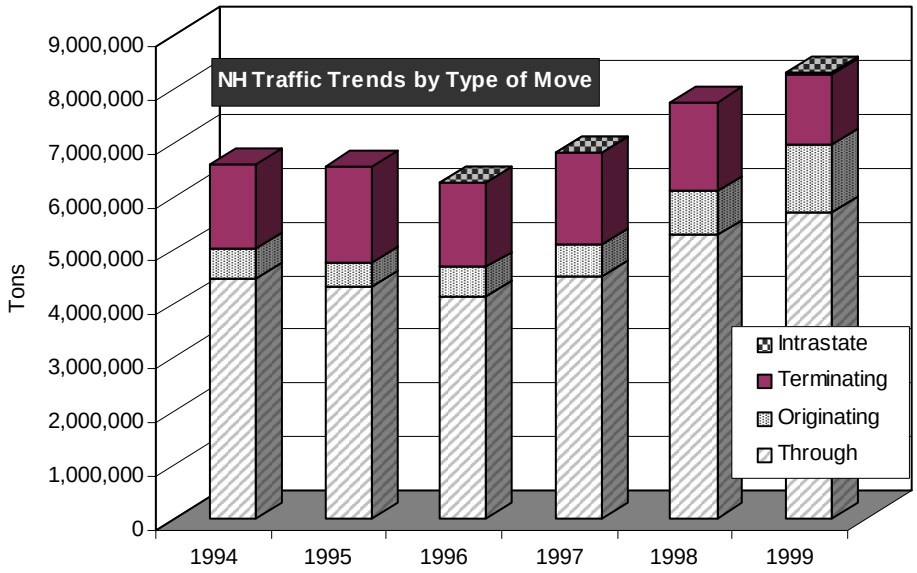
Figure E-3, contains a summary, by commodity group, of all traffic in or through the State of New Hampshire.

Figure E-3
New Hampshire Rail Freight Commodities



Revenue tonnage generally increased over the last 6 years as shown in Figure E-4. There was a slight dip in 1996, but traffic recovered in 1997. Originating traffic jumped in 1998 and again in 1999, while terminating traffic dropped in those two years. Through traffic has increased through the period, with the exception of small decreases in 1995 and 1996.

Figure E-4
New Hampshire Freight Rail Trends



Use of Abandoned Rail Corridors

Rail service has been abandoned on over 75 miles of New Hampshire rail corridor since the last plan amendment in 1993. A goal of the Statewide Rail Plan and Rail Program is to preserve abandoned railroad corridors having potential for future transportation or public uses. The rail program has worked toward this goal, during this period of rail system rationalization, by preserving corridors wherever appropriate and possible. A substantial portion of the rail lines that have been purchased by the state for preservation purposes are being used as trails, as an interim use for the corridor, during the absence of railroad service.

Purchases by the State of New Hampshire have resulted in the state owning close to 500 miles of rail corridors for preservation purposes including 193 miles of active line and 300 miles in interim trail use. As the state's operating rail system has been rationalized, the state has invested in the preservation of the corridors, thus realizing one of the goals of the 1993 Amendment to the 1991 Statewide Rail Plan and the State Rail Program.

Coordination with Regional Transportation Plans

A key ingredient to the New Hampshire transportation planning process is the role of the regional planning agencies. The development of this plan has taken into account the regional goals and policies regarding rail service in the state. Although the regions' specific rail related goals were slightly different, they could all be summarized by the following four goals:

- Promote the preservation of current rail rights-of-way for future transportation uses.
- Promote the improvement and active use of rail lines for freight or passenger service where demand warrants.
- Recommend communication among regional and state level planners to facilitate the free flow of information regarding future rail and land developments.
- Preserve grade separation of highway-rail crossings and improve grade crossings where applicable.

All of these regional goals are being advanced through this Statewide Rail Plan or other state plans and programs.

Statewide Rail Issues

The current issues that need to be assessed on a statewide or regional basis include:

- the increase in industry standard carload weights
- the need for higher vertical clearance along lines in the state
- the need to develop a coordinated statewide passenger rail plan.

As the population and traffic congestion of New Hampshire grow, interest in passenger rail as a transportation alternative grows as well. Several studies examining the feasibility and cost of passenger rail service in southern New Hampshire have been completed over the past several years. They include services along the New Hampshire Main Line, the Manchester & Lawrence Branch, the Main Line West, the Main Line East, a new rail corridor along the I-93 highway corridor, the Northern Line, the St. Lawrence & Atlantic and the Mountain Division Line, as well as extensions of existing excursion services.

It is clear that with all of these various passenger rail initiatives in the state, there is interest in investing in rail as an alternative transportation

mode. It is essential with all these various initiatives in process that the state develop a state passenger rail plan to determine how best to invest its resources through a coordinated and focused effort.

Assessment of the carload weight and vertical clearance issues in New Hampshire has resulted in a prioritization of corridors for improvements, and identification of some projects required to make those improvements.

Rail Infrastructure Project Analysis

There are no longer any public grant programs dedicated to freight rail projects from either the state or federal government. Until such funds become available, detailed analysis of rail projects would not serve any meaningful purpose. Even though there is an absence of funding, there are still rail infrastructure improvement projects that would provide a benefit to the state, the local communities and the railroads. A number of projects have been identified that would likely meet developed public investment criteria standards and should be considered as priorities to receive any public assistance available. The list of projects include specific improvements along the St. Lawrence & Atlantic, the Berlin Mills Railroad, the New Hampshire Northcoast, the New Hampshire Central Railroad and the Green Mountain Railroad. In addition, improvements are necessary on all active state-owned lines that can not be completed with existing resources and funding.

Future Studies

Rail planning is an important component of the state's overall transportation planning process. Based on the economic significance of the state's 459 mile rail system, it is important to plan for and maintain an efficient and effective rail system. This system differs from other transportation modes in the state because it relies almost exclusively on private entities for its operation and thus requires a coordinated effort between public and private entities to maintain an efficient system.

Aside from providing financial assistance, public agencies can assist in the coordination and planning to help guide the development of the system so that all parts are working together efficiently. The best way the state can do this is to conduct planning studies on ways to improve the rail system. The following planning activities would benefit the statewide transportation system, the rail program and transportation planning locally, regionally and statewide by addressing policy and implementation issues.

Statewide Passenger Rail Plan

A Statewide Passenger Rail Plan should be developed that examines the needs of the various regions in the state that can be addressed by some form of passenger rail service (either commuter rail, intercity service or excursion service). This plan should examine the feasibility of each of the passenger rail initiatives across the state to determine their costs, benefits and funding feasibility. Such a plan would result in a coordinated statewide passenger rail network development strategy. This strategy would ensure that the resultant network would be developed in a way that efficiently meets the state's transportation and economic development needs.

Rail Corridor Preservation Guidelines

Due to growth in the number of rail corridors and mileage owned by public entities in New Hampshire, it would be beneficial to all stakeholders, (trail users, railroad and transportation planners, property managers, public officials, and local communities) if rail corridor preservation guidelines were developed. These guidelines should address: interim use guidelines, property management, ownership and use responsibilities, improvement standards, and warrants for crossings, easements or utility uses. An inventory of the publicly owned rail corridors in the state should also be included.

286,000 Pound Carload Improvements

A coordinated effort with the state rail planners in the region and railroads to develop an implementation plan for improving the region's rail system to accommodate heavier rail cars should occur. This coordinated effort would ensure that timing and funding of improvement projects would be conducted in a manner that would provide a real benefit to the state and regional rail system. The focus of improvements would be the St. Lawrence & Atlantic, New Hampshire Main Line, and the Connecticut River Line, which are the highest priority lines.

Double Stack Clearance Improvements

The State should develop a financial and implementation plan to assist railroads in the removal of impediments to double stack clearance on their rail lines. This effort should be focused on the highest priority lines, which are the Main Line West and the Connecticut River Line. A planning effort will be necessary in the future to ensure that all branch

lines that would benefit from double stacked intermodal container traffic are capable of receiving that traffic.

Railroad Assistance

Although the State has been assisting the rail system through the maintenance and rehabilitation of state-owned lines and the loan program for all other rail operators, other assistance programs should be considered. Many of the lines in the state suffer from deferred maintenance over a long period and require significant support for continued operation. Although the assistance given is significant and necessary, it is still only a portion of what is needed for a healthy rail system.

Many states throughout the country have established Industrial Access Programs as a way to fill the gap left by the lack of federal support. Through the construction of new sidings and business oriented infrastructure improvements, these programs either leverage private funds or provide economic development assistance to growing expanding businesses in their state. New Hampshire should develop a similar program so that its industries can remain competitive in the region. The development of such a program would require the state legislature to establish a dedicated funding mechanism to support the program.

Regional Rail Plan

The state of New Hampshire should coordinate its rail planning efforts with the surrounding states. Due to the size of the New England states and the connectivity of the rail system, it is essential to consider rail issues across state lines. It is recommended that the State of New Hampshire initiate a regional rail planning effort focusing on freight rail issues. Through such a planning effort, regional issues, such as double stack clearance, 286,000 pound carloads and interstate improvement projects, could be evaluated and coordinated.

1

Rail Planning, Policies & Process

This report is the 2001 update to the 1991 New Hampshire Statewide Rail Plan, which was amended in 1993. The Rail Plan presents an overview of the current status of the New Hampshire Rail System, who operates it and how it is utilized. The Rail Plan describes the New Hampshire Rail Planning Process, applicable federal regulations and how the plan is incorporated into the New Hampshire Long Range Statewide Transportation Plan. Additionally, a process is provided in which potential rail related investment projects can be analyzed to determine if they provide net benefits to the state. This plan fulfills Federal Railroad Administration (FRA) requirements that each state establish, update and revise a State Rail Plan in order to receive federal funds.

Rail planning differs from statewide planning for other transportation modes because the infrastructure is primarily privately owned and operated. Therefore, freight rail movements and rail related infrastructure improvements are typically a result of market or business forces and not public policy decisions. It must be kept in mind that, although government can set policy and funding priorities, the structure of the railroad system in this country relies on private enterprise and business to operate and function and thus must provide a profit. Therefore any government action taken with regard to a railroad, either assistance or regulation, must keep in mind the viability and profitability of the business; a reality that is not as prevalent in planning for other transportation modes.

This plan provides a snapshot of the current state rail system. It provides the base line data on which to build public-private cooperative efforts that would advance both public initiatives and benefit the private rail operators.

Planning Goals

In 1995, the New Hampshire Department of Transportation adopted a Long Range Statewide Transportation Plan (LRSTP). This plan, identified as the statewide transportation plan, was developed with input from the general public, regional planning agencies, and local, state and federal officials. The LRSTP identifies goals and initiatives to develop an intermodal transportation system in New Hampshire that will meet the needs and demands of residents and visitors. The seven goals are the mission of the Department of Transportation and the guidelines of all transportation planning in New Hampshire.

GOAL 1) Maintain, enhance and manage the existing transportation network.

GOAL 2) Foster an interactive and cooperative approach to integrating land use and transportation planning issues.

GOAL 3) Improve the safety of the traveling public.

GOAL 4) Increase the availability of transportation options and connectivity.

GOAL 5) Maintain the environmental quality of New Hampshire through the development of an intermodal transportation system.

GOAL 6) Promote the judicious use of financial resources to enhance the intermodal transportation system.

GOAL 7) Establish a public education program.

Statewide Rail Plan Process

Railroad planning is a dynamic process that changes with the differing environments and needs of the state. Since this is an ongoing and multifaceted process, it can be affected by changes in the legal, technological, corporate, economic, political and social environments of the state, region or country. Although the results may change with the changing environment, the goals of the New Hampshire rail planning process have generally been consistent.

The State's Rail Policy can be best described as follows: to promote a balanced and integrated transportation system, in part through the maintenance of adequate rail freight and rail passenger services to serve

the needs of New Hampshire's people and industries, and through the improvement of these services wherever and whenever it is in the State's power to do so. New Hampshire is determined to utilize its own and whatever federal funds are available, along with private and local matching funds, on selected lines that require assistance and are integral to the economic well being of the State. Decisions on the selection of lines are made on a basis of benefit/cost studies, including social, economic and environmental factors.

The Role of New Hampshire Rail Planning

The role of state rail planning is to assist in protecting the public interest by examining the total rail system (rail carriers, shippers, receivers, local communities affected by rail transportation and other modes of transportation) to allow each sector of the rail service system the opportunity to contribute equally and play its proper role in an efficient and equitable manner.

The Railroad Planning Process

The railroad planning process in New Hampshire is based on the methods, goals, objectives and philosophies developed for the initial 1975 State Rail Plan. Although some of the legal framework and specific methods have changed, the basic goals and benefits of the Rail Plan have not.

The planning process begins with continuous monitoring, by the Department of Transportation, of the condition of the state rail system, its traffic, its customers, its potential and its problems. This monitoring is the day to day component of the planning process that implements policies and identifies when additional plans, studies, improvements or funding are needed, therefore completing the planning circle.

Currently railroad planning in New Hampshire is directed to respond to the pressures of the changing rail system, which can be characterized as a more streamlined system, providing limited service and increasing abandonment of lesser used lines. Since the State of New Hampshire's rail system is just one part of a larger regional and continental system, the state cooperates with its neighbors in the analysis and management of this national transportation system. A cooperative effort is necessary in the development of national, regional and state policies, which benefit rail service both within and beyond New Hampshire. The Statewide Rail Plan is a part of that policy development. It provides a current inventory and analysis of the State's railroad system that will serve as the basis for decisions to be made now and in the future.

Statewide Rail Plan Assumptions

The Statewide Rail Plan has been developed with a base set of assumptions. These assumptions provide governing principles under which the plan has been developed. Although some specifics have changed since the first New Hampshire Rail Plan developed in 1975, the assumptions in this 2001 plan are relatively unchanged from those originally stated.

1. Any rail plan that is developed will be dynamic, not static, and subject to revision as circumstances and conditions may require.

2. Rail passenger service has become necessary in all of New Hampshire, especially in southern New Hampshire. As a result of the population growth and increasing demands of the transportation system, the State must consider all modes to develop the most efficient and effective statewide transportation network.

3. Rail freight service is indispensable to New Hampshire. This assumption requires a commitment from the State to assure that rail service will be maintained in areas where necessary for the development of industries and for the maintenance of employment in existing rail-dependent firms.

4. New Hampshire rail customers have a vital interest in railroad planning both within the state and nationwide. Therefore, New Hampshire's rail planning process must consider implications of transportation system developments, regionally and nationwide.

Statewide Rail Plan Goals

The four basic assumptions are the underlying principles adhered to in the development of the plan. From these principles a more specific set of goals have been developed for the Statewide Rail Plan and Rail Program:

1. To provide and maintain a safe, efficient and viable railroad network within New Hampshire that is essential to help stabilize its economic health and to preserve and expand employment.

2. To develop and implement a program of sound railroad investment, based on an approved benefit/cost analysis methodology and to assure continued safe and quality rail service to New Hampshire.

3. To assist in the reestablishment of commuter and inter-city rail passenger services and tourist operations.

4. To keep railroad lines in the private sector by utilizing qualified short line operators in areas where lines are subject to abandonment or discontinuance of service.

5. To administer programs and allocate Federal, State and Local funds that are available to assist the state's rail system in a manner producing maximum overall benefit.

6. To encourage businesses to continue or increase their use of rail service whenever this results in effective utilization of resources and promotes social and economic growth and development.

7. To recognize the importance of rail service and include rail planning in the State's overall transportation planning process and policies.

8. To minimize adverse social and economic impacts of past and present changes in rail service and to anticipate trends that may affect the future of the rail industry in New Hampshire.

9. To preserve abandoned railroad corridors having potential for future transportation or public uses.

10. To continue to pursue the objective of operating the State-owned rail lines in a manner to realize a profit.

Statewide Rail Plan Benefits

The Statewide Rail Plan provides numerous benefits. The major benefits include:

1. Integration of rail planning with plans for other modes and development of the Statewide Transportation Improvement Program.

2. Providing the New Hampshire Department of Transportation with guidelines for analysis of benefit/cost relationships in order to determine the program for commitment of State and Federal funds and recommending specific allocation to the Governor and Executive Council and the Legislature.

3. Developing the methods of distribution for the expenditure of State and Federal funds through a complete analysis of the needs for continued State investment in railroad related projects.

4. Providing a comprehensive study of the State's rail system to the Governor, Executive Council and the Legislature that enables them

to make judgments concerning the expenditures of State and Federal funds.

5. Enabling other state agencies to review the needs of the State rail system in developing goals for their various disciplines and assuring that these goals will be included in the railroad planning policy process.

6. Allowing railroad users to examine closely and understand the State programs as they relate to the transportation components in their business operations.

7. Assuring that the public can not only gain knowledge of the rail transportation system, but also contribute effectively to railroad planning, policy and program decisions made by State agencies.

Rail Planning Programs and Policies

The State of New Hampshire has developed a number of programs and policies that have repercussions on the development of the Statewide Rail Plan and the management of the state's rail system. The following programs and policies are the basis used in formulating options and making decisions regarding the state rail system.

Intergovernmental Cooperation

The State supports and encourages interstate cooperation to promote the exchange of ideas and to develop cooperative efforts to deal with similar rail issues and problems. The New Hampshire Department of Transportation will continue to work with regional and local representative in assessing their rail needs and developing plans and innovative programs to make sure their needs are met. The Department also seeks cooperation with other State agencies to promote the use of rail as an alternative transportation mode for industries located on rail lines.

Rail Passenger Service

With the increased population of southern New Hampshire and the subsequent increase in vehicular traffic congestion, all modes of public transit service must be examined. The New Hampshire Department of Transportation will provide whatever technical assistance it can to such private or public rail passenger development initiatives.

Intermodal Policy

Rail transportation must be an integral part of the State's entire freight transportation system. The New Hampshire Department of Transportation recognizes that in studying rail issues, the other modes of freight transportation must be taken into consideration. Each mode provides services that are efficient and economical in their own right.

Rail Abandonment

Each rail line proposed for abandonment will be studied on a case by case basis. The analysis takes into consideration the following:

- Historical statistics: review of car and shipper / receiver usage of the line.
- Future potential: review of the line with regard to future potential uses, continued rail use, rail banking or other public uses.
- Potential adverse impacts: examination of the impact on customers and the community should abandonment occur.

Based on the analysis, the State will develop an opinion and may forward comments to the Surface Transportation Board.

Rehabilitation of Rail Properties

The New Hampshire Department of Transportation will continue to assist in the rehabilitation and preservation of rail properties, based on funding availability. The Department will program such rail projects subject to the appropriate Federal and State procedures and conditions. The following conditions are required for each project the state participates in:

- A commitment of matching funds from shippers, users or the operating railroad, with few exceptions.
- A commitment by shippers or users participating in financial aid to continue utilization of the line.
- An agreement by the owner of the line to continue service and to maintain the line at the classification level to which it was rehabilitated.
- A lien, or similar instrument, on the improved property in favor of the State, in order to protect the States interest in the improvements should the owner sell or abandon all or any portion of the line.

- Consideration will also be given to environmental, energy and social impact in accordance with Federal regulations.

New Construction

Service can often be continued or even improved by the construction of a connection track between two existing rail lines or intermodal facilities. Such new construction may provide benefits to the rail system that far outweigh the capital costs. State assistance would be considered for such a project if the benefit/cost analysis indicates such an advantage. The environmental, operational and community impacts of the improvements must be analyzed as part of the project cost/benefit analysis.

Acquisition and Ownership

The New Hampshire Department of Transportation supports private industry ownership and operation of railroads rather than acquisition and permanent ownership by the State.

Rights-of-Way Preservation

New Hampshire supports the preservation of active or abandoned railroad rights-of-way that have potential for future rail transportation needs or other public uses, and has initiated a corridor preservation program. The rail corridor preservation policy evolved following the State's purchase of the Concord to Lincoln line in 1975 and the North Stratford to Beecher Falls line in 1977. The purpose of acquiring these lines was to assist in providing continued rail service to New Hampshire industries. Legislation was passed prohibiting any use of railroad right-of-way that would unreasonably limit the ability to restore rail service at minimal cost. Legislation has also been enacted allowing the State to acquire a corridor in three ways:

1. To negotiate with the owners of abandoned railroad lines to purchase the railroad rights-of-way.
2. To match any verifiable, bona fide offer made to purchase the railroad rights-of-way.
3. To acquire the railroad rights-of-way by condemnation.

In 1991, The New Hampshire General Court enacted legislation that alters the potential state ownership interest in rail corridors in the state. The legislation enables the State to declare fee-simple ownership of all railroad rights-of-way and railroad properties acquired by the Commissioner of the New Hampshire Department of Transportation or the State of New Hampshire.

In addition to acquisition, legislation also allows the Department to enter into agreements with the owners of abandoned rights-of-way wherein the owner agrees to preserve the corridor intact for a specified period. In return, the owner is relieved, during the period of agreement, of certain taxes as well as relief of civil liability for any personal injury or property damage occurring on the right-of-way. The Department has entered into two such agreements with municipalities.

Short Line Operations

The New Hampshire Department of Transportation will actively solicit and support the installation of short line operators to operate on lines that qualify under the provisions of the Local Rail Freight Assistance Program. This policy is a "team effort" in trying to retain rail service. This type of solution stems from negotiated agreements between the State, the shippers, the railroads, local governmental agencies and any other benefited parties. Each party will be required to make the necessary contributions, commitments and/or concessions, as appropriate, that are needed to bring the line to a self-sustaining level of financial viability or at least soften the negative impacts of direct service discontinuance. The State's contribution to the "team effort" would be in the form of rehabilitation assistance, providing there is a positive cost/benefit ratio and Legislative concurrence. The State has, in the past, subsidized the operation of State-owned lines, a practice eliminated in the 1987 legislative session.

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The New Hampshire Rail System

The New Hampshire Rail system, depicted in The Statewide Rail Map (Appendix A) is comprised of one regional railroad[1] (Guilford Rail System), nine local railroads, one terminal railroad and five passenger/tourist rail operations. The local railroads range in size from fairly small intrastate railroads to carriers that haul in excess of 3 million gross tons on the lines that pass through New Hampshire and the adjoining states and provinces. The New Hampshire railroads form an operating rail system of 459 miles in the year 2001.

Historic Overview

New Hampshire's first railroad was chartered in 1835 and completed three years later. Within 75 years (by the start of World War I), 1,260 miles of rail had been laid primarily as a response to the economic growth created by the new southern New Hampshire industrial centers. This boom in rail mileage was initially characterized by the creation of numerous small individual lines that sprang up all over the state. One of the immediate results of this period was an economic shift away from a self-sustaining rural agrarian economy to one where rural communities became increasingly dependent on urban markets. Many of the small railroad businesses were consolidated in the late 1800's when efficiencies of scale promoted combined operations. Railroad operators of the time realized that the most efficient method of achieving this end was by leasing. By 1900, the Boston & Maine (B&M) Railroad controlled 90 percent of all rail mileage in the state through either ownership or lease, with the Grand Trunk Eastern line controlling most of the remaining

[1] Class I railroads have 1999 operating revenues of $258.5 million or more. Regional Railroads are non Class I line-haul railroads, operating 350 miles or more of road and/or with revenues of at least $40 million. Local Railroads are those that are neither a Class I or a Regional Railroad and are engaged primarily in line-haul service. A Switching and Terminal Railroad is a non-Class I railroad engaged primarily in switching or terminal services for other railroads. (Association of American Railroads)

track mileage. This pattern of railroad ownership is not much different from what we see today.

The overall rail economy has declined since the end of World War II due to an ever-changing regional industrial base, construction of the Interstate Highway System, a growing airline industry and the American passion for automobile use. These realities have changed the face of the New Hampshire rail system in 2001 to be only a third of its size when the 20th century began.

Rail System Changes

Since the last State Rail Plan, there have been changes to the general railroad system that affect the New Hampshire rail system. These changes differ in scope from national (Conrail breakup), to regional (ownership changes on Vermont rail lines) and local (abandonments). Some of these changes have a profound affect on the state's transportation system while others have not made much difference.

National System Changes

During the past decade, the major change in the national rail system that could have had a major impact on the New Hampshire rail system was the change in ownership of Conrail. Conrail, the major carrier into southern New England, was sold to CSX Corporation and Norfolk Southern Corporation in 1997.

This occurred during the same period of industry-wide Class 1 railroad consolidation. The Burlington Northern and the Santa Fe have merged as well as the Union Pacific and the Southern Pacific. These mergers have taken place to make the railroads more competitive in the movement of freight. However, the latest attempted merger between Burlington Northern Santa Fe and Canadian National was not allowed by the Surface Transportation Board due to competition concerns.

After each consolidation, service difficulties have been felt throughout the nation's rail system. Due to the lack of Class 1 presence in New Hampshire, these service interruptions have been limited. However, when CSX and Norfolk Southern began operating most of Conrail lines and facilities in June 1999, some temporary service problems were felt. Long term effects, however, have not been felt in New Hampshire since Conrail had no direct connection and any of the short-term problems seemed to have been worked out.

Regional System Changes

The regional rail system changed recently when in 1999 the State of Vermont purchased the Berlin Branch (a.k.a. the Wells River Branch) from the B&M Corporation which was no longer operating over the line. The State of Vermont selected the Northern Vermont Railroad (part of Iron Road Railways) as the long-term operator of the line. The Northern Vermont began to move freight over the line, thereby once again directly connecting Wells River and St. Johnsbury with White River Junction and the rail system to the south. Although this connection does not have a direct impact on the New Hampshire rail system, it has the potential to affect the patterns of freight movements through northern New England and the Connecticut River Valley. Since operations along that line just began, it is too early to tell how or if it will impact the New Hampshire rail system.

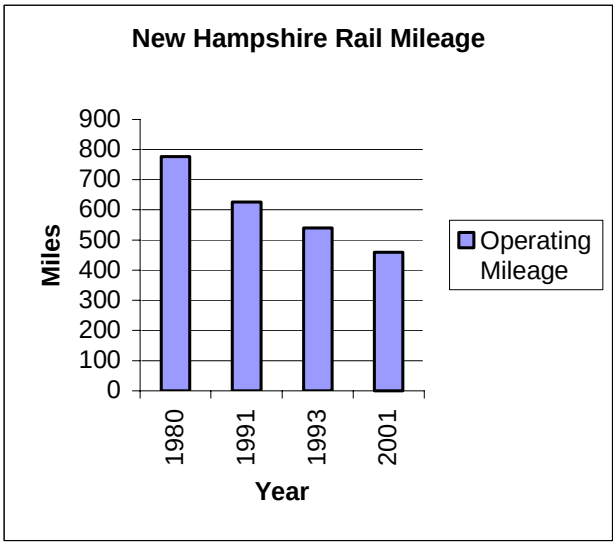
Abandonments

Of local concern in New Hampshire is the continued abandonment of operating rail lines. New Hampshire is not alone in this continued trend to rail system rationalization. Around the country Class 1 railroads have been streamlining operations by turning lines with marginal economic value over to short line railroads or abandoning them. Many of these lines in turn have been purchased by shortline railroads. This has resulted in a change in the composition of the national rail system. The highly profitable lines remain in operation by the Class 1 railroads while ownership of less profitable or marginal lines being shifted to operation by regional or local railroads. The State of New Hampshire has been actively monitoring rail line abandonments. Where it is in the public good the state has attempted to maintain rail operations on the line through purchase and leases or preserving corridors for future needs.

State System Changes

The 2001 New Hampshire Rail System is comprised of a total of 459 miles of operating rail lines owned by and operated by over 17 separate entities. As shown in Figure 2-1, this is a reduction of about 80 miles or 15% of the system since 1993, the date of the last Statewide Rail Plan. This reduction is consistent with past trends toward rationalization of the system and reduction of repetitive routes.

Figure 2-1
New Hampshire Rail Mileage



Improvement Projects

Although there has been a reduction in total mileage of rail in the state, many of the lines that remain in operation have been maintained and improved. Most of the private rail owners and operators have been improving their lines, as necessary, to maintain or improve traffic. These maintenance programs have included some assistance from state and federal sources. The following is a list of the major capital improvement projects undertaken between 1993 and 2000 using public funding.

Berlin Branch

Portions of the Berlin Branch were rehabilitated with partial funding from the FRA Local Rail Freight Assistance program in 1993.

Cheshire Branch

A portion of the Cheshire Branch in Walpole was improved in 1993, partially funded from the FRA Local Rail Freight Assistance program. In addition, the New Hampshire Class III Railroad Capital Rail Line Rehabilitation Revolving Loan Fund was used to construct a rail/highway petroleum transfer station on the line in 1996.

Concord to Lincoln Line

A section of the Concord to Lincoln Line was rehabilitated in 1996 using both state and private railroad funds. In 1998, the New Hampshire Class III Railroad Capital Rail Line Rehabilitation Revolving Loan Fund was

used to purchase and rebuild a locomotive and track maintenance equipment for use on the state owned line.

Conway Branch

The Conway Branch was improved with the support of the FRA Local Rail Freight Assistance program in Rochester in 1994 and in Somersworth in 1995. In addition, using the New Hampshire Class III Railroad Capital Rail Line Rehabilitation Revolving Loan Fund in 1996, 1997 and 1998, the line between Rollinsford and Ossipee was rehabilitated, a car shop in Ossipee was constructed and rolling stock was purchased and rebuilt.

Groveton Branch

Portions of the Groveton Branch were rehabilitated with partial funding from the FRA Local Rail Freight Assistance program in 1993.

Hillsboro Branch

Both state and private funds were used to rehabilitate portions of the Hillsboro Branch between Wilton and Bennington in 1995.

Mt. Washington Railway

The New Hampshire Class III Railroad Capital Rail Line Rehabilitation Revolving Loan Fund was used in 1998 to improve infrastructure and rolling stock for this rail line.

North Stratford to Beecher Falls

Seven miles of the N. Stratford to Beecher Falls line were rehabilitated in 1995 using state and private funds.

St. Lawrence & Atlantic

The St. Lawrence & Atlantic Railroad was assisted in its rehabilitation efforts through the FRA Local Rail Freight Assistance program in 1994 and 1995. In 1996, the line was rehabilitated between Shelburne and North Stratford using the New Hampshire Class III Railroad Capital Rail Line Rehabilitation Revolving Loan Fund.

Ownership Changes

Since the 1993 New Hampshire Statewide Rail Plan there have been 22 changes in rail line ownership. The predominant change has been the abandonment of rail lines and subsequent purchase by the State of New Hampshire.

Table 2-1
New Hampshire Rail Line Ownership Changes

New Hampshire Rail Line Ownership Changes 1993-2000				
Line	Former Owner	Present Owner	Year of Ownership Transfer	Mileage
Conway Branch	Boston & Maine Corporation	New Hampshire Northcoast	1993	9
Mountain Division	Boston & Maine Corporation	NH Dept. of Transportation	1994	52
Fort Hill Branch	Boston & Maine Corporation	NH Dept. of Transportation	1994	9
Gonic Branch	Boston & Maine Corporation	NH Dept. of Transportation	1994	1
Lakeport Branch	Boston & Maine Corporation	NH Dept. of Transportation	1994	1
Ashuelot	Boston & Maine Corporation	NH Dept. of Transportation	1995	21
Northern	Boston & Maine Corporation	NH Dept. of Transportation	1995/1999	62
Cheshire	Boston & Maine Corporation	NH Dept. of Transportation	1995	42
Conway	Boston & Maine Corporation	NH Dept. of Transportation	1995	8
Hampton Branch	Boston & Maine Corporation	NH Dept. of Transportation	1996/1999	5
Berlin Branch	New Hampshire Vermont Railroad	NH Dept. of Transportation	1996/1998/1999	55
Farmington	New Hampshire Northcoast	NH Dept. of Transportation	1997	7
Concord Claremont	Claremont Railway	City of Claremont	1997	2
Blackmount Branch	Boston & Maine Corporation	NH Dept. of Transportation	1997	6
White Mountain Branch	Boston & Maine Corporation	NH Dept. of Transportation	1998	1
Groveton Branch	New Hampshire Vermont Railroad	St. Lawrence & Atlantic Railroad	1999	1
Groveton Branch	New Hampshire Vermont Railroad	NH Dept. of Transportation	1999	18
Greenville	Boston & Maine Corporation	NH Dept. of Transportation	1999	2
Monadnock	Boston & Maine Corporation	NH Dept. of Transportation	1999	9
Portsmouth Branch	Boston & Maine Corporation	NH Dept. of Transportation	1999	3
Manchester & Lawrence	Boston & Maine Corporation	Manchester Airport Authority	2000	6
Jefferson-Whitefield	Boston & Maine Corporation	NH Dept. of Transportation	2000	2

Abandonments

Federal law requires that each rail carrier designate the status of all rail lines that it operates in its system to the categories detailed below based on their operating position. The most current classifications for rail lines in New Hampshire that have been filed are listed below.

Category I

Category I includes all lines or portions of lines that the carrier anticipates will be subject to the abandonment or discontinuance

application to be filed within three years following the date of filing of the System Diagram Map.

Boston and Maine Corporation - February 2001

1. Manchester-Lawrence Branch (segment of same)
Located within Rockingham County, NH and Essex County, MA
Milepost 1.4 to 4.65
No agency or terminal station is located on this line

Category II

Category II includes all lines or portions of lines potentially subject to abandonments or those that the carrier has under study and believes may be the subject of a future abandonment application because of either anticipated operating losses or excessive rehabilitation costs, as compared to potential revenues.

None

Category III

Category III includes all lines or portion of lines for which an abandonment or discontinuance application is pending on the date upon which the diagram is filed.

None

Category IV

Category IV includes all lines or portions of lines that are being operated under the Rail Service Continuation Provision of the Rail Reorganization Act of 1973, as amended.

None

Category V

Category V includes all other lines or portions of lines that the carrier owns and operates, directly or indirectly.

Berlin Mills Railroad
Berlin Mills Branch (Berlin)

Boston and Maine Corporation
Hillsboro Branch (Nashua to Wilton)
Main Line East (Hampton to Portsmouth)
Main Line West (Rollinsford to Plaistow)

NH Main Line (Nashua to Concord)
Newington Branch (Portsmouth to Newington)
Northern (Concord)
Portsmouth Branch (Newfields to Portsmouth)

Claremont Concord Railroad
Concord-Claremont (Claremont)

Conway Scenic Railroad
Conway Branch (Conway)

Green Mountain Railroad
Cheshire Branch (North Walpole)

Maine Central Railroad
Mountain Division (Whitefield to VT Border)

New England Central Railroad
Connecticut River Line (North Walpole to Cornish)

New Hampshire Northcoast
Conway Branch (Rollinsford to Ossipee)

St. Lawrence & Atlantic Railroad
St. Lawrence & Atlantic (Shelburne to North Stratford)

State of New Hampshire
Berlin Branch (Jefferson to Littleton)
Concord-Lincoln Line
Groveton Branch (Groveton to Jefferson)
Hillsboro Branch (Wilton to Bennington)
Mountain Division (Whitefield to ME Border)
N. Stratford-Beecher Falls Branch
Northern (Lebanon)

New Hampshire Rail System

The 2001 New Hampshire rail system is made up of 459 miles of active track that is owned and operated by 17 separate entities. A summary of the mileage of railway owed and operated by the various entities is presented below.

Table 2-2
New Hampshire Railroads 2001

Railroad	Railroad Mileage			
	Owned	%	Principally Operated*	%
Berlin Mills Railway	5	1%	0	0%
Claremont Concord Railroad	2	0%	5	1%
Green Mountain Railroad	1	0%	1	0%
Milford Bennington Railroad	0	0%	18	4%
New England Central Railroad	24	5%	24	5%
New England Southern Railroad	0	0%	85	19%
New Hampshire Central Railroad	0	0%	47	10%
New Hampshire Northcoast	42	9%	42	9%
Guilford Rail System	129	28%	111	24%
St. Lawrence & Atlantic	53	12%	58	13%
Twin State Railroad	0	0%	6	1%
State of New Hampshire	193	42%	0	0%
Tourist Excursion	10	2%	62	14%
Total	**459**		**459**	

*The Freight Rail Operator (or passenger rail operator on lines where no freight is moved) that is the primary freight rail carrier over a section of track or line.

Freight Rail Operators

Claremont Concord Railroad (CCRR)

This terminal railroad operates over a 2-mile section of the Concord to Claremont between Claremont Junction and downtown Claremont, including the railroad's maintenance and repair facility. During 2000 it also entered into an agreement to operate along a 3 mile section of the Northern Line in Lebanon, owned by the State of New Hampshire, providing switching operations to industries in that area.

Green Mountain Railroad (GMRC)

The Green Mountain Railroad, part of the Vermont Railway System, operates along one mile of track from its line in Vermont to a yard in North Walpole. The main function of the line is to serve the yard where engine repairs and car repairs are conducted. In addition, a bulk fuel

distribution center is located in the yard, as well as other offloading facilities.

Milford Bennington Railroad (MBRX)

The Milford Bennington Railroad operates over both the state-owned and Boston & Maine owned Hillsboro Branch, providing regular service between a quarry in Wilton and a stone processing plant in Milford.

New England Central Railroad (NECR)

This railroad, owned by Rail America, operates along the Connecticut River Line between the Massachusetts border and White River Junction, Vermont connecting New London, CT to St. Albans, VT. The line enters New Hampshire in North Walpole and exits in Cornish (24 miles). The railroad operates two trains daily along the line, which provides a major north-south connection through western New England.

New England Southern Railroad (NEGS)

This Class III railroad provides freight services along three lines, all within the state. The principal business is along the B&M-owned New Hampshire Main Line between Concord and Manchester. NEGS also provides occasional service along portions of the B&M-owned Northern Line in Concord and the state-owned Concord to Lincoln line to Tilton with freight rights extending to Lincoln.

New Hampshire Central Railroad (NHCR)

This railroad provides service along 11 miles of the state-owned North Stratford-Beecher Falls Line. Service is principally to a car repair and maintenance facility, however aggregate and wood products are also moved over the line. In 2001, a bulk fuel distribution center will increase traffic over the line. The New Hampshire Central has recently contracted (Jan. 2001) with the State of New Hampshire to operate freight services over both the state-owned Berlin and Groveton Branches.

New Hampshire Northcoast (NHN)

This Class III railroad operates along the Conway Branch between Ossipee and Rollinsford providing daily service between the Ossipee Sand and Gravel operation and Boston for the delivery of sand and

gravel. Additionally, propane, plastics and other products are delivered to Rochester.

Springfield Terminal Railway (ST)

Springfield Terminal Railway provides the majority of rail service in southern New Hampshire. This Class II railroad is a part of the Guilford Rail System (GRS) and operates over lines owned by Boston & Maine Corporation, another GTI subsidiary. A majority of the tonnage moved by ST through New Hampshire is along the Main Line West, which provides through service between Maine and Massachusetts. ST also operates a unit coal train to the Bow power plant.

St. Lawrence & Atlantic Railroad (SLR)

This railroad, owned by Emons Transportation Group, provides service along the former Grand Trunk Eastern. This line is a regionally significant connection between Portland / Auburn, ME and Canada, via northern New Hampshire and Vermont. This railroad transports bulk and container traffic through northern New Hampshire connecting with the Canadian National Railway near Montreal, Canada.

Twin State Railroad (TSRD)

Twin State Railroad, a subsidiary of CSF Acquisitions, operates along the Maine Central Railroad's section of the Mountain Division Line between Whitefield and St. Johnsbury, VT. Although the railroad does not currently have any regular customers, service along this line could provide an important connection to Vermont through St. Johnsbury.

Operating Railroad Lines

The New Hampshire rail system functions as three distinct subsystems that, due to connections, have different traffic patterns and characteristics. The three subsystems are the Northern, the Southern and the Western. The Northern Subsystem is focused primarily on one main line, the St. Lawrence & Atlantic, which provides a connection between Portland, ME and Montreal, Quebec. The Southern Subsystem is focused on the lines that feed two major lines belonging to the Boston and Maine Corporation, the New Hampshire Main Line and the Main Line West. The Western Subsystem is focused principally on the Connecticut River Line that provides a direct connection to southern New England and Canada.

The following section provides specific information concerning each of the lines in each of these subsystems. Each of the state's railroad operators was solicited for details regarding their lines. The information provided was spot checked to insure its accuracy. Where up to date information was not readily available, government records, track charts and/or local knowledge of the rail line was used to provide a best estimate of the line's condition.

Definitions

Definitions of specific terms and classification schemes used to describe the lines are provided.

FRA Track Classifications

The Federal Railroad Administration (FRA) has established six classes of track that prescribe the maximum speed of operation for freight and passenger trains. The classes of track and prescribed speed limit for each are listed below.

Table 2-3
FRA Track Classifications

Track Class	Maximum Speed of Trains	
	Freight (mph)	Passenger (mph)
1	10	15
2	25	30
3	40	60
4	60	80
5	80	90
6	110	110

These maximum speeds are based on standards that define the level of maintenance needed to permit safe operation. Although these are the maximum permitted speeds, other factors would limit actual operating speeds along a line. These factors could include excessive grades, curves or any other civil restriction along the line, i.e., limited clearances. In addition to the classifications listed, there is an excepted track classification. Although freight rail service is permitted over tracks in the excepted classification at 10 mph, strict guidelines apply regarding the movement of certain types of traffic (i.e., hazardous material) and passenger service.

Rail Weight

The rail weight refers to the weight of the rail, measured per yard. For example, 85 # rail means that a one yard section of the rail weighs 85 pounds.

Passive Grade Crossing Warning System

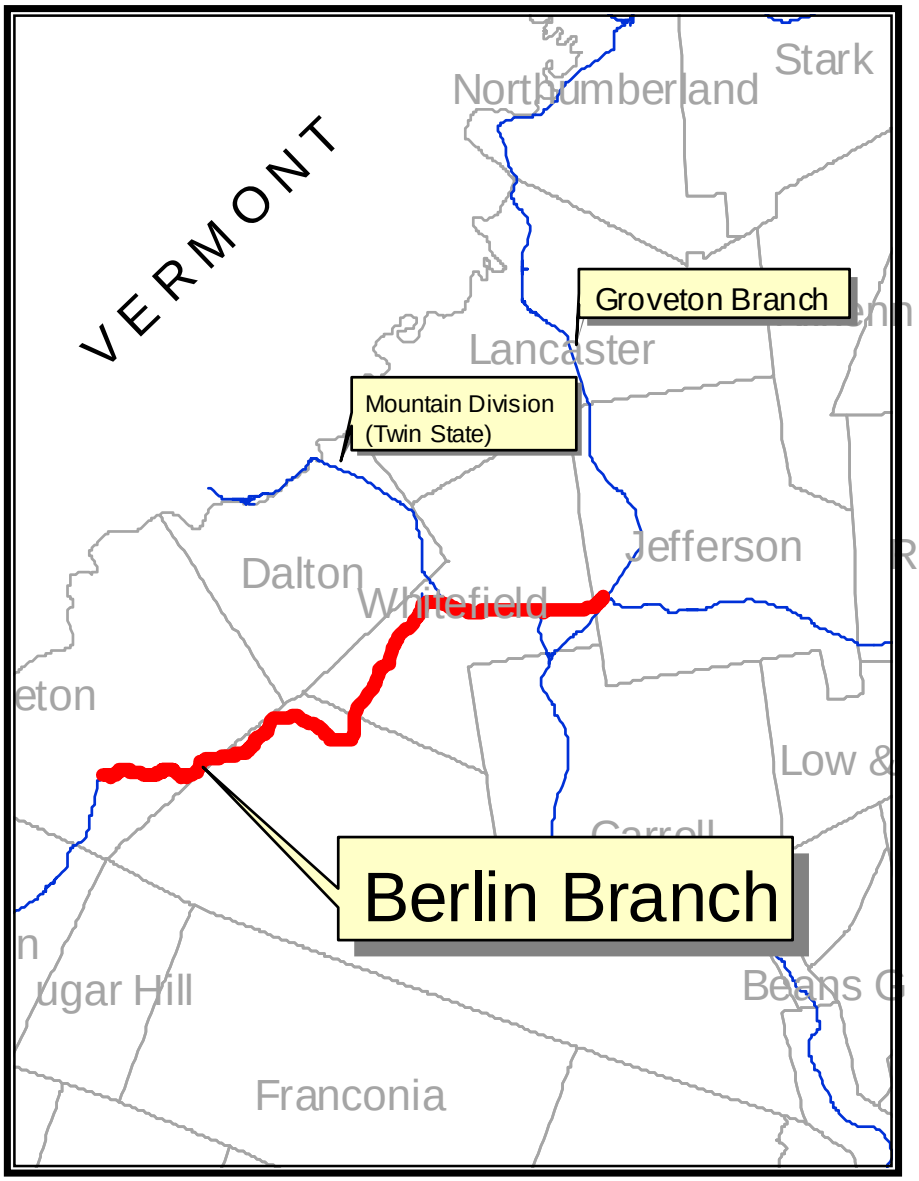
A passive grade crossing warning system is a system of motorist advance warning that does not change with the approach of a train. These systems typically consist of some combination of signs, crossbucks and pavement markings.

Active Grade Crossing Warning System

An active grade crossing warning system is a system of motorist advance warning that changes with the approach of a train. These systems may consist of flashing lights and automatic gates in addition to signs, crossbucks pavement markings.

New Hampshire Rail Lines

The following pages contain a detailed inventory of the rail lines that comprise the New Hampshire Rail System. The inventory contains a map of the line, showing connections to other lines in the system, details about the line's infrastructure and a brief description of the use of the line.

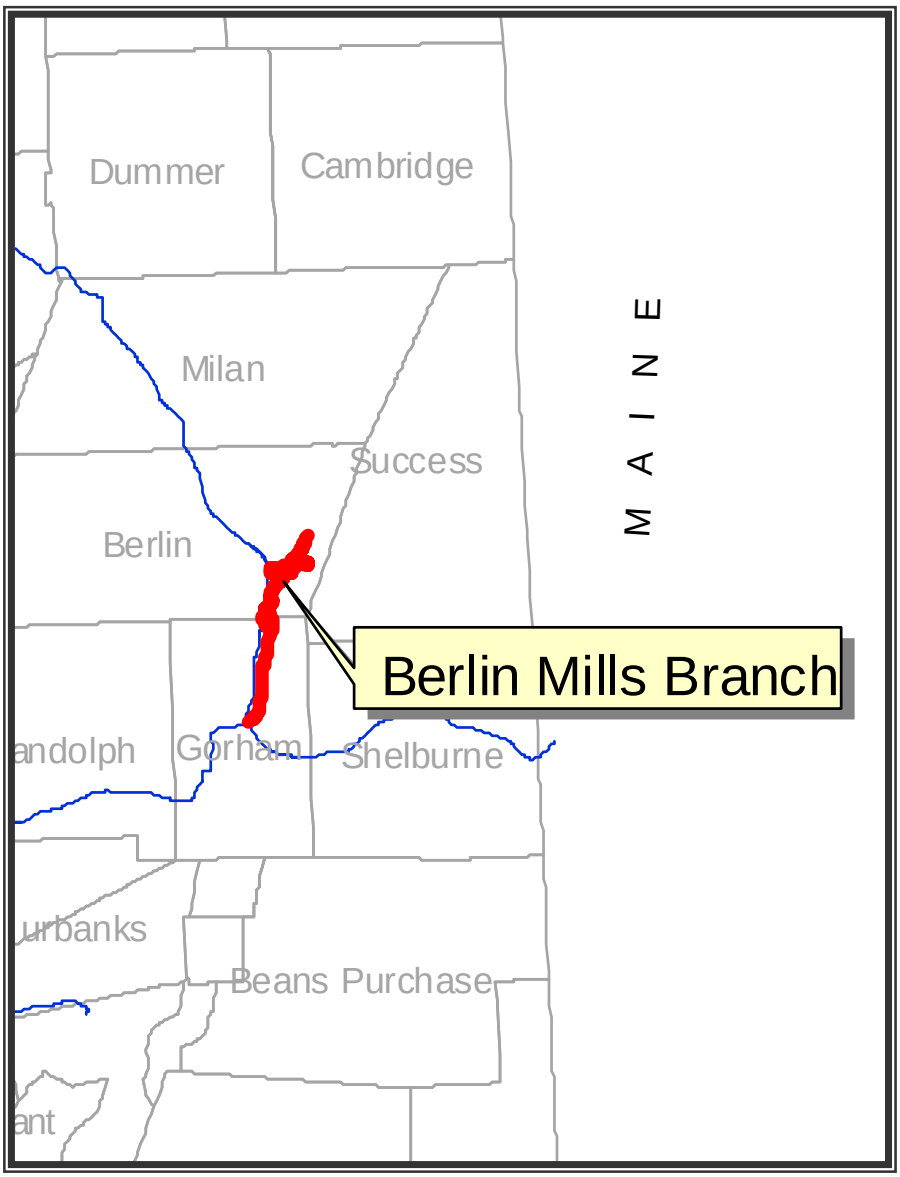

VERMONT
Stark
Northumberland
Groveton Branch
Lancaster
Mountain Division
(Twin State)
Jefferson
Dalton
Whitefield
Low &
Berlin Branch
Franconia

Berlin Branch (Littleton to Jefferson)

Line Description	
Owner	State of New Hampshire
Operator	New Hampshire Central RR
Distance in Operation (miles)	17.5
Subsystem	Northern
Service Frequency	N/A
STB Line Category	V
Physical Condition	
FRA Class	1
Rail Weight	85
Surface Condition	Poor
Drainage Condition	Fair
Ballast Type	Stone, Cinders
Ballast Condition	Poor to Fair
Tie Condition	Fair to Good
Number of Bridges	11
Overall Condition of Bridges	Good
Number of Grade Crossings	16
Number of Public Crossings	13
Number of Private Crossings	3
Number of Active Warning Systems	8
Number of Passive Warning Systems	8

The Berlin Branch is owned by the State of New Hampshire and operated by the New Hampshire Central Railroad. The section in operation extends from Waumbek Junction, in Jefferson, where it meets the Groveton Branch, to Barrett, in the town of Littleton, a distance of 17.5 miles. It also has an interchange with the Mountain Division (Twin State) at Whitefield Junction, and the Mountain Division (State-Owned) at Hazens, both in the town of Whitefield.

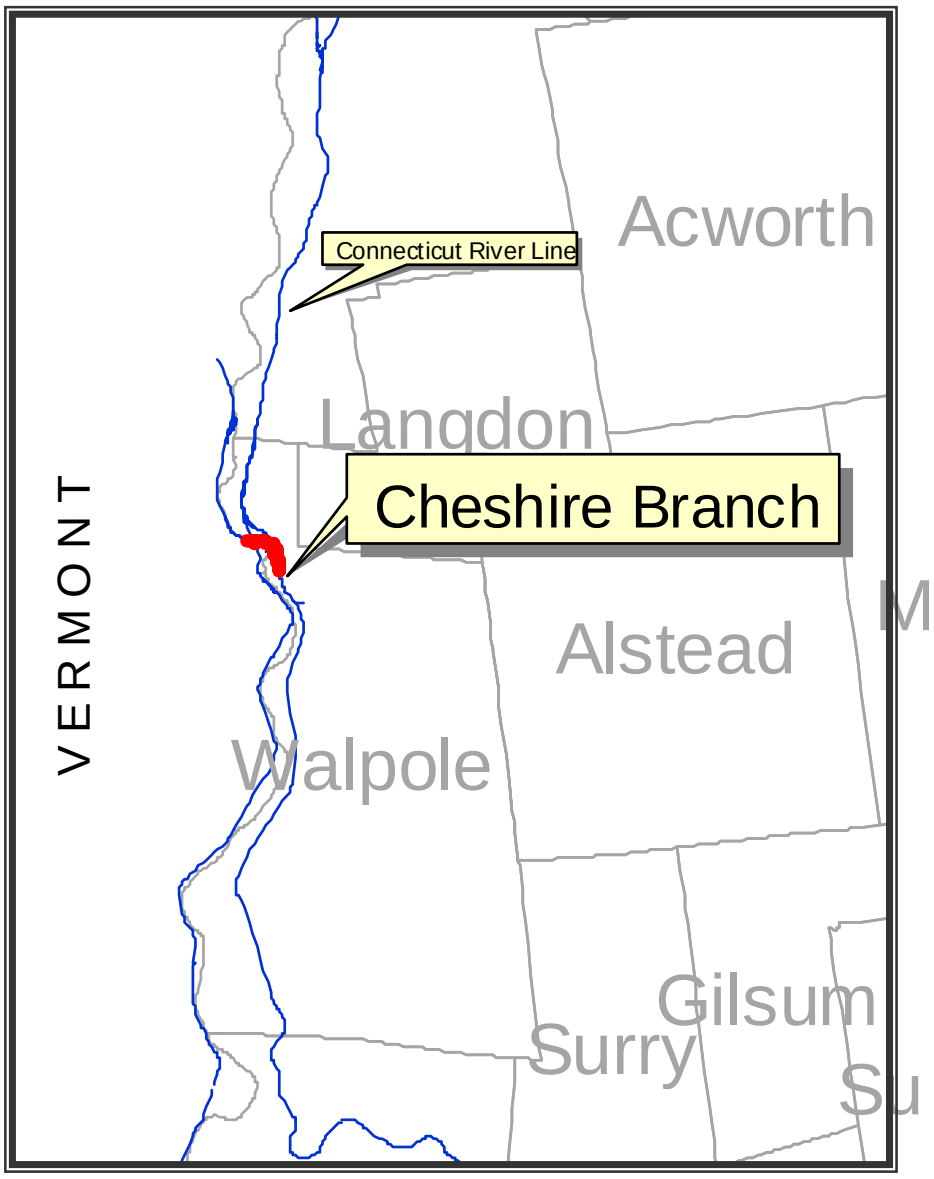
In 1993, portions of the Berlin Branch were rehabilitated through partial funding assistance from the FRA Local Rail Freight Assistance program.


Dummer
Cambridge
Milan
Success
MAINE
Berlin
Berlin Mills Branch
andolph
Gorham
Shelburne
urbanks
Beans Purchase
ant

Berlin Mills Branch

Line Description	
Owner	Berlin Mills Railway
Operator	St. Lawrence & Atlantic Railroad
Distance in Operation (miles)	5
Subsystem	Northern
Service Frequency	Weekly
STB Line Category	V
Physical Condition	
FRA Class	1
Rail Weight	80
Surface Condition	Fair
Drainage Condition	Good
Ballast Type	Cinder, Stone, Gravel
Ballast Condition	Poor
Tie Condition	Fair to Good
Number of Bridges	1
Overall Condition of Bridges	Poor
Number of Grade Crossings	5
Number of Public Crossings	4
Number of Private Crossings	1
Number of Active Warning Systems	4
Number of Passive Warning Systems	1

The Berlin Mills Branch is owned by the Berlin Mills Railway and operated by the St. Lawrence & Atlantic Railroad. The Branch, which crosses over one bridge, is about 5 miles long and provides a connection between the St. Lawrence & Atlantic line and pulp and paper mills in Berlin, NH.

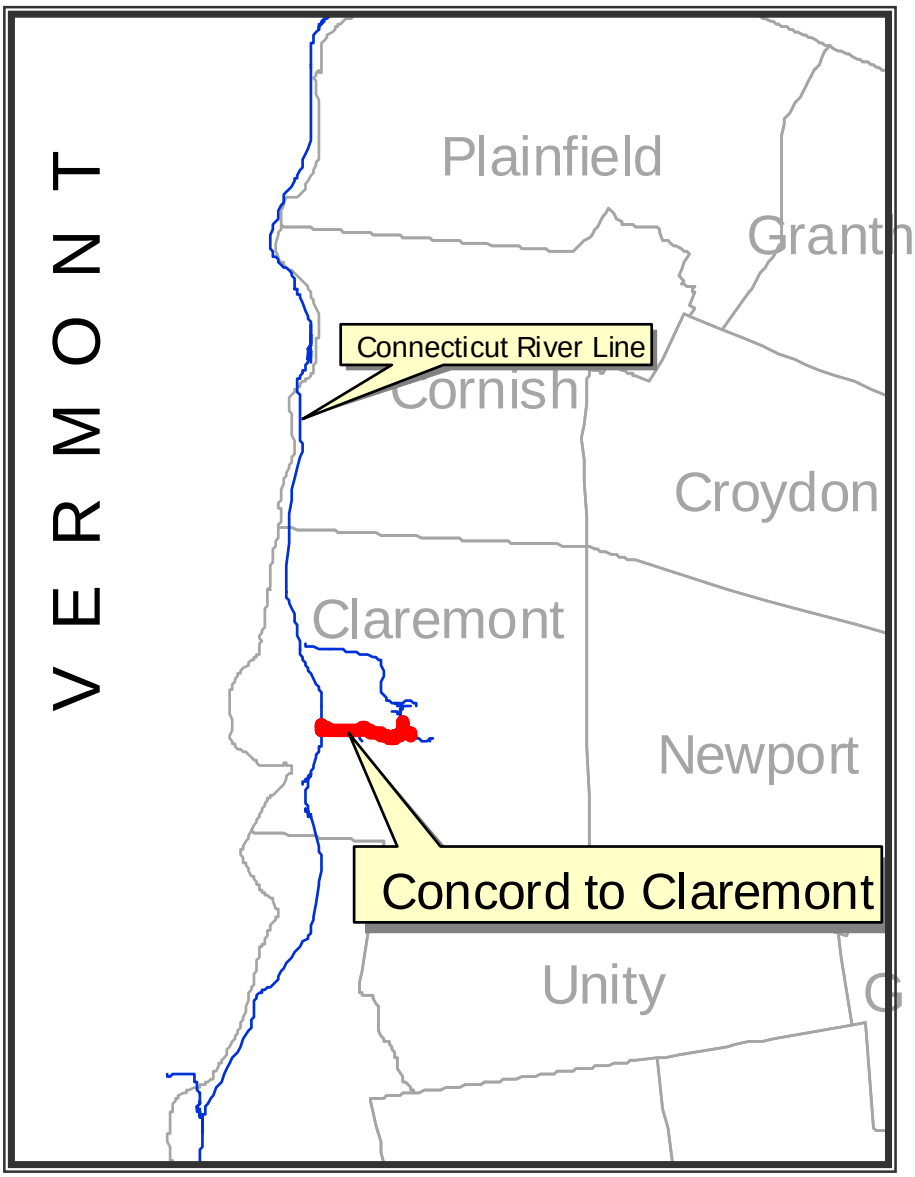

Acworth
Connecticut River Line
Langdon
Cheshire Branch
VERMONT
Alstead
M
Walpole
Gilsum
Surry
Su

Cheshire Branch (North Walpole)

Line Description	
Owner	Green Mountain Railroad
Operator	Green Mountain Railroad
Distance in Operation (miles)	1
Subsystem	Western
Service Frequency	Daily
STB Line Category	V
Physical Condition	
FRA Class	1
Rail Weight	85, 115
Surface Condition	Good
Drainage Condition	Good
Ballast Type	Cinder / Gravel / Crushed Stone
Ballast Condition	Good
Tie Condition	Good
Number of Bridges	1
Overall Condition of Bridges	Good
Number of Grade Crossings	1
Number of Public Crossings	1
Number of Private Crossings	0
Number of Active Warning Systems	1
Number of Passive Warning Systems	0

The active portion of the Cheshire Branch is owned and operated by the Green Mountain Railroad. This branch line is about a mile long, connecting the Green Mountain Railroad in Bellows Falls, Vermont to a car repair facility, engine house and railyard in North Walpole. Along this portion of the line there is one bridge, over the Connecticut River, with a weight limit of 263,000 lbs., and 1 grade crossing.

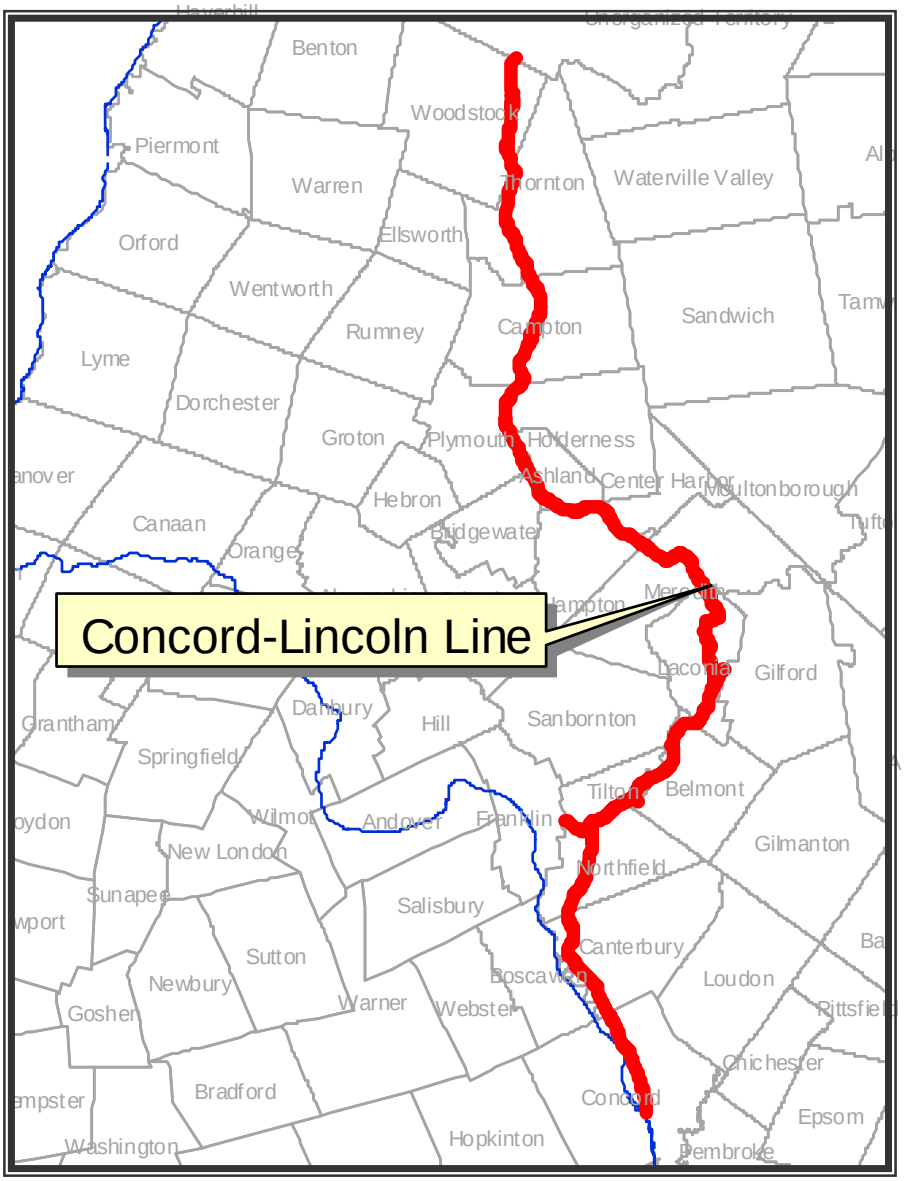
The Cheshire Branch was improved in 1993, partially funded from the FRA Local Rail Freight Assistance program. In addition, the Class III Railroad Capital Rail Line Rehabilitation Revolving Loan Fund was used to construct a rail to highway petroleum transfer station in the yard in 1996.


VERMONT
Plainfield
Grantn
Connecticut River Line
Cornish
Croydon
Claremont
Newport
Concord to Claremont
Unity

Concord to Claremont

Line Description	
Owner	Claremont Concord Railroad
Operator	Claremont Concord Railroad
Distance in Operation (miles)	2
Subsystem	Western
Service Frequency	Weekly
STB Line Category	V
Physical Condition	
FRA Class	1
Rail Weight	85
Surface Condition	Good
Drainage Condition	Good
Ballast Type	Stone
Ballast Condition	Good
Tie Condition	Good
Number of Bridges	0
Overall Condition of Bridges	N/A
Number of Grade Crossings	2
Number of Public Crossings	2
Number of Private Crossings	0
Number of Active Warning Systems	2
Number of Passive Warning Systems	0

The active portion of the Concord to Claremont line is owned and operated by the Claremont Concord Railroad. This Branch line is 2 miles long, running between downtown Claremont and Claremont Junction. There are no bridges and two grade crossings on this FRA Class 1 line. Rail traffic on this line is primarily destined to the railroad's car / engine repair shop and two customers in Claremont.

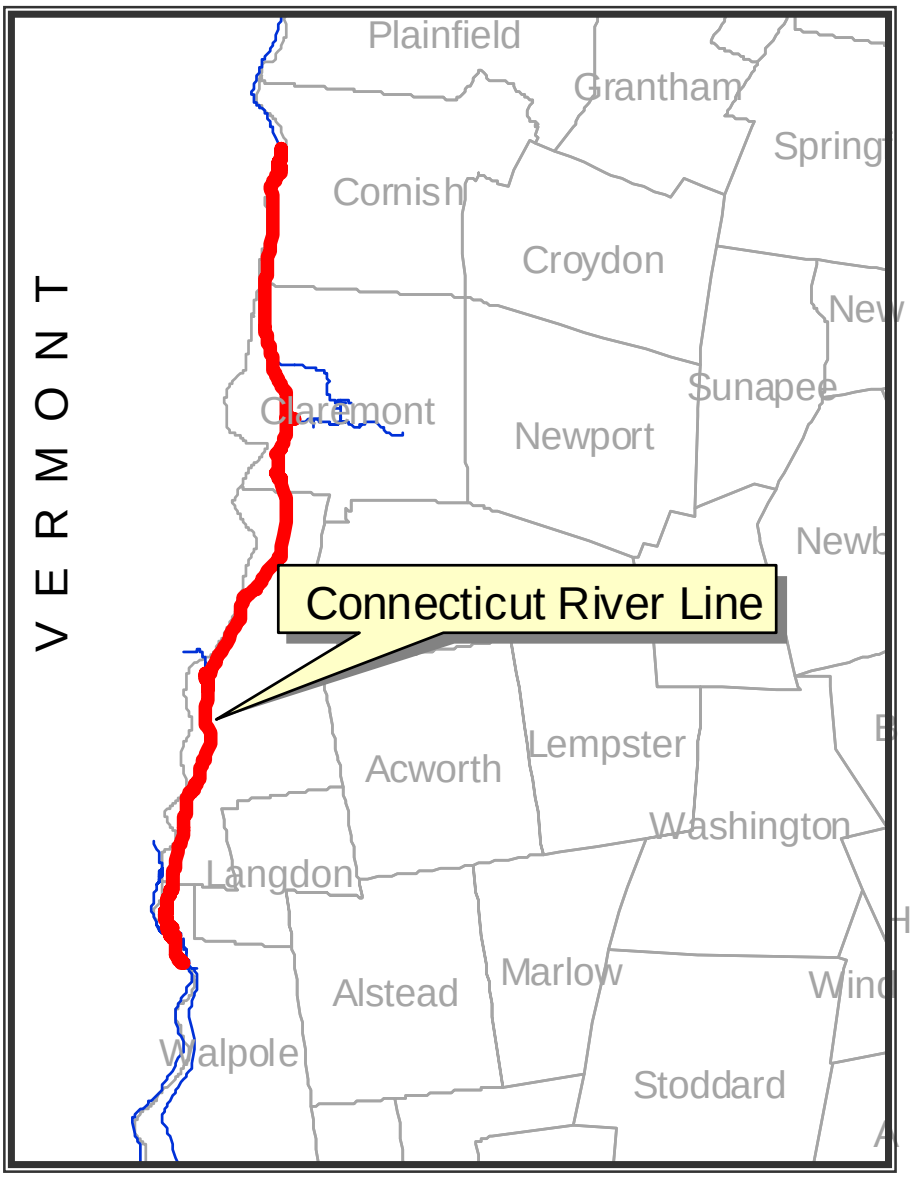

Concord-Lincoln Line
Benton
Woodstock
Piermont
Warren
Thornton
Waterville Valley
Orford
Ellsworth
Wentworth
Rumney
Campton
Sandwich
Lyme
Dorchester
Groton
Plymouth
Holderness
Ashland
Center Harbor
Meredith
Hebron
Canaan
Bridgewater
Orange
Laconia
Gilford
Grantham
Danbury
Hill
Sanbornton
Springfield
Tilton
Belmont
Wilmot
Andover
Franklin
New London
Gilmanton
Northfield
Sunapee
Salisbury
Canterbury
Sutton
Boscawen
Loudon
Newbury
Warner
Webster
Gosher
Chichester
Bradford
Concord
Epsom
Washington
Hopkinton
Pembroke

Concord-Lincoln Line

Line Description	
Owner	State of New Hampshire
Operator	Plymouth & Lincoln Railroad / New England Southern
Distance in Operation (miles)	73
Subsystem	Southern
Service Frequency	Monthly (Freight)
	Daily/Seasonal (Tourist)
STB Line Category	V
Physical Condition	
FRA Class	1 and 2
Rail Weight	75, 85, 100, 115
Surface Condition	Poor to Good
Drainage Condition	Fair to Good
Ballast Type	Stone / Crushed Stone
Ballast Condition	Fair to Good
Tie Condition	Fair to Good
Number of Bridges	47
Overall Condition of Bridges	Good
Number of Grade Crossings	109
Number of Public Crossings	58
Number of Private Crossings	51
Number of Active Warning Systems	8
Number of Passive Warning Systems	101

The Concord-Lincoln Line, which runs the 73 miles between Concord and Lincoln, is owned by the State of New Hampshire. Two tourist services and one freight railroad operate over this line. The tourist services, both operated by Plymouth & Lincoln Railroad, are the Hobo Railroad operating out of Lincoln and the Winnipesaukee Scenic Railroad operating out of Meredith. Freight service is operated along the line by the New England Southern Railroad. Although the line is maintained to FRA Class 1 standards, conditions vary considerably with some sections meeting FRA Class 2 standards. Along the line there are 47 bridges and 58 public grade crossings.

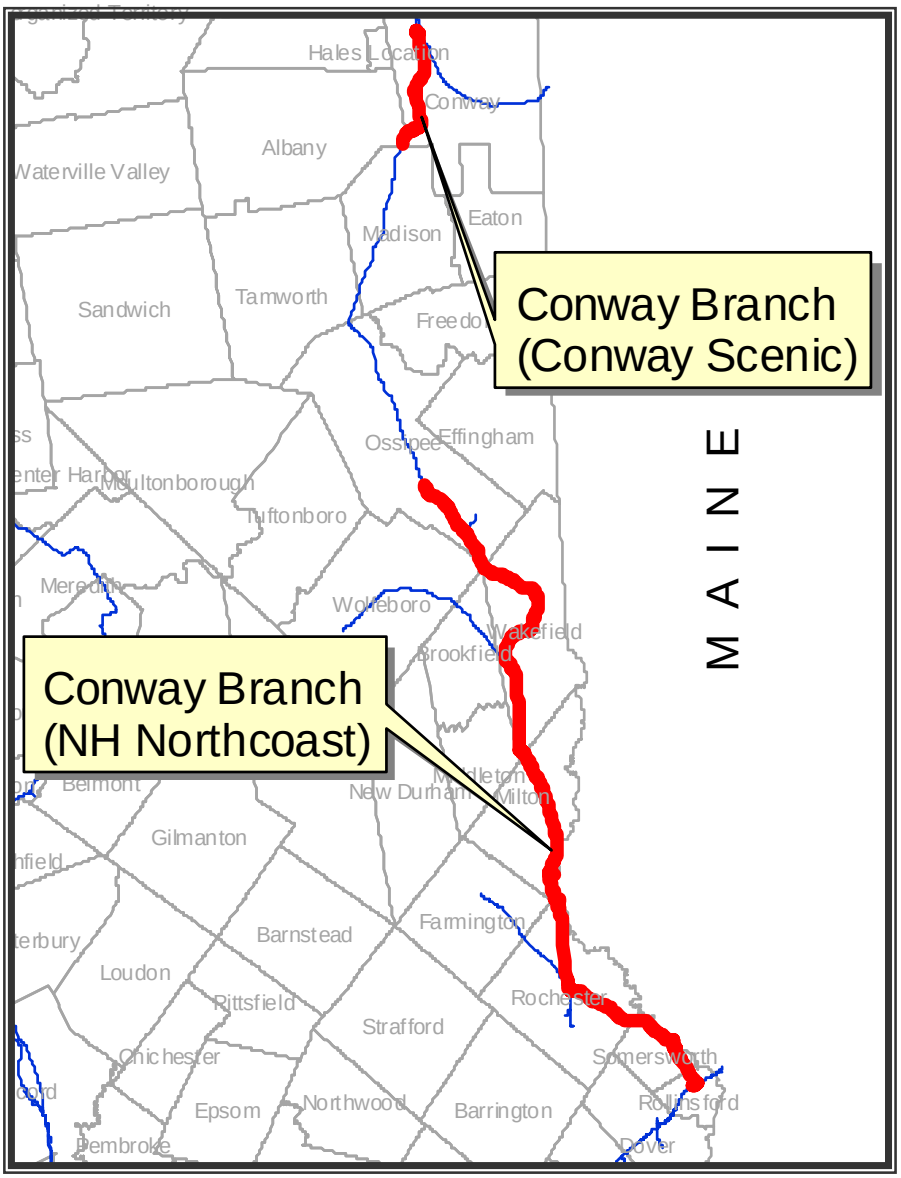
Sections of the Concord to Lincoln Line were rehabilitated in 1996 using both state and private funds. In 1998 the Plymouth and Lincoln Railroad used the New Hampshire Class III Railroad Capital Rail Line Rehabilitation Revolving Loan Fund to purchase and rebuild a locomotive and purchase a rail-mounted backhoe for use on the state owned line. The state and railroads have repaired several bridges on the line and surfaced and lined the track using state railroad and private funds.


Plainfield
Grantham
Spring
Cornish
Croydon
New
Sunapee
Claremont
Newport
Newb
VERMONT
Connecticut River Line
Lempster
Acworth
Washington
Langdon
Marlow
Alstead
Walpole
Stoddard

Connecticut River Line

Line Description	
Owner	New England Central Railroad
Operator	New England Central Railroad
Distance in Operation (miles)	24
Subsystem	Western
Service Frequency	Daily
STB Line Category	V
Physical Condition	
FRA Class	3
Rail Weight	113, 131
Surface Condition	Good
Drainage Condition	Good
Ballast Type	Stone
Ballast Condition	Good
Tie Condition	Good to Excellent
Number of Bridges	5
Overall Condition of Bridges	N/A
Number of Grade Crossings	25
Number of Public Crossings	13
Number of Private Crossings	12
Number of Active Warning Systems	8
Number of Passive Warning Systems	17

The Connecticut River Line is owned and operated by the New England Central Railroad, which operates between East Alburg, VT and New London, CT. The Connecticut River Line generally follows the western bank of the Connecticut River between Massachusetts and White River Junction, VT. However, for 24 miles between Walpole and Cornish the line crosses the river into New Hampshire. The track is maintained to FRA Class 3 standards allowing freight speeds up to 40 mph. In addition to freight service, Amtrak's Vermonter operates on the line, providing daily service between St. Albans, VT and New York City.


Hales Location
Conway
Albany
Waterville Valley
Eaton
Madison
Sandwich
Tamworth
Freedom
Conway Branch
(Conway Scenic)
Effingham
Ossipee
MAINE
Moultonborough
Tuftonboro
Meredith
Wolfeboro
Wakefield
Brookfield
Conway Branch
(NH Northcoast)
Belmont
New Durham
Milton
Gilmanton
Barnstead
Farmington
Loudon
Pittsfield
Rochester
Strafford
Somersworth
Chichester
Epsom
Northwood
Barrington
Rollinsford
Pembroke
Dover

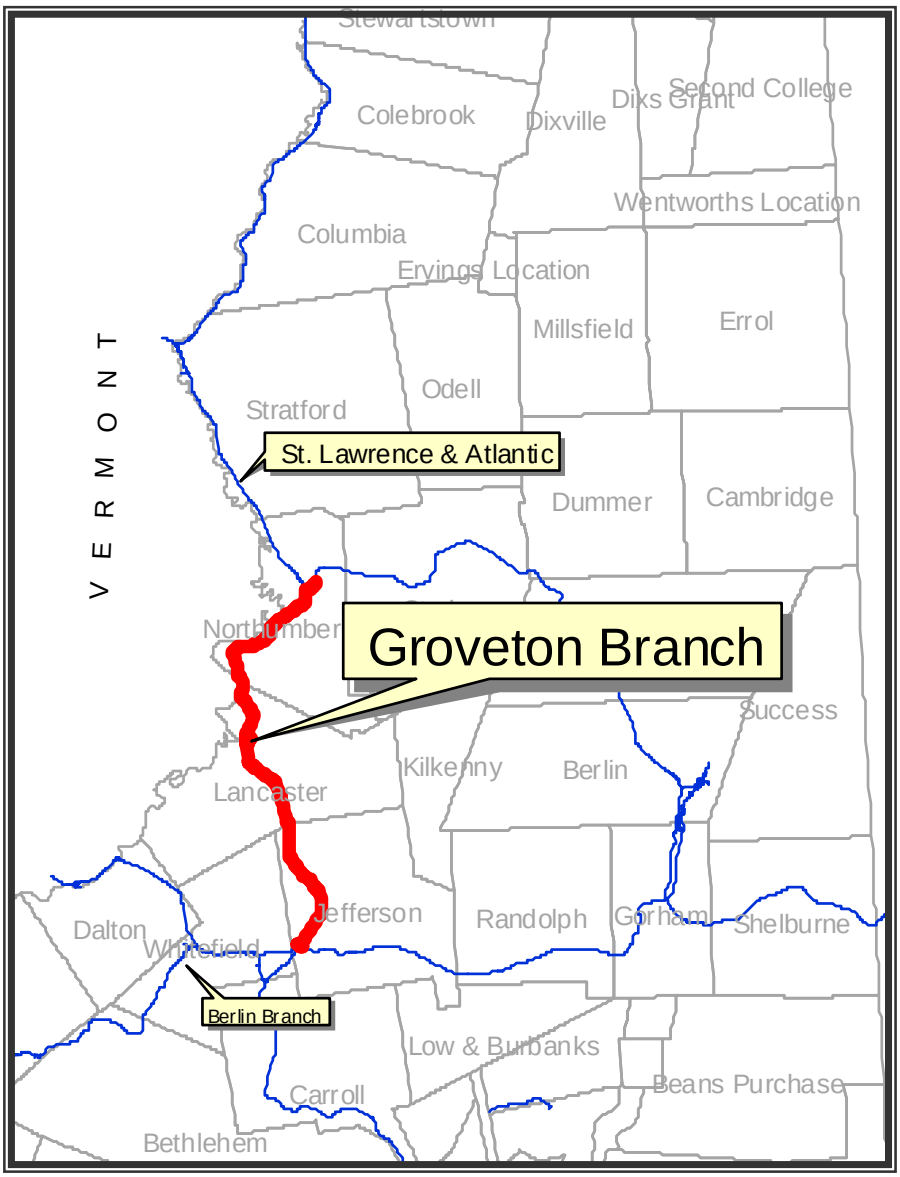
Conway Branch

Line Description		
Owner	New Hampshire Northcoast	Conway Scenic Railroad
Operator	New Hampshire Northcoast	Conway Scenic Railroad
Distance in Operation (miles)	42	6.5
Subsystem	Southern	Northern
Service Frequency	Daily	Daily (Scenic)
STB Line Category	V	V
Physical Condition		
FRA Class	3	2
Rail Weight	112, 131	75,85
Surface Condition	Excellent	Good
Drainage Condition	Good	Good
Ballast Type	Crushed Stone	Cinder/Gravel
Ballast Condition	Excellent	Good
Tie Condition	Good	Good
Number of Bridges	6	7
Overall Condition of Bridges	Good	Good
Number of Grade Crossings	45	17
Number of Public Crossings	43	8
Number of Private Crossings	2	9
Number of Active Warning Systems	28	4
Number of Passive Warning Systems	17	13

There are two operating sections of the Conway Branch, which stretches along the eastern border of New Hampshire from Rollinsford to Conway. The majority of the line in operation is owned and operated by the New Hampshire Northcoast between Rollinsford and Ossipee. This 42 miles of FRA Class 3 track permits 286,000 lb. carloads passing over 45 grade crossings and 6 bridges.

The other section of the Conway Branch in operation is in the town of Conway, and is owned and operated by the Conway Scenic Railroad. This 7.5 mile section provides a connection between Conway and the Mountain Division Line and is used exclusively for seasonal passenger service.

The Conway Branch was improved by the New Hampshire Northcoast with the support of the FRA Local Rail Freight Assistance program for work in Rochester in 1994 and in Somersworth in 1995. In addition, using the New Hampshire Class III Railroad Capital Rail Line Rehabilitation Revolving Loan Fund in 1996, 1997 and 1998 and LRFA funds in 1998, the line between Rollinsford and Ossipee was rehabilitated, a car shop in Ossipee was constructed and rolling stock was purchased and rebuilt.

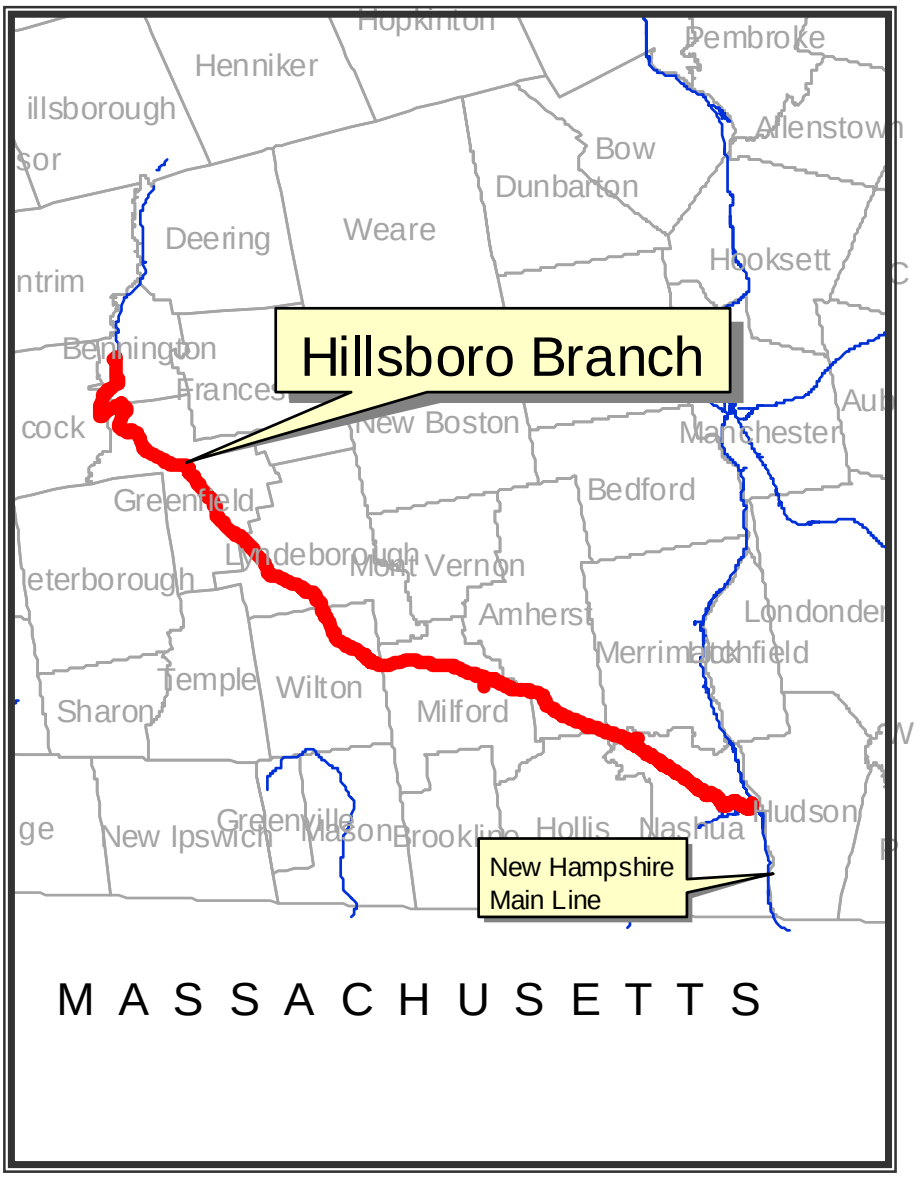

Stewartstown
Colebrook
Dixville
Dixs Grant
Second College
Wentworths Location
Columbia
Errings Location
Millsfield
Errol
Odell
Stratford
St. Lawrence & Atlantic
Dummer
Cambridge
VERMONT
Northumber
Groveton Branch
Success
Kilkenny
Berlin
Lancaster
Jefferson
Randolph
Gorham
Shelburne
Dalton
Whitefield
Berlin Branch
Low & Burbanks
Beans Purchase
Carroll
Bethlehem

Groveton Branch (Jefferson to Groveton)

Line Description		
Owner	State of New Hampshire	St. Lawrence & Atlantic Railroad
Operator	New Hampshire Central Railroad	St. Lawrence & Atlantic Railroad
Distance in Operation (miles)	18	1
Subsystem	Northern	Northern
Service Frequency	N/A	Daily
STB Line Category	V	V
Physical Condition		
FRA Class	1	1
Rail Weight	Primarily 75, 85	75, 85
Surface Condition	Poor	Good
Drainage Condition	Fair	Good
Ballast Type	Stone	Stone
Ballast Condition	Fair to Good	Good
Tie Condition	Fair to Good	Good
Number of Bridges	6	0
Overall Condition of Bridges	Not Determined	N/A
Number of Grade Crossings	22	0
Number of Public Crossings	22	0
Number of Private Crossings	N/A	0
Number of Active Warning Systems	3	0
Number of Passive Warning Systems	19	0

The Groveton Branch is principally owned by the state of New Hampshire and operated by the New Hampshire Central Railroad. However, one mile of the Branch is owned by the St. Lawrence & Atlantic Railroad in Groveton. The state-owned section is 18 miles with FRA Class 1 track, which passes over 6 bridges and 22 grade crossings. This line runs from Waumbek Junction in Jefferson where it meets the Berlin Branch, to Groveton. In 1993, portions of the Groveton Branch were rehabilitated, partially funded from the FRA Local Rail Freight Assistance program.

The portion of the line owned by the St. Lawrence & Atlantic is less than a mile long and functions as part of the junction with the St. Lawrence & Atlantic Line and the yard tracks serving Wausau Paper in Groveton.

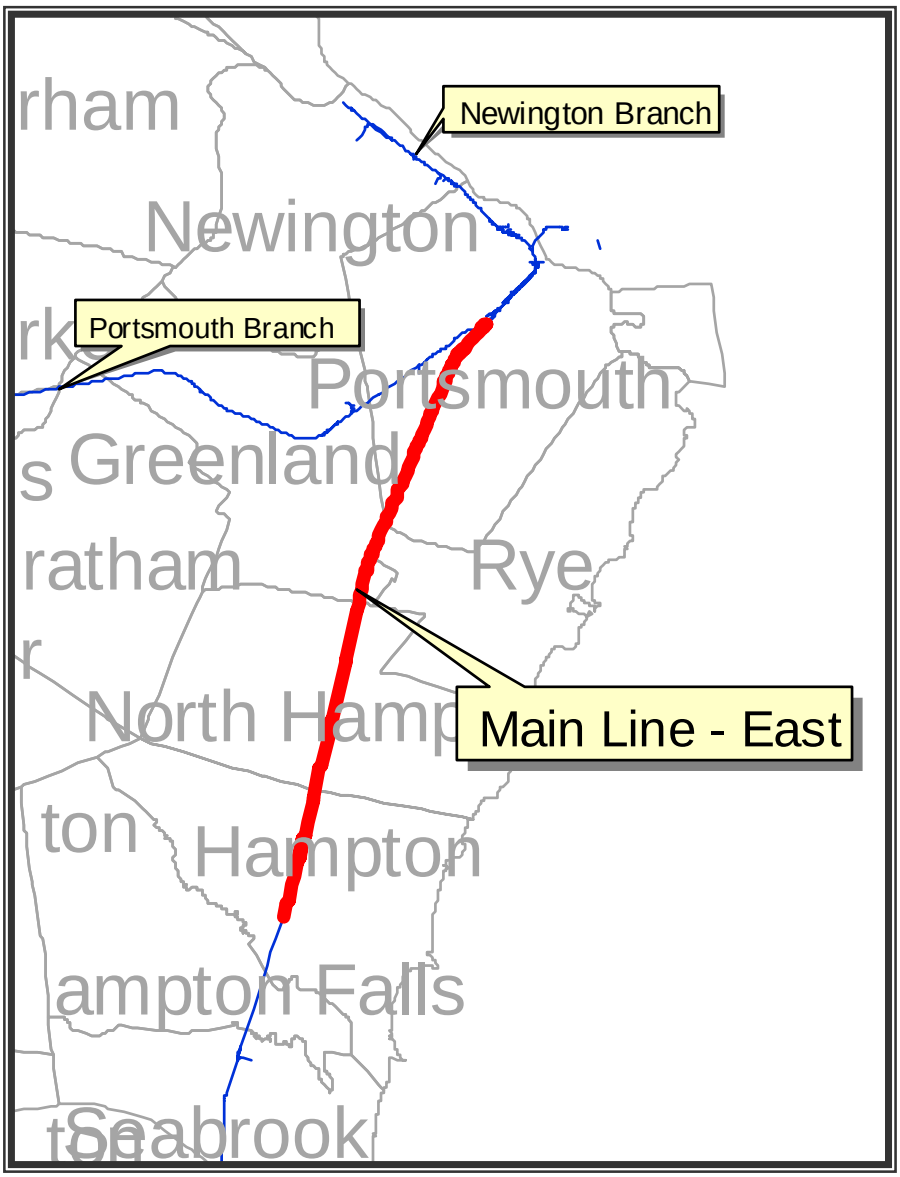

Hopkinton
Pembroke
Henniker
illsborough
sor
Allenstown
Bow
Dunbarton
Deering
Weare
Hooksett
ntrim
Hillsboro Branch
Bennington
Frances
cock
New Boston
Manchester
Bedford
Greenfield
Lyndeborough
Mont Vernon
eterborough
Amherst
Londonder
Merrimack
nfield
Temple
Wilton
Sharon
Milford
Greenville
ge
New Ipswich
Mason
Brookline
Hollis
Nashua
Hudson
New Hampshire
Main Line
M A S S A C H U S E T T S

Hillsboro Branch (Nashua to Bennington)

Line Description		
Owner	Boston & Maine Corp.	State of New Hampshire
Operator	Springfield Terminal Railway	Milford-Bennington Railroad
Distance in Operation (miles)	16.5	18
Subsystem	Southern	Southern
Service Frequency	N/A	Daily
STB Line Category	V	V
Physical Condition		
FRA Class	Excepted	2
Rail Weight	75, 85	85, 105
Surface Condition	Fair	Fair
Drainage Condition	Poor	Good
Ballast Type	Cinder, Stone, Gravel	Stone
Ballast Condition	Poor	Good
Tie Condition	Poor-Fair	Fair-Good
Number of Bridges	8	5
Overall Condition of Bridges	Fair	Fair
Number of Grade Crossings	36	17
Number of Public Crossings	23	17
Number of Private Crossings	13	N/A
Number of Active Warning Systems	7	2
Number of Passive Warning Systems	29	15

The Hillsboro Branch is owned by both the State of New Hampshire and the Boston and Maine Corporation. Springfield Terminal Railway is the operator for the Boston and Maine owned section that runs 16.5 miles between Nashua and Wilton. This section of the branch is FRA excepted, passing over 8 bridges and 36 grade crossings. The section in operation that is owned by the State of New Hampshire runs 18 miles between Wilton and Bennington and is operated by the Milford-Bennington Railroad. Regular service is operated over 3 miles of the state-owned track between Wilton and South Lyndeborough. This regularly active track is maintained to FRA Class 2 standards, passing over five bridges and two grade crossings.

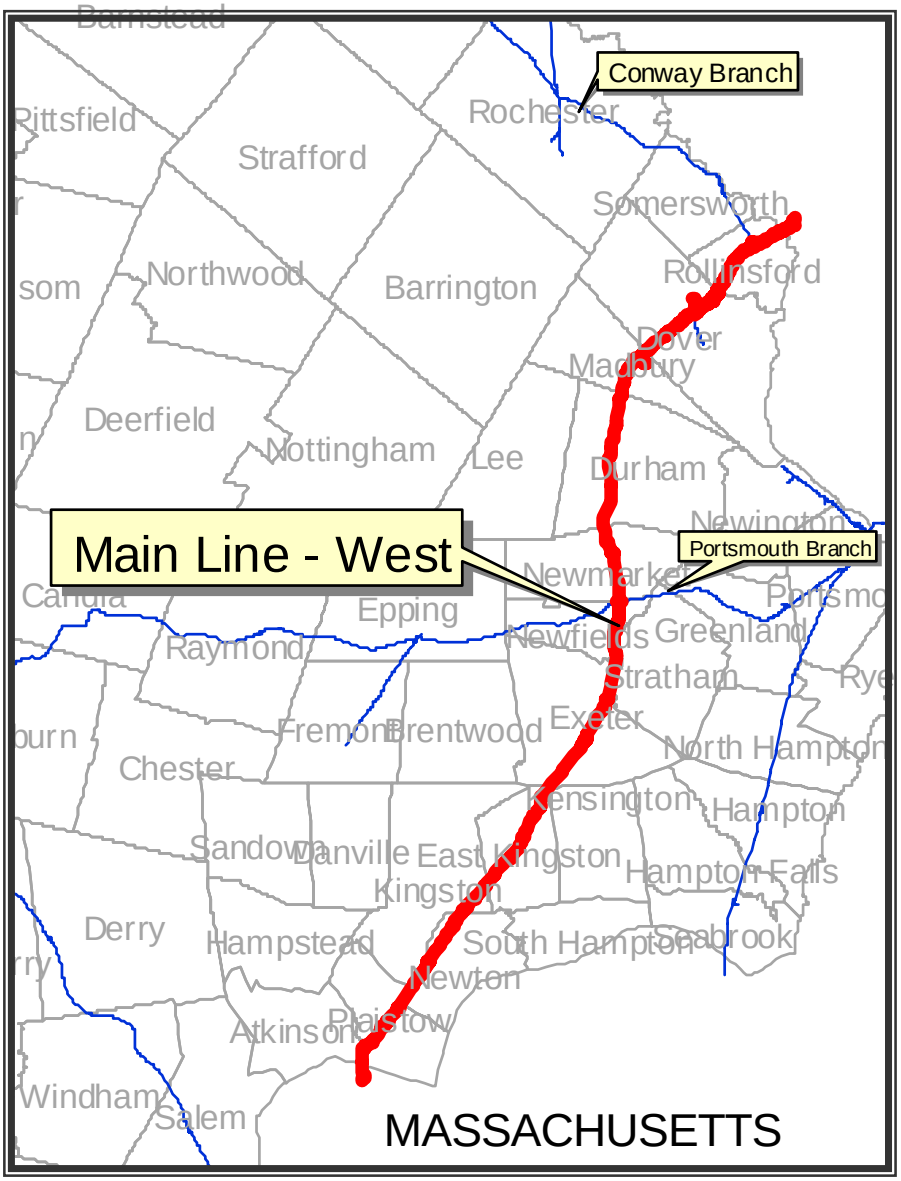
Both state and private funds were used to rehabilitate over 18 miles of the state-owned portion of the Hillsboro Branch between Wilton and Bennington in 1995.


Newington Branch
Portsmouth Branch
Main Line - East
Newington
Portsmouth
Greenland
Rye
Hampton
Seabrook

Main Line East (Hampton to Portsmouth)

Line Description	
Owner	Boston & Maine Corp.
Operator	Springfield Terminal Railway
Distance in Operation (miles)	10
Subsystem	Southern
Service Frequency	Not Determined
STB Line Category	V
Physical Condition	
FRA Class	Excepted
Rail Weight	85, 112
Surface Condition	Poor
Drainage Condition	Poor
Ballast Type	Stone
Ballast Condition	Poor
Tie Condition	Fair
Number of Bridges	4
Overall Condition of Bridges	N/A
Number of Grade Crossings	5
Number of Public Crossings	4
Number of Private Crossings	1
Number of Active Warning Systems	3
Number of Passive Warning Systems	2

The Main Line East (Hampton to Portsmouth) is owned by Boston & Maine Corporation and operated by the Springfield Terminal Railway. It is 10 miles long extending between Portsmouth and Foss Manufacturing in Hampton. The line passes over four bridges and five grade crossings on FRA excepted track.


Conway Branch
Main Line - West
Portsmouth Branch
Rochester
Somersworth
Rollinsford
Dover
Madbury
Durham
Newington
Newmarket
Portsmo
Greenland
Rye
Stratham
Exeter
North Hampton
Hampton
Hampton Falls
Seabrook
South Hampton
Kensington
East Kingston
Kingston
Danville
Sandown
Chester
Fremont
Brentwood
Epping
Raymond
Newfields
Lee
Nottingham
Deerfield
Barrington
Northwood
Strafford
Rochester
Rittsfield
Derry
Hampstead
Newton
Plaistow
Atkinson
Windham
Salem
MASSACHUSETTS

Main Line West (Plaistow to Rollinsford)

Line Description	
Owner	Boston & Maine Corp.
Operator	Springfield Terminal Railway
Distance in Operation (miles)	35
Subsystem	Southern
Service Frequency	Daily
STB Line Category	V
Physical Condition	
FRA Class	4
Rail Weight	112
Surface Condition	Good/Excellent
Drainage Condition	Good/Excellent
Ballast Type	Stone
Ballast Condition	Good/Excellent
Tie Condition	Good/Excellent
Number of Bridges	21
Overall Condition of Bridges	Good/Excellent
Number of Grade Crossings	19
Number of Public Crossings	17
Number of Private Crossings	2
Number of Active Warning Systems	19
Number of Passive Warning Systems	0

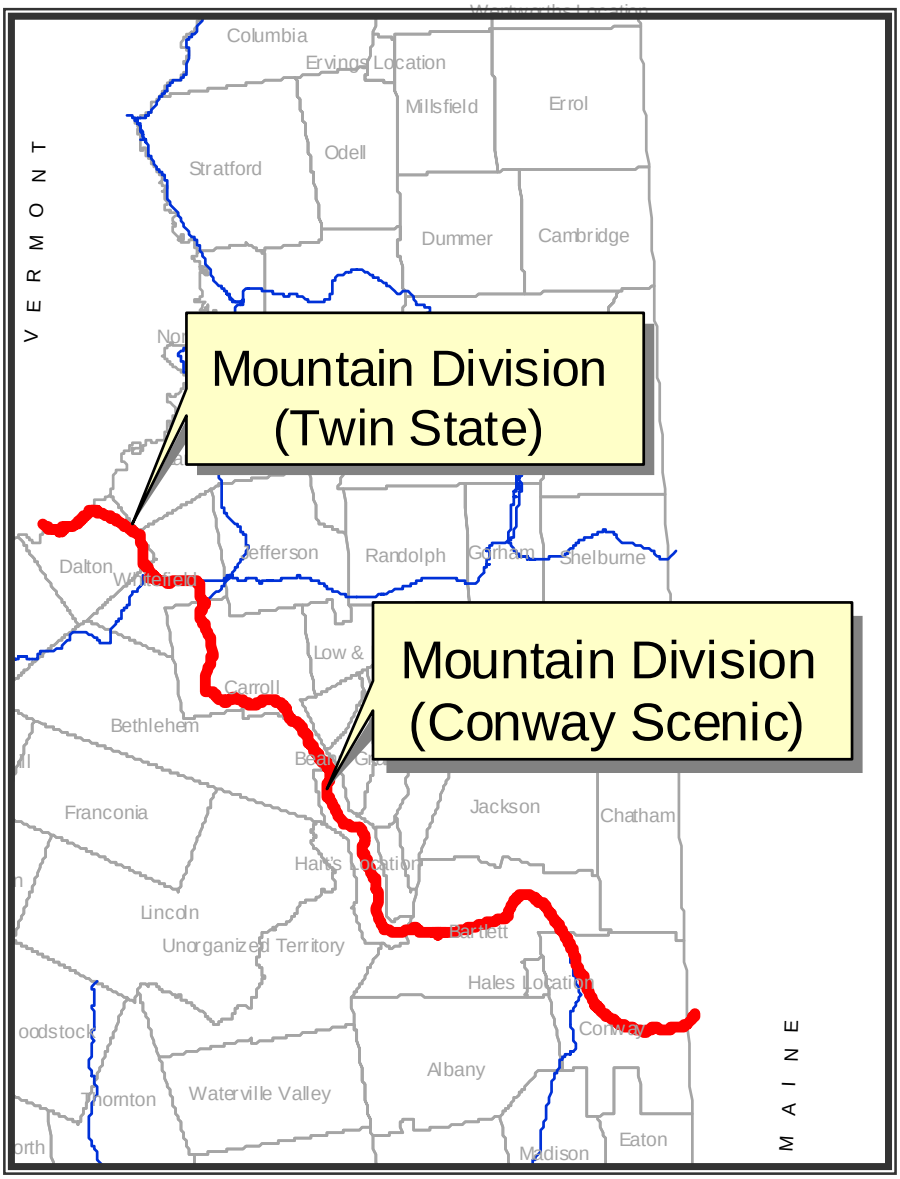
The Main Line West is owned by Boston & Maine Corporation and is operated by the Springfield Terminal Railway. The New Hampshire section of the line is 35 miles long between Rollinsford and Plaistow. This line is of regional importance as it provides a through route between Maine and Massachusetts utilized for daily freight service and soon for passenger service. The Amtrak Downeaster Service (planned to commence in 2001) will utilize the Main Line West, which was recently upgraded to FRA Class 4 track conditions in anticipation of the service. This upgrade program included improvements to all aspects of the infrastructure, including the ties, ballast, rail, signals, bridges and crossings.


Hooksett
Candia
Raymond
Goffstown
Auburn
Chester
Manchester
Bedford
New Hampshire
Main Line
Derry
Londonderry
Salem
Hollis
Nashua
Pelham
MASSACHUSETTS
Manchester-
Lawrence Line

Manchester-Lawrence Line

Line Description	
Owner	Boston & Maine Corp.
Operator	Springfield Terminal Railway
Distance in Operation (miles)	1
Subsystem	Southern
Service Frequency	N/A
STB Line Category	I
Physical Condition	
FRA Class	Excepted
Rail Weight	85
Surface Condition	Poor
Drainage Condition	Poor
Ballast Type	Gravel
Ballast Condition	Poor
Tie Condition	Poor
Number of Bridges	1
Overall Condition of Bridges	Poor
Number of Grade Crossings	3
Number of Public Crossings	2
Number of Private Crossings	1
Number of Active Warning Systems	0
Number of Passive Warning Systems	3

The operating section of the Manchester-Lawrence Line is owned by Boston & Maine Corporation and operated by the Springfield Terminal Railway. From Lawrence, MA the active line runs into Salem for about 1 mile. This FRA excepted track passes over three passive grade crossings.

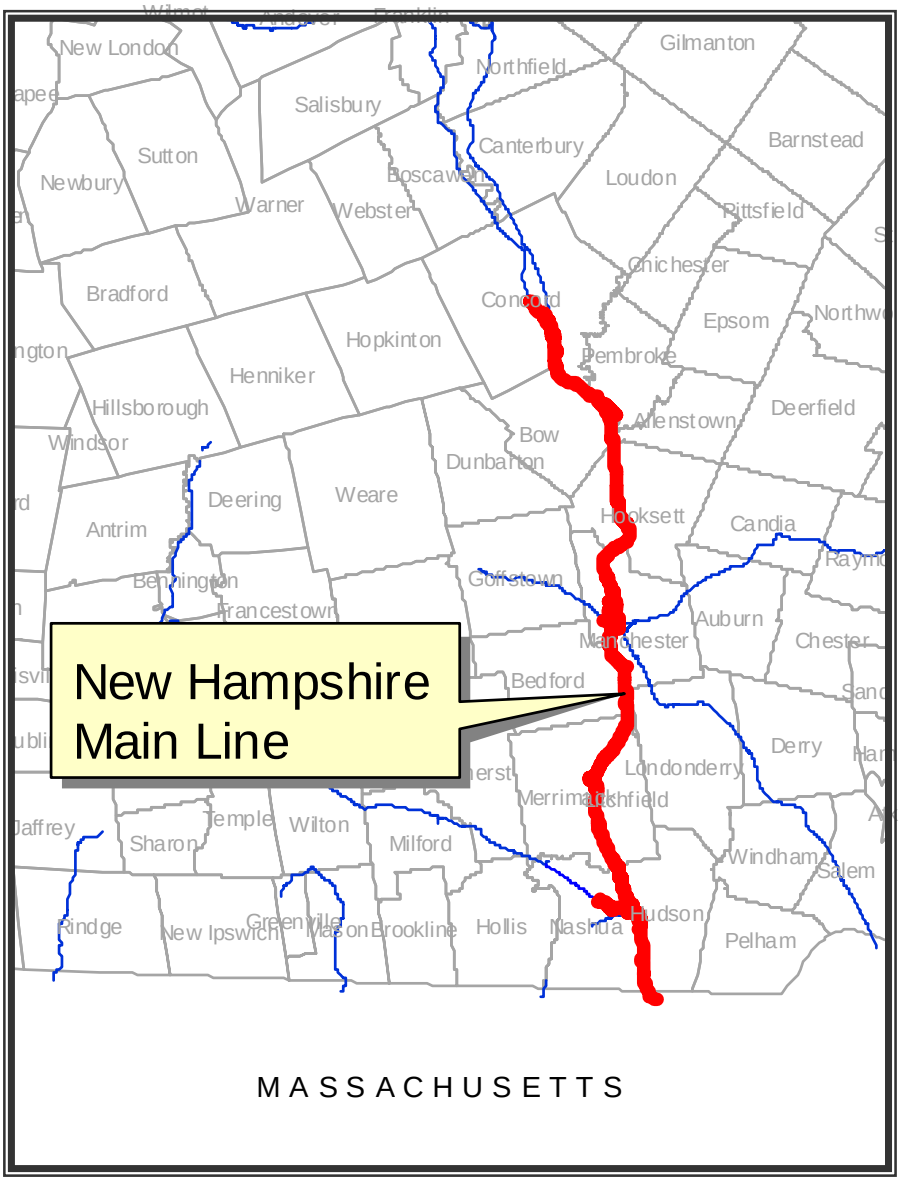

Columbia
Ervings Location
Millsfield
Errol
Stratford
Odell
Dummer
Cambridge
VERMONT
Mountain Division
(Twin State)
Dalton
Jefferson
Randolph
Gilmanton
Shelburne
Low &
Carroll
Bethlehem
Franconia
Jackson
Chatham
Harts Location
Lincoln
Unorganized Territory
Bartlett
Hales Location
Albany
Waterville Valley
Thornton
Eaton
Madison
MAINE
Mountain Division
(Conway Scenic)

Mountain Division

Line Description		
Owner	State Of New Hampshire	Maine Central Railroad
Operator	Conway Scenic Railroad	Twin State Railroad
Distance in Operation (miles)	52	6
Subsystem	Northern	Northern
Service Frequency	Daily (seasonal)	Embargoed
STB Line Category	N/A	V
Physical Condition		
FRA Class	1 & 2	1
Rail Weight	85, 100	85
Surface Condition	Good	Poor
Drainage Condition	Good	Poor
Ballast Type	Stone	Stone, Gravel
Ballast Condition	Good	Poor
Tie Condition	Good	Fair
Number of Bridges	24	2
Overall Condition of Bridges	Good	Not Determined
Number of Grade Crossings	47	11
Number of Public Crossings	29	6
Number of Private Crossings	18	5
Number of Active Warning Systems	10	4
Number of Passive Warning Systems	37	7

The Mountain Division Line includes approximately 58 miles of active track owned and operated by a number of different entities. The Conway Scenic Railroad leases 52 miles but regularly operates over a 44.2-mile section that is owned by the State of New Hampshire. This section runs from the Maine border in Conway to Whitefield. Along this section of the line the Conway Scenic operates seasonal excursion trains between North Conway and Crawford Notch/Fabyan Stations along FRA Class two track.

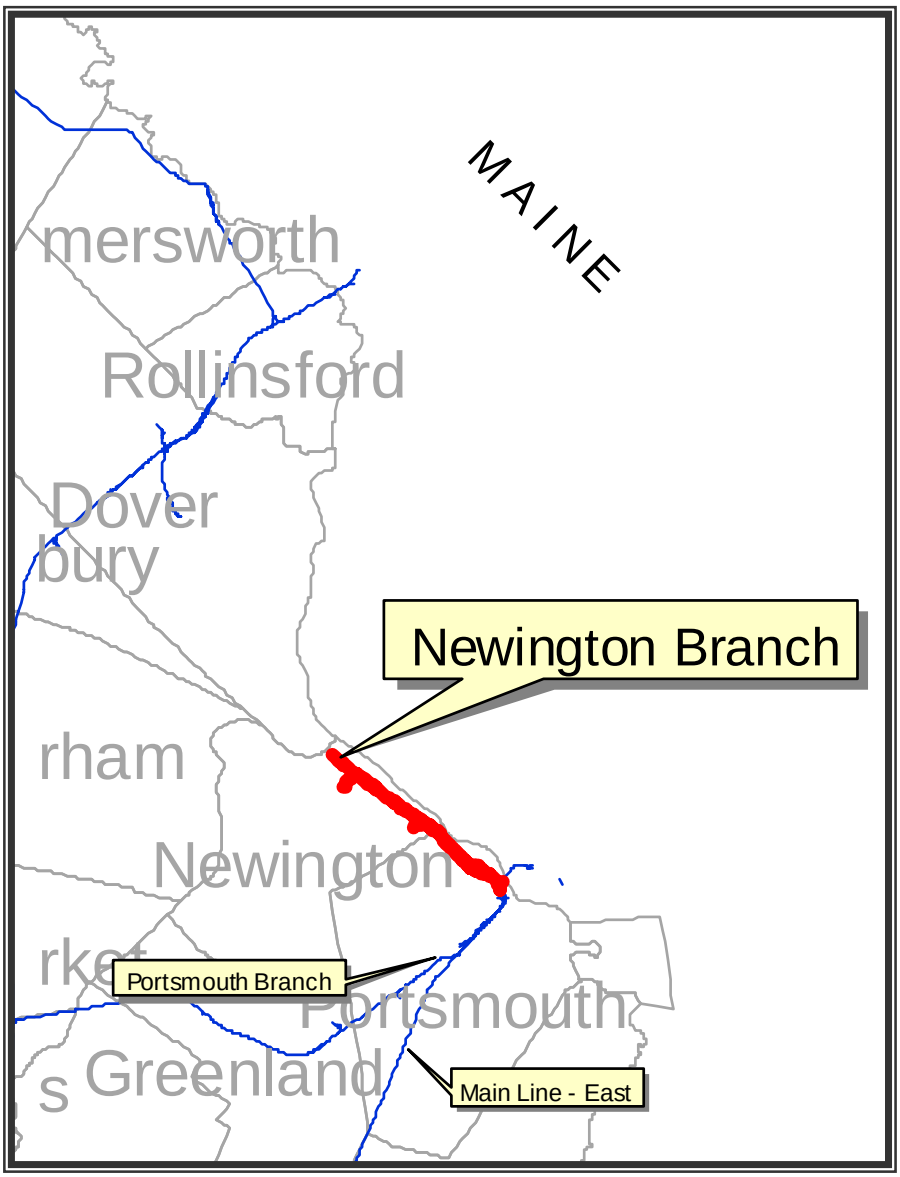
The Mountain Division Line between Whitefield and the Vermont border in Dalton is owned by the Maine Central Railroad, a part of the Guilford Rail System, and is operated by the Twin State Railroad. This section of the line travels about 6 miles in New Hampshire, providing connections with the Berlin Branch in Whitefield and the Northern Vermont Railroad in St. Johnsbury, VT. The 6 miles of FRA Class 1 track includes two bridges and 11 grade crossings.


New Hampshire
Main Line
MASSACHUSETTS
New London
Northfield
Gilmanton
Salisbury
Canterbury
Barnstead
Sutton
Newbury
Loudon
Warner
Webster
Pittsfield
Chichester
Bradford
Concord
Epsom
Hopkinton
Pembroke
Henniker
Hillsborough
Allenstown
Deerfield
Windsor
Bow
Dunbarton
Deering
Weare
Hooksett
Candia
Antrim
Francestown
Goffstown
Auburn
Manchester
Chester
Bedford
Derry
Londonderry
Merrimack
Temple
Wilton
Sharon
Milford
Windham
Salem
Greenville
New Ipswich
Mason
Brookline
Hollis
Nashua
Hudson
Pelham

New Hampshire Main Line

Line Description		
Owner	Boston & Maine Corp.	Boston & Maine Corp.
Operator	Springfield Terminal Railway	New England Southern Railroad
Distance in Operation (miles)	37	2
Subsystem	Southern	Southern
Service Frequency	Daily	Daily
STB Line Category	V	V
Physical Condition		
FRA Class	2 & 3	1
Rail Weight	112	80, 85, 112
Surface Condition	Good	Good
Drainage Condition	Good	Good
Ballast Type	Crushed Stone	Sand / Crushed Stone
Ballast Condition	Good	Good
Tie Condition	Good	Good
Number of Bridges	11	0
Overall Condition of Bridges	Fair to Good	Fair to Good
Number of Grade Crossings	23	0
Number of Public Crossings	13	0
Number of Private Crossings	10	0
Number of Active Warning Systems	10	0
Number of Passive Warning Systems	13	0

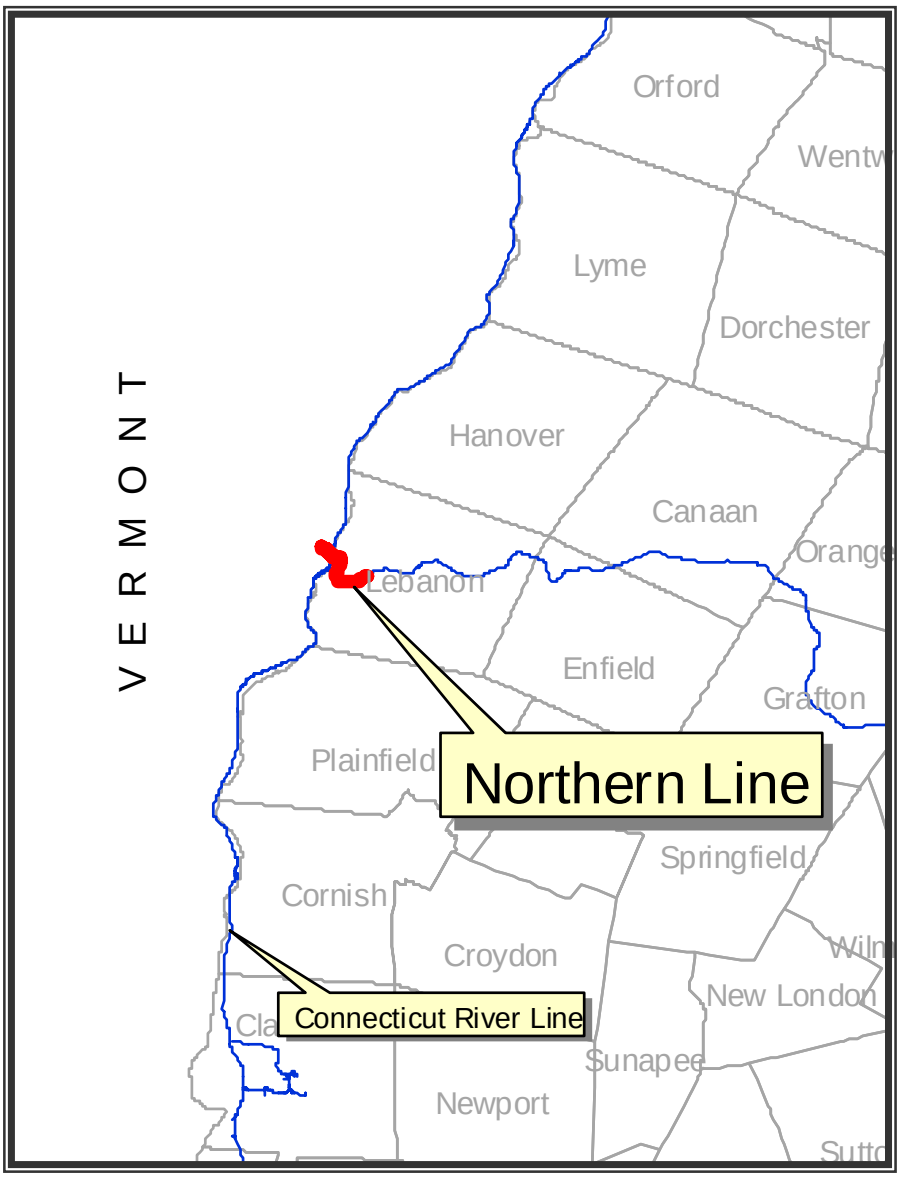
The New Hampshire section of the New Hampshire Main Line is 39 miles long, running between Concord, Nashua and Lowell, MA. This line is owned by the Boston & Maine Corporation and operated by the Springfield Terminal Railway and New England Southern Railroad. Springfield Terminal Railway operates from the Massachusetts state line to Bow, delivering unit coal trains about three days a week and local freight to Nashua and Manchester. Local service is provided from Concord to Manchester by New England Southern Railroad. The track is maintained to FRA Class 3 from Manchester to Nashua, Class 2 between Manchester and Bow, and Class 1 between Bow and Concord. There are 11 bridges and 23 grade crossings along the line.


MAINE
mersworth
Rollinsford
Dover
bury
Newington Branch
rham
Newington
rket
Portsmouth Branch
Portsmouth
s Greenland
Main Line - East

Newington Branch

Line Description	
Owner	Boston & Maine Corp.
Operator	Springfield Terminal Railway
Distance in Operation (miles)	3.5
Subsystem	Southern
Service Frequency	Weekly
STB Line Category	V
Physical Condition	
FRA Class	Excepted
Rail Weight	85, 100, 112, 130
Surface Condition	Fair
Drainage Condition	Poor-Fair
Ballast Type	Gravel
Ballast Condition	Fair
Tie Condition	Poor-Fair
Number of Bridges	1
Overall Condition of Bridges	Not Determined
Number of Grade Crossings	13
Number of Public Crossings	4
Number of Private Crossings	9
Number of Active Warning Systems	3
Number of Passive Warning Systems	10

The Newington Branch is owned by the Boston & Maine Corporation and operated by the Springfield Terminal Railway. It is 3.5 miles long, running between Newington and the Portsmouth Branch in Portsmouth. This FRA excepted line passes over one bridge and 13 grade crossings.

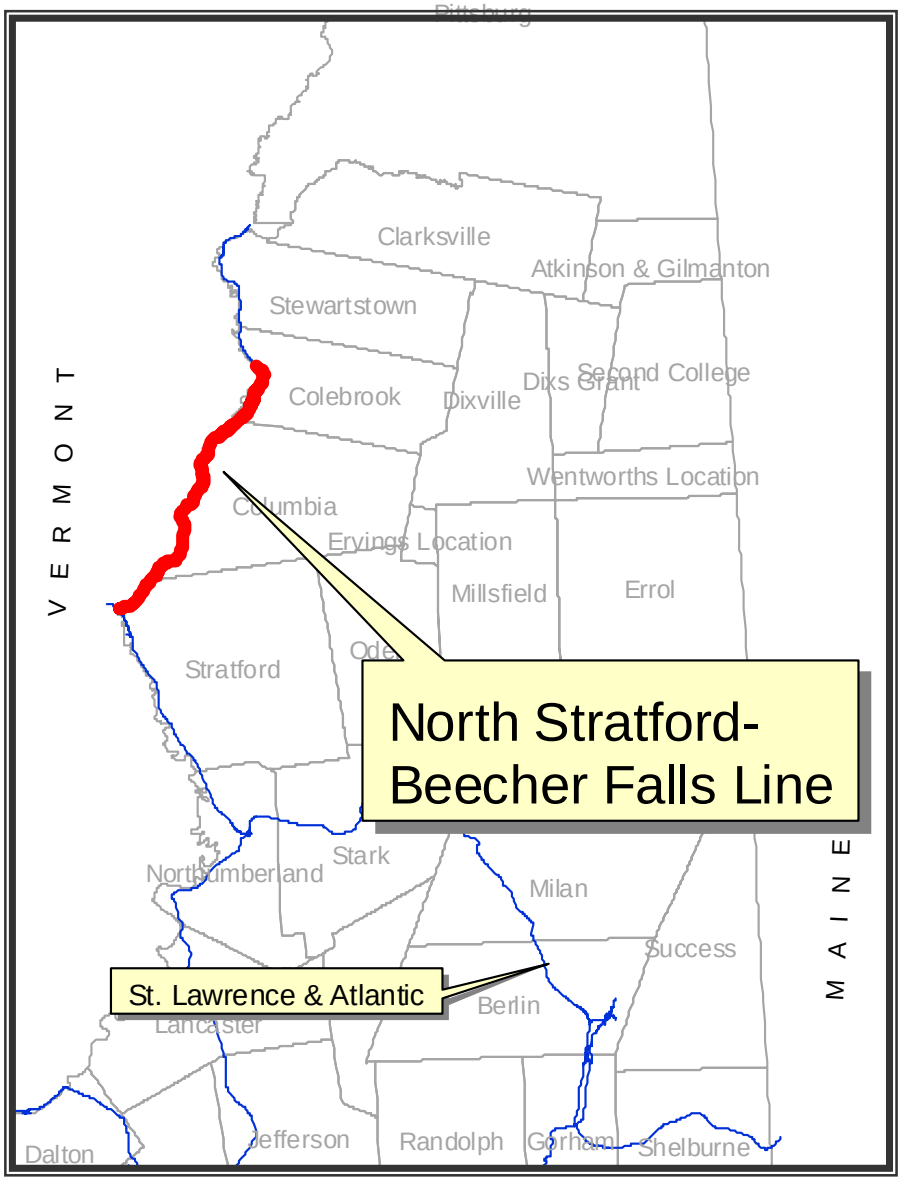

VERMONT
Orford
Lyme
Dorchester
Hanover
Canaan
Lebanon
Enfield
Grafton
Plainfield
Northern Line
Springfield
Cornish
Croydon
New London
Connecticut River Line
Sunapee
Newport

Northern Line (Concord to Lebanon)

Line Description		
Owner	Boston & Maine Corp.	State Of New Hampshire
Operator	New England Southern Railroad	Claremont Concord Railroad
Distance in Operation (miles)	6	3
Subsystem	Southern	Western
Service Frequency	N/A	N/A
STB Line Category	V	V
Physical Condition		
FRA Class	1	1
Rail Weight	100	112
Surface Condition	Poor	Good
Drainage Condition	Poor	Good
Ballast Type	Stone	Stone
Ballast Condition	Poor	Good
Tie Condition	Poor	Good
Number of Bridges	1	7
Overall Condition of Bridges	Good	Good
Number of Grade Crossings	4	3
Number of Public Crossings	4	3
Number of Private Crossings	0	0
Number of Active Warning Systems	1	3
Number of Passive Warning Systems	3	0

A majority of the Northern Line is owned by the State of New Hampshire. The section from Boscawen to Lebanon is abandoned, and was purchased from the Boston and Maine Corporation in 1995. In 1999, the state bought a 3-mile section in West Lebanon on which the Claremont Concord Railroad (CCRR) entered into an operating agreement in 2000. This 3-mile section, which includes seven bridges, runs over the Connecticut River from Vermont into Lebanon providing rail service to industries in West Lebanon. Although this section of line is FRA Class 1, CCRR has begun a 3 year infrastructure improvement plan with the goal of attaining FRA Class 2 track.

The other section of the Northern Line in operation is entirely within the City of Concord. This 6-mile section of line, which runs between the junction with the New Hampshire Main Line and Penacook, is owned by the Boston & Maine Corporation and operated by the New England Southern Railroad.

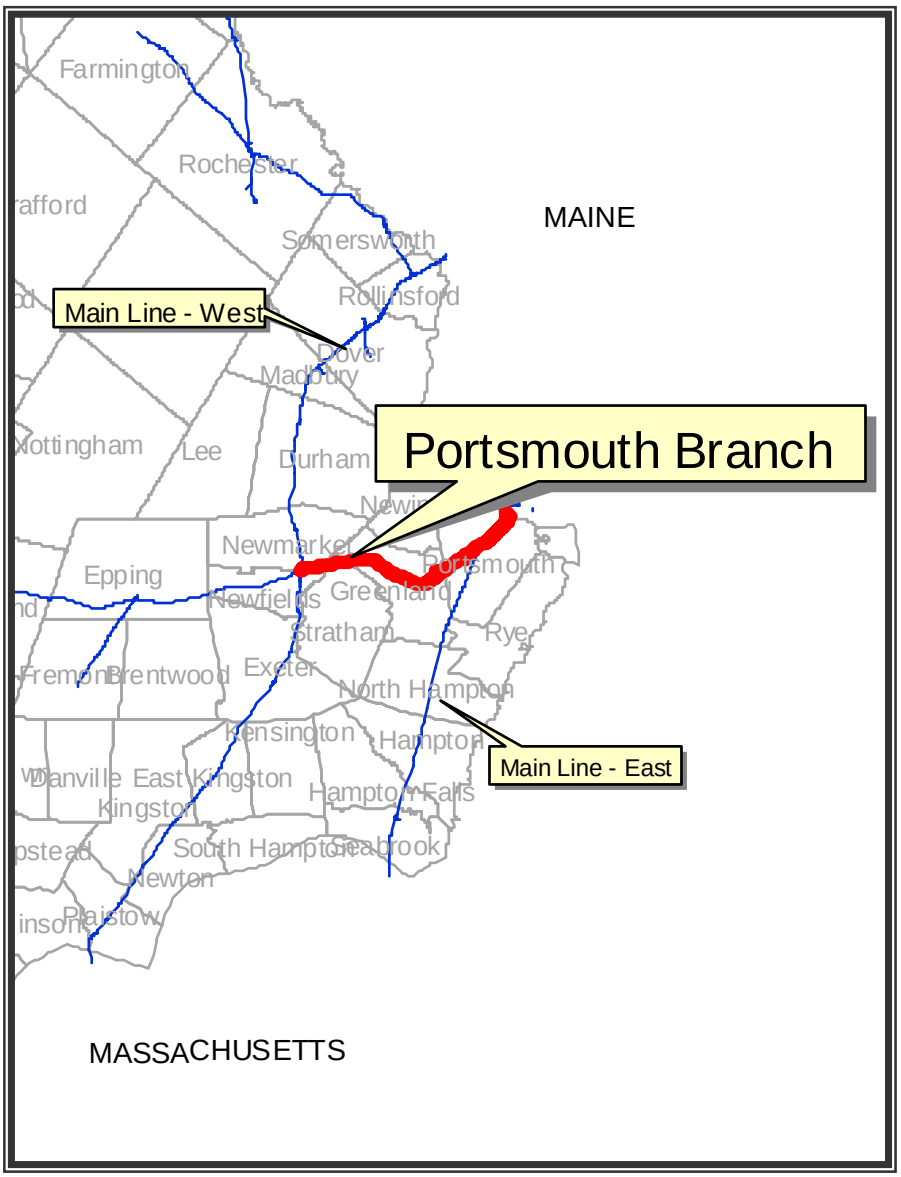

Pittsburg
Clarksville
Atkinson & Gilmanton
Stewartstown
Colebrook
Dixville
Dixs Grant
Second College
Wentworths Location
Columbia
Erving's Location
Millsfield
Errol
Stratford
Odell
North Stratford-
Beecher Falls Line
Stark
Northumberland
Milan
Success
St. Lawrence & Atlantic
Berlin
Lancaster
Jefferson
Randolph
Gorham
Shelburne
Dalton
VERMONT
MAINE

North Stratford-Beecher Falls

Line Description	
Owner	State Of New Hampshire
Operator	New Hampshire Central Railroad
Distance in Operation (miles)	11
Subsystem	Northern
Service Frequency	Daily/Weekly
STB Line Category	V
Physical Condition	
FRA Class	1
Rail Weight	75, 85
Surface Condition	Good
Drainage Condition	Excellent
Ballast Type	Stone
Ballast Condition	Good
Tie Condition	Good/Excellent
Number of Bridges	3
Overall Condition of Bridges	Good
Number of Grade Crossings	5
Number of Public Crossings	4
Number of Private Crossings	1
Number of Active Warning Systems	0
Number of Passive Warning Systems	5

The North Stratford-Beecher Falls Line is owned by the State of New Hampshire and operated by the New Hampshire Central Railroad. Eleven miles of the line is active between North Stratford, at its junction with the St. Lawrence & Atlantic, and Colebrook. Along this line there are 11 bridges. All are in good condition, with a weight limit of 275,000 pounds. Additionally the line passes over four public grade crossings.

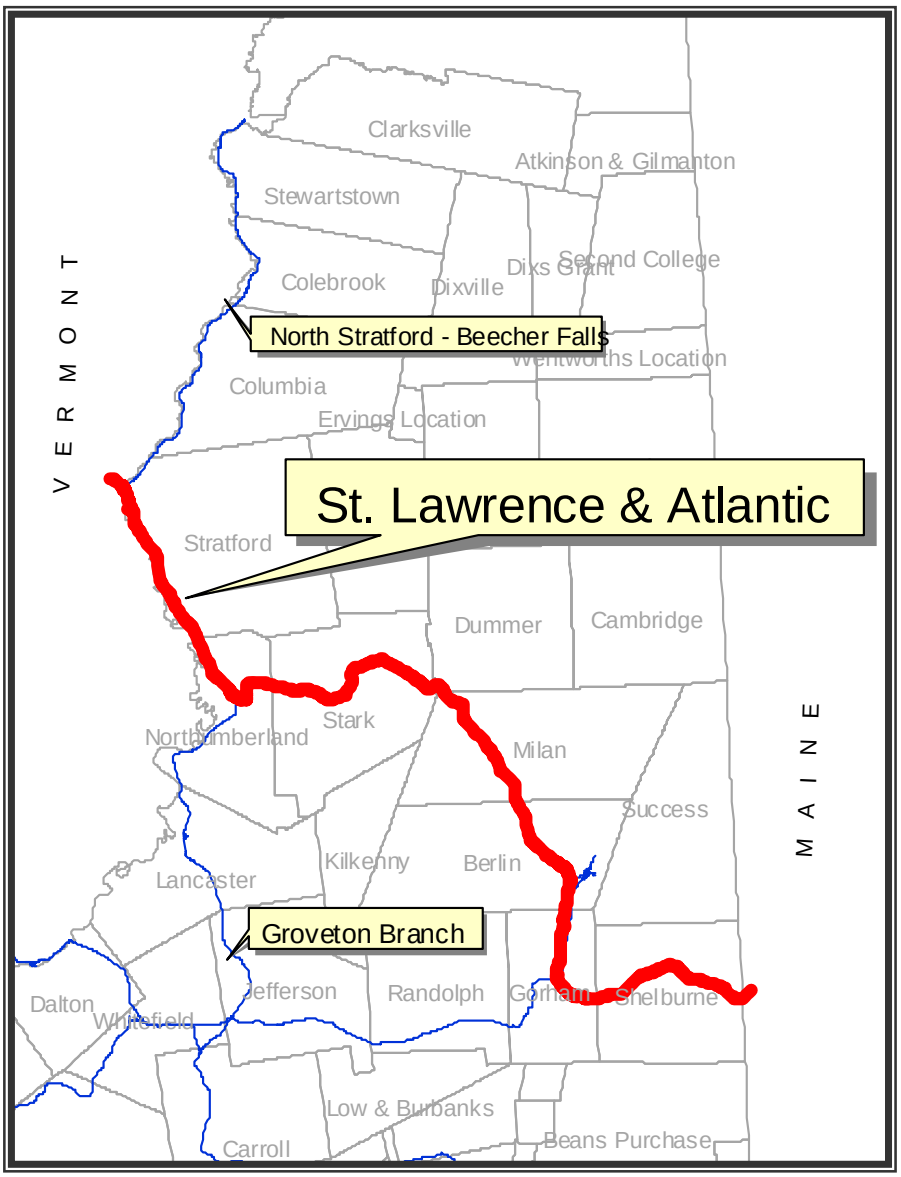
Seven miles of the N. Stratford to Beecher Falls line were rehabilitated in 1995 using state and private funds. The state has also repaired two bridges along the line using state railroad funds.


Farmington
Rochester
afford
MAINE
Somersworth
Rollinsford
Main Line - West
Dover
Madbury
Portsmouth Branch
ottingham
Lee
Durham
Newmarket
Epping
Portsmouth
Greenland
Newfields
Stratham
Rye
Fremont
Brentwood
Exeter
North Hampton
Kensington
Hampton
Main Line - East
Danville
East Kingston
Kingston
Hampton Falls
South Hampton
Seabrook
Newton
Plaistow
MASSACHUSETTS

Portsmouth Branch

Line Description	
Owner	Boston & Maine Corp.
Operator	Springfield Terminal Railway
Distance in Operation (miles)	10
Subsystem	Southern
Service Frequency	Weekly
STB Line Category	V
Physical Condition	
FRA Class	Excepted
Rail Weight	72, 75, 100, 112
Surface Condition	Good
Drainage Condition	Fair
Ballast Type	Gravel
Ballast Condition	Fair
Tie Condition	Fair
Number of Bridges	3
Overall Condition of Bridges	Not Determined
Number of Grade Crossings	12
Number of Public Crossings	11
Number of Private Crossings	1
Number of Active Warning Systems	7
Number of Passive Warning Systems	5

The section of the Portsmouth Branch in operation is owned by the Boston & Maine Corporation and operated by the Springfield Terminal Railway. Ten miles of FRA excepted track is active between Portsmouth and Newfields, connecting the Main Line West with the Main Line East (Hampton Branch) and the Newington Branch. The branch passes over three bridges and 12 grade crossings.


Clarksville
Atkinson & Gilmanton
Stewartstown
Colebrook
Dixville
Dixs Grant
Second College
North Stratford - Beecher Falls
Wentworths Location
Columbia
Ervings Location
VERMONT
St. Lawrence & Atlantic
Stratford
Dummer
Cambridge
Stark
Northumberland
Milan
MAINE
Success
Kilkenny
Berlin
Lancaster
Groveton Branch
Dalton
Whitefield
Jefferson
Randolph
Gorham
Shelburne
Low & Burbanks
Carroll
Beans Purchase

St. Lawrence & Atlantic

Line Description	
Owner	St. Lawrence & Atlantic Railroad
Operator	St. Lawrence & Atlantic Railroad
Distance in Operation (miles)	52
Subsystem	Northern
Service Frequency	Daily
STB Line Category	V
Physical Condition	
FRA Class	2 & 3
Rail Weight	100, 110, 115
Surface Condition	Good
Drainage Condition	Good
Ballast Type	Stone
Ballast Condition	Good
Tie Condition	Good
Number of Bridges	41
Overall Condition of Bridges	Good
Number of Grade Crossings	48
Number of Public Crossings	27
Number of Private Crossings	21
Number of Active Warning Systems	21
Number of Passive Warning Systems	27

The St. Lawrence & Atlantic Line is owned and operated by St. Lawrence & Atlantic Railroad, a subsidiary of Emons Transportation Group, Inc. The line is 52 miles long and includes 41 bridges and 48 grade crossings. The line is FRA Class 3 with a maximum track speed of 40 mph for 20 miles, and FRA Class 2 with a maximum freight speed of 25 mph for 32 miles.

The St. Lawrence & Atlantic Railroad was assisted in its rehabilitation efforts through the FRA Local Rail Freight Assistance program in 1994 and 1995. In 1996, the line was rehabilitated using the New Hampshire Class III Railroad Capital Rail Line Rehabilitation Revolving Loan Fund.

Freight Movements

The State's rail system handled over 8,286,922 tons of freight in 1999, representing a 25 % increase since 1994. This shows a substantial increase during the same period in which the total track mileage in the state has decreased. The lines that have remained in service have been carrying more tonnage over a more efficient regional rail network.

The data, reporting on the amounts and types of freight moved, was generated from the Surface Transportation Board (STB) Waybill Sample Data. The confidential nature of this data and the composition of New Hampshire's rail system makes reporting some data difficult. Not all New Hampshire freight carriers are required to submit waybill data to the STB due to their limited number of freight movements. This results in a slight under-estimation of the overall freight rail movements through the state. The only moves left unaccounted for are those that are not interchanged with one of the larger freight rail carriers. This is estimated to be a small percentage of the total moves.

Total Rail Freight Traffic

Total reported tonnage moved by rail in the State of New Hampshire can be seen in the following graphs. This chart shows the general trend over the past six years toward increased movements of freight by rail.

Figure 2-2
Total New Hampshire Freight Rail Traffic

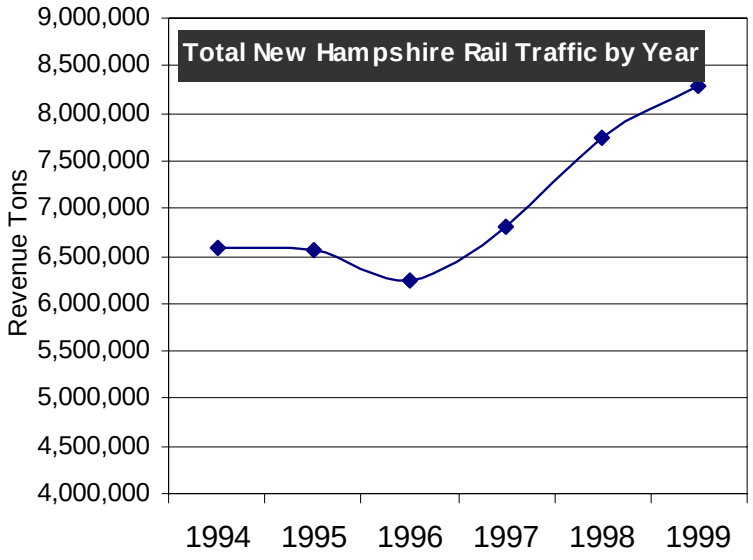


Table 2-4
New Hampshire Freight Rail Traffic

Reporting Year	Total Revenue Tons
1994	6,597,004
1995	6,561,601
1996	6,244,740
1997	6,808,870
1998	7,740,565
1999	8,286,922

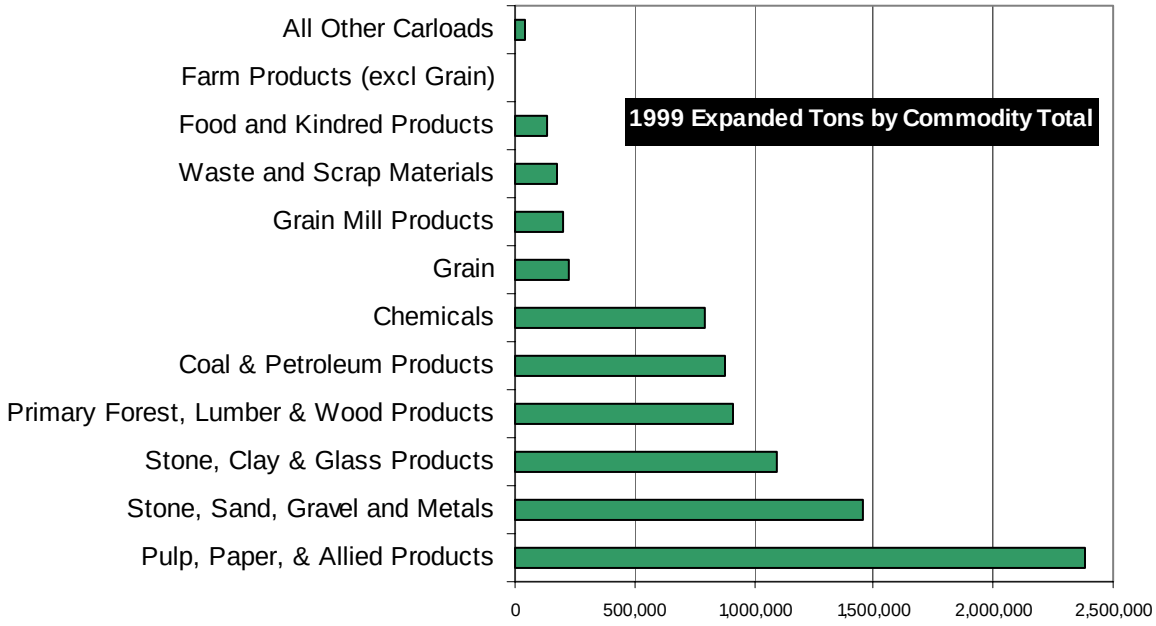
Commodities Transported

The following table contains the summary, by commodity group, of all traffic in or through the state of New Hampshire.

Table 2-5
New Hampshire Rail Freight Commodities

1999 Expanded Tons by Commodity Group	
Commodity	**Total**
Pulp, Paper, & Allied Products	2,379,800
Stone, Sand, Gravel and Metals	1,453,568
Stone, Clay & Glass Products	1,095,180
Primary Forest, Lumber & Wood Products	908,400
Coal & Petroleum Products	876,882
Chemicals	791,200
Grain	225,988
Grain Mill Products	201,404
Waste and Scrap Materials	171,700
Food and Kindred Products	136,600
Farm Products (excl Grain)	8,320
All Other Carloads	37,880
Grand Total Tons	**8,286,922**

Figure 2-3
New Hampshire Rail Freight Commodities



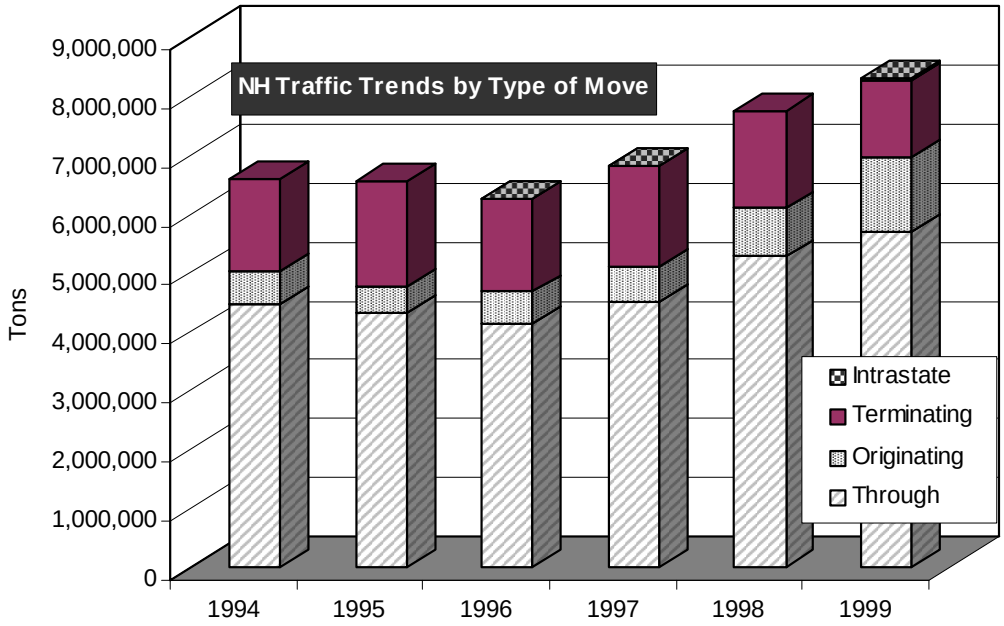
Rail Movements

Revenue tonnage generally increased over the last 6 years. There was a slight dip in 1996, but traffic recovered in 1997. Originating traffic jumped in 1998 and again in 1999, while terminating traffic dropped in those two years. Through-traffic has increased during the period, with the exception of small decreases in 1995 and 1996.

Table 2-6
New Hampshire Freight Rail Trends

Expanded Tons by Type of Move					
Year	Intrastate	Originating	Terminating	Through	Grand Total
1994		569,610	1,567,382	4,460,012	6,597,004
1995		470,920	1,791,531	4,299,150	6,561,601
1996	3,200	525,140	1,573,942	4,142,458	6,244,740
1997	3,040	594,088	1,718,186	4,493,556	6,808,870
1998		819,025	1,661,014	5,260,526	7,740,565
1999	22,008	1,260,720	1,315,050	5,689,144	8,286,922

Figure 2-4
New Hampshire Freight Rail Trends



Origin and Destination of NH Freight Rail Traffic

The two tables below summarize NH-based rail freight traffic by region of the country. The first table contains the originating region for traffic terminating in New Hampshire. The second table contains the destination region for traffic originating in New Hampshire

Traffic Terminating in New Hampshire - The majority of inbound shipments to New Hampshire originate in the Mid-Atlantic region. Ten percent of the remaining shipments originate in Canada, with another 10% from the Southeast.

Table 2-7
Freight Origination Regions

1999 Expanded Tons, by Originating Region	
Origin	**Total Tons**
Maine	32,480
New England	8,480
Mid-Atlantic	931,130
Southeast	130,760
Mid-West	69,400
West	5,480
Canada	137,320
Grand Total	**1,315,050**

Traffic Originating in New Hampshire - Destination regions for New Hampshire products are primarily located in other New England states, with a small amount going to the Midwest. Very few goods travel to the Southeastern or the Western regions.

Table 2-8
Freight Destination Regions

1999 Expanded Tons, by Destination Region	
Destination	**Total Tons**
Maine	19,000
New England	1,122,240
Mid-Atlantic	26,720
Southeast	9,600
Mid-West	71,000
West	12,160
Grand Total	**1,260,720**

Passenger & Tourist Excursion Rail Operations

Within the State of New Hampshire there are currently five passenger / tourist excursion railroad services in operation, with another service to start in the coming months. Amtrak intercity passenger rail service is presently operated on the Connecticut River Line providing a connection between the Connecticut River Valley and New York City. Another Amtrak intercity service between Portland, ME and Boston, MA, along the Main Line West, is scheduled to start this year. Four other passenger rail services in the state are excursion trains providing tourist destinations and amenities in areas of the state where the tourist industry is a large portion of the local economy.

Passenger Rail Operators

Amtrak (Downeaster)

Amtrak is planning to operate daily intercity service between Portland, ME and Boston, MA. The service will be operated over the Main Line West, which passes through New Hampshire between Rollinsford and Plaistow with station stops planned in Exeter, Durham and Dover. The initial schedule, planned to commence in 2001, is to include four daily round trips, which may be expanded to eight or more daily round trips in the future. This service is supported by the State of Maine and managed by the Northern New England Passenger Rail Authority.

Amtrak (Vermonter)

Amtrak operates daily intercity service between New York City and St. Albans, VT. The service is operated over the Connecticut River Line in New Hampshire offering one daily round trip with a station in Claremont, NH. This service is supported in part by the State of Vermont Agency of Transportation and is contingent upon continued state support.

Vermonter

(Montréal)...St. Albans...Burlington... Montpelier...Springfield...New York... Washington

55	57	◄ Train Number ►				56
Mo-Fr	SaSu	◄ Days of Operation ►				Daily
Read Down		Mile	▼		Symbol	▲ Read Up
Vermont Transit Thruway Connection—Montréal, QC/St. Albans, VT						
5 35A	5 35A	0	Dp	Montréal, QC –Central Sta. ● (ET)	⊘	Ar 10 55P
7 05A	7 05A	69	Ar	St. Albans, VT	⊘ ♿	Dp 9 25P
8 10A	8 10A	0	Dp	St. Albans, VT (Jay Peak)	♿	Ar 9 05P
8 40A	8 40A	24		Burlington-Essex Jct., VT	⊘ ♿	8 20P
9 08A	9 08A	47		Waterbury-Stowe, VT	●	7 51P
9 22A	9 22A	56		Montpelier-Barre, VT	● ♿	7 37P
9 57A	9 57A	86		Randolph, VT	●	7 02P
10 40A 10 45A	10 40A 10 45A	118		White River Jct., VT (Lebanon-Hanover, NH)	⊘ ♿	6 20P 6 15P
11 03A	11 03A	131		Windsor-Mt. Ascutney, VT	●	5 55P
11 14A	11 14A	140		Claremont, NH	●	5 43P
11 36A	11 36A	157		Bellows Falls, VT	●	5 20P
12 11P	12 11P	181		Brattleboro, VT	●	4 45P
12 59P	12 59P	216		Amherst, MA	●	3 55P
2 20P 2 30P	2 20P 2 30P	251	Ar Dp	Springfield, MA	♿	Dp 2 50P Ar 2 40P
3 11P	3 11P	277		Hartford, CT	♿	1 58P
3 56P 4 11P	3 56P 4 11P	309	Ar Dp	New Haven, CT	⊘ ♿	Dp 1 17P Ar 1 05P
4 31P	4 31P	322		Bridgeport, CT	♿ [9]	12 42P
4 56P	4 56P	345		Stamford, CT	♿	12 18P
6 00P 6 20P	5 50P 6 10P	380	Ar Dp	New York, NY –Penn Sta. ●	♿	Dp 11 30A Ar 10 55A
6 36P	6 26P	391		Newark, NJ	♿	10 35A
6 49P	6 39P	405		Metropark, NJ	♿	10 17A
7 12P	7 02P	438		Trenton, NJ	⊘ ♿	9 55A
7 45P	7 35P	471		Philadelphia, PA –30th St. Sta. ●	♿	9 25A
8 08P	7 58P	497		Wilmington, DE	⊘ ♿	9 01A
9 00P	8 50P	565		Baltimore, MD –Penn Sta.	⊘ ♿	8 13A
9 13P	9 03P	576		BWI Airport, MD	♿ [7]	7 57A
D 9 27P	D 9 17P	597		New Carrollton, MD	⊘ ♿	R 7 41A
9 45P	9 35P	606	Ar	Washington, DC ● (ET)	⊘ ♿	Dp 7 30A

Services on the Vermonter

Coaches—Reservations required
Business Class—Reserved deluxe seating.
Cafe Car—Sandwiches, snacks and beverages.
Bicycles—Unboxed bicycles are carried to/from all stations except Claremont, NH. Reservations are required and a service charge applies. Call Amtrak for more information.
Note—No checked baggage, skis, snowboards or bicycles on Thruway connection. Passengers may carry hand baggage on board.
Smoking is prohibited entirely on this train.

The Vermonter is financed in part through funds made available by the Vermont State Department of Transportation. State supported trains are operated at the discretion of each state and their operation is dependent upon continued state financial support.

Proper documentation is required to cross U.S./Canadian border. (See other side.)
See other side for explanation of symbols and reference marks.

Schedules subject to change without notice.
Amtrak® is a registered service mark of the National Railroad Passenger Corp.
National Railroad Passenger Corporation
Washington Union Station, 60 Massachusetts Ave., N.E., Washington, DC 20002
NRPC Form P55—115M—10/29/00 Stock #023743

Symbols and Reference Marks

- **A** Time Symbol for A.M.
- **D** Stops only to discharge passengers; train or bus may leave ahead of schedule when station work is completed.
- **ET** Eastern Time
- **P** Time Symbol for P.M.
- **R** Stops only to receive passengers.
- R All reserved train or bus. Reservations required.
- Amtrak Express® Shipping and Checked Baggage Service available at stations indicated.
- Thruway Motorcoach Connection. Coordinated train/motorcoach service with guaranteed connections, as well as through fares and ticketing. Passengers traveling on Thruway connections must be ticketed before boarding coaches in order to obtain through fares. Motorcoaches are normally not accessible to passengers who use wheelchairs.
- ● Tickets cannot be purchased at this location. You may purchase your tickets on the train (without penalty), by mail from Amtrak, or from any Amtrak appointed travel agency. Please call 1-800-USA-RAIL to make special arrangements when boarding/detraining assistance is required.
- ⊘ Ticket office not open at all train departure times. When ticket office is closed, fare may be paid on train without penalty.
- ♿ All station facilities are fully accessible to persons using wheelchairs.
- ♿ Barrier-free access between street or parking lot, station platform and trains; however, not all facilities within the station are fully accessible.
- ● Amtrak Vacations package(s) available at this destination. Book your hotel and/or tour by calling 1-800-321-8684.
- [1] No local passengers carried between Yonkers, Croton-Harmon or Poughkeepsie.
- [7] Free shuttle service between rail and air terminal.
- [9] Quik-Trak ticket machine available for credit/debit card sales. No Amtrak ticket office. (Cash fares may be paid on board without penalty.)

CROSSING THE U.S./CANADIAN BORDER
Customs and Immigration Information

Just like taking the bus, flying or driving across the border—Customs and Immigration officials from both the United States and Canada are required to board and inspect all trains for contraband and immigration purposes. In an effort to expedite the inspection procedure, Amtrak requires all passengers to supply their date-of-birth and citizenship information in order to receive a ticket. This information is supplied to Customs and Immigration officials for clearance purposes only. Providing false or inaccurate information may subject you to an extensive inspection and interview by federal authorities.

Passengers are required to know what documentation they need to cross the border (a driver's license is NOT sufficient) and what items cannot be taken across the border (such as certain plants and fruits). In general, U.S. and Canadian citizens should bring their birth certificate as well as government issued photo identification. Citizens from other countries, however, may need additional documentation and should check with the appropriate immigration office or their local consulate for visa and other relevant information.

If you have any questions, please contact your local Customs or Immigration office—PRIOR to boarding the train—or log on to their websites at www.customs.ustreas.gov (U.S. Customs Service) and www.ins.usdoj.gov (U.S. Immigration and Naturalization Service) or www.ccra-adrc.gc.ca (Canada Customs) and www.cic.gc.ca (Citizenship and Immigration Canada).

Tourist Excursion Services

Conway Scenic Railroad

Conway Scenic Railroad operates three passenger excursion trips on lines in the Mount Washington Valley region originating from the North Conway Station. From North Conway two trips operate north and west along the Conway Branch and Mountain Division Line. One regularly scheduled trip turns in Bartlett, while the other continues on, through Crawford Notch before turning for its return trip. Another trip heads south from North Conway to Conway along the Conway Branch, an eleven-mile round trip. Rail service is normally operated between May and October with between one and eight round trips daily.

Mount Washington Railway

The Mount Washington Railway Line is owned and operated by the Mount Washington Railway. Passenger service is operated along the 3.1 mile line on the west side of Mount Washington. The entire cog railroad line is built upon a trestle on grades of up to 37%. The service typically operates from late April to late October with a schedule that ranges from one to 10 trips a day.

Hobo Railroad

The Hobo Railroad, operated by the Plymouth & Lincoln Railroad, provides passenger excursion trips along the Concord-Lincoln Line south from the station in Lincoln to Thornton. During the peak summer season the railroad offers four daily trips, which includes a dinner train during the evening hours. In addition, holiday and theme trips are offered throughout the year. The services are provided on a number of different coaches that are restored and maintained in Lincoln.

Winnipesaukee Scenic Railroad

The Winnipesaukee Scenic Railroad provides passenger excursion trips along the Concord-Lincoln Line from Meredith through Weirs Beach to Lakeport. During the peak summer season 12 one to two hour round trips are offered. This service is operated by the Plymouth & Lincoln Railroad offering an important and heavily visited tourist attraction in New Hampshire's Lakes Region.

Highway - Rail Grade Crossings & Safety

There are about 488 grade crossings in the State of New Hampshire. These range from little used private pedestrian crossings to heavily used crossings involving major roadways and rail lines. Each of these grade crossings is a safety hazard to the traveling public due primarily to the long stopping distances required for trains. Grade crossings require special attention (signage and warning systems) to improve safety for those passing over the grade crossing.

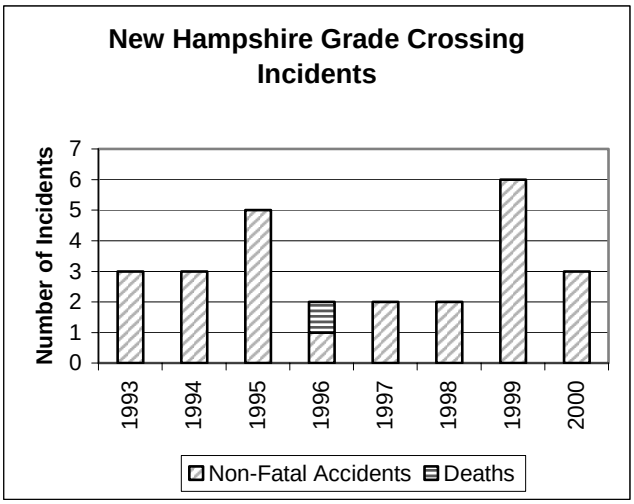
Table 2-9
New Hampshire Highway-Rail Grade Crossings

New Hampshire Highway-Rail At-Grade Crossings on Active Rail Lines, 2001	
CROSSING TYPE	**COUNT**
PUBLIC	328
PRIVATE	160
ACTIVE WARNING SYSTEM	156
PASSIVE WARNING SYSTEM	331
Total	488

The difference in speed and stopping distances of trains and cars that use a grade crossing can lead to accidents. There are an average of 2 to 3 incidents each year at grade crossings in New Hampshire. It is essential that particular attention be given to the design and maintenance of grade crossings to improve the safety of the New Hampshire transportation system. The State of New Hampshire should adopt the Federal Railroad Administration policy of no additional grade crossings.

The State of New Hampshire, with federal assistance, invests in improving safety at the grade crossings across the state. A program of improvements is developed based on the various needs around the state. These improvements range from crossing elimination to installation of signals and gates, to the replacement of crossing surfaces.

Figure 2-5
New Hampshire Grade Crossing Incidents



Use of Abandoned Rail Corridors

Railroad use of over 75 miles of New Hampshire rail corridor has been abandoned since the last plan amendment in 1993. A goal of the Statewide Rail Plan and rail program is to preserve abandoned railroad corridors having strong potential for future transportation or public uses. The rail program has worked toward this goal during this period of rail system rationalization to preserve corridors wherever appropriate and possible.

Corridors Under a Cooperative Agreement with the Department of Resources and Economic Development (DRED)

Purchases by the State of New Hampshire have resulted in the state owning close to 500 miles of rail corridors for preservation purposes made up of close to 200 miles of active line and 300 miles in interim use. The following is a list of those lines under a DRED / NH DOT cooperative agreement, which involves shared ownership and management responsibilities for DRED and NH DOT.

Table 2-10
Rail Corridors Under Agreement with DRED (1993-2000)

Corridors purchased by NH Dept. of Transportation and under a cooperative agreement with the NH Department of Resources and Economic Development (1993-2000)		
Line	**Year Acquired**	**Mileage**
Fort Hill (Hinsdale)	1994	9
Ashuelot (Hinsdale-Keene)	1995	21
Cheshire (Fitzwilliam-Walpole)	1995	42
Conway (Madison)	1995	8
Northern (Boscawen-Lebanon)	1995	59
Berlin (Woodsville-Littleton, Jefferson-Gorham)	1996-8	37
Farmington	1997	7
Greenville	1999	2
Monadnock (Rindge-Jaffrey)	1999	9
Jefferson-Whitefield	2000	2
Total		**196**

Table 2-11
Rail Corridors Under Agreement with DRED (1977-1992)

Corridors purchased by NH Dept. of Transportation and under a cooperative agreement with the NH Department of Resources and Economic Development (1977-1992)		
Line	**Year Acquired**	**Mileage**
North Stratford -Beecher Falls	1977	8
Wolfeboro	1986	11
Portsmouth (Newfields-Manchester)	1988	25
Manchester-Lawrence	1988	8
Hillsboro (Bennington -Hillsboro)	1988	8
Fremont (Epping)	1988	4
Total (1977-1992)		**64**
Total (1977-2000)		**260**

Other Corridors

The state has also purchased rail corridors for preservation purposes or interim use for other non-rail service purposes.

Table 2-12
Other Rail Corridors Purchased by NHDOT (1993-2000)

Other Rail Corridors Purchased by NH Department of Transportation (1993-2000)		
Line	**Year Acquired**	**Mileage**
Gonic	1994	1
Hampton (Seabrook - Hampton)	1996-99	5
Lakeport	1994	1
Portsmouth (Manchester)	1999	3
Total		**10**

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New Hampshire Transportation Planning Process

The New Hampshire Department of Transportation has developed a statewide transportation planning process in compliance with federal and state laws for all areas of New Hampshire. Systems planning in New Hampshire is reflected in the development of a Long Range Statewide Transportation Plan (LRSTP) and a statewide program of projects as defined in the Statewide Transportation Improvement Program (STIP). Statewide transportation needs are identified through the LRSTP and the STIP through the continuing collection and analysis of transportation data as supported by statewide management systems. Public involvement is essential at all levels of LRSTP and STIP development and along with the planning process is continuous, cooperative and comprehensive.

Long Range Statewide Transportation Plan (LRSTP)

The LRSTP is an essential tool for identifying future transportation needs. By looking at the present transportation system, the transportation needs for twenty or more years into the future are identified through a series of long-range transportation goals and objectives. In addition, the LRSTP addresses transportation demand and usage for each mode of transportation. The LRSTP is developed cooperatively with the Regional Planning Commissions (RPCs) and Metropolitan Planning Organizations (MPOs) to achieve consistency between regional and state transportation plans. This cooperative effort is advantageous when planning major construction improvements and developing management strategies. The LRSTP requires continuous evaluation and revision.

During the development of the LRSTP, the public has the opportunity for input through a series of public meetings held in cooperation with the RPCs and MPOs. After these public meetings, the proposed LRSTP is compiled to reflect public input. The final LRSTP reflecting the comments of the public and a comment period is adopted by the NHDOT as a guide for the future development of the transportation system. The adopted LRSTP is forwarded to the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) for their acceptance.

The NHDOT may augment the LRSTP with more specific plans for modes of transportation, such as aviation, local transit or intercity bus, or railroads. This Statewide Rail Plan thus serves as a component of the LRSTP.

Statewide Transportation Improvement Program (STIP)

The STIP is developed within the goals of the LRSTP. The STIP is a three-year project scheduling tool required by federal law. It is also a component of the State Ten Year Transportation Program, which is required by state law.

Each RPC and MPO prepares a three year Transportation Improvement Program (TIP) for its region. The RPCs prioritize all improvement projects included in their TIPs. These are guided by the goals and objectives outlined in the long-range regional transportation plans. The MPO TIP must come from project-specific regional long range transportation plans and must meet the air quality conformity requirements of the 1990 Clean Air Act Amendments.

Federal law requires that the STIP include all projects included in the MPO TIPs as approved by the MPO and the Governor. For non-MPO areas, the NHDOT utilizes the TIPs prepared by Regional Planning Commissions during the development of the STIP, although inclusion of all projects is not required. During the development of these documents, the public has an opportunity to comment through an RPC, MPO, or the transportation department. The process for the development of the STIP within the Ten Year Transportation Program involves a two-year cycle that is outlined below. The cycle begins on October 1 of each even-numbered year with the division of the STIP into project lists by region, and continues with numerous refinements and public input until new TIPs are combined into a new STIP.

The steps in this process are summarized below:

By October 1 of even-numbered years, the NHDOT will submit the Ten Year State Transportation Program (as approved earlier in the year by the Legislature) to the RPCs and MPOs, without the first two years of projects, since they will be under design or construction during the development of the next STIP. The NHDOT will recommend projects for years nine and ten. Those projects will serve as guidelines for use of the funds available in developing both the regional long range transportation plan and the regional TIP.

By April 1 of the following (odd-numbered) year, each RPC and MPO develops and submits a recommended Ten Year Transportation Improvement Program (Ten Year STIP) to the NHDOT. The NHDOT combines the TIPs into the STIP. The STIP undergoes analysis to verify that it is financially constrained and in compliance with Clean Air Act Amendments (for projects in Clean Air nonattainment areas). In addition, the STIP must meet LRSTP goals.

By July 1 of the odd numbered year, the NHDOT submits a financially constrained Ten Year STIP to the Governor's Advisory Commission on Intermodal Transportation (GACIT). The GACIT conducts a series of public hearings to afford the public an opportunity to comment on the proposed Ten Year STIP.

By December 1 of the odd numbered year, the GACIT will submit its recommendations for the Ten Year STIP to the Governor for review and comment.

By January 15 of the even-numbered year, the Governor will submit the recommendations to the Legislature, which will conduct hearings on the Ten Year STIP.

By June 1 of the even-numbered years, the Legislature will take the necessary action to approve a financially constrained Ten Year STIP.

By June 15 of the even-numbered years, the NHDOT will submit the legislatively approved Ten Year STIP to the Regional Planning Commissions and Metropolitan Planning Organizations to review any changes made by GACIT, the Governor, or the Legislature.

By July 30 of the even-numbered years, the RPCs and MPOs will approve the final Three-Year TIPs, which are the first three years of the Ten Year STIP.

By August 1 of the even-numbered years, the NHDOT will submit the MPO Three Year TIPs, along with Clean Air Act Amendments conformity analysis, to the FHWA and FTA for their review. The FHWA

and FTA must make a determination of conformity after receiving comments from the Environmental Protection Agency (EPA). During this review period, the NHDOT will submit the record of MPO approved TIPs to the Governor or his/her designee for approval.

By September 1 of the even-numbered years, the NHDOT will submit the Three Year STIP to the FHWA and the FTA for their review and approval by October 1.

On October 1 of even numbered years, the TIP/STIP development process begins again.

Date	Year	Action
Oct 1	Even	RPC/MPO TIP development process begins
Apr 1	Odd	RPCs submit draft TIP to NHDOT
Jul 1	Odd	NHDOT submits draft 10-year STIP to GACIT
Dec 1	Odd	GACIT submits draft 10-year STIP to Governor
Jan 15	Even	Governor submits 10-year STIP to Legislature
Jun 1	Even	Legislature approves 10-year STIP
Jun 15	Even	NHDOT submits 10-year STIP to RPCs/MPOs
Jul 30	Even	RPCs/MPOs approve 3-year TIPs
Sep 1	Even	NHDOT submits 3-year STIP to FHWA/FTA for approval
Oct 1	Even	Approved 3-year STIP

STIP Amendment

After FHWA and FTA approval of the STIP, it may be necessary during the next two-year cycle to amend the STIP by adding, deleting, or revising projects. This process takes place as follows:

1. Projects in an air quality attainment area under the jurisdiction of an RPC:

   For minor projects, the NHDOT may request the change in writing to FHWA and FTA and complete the amendment in one to five days. For major projects, a public comment period will be provided, and the NHDOT may request that FHWA and FTA approve the change after notifying them of comments received and how they were addressed. The time to complete this amendment process is 40 to 60 days.

2. Projects in an air quality nonattainment area under the jurisdiction of an RPC:

Projects that are considered exempt from air quality conformity are handled the same way as minor projects in an attainment area. If the project is not exempt from air quality conformity, the NHDOT will reexamine the air quality analysis submitted for the nonattainment area. A public comment period will be provided and the NHDOT may request that FHWA and FTA approve the change after notifying them of comments received and how they were addressed. The time to complete this amendment process is 90 to 120 days.

3. Projects in an air quality nonattainment area under the jurisdiction of an MPO:

   All projects in this category must follow both the state public involvement process and the MPO public involvement process. If the project is exempt from air quality conformity, the NHDOT will notify the public of the proposed change. Once the MPO public involvement process is complete, the NHDOT will request approval of the change by FHWA and FTA. The time to complete this amendment process is 40 to 60 days.

   If the project is not exempt from air quality conformity, the NHDOT will notify the MPO of the proposed change. The MPO conducts a public involvement process and makes a determination of conformity with the Clean Air Act Amendments and proposes a TIP amendment. The NHDOT submits the amended TIP to FHWA and FTA for review and approval of the conformity determination and the TIP amendment. If the project was not included in a long range transportation plan that was in conformity with the Clean Air Act Amendments, the MPO may have to amend its long range transportation plan and make a determination of air quality conformity for the plan. The time to complete this amendment process is approximately 90 to 180 days.

Coordination with Regional Transportation Plans

A key ingredient to the New Hampshire transportation planning process is the role of the regional transportation planning process. New Hampshire is divided into nine regional planning areas. In five of these areas, transportation planning is facilitated by the Regional Planning Commissions (RPCs). These RPCs develop 20-year transportation plans that provide the policy framework under which decisions regarding transportation improvements or changes are made. In the other four areas Metropolitan Planning Organizations facilitate the transportation planning process. The MPOs not only develop 20-year transportation

plans in which goals and policies are detailed, they develop project specific implementation plans of transportation improvements called the Transportation Improvement Program.

The development of the New Hampshire Statewide Rail Plan has taken into account the regional goals and policies regarding rail service in the state. This was done to coordinate the goals at the regional level with the implementation plans at the statewide level for this particular transportation mode. Although each of the regions' specific rail related goals were slightly different, they could be summarized by the following four goals:

- Promote the preservation of current rail rights-of-way for future transportation uses.
- Promote the improvement and active use of rail lines for freight or passenger service where demand warrants.
- Recommend communication between regional and state level planners to facilitate the free flow of information regarding future rail and land developments.
- Preserve grade separation of highway-rail crossings and improve grade crossings where applicable.

All of these regional goals are being advanced through this Statewide Rail Plan or other state plans and programs. One of the recommendations that was discussed repeatedly during the regional input sessions for this plan was the need for a comprehensive study of abandoned rail corridors. The corridor preservation efforts have been so successful, and there is now so much right-of-way to be managed, that it would be beneficial for the state's property management purposes, as well as future planning efforts, that a comprehensive study of abandoned rail corridor be conducted.

Passenger Rail Initiatives

As the state's population and traffic congestion grow, there has been an increase in interest in passenger rail as a transportation alternative. Several studies examining the feasibility and cost of passenger rail service in southern New Hampshire have been completed over the past several years.

Lowell-Nashua Commuter Rail Extension

In June 1999, the Nashua Regional Planning Commission completed a Major Investment Study (MIS) to evaluate alternatives for extending transit service to connect Boston, MA with Nashua, NH and to meet the requirements for filing an application for the FTA New Starts program. The MIS examined rail alternatives to help reduce congestion, particularly during peak-hour commuting.

The MIS evaluated four transit alternatives and identified the most viable. The analysis was based on predicted ridership, capital costs, operating costs / revenues, potential reductions in traffic congestion and environmental benefits. The Lowell – Nashua commuter rail extension was the preferred alternative.

The NHDOT has begun the Preliminary Engineering phase of this project, which will be completed in 2002, leading to final design and construction once funding is obtained.

I-93 Salem-Manchester Corridor Improvements: Rail Alternatives Evaluation Report (November 2000)

The *Rail Alternatives Evaluation Report* was completed as a part of the New Hampshire Department of Transportation's (NHDOT) Draft Environmental Impact Statement (DEIS) to evaluate alternatives for improving a segment of I-93 between Manchester and Salem. The report provided a conceptual overview of three rail service possibilities in the I-93 highway corridor. They included a commuter rail service extension on the New Hampshire Main Line between Lowell, MA and Manchester, a commuter rail extension along the Manchester and Lawrence Line between those two cities, and a light rail service within the I-93 highway corridor between Exit 5 in Londonderry and the Massachusetts border, and extending along the M&L rail corridor to Lawrence Station in Massachusetts.

Although the *Rail Alternatives Evaluation Report* provided a first step in considering the merits of passenger rail service along the M&L Branch, extending service to Manchester on the New Hampshire Main Line, and along a new I-93 Rail Corridor it did not reach any conclusion concerning further development. It did provide a basis for designing the I-93 highway improvements in a manner that would not preclude an I-93 Rail Corridor service option in the future.

Commuter Rail Service to Coastal New Hampshire: Feasibility Study for the Hampton Branch (June 1999)

The Rockingham Planning Commission conducted a study that examined the feasibility of reinstating passenger rail on the Hampton Branch (Main Line East). The study specifically examined the rail corridor between Newburyport, MA and Portsmouth as a continuation of the recent extension of the MBTA's Newburyport service. The study looked at potential station sites, service options, ridership potential and operating and capital costs, which ranged from $77 million to $104 million. The report represents a preliminary step in planning for transit use of the corridor and determining the steps necessary to implement the project. A legislative task force has continued to study this proposal.

Technical Memorandum: NHRRA Rail Proposal (1997)

In 1997, the Rockingham Planning Commission prepared a technical memorandum documenting the feasibility of a commuter rail service extension to Salem. The RPC memo was based on a study conducted by the New Hampshire Rail Revitalization Association. The study projected that up to 800 people a day (1,600 trips) could potentially utilize a Salem service extension. Using capital cost estimates previously prepared for the Manchester and Plaistow extensions and the Boston to Portland (Maine) intercity rail project, an infrastructure cost estimate of $17.7m for the 7.2 mile extension was developed ($2.5m per mile). This estimate included track rehabilitation, installation of a signal and communications system, grade crossing improvements, and a station and layover facility.

Plaistow Extension

The feasibility of extending the MBTA Haverhill Line service to Plaistow has been evaluated on several occasions by the MBTA. With the reconstruction of the track between Plaistow and Portland (Maine) to support the Boston to Portland intercity service, the Plaistow service extension has become more feasible. The Boston to Portland intercity project addresses a number of the track and signal and communications system issues that studies of the Plaistow project previously encountered. Track and signal improvements associated with the Boston to Portland project will allow trains to operate at speeds up to 79 mph. Funding for the Plaistow extension has been included in the STIP (2005). However, Guilford Rail System has indicated in discussions with NHDOT officials that they would be unable to consider the proposed service due to capacity issues on the Main Line West.

Other Passenger Rail Initiatives

There are additional corridors along which there is interest in implementing passenger rail service. These initiatives are in various stages ranging from community discussions to federal designations. Specific information regarding planned operations, capital costs, and ridership potential have not been developed for these initiatives. A description of these other passenger rail initiatives under consideration is given below.

Northern New England High-Speed Rail Corridor

The U.S. Secretary of Transportation has announced the designation of the Northern New England High Speed Rail Corridor. This Corridor has two branches, both starting in Boston, MA and passing through New Hampshire. One branch extends between Boston and Portland, ME before terminating in Auburn, ME. The other branch runs from Boston to Montreal, Quebec passing through Concord, Lebanon and Montpelier, VT.

The purpose of the corridor designation is to provide official federal support of the development of high speed passenger rail in the corridor. High speed rail refers to trains which are capable of maintained speeds in excess of 125 miles per hour, however, due to corridor constraints trains may only average 80 miles per hour. Federal support is given to assist in the development of implementing plans, interstate corridor organizational structures, appropriate technology and the possibility of attracting private funding sources.

Presently High Speed Rail Corridor designation makes only one additional dedicated funding program available to the corridor, the High Speed Rail Crossing Elimination Program. In additional there is an FRA grant available for examining the feasibility of implementing high speed rail service in the corridor running between Boston and Montreal. Vermont, New Hampshire and Massachusetts will jointly oversee this planning study in 2001-02. The dedicated grade crossing funding program may make it possible to analyze and improve or eliminate grade crossings along the two corridors. Also, a legislative study committee has studied restoration of service on the Northern Line.

Portland to Montreal Service

As an extension to the newly designated Boston-Portland-Auburn High Speed Rail Corridor designation, there has been interest in providing passenger service along the St. Lawrence & Atlantic line from Portland to Montreal. Substantial improvements would not likely be needed to operate the service at slow speeds since this line is in relatively good condition. Some form of operating assistance would likely be required for the service. In addition, infrastructure upgrades would be needed to increase speeds and thus the attractiveness of the international intercity service.

Portland to North Conway Service

There has been interest in restoring passenger rail service along the Mountain Division line between Portland and North Conway. This line, principally owned by the State of Maine, is not currently in service. It would provide a connection between two tourist destinations, possibly providing economic benefits to both communities.

Extensions of existing excursion train services

Many of the existing excursion train service operators are interested in extending the services they offer or making other improvements that would make their operations more attractive to customers, such as faster speeds or more frequent service. These extensions, although each proposal must be reviewed individually, generally represent a cost-effective way to assist the local tourist economy without substantial negative impacts. They would also improve the movement of freight in the state by improving rail infrastructure that can be used by both excursion trains and freight trains.

It is clear that with all of these various passenger rail initiatives in the state, there is interest in investing in rail as an alternative transportation mode. It is essential with all these various initiatives in process that the state develop a state passenger rail plan to determine where best to invest its resources. There are three different types of potential passenger rail services in the state (commuter rail, intercity service and excursion trains) all serving different but important purposes. They are all vying for the same financial resources but cannot be assessed for their effectiveness using the same parameters. A state passenger rail plan that determines priorities for state assistance and support would ensure the

most affective use of state resources. Possible priorities for support may include 1) congestion relief, 2) funding opportunities, 3) community needs / economic development, and 4) improved infrastructure to support the state's freight rail system.

New Hampshire Freight Rail System Issues

A review of the state's rail system must also look at the some of the statewide rail issues that may not necessarily be addressed by individual line operators. These issues change over time as conditions in the industry change. The current issues that need to be assessed on a statewide or regional basis include the increase in industry standard carload weights, the need for higher vertical clearance along lines in the state, and the need to coordinate passenger rail initiatives statewide, which was addressed in the preceding section. The following sections include a discussion of the major issues, the concerns specific to the state of New Hampshire and recommendations on methods to address the concerns.

Carload Weights

The railroad industry, driven by the Class I railroads, is changing to a standard of using 286,000-lb. capacity rail cars to carry some commodities on the lines throughout the country. This is an increase of 23,000 pounds of the previous industry standard of 263,000-lb. capacity cars. This heavy axle-load equipment is rapidly becoming the norm for the movement of commodities such grain, lumber and paper products, to name just a few. The new 286K cars carry more commodity per car, and therefore require proportionately fewer trains, crews, locomotives, etc., to move the same amount of product. There are advantages for both shippers and Class I railroads, and these advantages have driven the rapid growth in the number of these heavier, larger capacity cars on the nation's railways.

The heavier equipment puts significant new strains on rail infrastructure. Many short lines can handle the heavier cars only with difficulty at slow speeds, or not at all. The heavier cars require upgraded track and track structure beyond what is standard on most short lines. Heavier and welded rail and better condition of ties, rights-of-way and ballast are often needed to enable small railroads to move heavier loads efficiently. Bridges must be carefully scrutinized and often upgraded, which can be extremely expensive.

The rapid advent of heavier cars is creating the need for a one-time, major upgrade of most of the small railroad network's infrastructure

across the country in order to stay competitive with other transportation modes, and insuring the smooth handling of cars at interchanges with Class 1 railroads. The changes, which are driven by market efficiencies and demand, will offer clear benefits to the industry in the long-term but requires major capital expenditures to accommodate the upgrades.

To date the long-term impact of the heavier cars on light density short line and branch line tracks is not known. However, research is being conducted by the industry to establish, for the first time, the technological requirements for track, turnouts, ties, ballast, bridges, etc., to accommodate 286 cars. It is generally thought that the track structure should include continuously welded rail of 112 pounds or heavier with clean ballast and good drainage in order to regularly accommodate the heavier cars. However, requirements for track and bridge structures may vary depending upon the frequency of heavy loading and train operating speeds. Due to the lack of industry standards, specific improvements would need to be addressed on a line by line basis until such industry infrastructure specifications are developed.

State Issues

A review of the state's rail infrastructure reveals that there are not many lines capable of regularly handling the 286,000 pound cars. The two lines that currently can regularly handle the high-capacity cars are the New Hampshire Northcoast section of the Conway Branch and the recently upgraded Main Line West. Restrictions on other lines include not only the track structure but bridge conditions as well.

In discussions with the state's freight rail operators, there was not a consensus on the need for upgrading track infrastructure to handle the heavier cars. In general, it was seen that the primary lines in each subsystem would benefit from and eventually require infrastructure upgrades. However, it was questioned whether customers on the branch lines would ever need to move commodities in the heavier cars or substantially benefit from the necessary infrastructure upgrades.

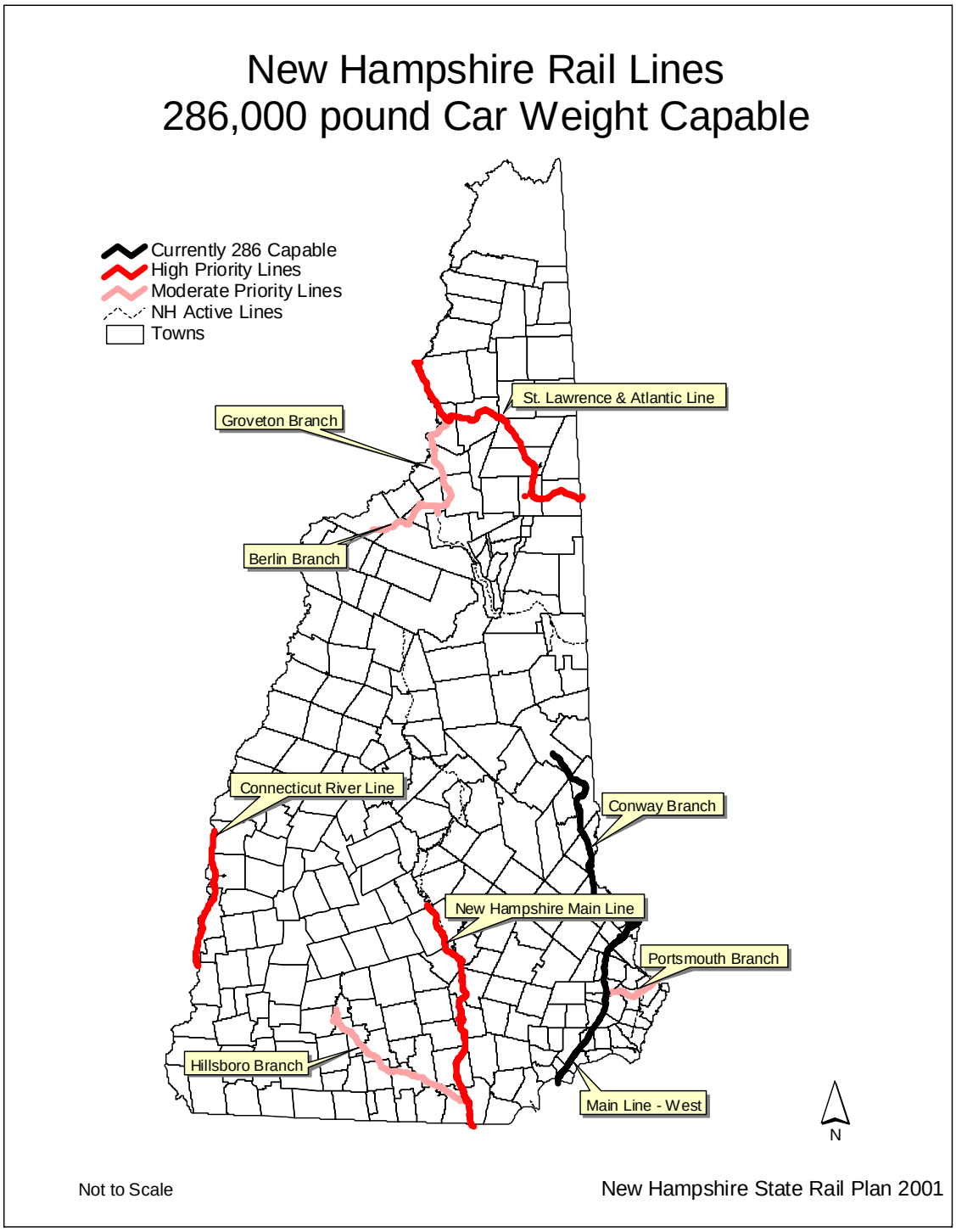
Although it is important for the region to keep pace with the industry, a regional solution must be developed. The state's rail network relies on the connections and infrastructure in other states and is confined by the constraints in those states, and vice versa. The adjoining states are also determining a strategy to deal with the necessary infrastructure improvements without any direction or financial support from the federal government. The commodities being moved in the new higher capacity cars are not as prevalent in New England as in other parts of the country and thus not as essential to the health of the regional rail system.

Therefore, it is recommended that a program be developed, in conjunction with adjoining states, to prioritize infrastructure improvements along regionally important rail lines so that the New Hampshire and New England rail system can remain a competitive transportation mode and component of the regional transportation network. The New Hampshire rail lines that could most benefit are those that carry through-traffic or those with higher tonnage. The following table lists those lines that should be a priority for 286K oriented improvements. These lines are similar to those identified as regionally significant in a 1992 study conducted by the Center for Transportation Studies titled, *Rail Service in New England.*

Table 3-1
286K Compliance Priorities

Top Priority New Hampshire Rail Lines for 286,000 lb. Car Weight Compliance	
Line	**Priority for Improvements**
Main Line West	Highest (Maintain)
Conway Branch (NH Northcoast)	Highest (Maintain)
Saint Lawrence & Atlantic	Highest
New Hampshire Main Line	Highest
Connecticut River Line (NECR)	Highest
Hillsboro Branch	Moderate
Groveton Branch	Moderate
Berlin Branch	Moderate
Portsmouth Branch	Moderate

Figure 3-1
New Hampshire 286K Capable Priority Rail Lines



Double Stack Clearance

Poor utilization of rail equipment and a rapid increase in the number of shipments being made using intermodal containers in early 1990's gave rise to the need to improve rail equipment efficiency. A problem with "piggy back" operations (where an intermodal container is carried on a rail car) is that they create long trains and cause congestion in railyards. The rail industry quickly turned to rail car equipment that allowed containers to be stacked, one on the other, doubling the capacity of the equipment and the track. Moving intermodal containers in this way improves the efficiency of the railroad and thus lowers the cost of moving containers along the railroad

In order for a train with double stacked containers to travel along a line, it must be able to pass under all bridges or other vertical obstructions on the line. Along most of the lines in New Hampshire there are bridges that create obstructions to double stack train traffic. State law provides that the standard vertical clearance to be provided along railroads is 22' 6", which provides enough clearance for a double stack container, with some room to spare. The law allows the commissioner to permit a lower clearance and in some cases this is acceptable.

State Issues

An inventory of the rail lines in the state revealed that the only line with full double stack clearance is the St. Lawrence & Atlantic line. In fact, the SLR has recently started running a regular intermodal container train between Portland, ME and Canada that has increased in tonnage based primarily on the success of running double stack equipment.

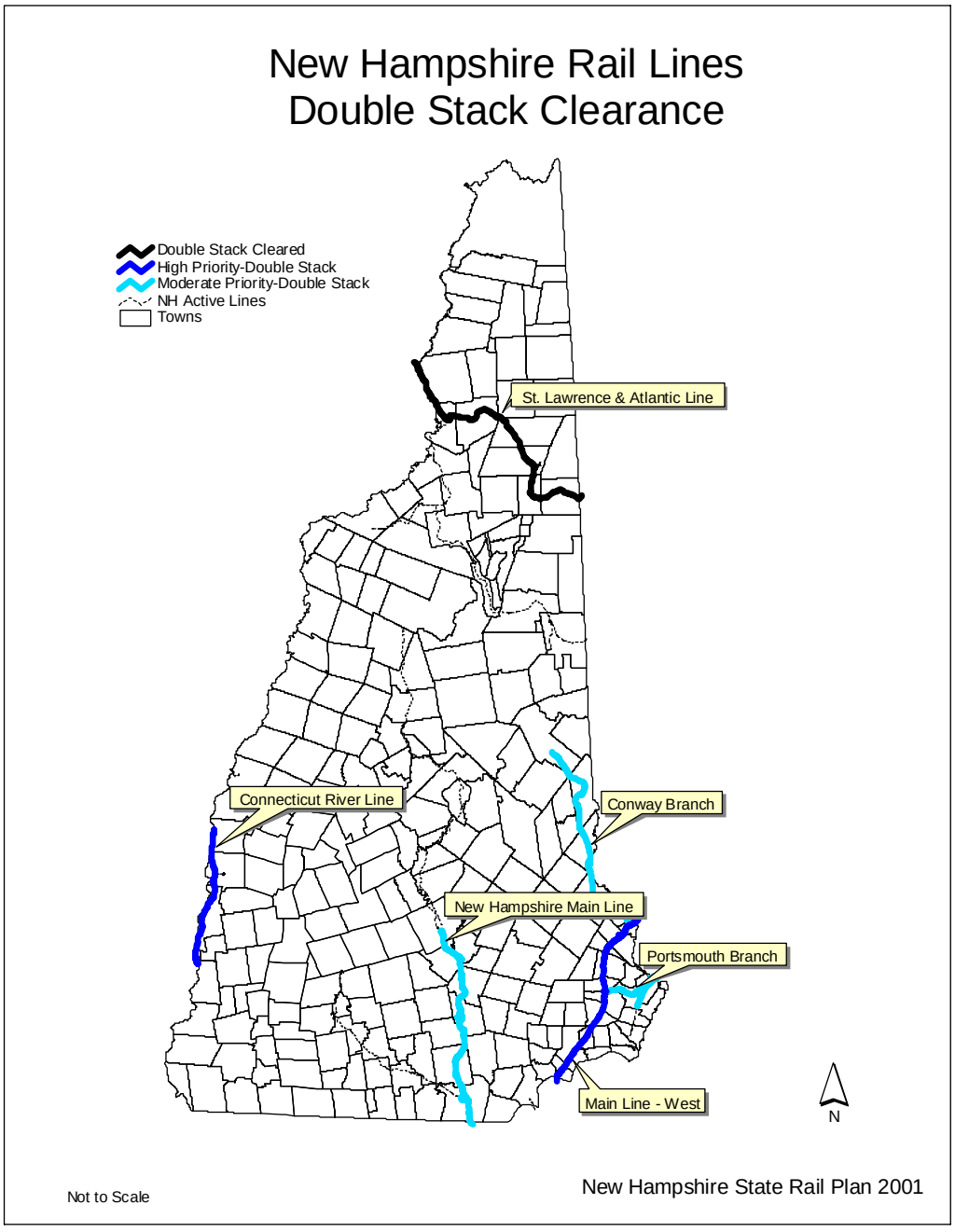
Similar to the issue of heavier rail cars, this is an issue that cannot be examined on a local level, or in New England on a state level. The major rail lines in New England travel through many states. These major lines are the ones that would benefit from double stack cleared routes, by being able to increase main line capacity and efficiency. Double stack clearance is an issue that is most effectively examined at a regional level. Both Massachusetts and Vermont have studied clearances of lines statewide, although it is unclear what their policy or project plans are to clear those obstructions identified. It is certainly possible for railroads to examine their lines across state lines, identifying obstructions, but as improvements typically require improvements to state and local roadways, it is necessary to obtain state and local financial assistance to clear lines for double stack trains.

Since main lines need to have double stack clearance before clearance will benefit customers or operators on branch lines, it is suggested that those main lines be cleared as a first priority. Both the Connecticut River line and the Main Line West, the main lines in the state that are not cleared, have been studied for double stack clearance. Obstructions in New Hampshire were identified on both lines. It is recommended that by supporting the clearance of those obstructions in New Hampshire, the state would be providing needed support for those lines and the New Hampshire Rail System in general. Following clearance of obstructions on subsystem main lines branch lines should be studied to determine if double stack clearance would be needed or cost effective based on the projected intermodal traffic.

Table 3-2
Doublestack Priorities

Top Priority New Hampshire Rail Lines for Double Stack Clearance	
Line	**Priority for Improvements**
Saint Lawrence & Atlantic	Highest (Maintain)
Main Line West	Highest
Connecticut River Line	Highest
New Hampshire Main Line	Moderate
Conway Branch (Northcoast)	Moderate
Portsmouth Branch	Moderate

Figure 3-2
New Hampshire Double Stack Clearance Priorities



Funding Programs

Government funding programs for rail infrastructure improvement projects have changed substantially since the last amendment to the New Hampshire Statewide Rail Plan in 1993. At that time most states relied

upon the federal Local Rail Freight Assistance Program, which no longer provides funding. With the passage of the Transportation Equity Act for the 21st Century (TEA-21) federal freight rail assistance has been limited. Many states across the country have responded by developing grant programs of their own, financed primarily by state funds. The following is a description of government funding programs that have been used to assist freight rail capital improvement projects.

Federal Programs

Local Rail Freight Assistance Program (LRFA)

The Local Rail Service Assistance program (now called the Local Rail Freight Assistance Program) was started after passage of the Regional Rail Reorganization Act (3-R Act) of 1973. The program was originally designed to provide temporary financial support (two years) for rail service continuation on lines not included in the newly created Conrail system. This would give rail users time to adjust to the loss of rail service and/or to find alternate transportation.

Through the years the program was changed and expanded providing about $25 to $30 million annually nationwide. However, after 1995 the program ceased being funded, although the program is still part of the Code of Federal Regulations (CFR). The applicable code provides the federal guidelines and regulations concerning Statewide Rail Plans. Therefore, although the LRFA program is no longer a source of funding, the rules governing planning for the program are still those used to guide the New Hampshire Statewide Rail Plan.

As stated previously, the purpose of the LRFA program was to provide rail service assistance funds to states in order to develop, promote, supervise and support safe, adequate and efficient rail freight transportation services.

The intent of Congress was that each state should:

1) Establish a state rail planning process that shall be based on a comprehensive, coordinated and continuing planning process for all transportation services within the state.

2) Preserve rail service when it is in the public interest.

3) Anticipate the impact of rail abandonments and assess the relative benefits of rail or highway system improvements.

4) Implement programs that invest in railroad projects that are justified on their own merit and/or cost-effective alternatives to other improvements.

With the lack of funding assistance now available through the LRFA, and the subsequent passing of the Transportation Equity Act for the 21st Century (TEA-21), the federal government has reduced support to the nation's railroad industry. The Railroad Rehabilitation and Improvement Financing Program and the Light Density Line Pilot Project Program are the two programs authorized in TEA-21 designed to support railroad infrastructure improvement projects.

The Railroad Rehabilitation and Improvement Financing Program (RRIF)

The Railroad Rehabilitation and Improvement Financing (RRIF) Program introduced under TEA-21 enables the Federal Railroad Administration (FRA) to provide loans and loan guarantees for railroad capital projects, including freight railroads, state and local passenger railroads and Amtrak. The purpose of the program is "to acquire, improve, or rehabilitate intermodal or rail equipment or facilities, including track, components of track, bridges, yards, buildings and shops, refinance existing debt, develop or establish new intermodal or railroad facilities." The RRIF program authorizes $3.5 billion, on a revolving basis, in direct federal loans and /or loan guarantees. Loans can have a term of 25 years with an interest rate that is essentially the cost of money to the federal government. RRIF loans are for railroad purposes only, but can be used for almost any rail purpose without any specific dollar thresholds.

RRIF loans must be accompanied by a "credit risk premium", i.e., a premium payment that insures the Government against default. Pursuant to TEA 21, Congress can appropriate funds to cover this credit risk premium, or the applicant or partner (private or government) may provide such funds. As Congress has not appropriated funds to cover the credit risk premium, it is up to each applicant to provide or obtain such funds. Many factors will be taken into consideration including credit worthiness of the applicant, collateral offered, or experience of other borrowers. It is expected that a credit risk of at least 5% will be required.

In making determinations for support under the program the Department of Transportation will give priority to projects that will

enhance public safety, improve the environment, promote economic development, help United States companies to be more competitive in international markets and preserve or enhance rail or intermodal service to small communities or rural areas.

The program has been bogged down by cumbersome, restrictive and unclear regulations. To date, the Department of Transportation has not granted assistance to any projects and as a result has committed to Congress that they will revamp the regulations to make the program more accessible.

Light Density Rail Line Pilot Project Program

The Light Density Rail Line Pilot Project program was authorized in TEA-21 to allow the US Secretary of Transportation to fund pilot projects that demonstrate the relationship of light density railroad services to the statutory responsibilities of the Secretary related to rail and highway transportation. The program would allow federal grants to be made to states with state rail plans, in order to fund pilot projects involving capital improvements to, and rehabilitation of, publicly and privately owned rail line and associated structures.

TEA-21 authorized $17.5 million a year for the program for 6 years. However, funding is authorized from the General Fund, which therefore will require funds to be made available in an Appropriations Act before the program can be implemented. To date funds have not been appropriated to implement this program.

State Programs

Since the demise of federal funding through the LRFA or any other freight oriented federal grant program, many states have developed programs of their own, using state funds, as a way to continue government support for the rail industry and continuing rail service. Across the nation many states have created Industrial Access programs. These grant or loan programs provide a method of supporting rail infrastructure investment that benefits the railroads and local industry by improving access to the rail system.

Each of the adjoining New England states has developed a program to support private rail operators and their infrastructure needs. New Hampshire should adopt a similar program. A summary of each of these programs is provided below.

Maine

The Maine Department of Transportation's Industrial Rail Access Program (IRAP) provides financial assistance for investment in rail or rail-related infrastructure located on, within or adjacent to the general railroad system. The program has awarded over two million dollars, funding 16 projects over 5 years. This public funding was made available through the federal Congestion Mitigation / Air Quality (CMAQ) program as well as state sources. The intent of the Program is: (1) to stimulate economic and employment growth through generation of new or expanded rail service; (2) to preserve essential rail service where economically viable; (3) to enhance intermodal transportation; and (4) to preserve rail corridors for future transportation uses.

Projects may fall into five categories: accelerated maintenance, rehabilitation, new siding improvements, right-of-way acquisition, or intermodal facility construction. IRAP will provide up to 50% of total eligible project cost and will provide funding assistance to private railroad companies, municipalities, counties, private enterprises that wish to avail themselves of rail freight transportation, and non-profit organizations.

Evaluation of the projects is based on the applicant's demonstration of the public benefits of the project. These benefits are to include transportation and logistics cost savings for rail users, employment and economic development opportunities for the rail community, positive benefit cost ratio, improvement of rail service levels and benefits to the general public.

Vermont

Vermont has a program in which the state partners with railroads and shippers to provide funding assistance for railroad projects. The Rail Siding Economic Enhancement Fund grant program calls for a match of funds among three entities; the state, the railroad and the shipper. This program allows the public funds to leverage private investment in the state's rail infrastructure. The program has been in existence in one form or another for over a decade. Although specific funding levels change each year, about $200,000 is approved each year resulting in $600,000 annually invested in necessary rail infrastructure.

Eligible projects can be any rail-related capital improvement that demonstrates a public benefit. Past projects have included the construction of sidings, loading docks and fuel transfer facilities. This

year a project being funded is the construction of a dust particle containment shed at a wood-burning electric generation facility.

Massachusetts

The Massachusetts Executive Office of Transportation and Construction (EOTC) has developed a program to make available state bond funds to implement freight rail system improvements. One to 2 million dollars will be made available during FY 2001. Since this will be the first year of the program it is unclear whether additional funds will be made available for coming fiscal years.

The funded projects must demonstrate a sustained public benefit to warrant the use of public funds. Examples of eligible projects include construction of public intermodal freight facilities, safety improvements, and new rights-of-way. Operating funds cannot be provided under this program.

Eligible recipients of funding must be public entities or public/private partnerships. In any case, a minimum of 25% local match is required with local matches in excess of 25% encouraged. In cases of public/private partnerships, the public entity must offer financial as well as functional project support.

Projects must demonstrate, and will be evaluated on, their support of regional plans and policies. Project proponents are strongly encouraged to develop freight rail projects that will create or strengthen intermodal freight transportation connections.

New Hampshire

The State of New Hampshire has been investing in the rail system through other programs and methods. State investment has included the purchase of rail lines and corridors, maintenance/rehabilitation of those state-owned lines and loans for projects on other lines.

Rail Line Revolving Loan Fund

Rail Line Revolving Loan Fund was established with state bond funds in 1993 and funded with additional money in 1997 (total funds $4 million). Loans are issued for up to 20 years for capital improvements to short line railroads. Projects funded through this program include:

- St. Lawrence & Atlantic Railroad track improvements
- New Hampshire Northcoast (heavier weight rail, bridge redecking, car repair shop, rehabilitation of three locomotives)
- Green Mountain Railroad (construction of an intermodal fuel facility)

- Mt. Washington Cog Railway (partial rebuilding of four coaches, fabrication of cog racks, rehabilitation of trestle piers)
- Plymouth and Lincoln Railroad (purchase and rehabilitation of locomotive and purchase of rail-mounted backhoe for track maintenance).

Special Railroad Fund

The Special Railroad Fund, established by RSA 228:68 and 69, provides that income from state owned rail lines be deposited in a dedicated fund and used for maintenance and repair of state owned rail lines. This fund is made up of user fees paid by the railroads (roughly $160,000/year) and lease and other payments made by other entities using railroad property (est. $90,000/year). In recent years this money has been used to purchase 3000-4000 ties per year for the active state-owned lines, repair bridges on Concord-Lincoln (3), Hillsboro (1), North Stratford-Beecher Falls (2) and Mountain Division (1), surface and line a portion of the Concord-Lincoln line, inspect most bridges on state-owned lines, clean ditches, remove brush and spray weeds. In addition, the operating railroads are required to maintain lines at their expense, at a set percentage of their revenues.

Line/Corridor Purchases

Line/Corridor Purchases is another method of rail system investment that the state has undertaken. The state has purchased rail lines that are likely to be or are in the abandonment process. Some of these lines have been leased to a railroad operator for continued service while others are being retained for future use. This process of rail line purchases has resulted in maintaining service on seven lines in the state.

State Bonds

State bonds were last authorized in 1995 and 1996 by the legislature for railroad repairs as part of the state's capital budget. These have contributed to tie replacement on the Concord-Lincoln and North Stratford-Beecher Falls lines and installation of heavier weight rail on the state owned portion of the Hillsboro Branch, to accommodate trains hauling stone.

Although the State has been assisting the rail system through the maintenance and rehabilitation of state-owned lines and the loan program for all other rail operators, other assistance programs should be considered. Many states throughout the country (PA, VA, GA, NC) have established Industrial Access Programs similar to those previously described. Through the construction of new sidings and business oriented infrastructure improvements, these programs either leverage private funds or provide economic development assistance to expanding

businesses in their state. Due to the multiple benefits this type of public investment provides to the state, development of a similar program should be considered in New Hampshire to maintain a competitive position in the region.

Table 3-3
Summary of Public Freight Railroad Funding Programs

Summary of Public Freight Railroad Funding Programs	
Program	Purpose
Local Rail Freight Assistance Program (LRFA)	Federal grant program to help fund freight railroad improvement projects. (No longer funded by Congress)
The Railroad Rehabilitation and Improvement Financing Program (RRIF)	Federal loan program designed to provide a method for freight railroads to finance needed improvement projects. (No loans made to date)
Light Density Rail Line Pilot Project Program	Federal grant program designed to fund improvements on light density rail lines. (No funds appropriated for program)
State Industrial Access Programs	State Initiated grant/loan programs focused on assisting railroads and shippers improve operations or access to rail. (Requires appropriation of state funds)

4

Rail Infrastructure Project Analysis

As previously noted there are no specific public grant programs dedicated to freight rail projects either from the state or federal government. Until such funds become available, detailed analysis of rail projects would not serve any meaningful purpose. However, the absence of funding does not mean that there are no rail infrastructure improvement projects that would provide a benefit to the state, the local communities and the railroads. A list of such projects has been developed that highlights some of the projects that have been identified by the state's rail operators that would benefit from governmental assistance. A screening process has been developed based on the FRA's Local Rail Freight Assistance Program as well as a cost/benefit methodology that could be implemented if federal funds became available.

Project Screening

Based on the Assumptions, Goals and Benefits developed for the New Hampshire Rail Planning Process, the following project screening criteria have been developed. In addition to these criteria, the project under consideration should be evaluated for local and regional benefits, including safety and environmental impacts that will result from the project.

Project Screening Criteria

A. The project is considered a sound investment based on a benefit/cost analysis. The benefit/cost analysis procedures employed will be the latest accepted USDOT/FRA methodology.

B. The project is on a line that is eligible for the Local Freight Assistance Program or other Federal funding. Eligible lines for the Local Freight Assistance Program include:
   1. Abandoned lines or lines with discontinued service, that had at least 20 carloads per mile in the previous year or a contract that guarantees at least 40 carloads per mile in each of the first 2 years following completion of the project.
   2. Lines carrying less than 5 million gross ton-miles per mile (MGTM/M) per year.

C. The project encourages businesses to continue or increase the use of rail service that results in effective utilization of resources, promotion of economic growth and development.

D. The project assists and promotes the continued viability of the private operator on the line.

Project Analysis

The following is a brief description of improvements to the state's rail system recommended by railroad operators that, after further development and analysis, would likely meet the project screening criteria detailed above.

St. Lawrence & Atlantic

Replacement of Bridge Timbers - Twenty-five bridges along the St. Lawrence & Atlantic Line are in need of bridge timber replacement. This bridge rehabilitation program is necessary to continue maintaining the 286,000 pound weight rating for bridges on the corridor. Although the line is not capable of handling 286,000 pound carloads presently, this maintenance project will minimize costs of upgrading the entire line to permit 286,000 pound carloads.

Construction of Rail Siding in Berlin - The railroad would like to construct a siding for a potential customer in Berlin. The customer, the largest automobile distributor in northern New England, is exploring the feasibility of receiving autos via rail. In order for this to be operationally feasible a siding, estimated to cost about $300,000, must be constructed. The construction of this siding would result in removing a considerable number of auto carrier trucks from the state's highway system.

Berlin Mills Railroad

Bridge Replacement - The railway needs to replace a bridge that has a weight limit of 70,000 pounds. The weight limit on this bridge and substandard curvature on the approach, which all cars must pass over to

connect with the St. Lawrence & Atlantic, limits the operations of the branch, thereby increasing labor and freight costs to the customer. Replacement of the bridge would cost about $1.2 million.

New Hampshire Northcoast

Rehabilitation of Conway Branch - The New Hampshire Northcoast would like to re-establish their connection to the north along the Conway Branch. The state is considering and assessing the purchase of the line between Ossipee and Conway.

Rochester Intermodal Facility - The New Hampshire Northcoast would like to improve an industrial park / rail facility in Rochester. This 46-acre site presently serves a number of rail customers and is poised to become a growing transportation hub for future business development due to exceptional highway and rail access.

New Hampshire Central Railroad

The New Hampshire Central is in need of about $200,000 to construct storage tracks in North Stratford. These storage tracks will be necessary for interchanges with the St. Lawrence & Atlantic as a result of increased fuel oil traffic due to the new construction of a fuel oil transfer facility on the line.

Green Mountain Railroad

The Green Mountain Railroad is looking to upgrade the track in the freight yard and rate the bridge structure across the Connecticut River to accommodate heavier loads. The increase in weight limits would improve operational effectiveness and thus profitability while removing more trucks from the area roadways.

State-Owned Lines

Additional infrastructure improvements are necessary on active state-owned lines. The NH DOT works closely with the railroads to maintain and repair the lines within the available resources. The railroads provide routine maintenance as part of their contract with the state, and in addition pay user fees that are reinvested into maintenance. There are needs well beyond the available resources, however. The following is a summary of infrastructure improvement needs that can not be accommodated through the special railroad fund. These estimates have

been determined through state field inspection, a bridge inspection program and information from the operating railroads.

Concord -Lincoln Line

Tie replacement (75,000 ties)	$4,600,000
Ballast, surface and line track	744,000
Bridge and culvert repairs	945,000
Other (ditching, brush cutting, etc)	260,000
	$6,549,000

Mountain Division

Tie replacement (32,000 ties)	$1,935,000
Ballast, surface and line track	498,000
Bridge and culvert repairs	925,000
Other (ditching, brush cutting, etc)	212,000
	$3,570,000

Hillsboro Branch

Tie replacement (2,150 ties)	$130,000
Install heavier rail	81,000
Ballast, surface and line track	45,000
Bridge and culvert repairs	205,000
Other (ditching, brush cutting, etc)	15,000
	$476,000

Berlin and Groveton Branches

Tie replacement (36,000 ties)	$2,160,000
Install heavier rail	746,000
Ballast, surface and line track	438,000
Bridge and culvert repairs	425,000
Other (ditching, brush cutting, etc)	228,000
	$3,997,000

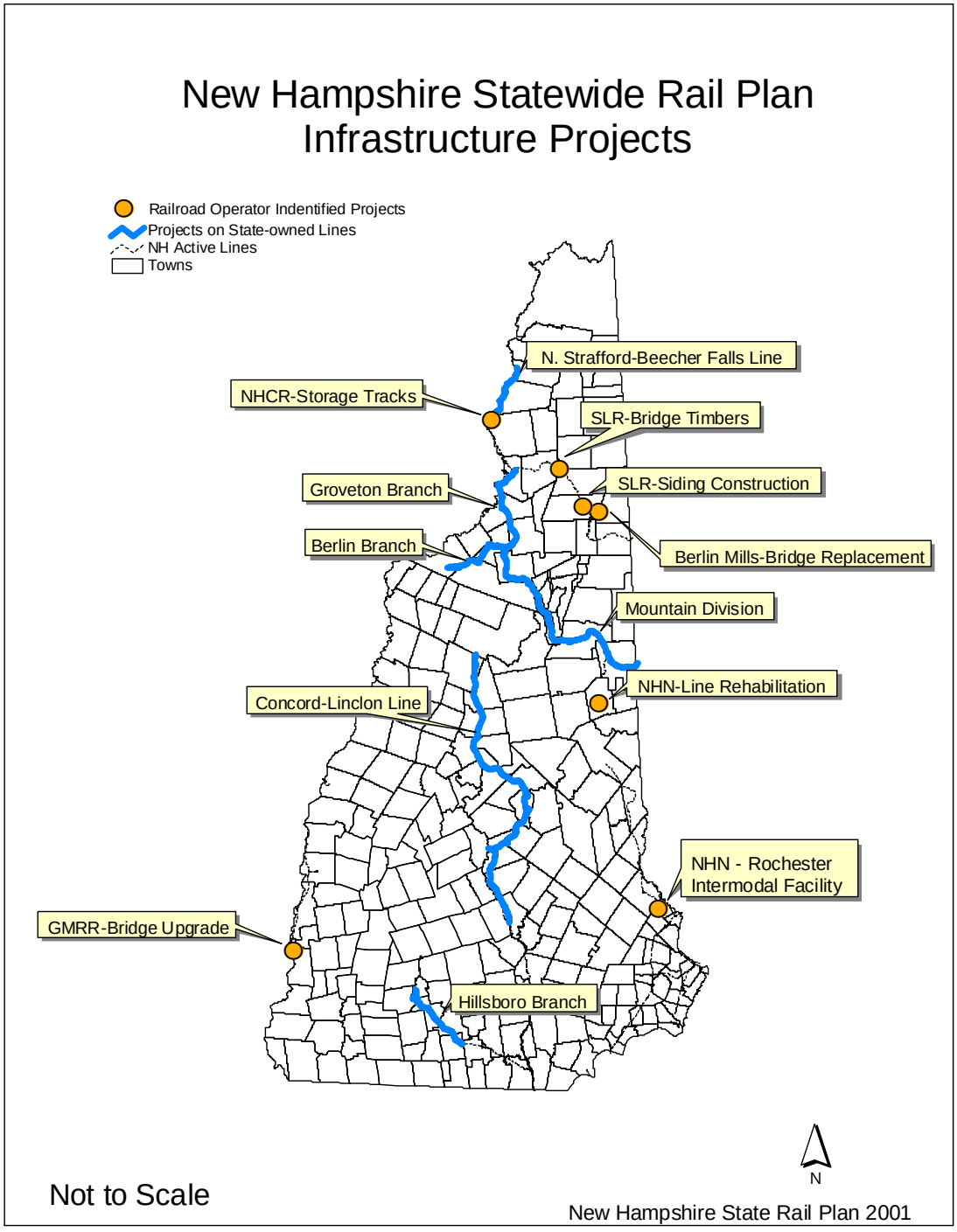
North Stratford-Beecher Falls Line

Tie replacement (9,500 ties)	$570,000
Install heavier rail	230,000
Ballast, surface and line track	200,000

Bridge and culvert repairs	117,000
Other (ditching, brush cutting, etc)	31,000
	$1,148,000

As mentioned previously, the clearance for double stack container trains and improvements to allow the passage of heavier carloads is important on certain rail lines in the state. These initiatives would result in a stronger statewide rail system and should be seriously considered. Although estimates have not been developed for all infrastructure constraints some have been developed. The investment of about $1.5 million in heavier rail on the St. Lawrence & Atlantic Line would result in allowing passage of 286K pound carloads. About $1.3 million is needed to clear double stack restrictions along the New Hampshire section of the Connecticut River Line. Additional project estimates for each line could be developed once funding opportunities are identified.

Figure 4-1
Infrastructure Projects



5

Future Studies

Rail planning is an important component of the state's overall transportation planning process. Based on the economic significance of the state's 459 mile rail system, it is important to plan for and maintain an efficient and effective rail system. This system differs from other transportation modes in the state because it relies almost exclusively on private operators for its operation and thus requires a coordinated effort between public and private entities to maintain an efficient system.

Aside from providing financial assistance, public agencies can assist in coordination and planning to help guide the development of the system so that all parts are working together efficiently. The best way the state can do this is to conduct planning studies on ways to improve the rail system. The following planning activities would benefit the statewide transportation system, the rail program and transportation planning locally, regionally and statewide by addressing policy and implementation issues.

Statewide Passenger Rail Plan

A Statewide Passenger Rail Plan should be developed that examines the passenger rail service needs of the various regions in the state, including commuter rail, intercity service and excursion service. This plan should examine the feasibility of each of the passenger rail initiatives across the state to determine their costs, benefits and funding feasibility. Such a plan would result in a coordinated statewide passenger rail network development strategy. The state could then establish priorities for developing passenger rail service and address institutional, funding and other issues in passenger rail development.

Rail Corridor Preservation Guidelines

Due to growth in the number of rail corridors and mileage owned by public entities in New Hampshire, it would be beneficial to all

stakeholders (trail users, railroad and transportation planners, property managers, public officials, and local communities) if rail corridor preservation guidelines were developed. These guidelines should address interim use guidelines, property management, ownership and use responsibilities, improvement standards, and criteria for crossings, easements or utility uses. An inventory of the publicly owned rail corridors in the state should also be included.

286,000 Pound Carload Improvements

A coordinated effort with the state rail planners in the region and railroads to develop an implementation plan for improving the region's rail system to accommodate heavier rail cars should occur. This coordinated effort would ensure that timing and funding of improvement projects would be conducted in a manner that would provide a real benefit to the state and regional rail system. The focus on improvements would be on the St. Lawrence & Atlantic, New Hampshire Main Line and the Connecticut River Line all of which are the highest priority lines.

Double Stack Clearance Improvements

The State should develop a financial and implementation plan to assist railroads in the removal of impediments to double stack clearance on their rail lines. This effort should be focused on the highest priority lines, which are the Main Line West and the Connecticut River Line. A planning effort will be necessary in the future to ensure that all branch lines that would benefit from double stacked intermodal container traffic are capable of receiving that traffic.

Railroad Assistance

Although the State has been assisting the rail system through the maintenance and rehabilitation of state-owned lines and the loan program for all other rail operators, other assistance programs should be considered. Many of the lines in the state suffer from deferred maintenance over a long period and require significant support for continued operation. Although the assistance given is significant and necessary, it is still only a portion of what is needed for a healthy rail system.

Many states throughout the country (ME, MA, VT, PA, VA, NC, GA) have established Industrial Access Programs as a way to fill the gap left by the lack of federal support. Through the construction of new sidings and business oriented infrastructure improvements, these programs

either leverage private funds or provide economic development assistance to expanding businesses in their state. New Hampshire should develop a similar program so that its industries can remain competitive in the region. The development of such a program would require the state legislature to establish a dedicated funding mechanism to support the program. The state can also assist with marketing and can provide information to cities and towns on railroad issues.

Regional Rail Plan

The state of New Hampshire should coordinate its rail planning efforts with the surrounding states. Due to the size of the New England states and the connectivity of the rail system, it is essential to consider rail issues across state lines. It is recommended that the State of New Hampshire initiate a regional rail planning effort focusing on freight rail issues. Through such a planning effort, regional issues, such as double stack clearance, 286,000 pound carloads and interstate improvement projects, could be evaluated and coordinated.

Appendix A

State Rail Map


STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION
BUREAU OF RAIL AND TRANSIT
(Revised 1-29-01)
N
Railroad by Owner and Type
BOSTON & MAINE CORP.
N.H. NORTHCOAST CORP
NEW ENGLAND CENTRAL
ST. LAWRENCE & ATLANTIC
STATE OF NH
OTHER Short Line
STATE OF NH Inactive
OTHER Abandoned
State Line
County Line
Town Line
N.H.S.
Water Bodies
Printed on February 21, 2001

Appendix B

Public Participation

Public participation has been an important aspect of developing the New Hampshire State Rail Plan. Input from the public, regional planning commissions and the operating railroads has been actively sought. The principal method of gathering input from the public has been through public informational meetings held throughout the state. Each of these meetings, hosted by a regional planning agency, was arranged to disseminate information regarding the project as well as to hear the issues of the public and the state's regional planners. These public meetings were held at the following times and locations:

Sept. 19	Southern NH Planning Commission
Oct. 24	North Country Council
Nov. 21	Lakes Region Planning Commission
Dec. 19	Seacoast Metropolitan Planning Organization
Jan. 17	North Country Council

In addition, the New Hampshire Department of Transportation held a public hearing on the Statewide Rail Plan on Feb. 22, 2001 from 7-9 p.m. at the Legislative Office Building in Concord, with a draft rail plan available from the department prior to the hearing.

Attendees included representatives of the railroads, the department, regional planning commissions, and other interested parties. Written comments, for those unable to participate in any of the public meetings, were also accepted throughout the process and incorporated where appropriate.

Appendix C

■ FRA State Rail Plan Regulations

Code of Federal Regulations
Title 49, Part 266.15
As revised June 24, 1983

TITLE 49--TRANSPORTATION

CHAPTER II--FEDERAL RAILROAD ADMINISTRATION, DEPARTMENT OF TRANSPORTATION

PART 266--ASSISTANCE TO STATES FOR LOCAL RAIL SERVICE UNDER SECTION 5 OF THE DEPARTMENT OF TRANSPORTATION ACT--Table of Contents

Sec. 266.15 Requirements for State Rail Plan.

(a) State planning process. The State Rail Plan shall be based on a comprehensive, coordinated and continuing planning process for all transportation services within the State and shall be developed with an opportunity for participation by persons interested in rail activity in the State and adjacent States where appropriate. At a minimum, the State shall hold a public hearing if, on the basis of reasonable public notice appearing in the press, there is sufficient public interest to justify a hearing. Public notice shall be given, in accordance with applicable State law and practice concerning comparable matters, that a draft of the State Rail Plan is available for public inspection at a reasonable time in advance of the hearing. The State shall enable local and regional governmental bodies to review and comment on appropriate elements of the State Rail Plan. Provisions shall also be made for updating, revising, and amending the State Rail Plan.

(b) Format of the State Rail Plan. Each item submitted in response to a requirement of this section shall reference that requirement by subsection, paragraph, and subparagraph.

(c) Contents of the State Rail Plan. Each State Rail Plan shall:

(1) Specify the objectives of the State's Rail Service Assistance Program and explain how the implementation of the State Rail Plan will accomplish these objectives and explain relevant data sources, assumptions, analytical methodology, other legal constraints and special problems or conditions which will aid the public in understanding the State Rail Plan;

(2) Contain an illustration of the State's entire rail system on suitable scale maps of the State highway system (such as a reduction of the County Highway Planning Series of maps), designating with respect to each line listed under subparagraph (3) of this subsection, including all lines connecting to them:

(i) The operating carrier or carriers;

(ii) Freight traffic density, and

(iii) Location of passenger service.

These maps shall be accompanied by a written description of the service provided on each line;

(3) Identify the following classes of rail service within the State:

(i) Lines in the State which are eligible for assistance under Sec. 266.7 of this part other than those included in paragraph (c)(3)(ii) of this section;

(ii) Lines in the State which a common carrier has identified on its system diagram map submitted under 49 CFR 1121.20(b) (1) and (2) as potentially subject to abandonment and lines which are anticipated to be the subject of an abandonment or discontinuance application within three years following the date of submission;

(iii) [Reserved]

(iv) Lines in the State for which abandonment or discontinuance applications are pending;

(v) Lines in the State which are involved in the following kinds of proposals that have been submitted to the Commission for approval or are in the process of negotiation, to the extent that this information is publicly available:

(A) Mergers;

(B) Consolidations;

(C) Reorganizations;

(D) Purchases by other common carriers; or

(E) Other unification and coordination projects.

(vi) Rail projects for which the State plans to request Federal assistance or approval as in-kind benefits; and

(vii) Rail projects for which a State provides or plans to provide assistance from sources other than the Rail Service Assistance Program, including the estimated cost of the projects;

(4) Establish and describe screening criteria to be used in selecting the eligible lines which the State analyzes in detail, identify these lines, and explain how the application of the screening criteria resulted in their selection;

(5) Describe the State's methodology for determining the ratio of benefits to the costs of proposed projects eligible under Sec. 266.7 of this part (except projects to be funded with rail service continuation assistance);

(6) Include, to the extent that the information is available to the State, the following data for each line the State has selected to analyze in detail:

(i) Annual freight tonnage and carloads segregated by commodity type and indicating any seasonal traffic fluctuations and the number of shippers and receivers on the line aggregated by type (e.g., grain elevator, power plant, heavy manufacturing), including identification of information which a shipper wishes the Administrator to consider confidential to the extent permitted by law;

(ii) Revenues and costs of providing rail freight service on the line;

(iii) Condition of the related rail facilities and equipment, and for a line eligible under Sec. 266.7(b) of this part, a description of the particular rail facilities involved in any project a State may be considering on the line;

(iv) When the State is considering a line for rail service continuation assistance, projections of freight traffic needs on the line for at least the three succeeding calendar years and estimates of the amount and type of equipment, the condition of the rail facilities, and the level of service necessary to satisfy the projected traffic needs as well as estimates of the revenue and costs of providing this service; and

(v) When the State is considering a project eligible under Sec. 266.7(b) of this part, the amount of funds expended for the maintenance of the line and the kinds of work performed during the five year period preceding its eligibility.

(vi) When the State is considering a line for rail banking, a description of the line's future economic potential, such as the

existence of fossil fuel reserves or agricultural production likely to be served;

(7) Describe the alternatives which the State will analyze in applying the methodology described in paragraph (c)(5) of this section, such as: Rail service continuation payments, rehabilitation or improvement, acquisition, rail facility construction, potential for moving freight by alternate modes, or abandonment or discontinuance of rail freight service;

(8) Apply the methodology described in paragraph (c)(5) of this section to each line the State has selected to analyze in detail;

(9) Specify the State's decision regarding the alternative selected for each line the State has analyzed in detail and include the following:

(i) An indication of whether Federal assistance will be requested or other funds will be used to implement the alternative selected;

(ii) An identification of lines which may be affected by the alternative selected;

(iii) An explanation of how the alternative selected contributes to the accomplishment of the State's objectives as stated in paragraph (c)(1) of this section; and

(iv) A statement of the projected future of the line after the alternative selected is implemented and the line is no longer eligible for rail service continuation assistance under Sec. 266.7(a) of this part or after the payback period used in the State's benefit-cost analysis, whichever is appropriate;

(10) Describe the planning process participation of local and regional governmental bodies, the railroads, railroad labor, rail service users, and the public in general;

(11) Describe the overall planning process for all transportation services in the State; and

(11A) Indicate how the overall planning process in the State addresses the need to improve national energy efficiency, reduce the national use of petroleum and natural gas, and increase the national use of coal.

(12) Include a program of projects which identifies the projects for which the State expects to submit applications and the anticipated submission date. The program shall group the proposed projects in the order they comply with the State's criteria and goals for assistance, and shall:

(i) Identify the type of project (i.e., rail service continuation payments, acquisition, rehabilitation or improvement, rail facility construction, or substitute service), its location, and duration; and

(ii) Include the anticipated amount of funds to be requested for each project:

(d) Updates, revisions, and amendments of the State Rail Plan--(1) General. As provided for in paragraph (e) of this section, State Rail Plans shall be updated at least on an annual basis but may be revised more frequently at the discretion of the State in accordance with its program needs. Such updates shall be subject to the same review, public participation and approval procedures by the State and FRA as the original State Rail Plan.

(2) Contents. Annual updates shall include the following:

(i) A response to unanswered FRA comments on previously submitted updates, revisions, amendments, or the original State Rail Plan;

(ii) An update of information in previous submittals which is no longer accurate as a result of plan implementation, action by a governmental entity or railroad, or changed conditions;

(iii) For lines receiving rail service continuation assistance, inclusion of revenue and cost information from the past year's operating experience and a reevaluation of service based on these new data;

(iv) Updating of the maps and descriptions required under paragraph (c)(2) of this section;

(v) Analysis of any new projects developed by the State in accordance with paragraphs (c)(4), (5) and (6) of this section;

(vi) Changes in agency responsibilities and authority including ability to provide the non-Federal share; and

(vii) Revisions in the State's policies, objectives or long-range expectations.

(e) Adoption and submission of State Rail Plan and annual updates. An original and five copies of the State Rail Plan, and any amendments, revisions, or updates shall be submitted to FRA for review and approval with a certification by the Governor, or by the Governor's delegate, that the submission constitutes the State Rail Plan established by the State as provided in section 5(j) of the Act. The State Rail plan, and all amendments, revisions, and updates shall be submitted to the FRA through the appropriate Federal Highway Division Office. A current list of mailing addresses of the above offices will be provided by FRA to each State.

(f) Review of the State Rail Plan and Updates. The State Rail Plan and all amendments, revisions, and updates shall analyze in accordance with this section all projects for which the State anticipates requesting rail service assistance, other than planning assistance, during the fiscal year. In accordance with Sec. 266.17(b) of this part, a project for which funds are requested must have been addressed in a previously approved State Rail Plan or update. If the Administrator determines that the State Rail Plan or update is not in accordance with this part, the Administrator will notify the State in writing setting forth the Administrator's reasons for such a determination.

[44 FR 51129, Aug. 30, 1979, as amended at 45 FR 58038, Aug. 29, 1980; 48 FR 29274, June 24, 1983]

Appendix D

■ Benefit-Cost Methodology[2]

BENEFIT-COST METHODOLOGY FOR PROJECTS UNDER THE LOCAL RAIL FREIGHT ASSISTANCE PROGRAM

BACKGROUND AND INTRODUCTION

The Local Rail Service Reauthorizing Act of 1989 amended Section 5 (n) of the Department of Transportation Act (Act), to require that:

> "The Secretary, no later than July 1, 1990, shall establish a methodology for calculating the ratio of benefits to costs of projects proposed under subsection (b), taking into consideration the need for equitable treatment of different regions of the United States and different commodities transported by rail. The establishment of such methodology shall be a matter committed to the Secretary's discretion."

Section (c) (2) of the Act was also amended as follows:

"No projects shall be provided rail freight assistance under this section unless the ratio of benefits to costs for such project, calculated in accordance with the methodology established by the Secretary under subsection (n), is greater than 1.0."

This methodology has been established and published in response to the Act's directive. It is to be used for calculating the benefit-cost ratios of all projects for which assistance is requested under Section (b) of the Act. These projects include acquisition of a line of railroad or other rail property, rehabilitation or improvement of rail properties and construction of rail or rail related facilities.

The foundation for much of this methodology was provided by two earlier FRA documents: Benefit-Cost Guidelines Rail Branch line Continuation Program (February 1980) and FRA Simplified Benefit-Cost Methodology (May 1982). Also, the twenty State methodologies that have been approved by the FRA were each reviewed, both to identify common elements and to identify individual State approaches to issues that might have been overlooked in the earlier FRA documents.

An example of the result of this review process is the inclusion in this methodology of the avoidance of increased highway maintenance costs as a legitimate secondary benefit of a rehabilitation project that prevents a rail line abandonment. Neither of the earlier FRA documents addressed this issues although 35 percent of the States submitting methodologies did. Most of the potential projects in these States were on branch lines in

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[2] Published by the Federal Railroad Administration, July 1990

rural/farm areas where it could be expected that significant diversion of traffic onto farm to market secondary roads would indeed create the need for increased maintenance on those roads.

Inclusion in the methodology of this feature also complies directly with the Act's requirement that the Secretary take into consideration "…the need for equitable treatment of different regions of the United States and different commodities transported by rail."

THE BENEFIT-COST METHODOLOGY

General. The following sections present, in a step by step fashion, the benefit-cost methodology to be used for analyzing local rail freight assistance projects. The methodology and the steps included herein have been developed as the minimum with which the analyst must comply if the benefit-cost analysis is to meet the statutory requirements discussed earlier.

The analyst or other reader who is interested in learning more about the economic theory behind benefit-cost analyses in the local rail service area and/or the various techniques available for gathering and analyzing information is referred to the FRA's February 1980 Benefit-Cost Guidelines Rail Branch Line Continuation Program, and to the FRA's July 1978 Rail Planning Manual, Volume II: Chapter 2, "Light Density Lines".

It is important that the data underlying the benefit-cost analysis be reasonably current and data over three years old should not be considered valid, except where:

1. It is part of a historical time series of data that has an end date within three years prior to submission of the data, or:

2. An explanation accompanies submission of the data as to why it can reasonably be expected to reflect current conditions.

A benefit-cost analysis of a candidate rail freight assistance project must complete the following steps:

1. Establishing the project alternative;

2. Determining the project costs;

3. Determining the null alternative;

4. Using the standard planning horizon;

5. Using the FRA published discount rate;

6. Calculating transportation efficiency benefits;

7. Calculating secondary benefits;

8. Calculating salvage value;

9. Calculating the benefit-cost ratio.

Each of these steps is discussed in detail in the sections which follow.

Establishing the project alternative. The analyst must begin by identifying the problem, determining the possible solutions to the problem, comparing those solutions to each other and choosing which one (or more) to define as a "project" for purposes of performing the benefit-cost analysis or analyses. The project must meet one of the statutory eligibility criteria which are (1) acquisition of a line of railroad or other rail property, (2) rehabilitation or improvement of rail properties, or (2) construction of rail or rail-related facilities.

Table 1 presents in a summary fashion, for each of the eligible project alternatives, the type of indications that would lead the analyst, to choose that alternative for evaluation. It also presents categories of benefits and costs to be used in comparing various project alternatives with various null alternatives.

Determining the project costs. In most cases, the project cost will be equal to the cash and in-kind outlays used to build and implement the project, exclusive of financing costs. Since the analysis is from a public perspective, the source of funds or the financing arrangements have no bearing on the project cost. It is important to include the costs covered by shares paid in cash or in kind by the Federal Government, the State, the railroad, local governments, shippers (for the purpose of this methodology shippers also includes receivers), or anyone else contributing to the project. If costs will occur in future years, such costs should be discounted to a present value.

In some cases, there will be more to the project than just the direct cash and in-kind investments. For example, when the project alternative is rehabilitation and the null alternative is abandonment, the project cost should include the net liquidation value of the existing line. This is because the materials and land tied up by the line could be released for other purposes if the project were not undertaken. Similarly, any project which uses existing resources that under the null alternative would be sold must include the value of those resources as part of the project cost. Conversely, when the project alternative is rehabilitation and the null alternative is continued operation on poor track, then the value of any material taken up during the rehabilitation and used elsewhere (e.g., light rail which is used on other lines in the railroad's system) should be subtracted from the cost of the rehabilitation project.

Determining the null alternative. Although seeming to be self evident, this step is as important as any in the process. The null alternative represents the analyst's best estimate as to what will happen if the project is not undertaken, and is the alternative against which any candidate project must be compared in the benefit-cost analysis. Possible null alternatives to various types of projects are shown in Table 1.

Chapter 2 of the Rail Planning Manual provides considerable information on data collection techniques and methods to assist the analyst in determining the null alternative.

Using the standard planning horizon. This is the number of years over which the benefits and costs of the project will be considered. The FRA has determined that for local rail freight assistance projects the appropriate planning horizon is ten years, and that horizon is to be used in all benefit-cost analyses in support of project applications.

Using the FRA published discount rate. The discount rate to be used each year in benefit-cost analyses will be published annually by the FRA after funds for the Local Rail Freight Assistance Program have been appropriated. Normally, that will be at the

same time as the FRA sends to the States the solicitation for applications for projects to be funded with that year's appropriation.

The published discount rate will be based upon the Federal Government's cost of borrowing (determined by the interest rate on 10 year obligations) less that element of the cost of borrowing that is estimated to represent expectations as to inflation.

Because the discount rate to be used will not include an inflation component, all forecasts of cost and benefits included in the analysis are to be in constant dollars.

Calculating transportation efficiency benefits. Transportation efficiency benefits are those which are a direct effect of the project alternative being considered. Much of the information used to calculate transportation efficiency benefits must, of necessity, be provided by railroads and/or shippers. To the extent permissible under law, any information considered commercially sensitive will be protected. Any information submitted with or as part of a benefit-cost analysis which the State wants to be treated confidentially should be clearly and specifically so identified.

Refer back to Table 1 for examples of the types of transportation efficiency benefits to be achieved under various combinations of project and null alternatives. Because the alternatives and the circumstances attendant to the alternatives will vary in each case, so will the procedures used to calculate the transportation efficiency benefits. Various procedures and formulas are presented in the Benefit-Cost Guidelines for Local Rail Service Assistance. The procedures described here for the two most common sets of alternatives will allow for estimation of these benefits using readily available data. The two sets of alternatives discussed here are:

(1) The null alternative is abandonment and the project alternative is rehabilitation.

(2) The null alternative is continued operation and the project alternative is rehabilitation.

In the majority of other eligible project alternatives, the procedures discussed here will still be relevant if the words "acquisition" or "construction" are substituted for "rehabilitation" in the following discussion.

In describing the calculation of benefits, the terms "base traffic" and "incremental traffic" will be used often. Base traffic is the amount of traffic that would be shipped under both alternatives, by whatever mode. Incremental traffic is the amount of traffic that would be shipped under the project alternative, but not under the null alternative. For example, incremental traffic includes new traffic that the shipper chooses to produce and ship under the project alternative, but which would neither be produced nor shipped under the null alternative. Incremental traffic may also simply consist of traffic saved from extinction by preventing an abandonment that would put a shipper out of business. In many cases, incremental traffic will be zero.

The calculation for determining the transportation efficiency benefits of the first set of alternatives (rehabilitation vs. abandonment) is as follows:

Transportation efficiency benefits resulting from implementing the project alternative	= Reduced Transportation cost to the shipper on base traffic plus Profits earned by the shipper in producing, shipping and selling incremental traffic plus (minus) Branch line operating profits (losses)

Table 2 presents a worksheet format for calculating transportation efficiency benefits for this set of alternatives. As an example of the calculation in a simple case, assume that under the project alternative (a rehabilitated branch line), the only business on the line will manufacture and ship 3,000 tons by rail at a rate of $5.00 per ton; that under the null alternative (abandonment), the shipper will only manufacture and ship by truck 1,000 tons at a rate of $10.00 per ton; that in manufacturing, shipping and selling the additional 2,000 tons under the project alternative, the shipper, earns an additional profit of $5,000; and that under the project alternative railroad on- and off-branch operating costs exceed attributable revenues by $4,000. Then,

Reduced transportation costs to shipper on base traffic	= (1,000 tons) x ($10.00 -$5.00) = $5,000
Profits earned by the shipper on incremental traffic	= $5,000
Branchline operating losses	= $4,000
Net transportation efficiency benefits	= $5,000 + $5,000 - $4,000= $6,000

The example presented above is purposefully a simple one, and real world variations will undoubtedly present the analyst with complications. A more complex example is presented in the Appendix. Additionally, some of the differing circumstances that may arise are discussed below.

(1) The line may have more than one business and / or commodity using its services. If so, the reduced transportation costs to the shipper on base traffic and the profits earned by the shipper on incremental traffic would have to be computed separately for each commodity and business and then summed.

(2) Forecasted continued operation of the line at a deficit may result in surcharges. Such surcharges should be included in the rate paid under the project alternative.

(3) The approach presented here requires the analyst to establish the on- and off-branch operating costs and attributable revenue for the branch line. The Interstate Commerce Commission abandonment procedures, 49 CFR 1152, Subpart D (Standards for Determining Costs, Revenues and Return on Value), provide a methodology for calculating on- and off-branch operating costs as well as attributable revenue. If appropriate data are not readily available from the railroad(s), the analyst will need to study the line operation and develop data using appropriate unit costs.

(4) This approach assumes that the rate charged by an alternate mode is equal to its cost to provide service (including a return on investment). That assumption is

necessitated by the fact that little or no information is normally available to allow the analyst to calculate alternate mode costs with any reasonable accuracy. If information is available to show that the alternate mode's rate is different than its cost to provide services, appropriate adjustments should be made (as were made by considering the operating income or loss attributable to the branch line).

(5) In the above example, a simple assumption is made about the profits earned by the shipper on incremental traffic. In reality, that information may not be easily obtained and will require cooperative dialogue with the shipper(s) or potential shipper(s) involved, as well as some independent confirming evaluation by the analyst. However, since it is in the shipper's self interest to have lower transportation rates, and thus higher profits, he should be motivated to cooperate.

In the second set of most commonly seen alternatives (rehabilitation versus continued operation), calculating the benefits involves estimating decreases in rail line operating costs for current traffic and estimating benefits of any newly generated traffic. If tariffs will remain the same under both alternatives, the benefits will normally be simply increased operating income for the branch line as a result of decreased operating costs. Table 3 provides a worksheet format for calculating and recording transportation efficiency benefits under this scenario. Occasionally, improved service as a result of rehabilitation may attract incremental traffic to a line even if there is no tariff decrease. In those cases, the increased profit to the shipper(s) of producing, shipping and selling that incremental traffic should be included. However, the analyst should verify that the shipper(s) commitment to provide the incremental traffic is real and will not vanish after the rehabilitation is finished.

If the operating cost savings resulting from the rehabilitation translate into lower tariffs as well as (or perhaps instead of) increased branch line operating income, or if the rehabilitation keeps tariffs from rising, then there will be shipper related benefits and the situation will be similar to the rehabilitation versus abandonment set of alternatives and should be handled according to the worksheet format shown in Table 4. It is important that the analyst track closely the savings in this case, from operating cost savings to either increased branch line profits or rate reductions, and thus benefits to the shipper(s), so as to avoid double counting of benefits.

Calculating Secondary Benefits. Secondary benefits are those which are an indirect consequence of the project alternative being evaluated and normally reflect temporary dislocations that will be avoided by implementing the project alternative rather than allowing the null alternative to occur. The analyst should identify secondary benefits and quantify them for each year in the planning horizon, including all offsets, taking care to avoid double counting and the inclusion of transfer payments. If in the course of searching for and identifying secondary benefits, the analyst determines that they do not warrant consideration, then they need not be quantified and included in the analysis. However, a statement to that effect should be included.

In calculating secondary benefits, the analyst should take a Statewide and not a local perspective. Thus, for example, if a plant is expected to close as a result of a rail line abandonment, it is important to know what alternatives the plant's owner might pursue, if any. If the owner intends to relocate that plant's production to another part of the State, then the local employment and other impacts should not be included in the analysis, since they will be offset at the new location. If the owner intends to relocate out of State, then these impacts should be included. This pertains also to any tax revenues

lost to the State or local community as a result of the plants relocating out-of-state. In either case, the business relocation costs should be included in the analysis.

Typical secondary benefits to be addressed include:

(1) Relocation Expenses. If rehabilitation of a line prevents abandonment of that line and a shipper thus avoids moving his business elsewhere, the relocation costs saved are secondary benefits of the rehabilitation alternative. Information and data to quantify these benefits must be obtained through cooperative dialogue (or surveys) with the shipper(s) involved, and independent confirming evaluation by the analyst. Typical relocation expenses might include (but are not limited to) the cost of moving equipment and inventory, the cost of moving key employees and the cost of breaking a lease at the old location. In addition to relocation, shippers might have other alternatives, including changing markets. If so the avoidance of the costs of turning to those alternatives should be quantified as benefits.

(2) Unemployment. If the abandonment alternative would result in people losing their jobs, then the value of the wages earned by those people under the rehabilitation alternative constitutes a secondary benefit, but only for the length of time that they would have been unemployed under the abandonment alternative. The analyst must establish that period, beginning with data available from the State unemployment office as to unemployment rates and the length of time that people in the local area (usually on a county basis) pursue unemployment claims. Care must be taken to keep the unemployment analysis reasonable. Inclusion of jobs lost beyond the shipper, railroad and secondary jobs that can be specifically identified as resulting from the abandonment should be avoided.

    Because the benefit-cost analysis is to be conducted from a State wide perspective, unemployment compensation should not be deducted from the lost wages, since within the boundaries of the State, unemployment compensation is a transfer payment. Additionally, the analyst should take into account as an offset the value of any jobs created by the abandonment alternative (e.g. trucking industry jobs if there is a significant movement to that mode). On the other hand, the value of new jobs created by the project alternative is an additional benefit if those jobs are filled by people who would otherwise remain unemployed.

(3) Highway Impacts. At some point, diversion of traffic l from rail to truck may become significant enough to result in increased maintenance needs on the local road and highway system. Another highway related impact to be considered is increased air pollution. While increased highway maintenance costs and air quality impact may be difficult to quantify, they are legitimate secondary benefits.

    It should not be forgotten that traffic diversion significant enough to increase road and highway maintenance costs also implies offsets to the benefits achieved by avoiding that maintenance. Offsets to be taken into account at the appropriate steps in the analysis include any increased trucking industry employment (discussed earlier) and increased road and use tax revenues, such as fuel taxes and vehicle registration fees.

Calculating salvage value. The salvage value for the last year in the planning horizon should be calculated. In cases where the value of the entire line was used in the project cost, the salvage value of all materials in the line, i.e. the line's net liquidation value, would be used here. If the project cost represents only those capital improvements put

in place by the project, it is the salvage value of only those capital improvements that would be used here.

Calculating the benefit-cost ratio. Using the FRA published discount rate, calculate the present value of the benefits (see Table 5 for an example format). The sum of the present values of the benefits should then be divided by the project cost to determine the benefit-cost ratio. In the case of a phased project, the present value of future project costs should be added to current year costs.

Table 2

Calculation Sheet for Transportation Efficiency Benefits
Null Alternative = Abandonment
Project Alternative = Rehabilitation

Item	Amount Per Year
1. Reduced transportation cost to the shipper on base traffic as a result of the rehabilitation.	_____
2. Shipper's profit on incremental traffic (traffic that would not move without the rehabilitation)	_____
3. Branch line projected operating profit (loss) after the rehabilitation	_____
4. NET TRANSPORTATION EFFICIENCY BENEFITS (add lines 1, 2, and 3)	_____

NOTES:

1. Reduced transportation cost on base traffic = Quantity shipped in null D alternative x (rate per unit in null alternative minus rate per unit in project alternative).

2. Shipper's profit on incremental traffic should be determined by cooperative dialogue with the shipper and evaluated for reasonability by the analyst.

3. Branch line projected operating profit (loss) = Branch line projected attributable revenue minus projected off-branch costs minus projected on-branch costs (excluding return on value).

Table 3

Calculation Sheet for Transportation Efficiency Benefits
Null Alternative = Continued Operation
Project Alternative = Rehabilitation

Note: Rates are Reduced Under Project Alternative (or are kept from rising)

Item	Amount Per Year
1. Branch line operating profit after rehabilitation	_____
2. Branch line operating profit before rehabilitation	_____
3. NET TRANSPORTATION EFFICIENCY BENEFITS (subtract line 2 from line 1)	_____

NOTES:

(1) Branch line operating profit = Branch line attributable revenues minus off-branch costs minus on-branch costs (including return on value).

(2) Where the effects of rehabilitation are directly traceable to changes in specific cost elements (e.g. crew costs), it is adequate to simply calculate the value of each of those changed costs and sum them to arrive at the total transportation efficiency benefits, without having to calculate total branch line operating profit before and after rehabilitation.

Table 4

Calculation Sheet for Transportation Efficiency Benefits
Null Alternative = Continued Operation
Project Alternative = Rehabilitation
Note: Rates are Reduced Under Project Alternative
(or are kept from rising)

Item	Amount Per Year
1. Reduced transportation cost to the shipper on base traffic as a result of the rehabilitation	NET TRANSPORTATION EFFICIENCY BENEFITS (add lines 1, 2, and 3)
2. Shipper's profit on incremental traffic (traffic that would not move without the rehabilitation)	
3. Increase in branch line projected operating profit as a result of the rehabilitation	

Table 5

Calculation of the Present Value of Project Benefits

Benefit Category	Year (a)			
	1	2	3.....10	
1. Transportation Efficiency Benefits				
2. Lost Labor Output	(b)	(c)	(c)	(c)
3. Business Moving Costs	(b)	(c)	(c)	(c)
4. Increased Highway Costs	(b)	(c)	(c)	(c)
5. Salvage Value				
6. Totals				
7. Discount Factor (d)	$(1+i)$	$(1+i)^2$	$(1+i)^3$	$(1+i)^{10}$
8. Present Value of Totals (6 divided by 7)				

(a) Each year form 1 to 10 should have its own column.

(b) If abandonment occurs in a later year, this benefit would be moved to that year

(c) No entry should be made beyond the temporary period in which people would be employed and / or the business is moved.

(d) The interest rate (discount rate) is represented by the letter i. Calculations to determine the discount factor can be eliminated by using discount Tables available in many economics and finance textbooks or by the use of a pocket calculator which includes a discounting function.

Appendix E

RAILROADS OPERATING IN NEW HAMPSHIRE

Claremont Concord Railroad
PO Box 1598
Claremont, NH 03743-1598
(603) 542-5166

Conway Scenic Railroad
PO Box 1947
North Conway, NH 03860-1947
(603) 356-5251

Green Mountain Railroad
One Railway Lane
Burlington, VT 05401-5290
(802) 658-2550

Guilford Transportation Industries
Iron Horse Park
North Billerica, MA 01862
(978) 663-1175

Milford Bennington Railroad
62 Elm Street
Milford, NH 03055
(603) 673-7181

Mount Washington Railway
Base Road
Mt. Washington, NH 03589
(603) 278-5831

New England Central Railroad
2 Federal Street
St. Albans, VT 05478
(802) 527-3411

New England Southern Railroad
8 Water Street
Concord, NH 03301-4844
(603) 228-8580

New Hampshire Central Railroad
PO Box 248
Colebrook, NH 03576-0248
(603) 922-3400

New Hampshire Northcoast Corporation
PO Box 429
Ossipee, NH 03864-0429
(603) 539-2789

Plymouth & Lincoln Railroad
PO Box 9
Lincoln, NH 03251-0009
(603) 745-2135

St. Lawrence & Atlantic Railroad
416 Lewiston Junction Road
PO Box 1025
Auburn, ME 04211-1025
(207) 782-5680

CSF Acquisitions, Inc.
(Twin State Railroad)
PO Box 1267
Trenton, FL 32693-1267
(352) 463-1103