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The Determination of the Change in  
Operating Expenses of the Old Colony  
Branch of the New York, New Haven &  
Hartford Railroad Company After  
Elimination of Certain Trains from  
the Present Schedule

by  
Frank M. McGowan, Jr.  
and  
Albert A. Yurgelun

Department of Business and  
Engineering Administration

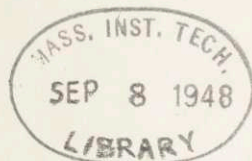


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THESIS AUTHORIZATION

Date March 10, 1948

Name Frank M. McGowan, Jr. and Albert A. Yurgelun

Topic The Determination of the Change in Operating Expenses in the Old Colony Branch of the New York, New Haven & Hartford Railroad Company After Elimination of Certain Trains from the Present Schedule

This is your authority to proceed with the thesis investigation as outlined in your preliminary report. Please return this sheet with the original copy of the finished thesis.

Adviser Professor Tucker Room 10-158

Signature of the Adviser, indicating completion of a satisfactory preliminary report.

Signature redacted  
Adviser  
Date March 11, 1948

Signature of the Supervisor, indicating proper registration for credit, and generally satisfactory progress.

Signature redacted  
Supervisor

M.I.T. Dormitories  
Cambridge 39, Mass.  
May 17, 1948

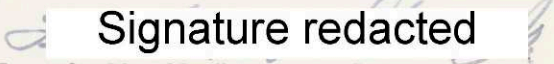
Professor Joseph S. Newell  
Secretary of the Faculty  
Massachusetts Institute of Technology  
Cambridge 39, Massachusetts

Dear Sir:

In accordance with the requirements for graduation, we herewith submit a thesis entitled, "The Determination of the Change in Operating Expenses of the New York, New Haven & Hartford Railroad Company After Elimination of Certain Trains from the Present Schedule."

We are particularly indebted to Professor Carlton E. Tucker, who provided us with the necessary background material for this work and proof-read the finished thesis. Also, the high degree of cooperation from Messrs. Hollis Coyle and J.P. Ramsey, both of the N.Y., N.H. & H. R.R., made it possible for us to obtain the necessary data for this work.

Yours truly,

  
Frank M. McGowan, Jr.

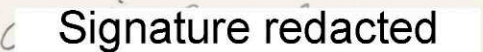
  
Albert A. Yurgelun

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## INTRODUCTION

### Background and History

When on October 23, 1935, the New York, New Haven, and Hartford Railroad Company became bankrupt, one of the first steps taken was to make an analysis of earnings and operations of the leased lines. Because of the passenger situation, the first line reviewed was the Old Colony. This study showed that the earnings from the Old Colony traffic fell far short of covering expenses, taxes, and rentals, and it was clear that the primary difficulty was in the passenger service.

In November of 1937, another study dealing with operations, primarily passenger, on the Old Colony showed that large savings could be made by reductions in passenger service with further economies through complete abandonment of service on light density lines, elimination of unused buildings and facilities, and the substitution of automatic for manual protection at crossings.

As result of further surveys, the District Court in Connecticut, in 1938, ordered into effect substantial reductions in passenger service and the closing of a large number of stations for passenger service. Though this program met with much opposition in Massachusetts, it did make it possible for the railroad to make sub-

stantial savings.

Because of continued heavy losses in carrying on passenger service, the Old Colony trustees, in 1940, petitioned the Interstate Commerce Commission for permission to abandon passenger service on the Boston group (Boston to Braintree, Greenbush, Plymouth, and Middleboro). However, the Commission refused to authorize abandonment.

In June, 1941, hearings as to the reorganization plan were held before the District Court in Connecticut. Though substantial improvement in the passenger situation had been evolved through reduction in operating schedules, there were still wide differences of opinion as to the inclusion of the Old Colony in the reorganized New Haven system. Therefore, the Judge appointed a committee to make a further study of the problem. The committee made its report, and after hearings in 1942, the recommendations of this committee were adopted and incorporated in the approved plan.

The committee found that losses of the Old Colony passenger service were too great to be absorbed by the reorganized system. They proposed that the New Haven should not be required to operate passenger service on the Old Colony lines if the losses therefrom exceeded the critical figure of \$850,000 per year for any 12 consecutive calendar months during the first two years

following the consummation of the plan, and \$500,000 for any subsequent 24 consecutive months. When the New Haven Railroad emerged from reorganization on September 18, 1947, this recommendation was a part of the plan. The first 12 months will expire September 30, 1948, as October 1, 1947, has been set by the District Court as the beginning of the year following the consummation of the plan.

On September 16, 1947, the Old Colony Transportation Committee set up a sub-committee to negotiate with the officials of the New Haven Railroad in regard to their plan for continuing operation. This sub-committee consisted of Mr. John Barnard of Hingham, Mr. Walter Ford of Quincy, Professor Carlton E. Tucker of Whitman, and Mr. Kilby P. Smith, Jr. of Scituate. These men have been and still are studying the transportation problem in an attempt to find some feasible solution. One of the most important findings of this committee was that over half of the trains did not earn the bare out-of-pocket operating expenses.

Several different plans were offered by members of the committee and by members of the Massachusetts Legislature. Of the plans suggested, the two which emerged as the most logical were the Greenbush Plan and the plan for extension of the Metropolitan Transit Authority to Braintree. At present the proponents of



each plan are using every means within their power to prove the merits of their proposals.

By early January, 1948, the Old Colony subcommittee had worked out a plan for reduced service with bus substitution for some poorly patronized mid-day trains. On February 9, 1948, the New Haven filed with the Department of Public Utilities this tentative schedule which would eliminate approximately 39% of the passenger train miles. Hearings on this application were held on March twenty-third and twenty-fourth, but as yet (May 11) no action has been taken on the plan for curtailed service. As a result of this delay and various factors causing high losses, the railroad decided to exercise its rights under the reorganization plan to abandon all service as of October, 1948, since by February the Old Colony losses had exceeded \$850,000. The Governor of the Commonwealth was so notified by President Palmer in a letter dated February 20, 1948.

On April 29, 1948, Governor Bradford announced that the New Haven Railroad had agreed to postpone discontinuance of its passenger service from the announced October 1 date to March 1, 1949. During this five month extension, the state would not pay any portion of the operating deficit of the Old Colony, the road carrying the full load.

### Purpose

With a decrease in the number of trains operating on the Old Colony Railroad the resultant decrease in the operating expenses is expected to reduce the present deficit. Because the operating expenses will not decrease in direct proportion to the reduction in train service, the effect on the deficit can be ascertained only through analysis of the individual expense accounts. The results of this study will be used to decide how great a reduction in the annual deficit can be expected if the proposed schedule, as of February 9, 1948, were to be put into effect.

### Scope

On February 9, 1948, the New Haven Railroad put out a tentative schedule for various lines of the Old Colony (See Appendix A, Comparison of existing and tentative schedules on various lines of the Old Colony Railroad). It is upon this tentative schedule of operation that we are basing our estimates of reduction in operating expenses on the Old Colony group of the New Haven system.

In making this study we are limiting ourselves to an investigation of operating expenses for passenger service on the Old Colony group of the railroad. Included will be Maintenance of Way and Structures,

Maintenance of Equipment, Traffic, Transportation, Miscellaneous, and General Expenses. The reason for this limitation is that the vast majority of the accounts in this category are quite closely related to the number of trains in operation.

We are not concerning ourselves with revenue figures because a very extensive survey would be necessary in order to determine what the loss in revenue will be. Furthermore, the proposed schedule has been so arranged as to make the loss in revenue very small (estimated about 8%) in proportion to the savings to be made in operating expenses.

#### General Procedure

In order to better understand the difficulties associated with the controversy over discontinuance of all or part of the Old Colony Railroad, we spent the first several weeks of our study accumulating background information pertinent to the Old Colony problem. This information was available in the Boston newspapers and in numerous articles published in the "Quincy Patriot Ledger." Professor Carlton E. Tucker, member of the South Shore Transportation Committee, also aided us greatly in familiarizing us with the subject.

Since a great deal of data were necessary to further extend our knowledge of the railroad, several

trips were made to New Haven, where, through the kindness of those in the Research Department of the New York, New Haven, and Hartford Railroad Company, the operating figures and various material related to the expense accounts were obtained.

After tabulation of all necessary monthly expense figures needed for analysis, we considered each expense item individually and determined what its decrease, if any, would be after discontinuance of those trains which the proposed schedule eliminates. The total of these decreases, multiplied by twelve, gave the estimated annual savings to be realized through putting the proposed schedule into effect.

Since the expense figures for the Old Colony are determined largely through application of the Segregation Formula(See Appendix B), we have attempted to keep our calculations and estimates in keeping with this procedure. For clarification as to the nature of the accounts we referred to the Interstate Commerce Commission publication, "Accounting Classifications(for steam railroads)."

## SUMMARY

In order to obtain a figure approximating the decrease in operating expenses to be realized through reduction in the number of trains on the Old Colony, we attempted to discover what the result would be of putting into effect the tentative schedule proposed by the New Haven Railroad, dated February 9, 1948. By careful analysis of each expense account and by noting the effect on each account of the decrease in train service, we were able to arrive at a figure which we believe is a reasonable estimate of what saving could be expected. A tabulation of the results we obtained, broken into the groups which make up the operating expenses of the railroad, are as follows;

	<u>Monthly Present Expense</u>	<u>Monthly Saving</u>	<u>Per cent Saving</u>
Maint. of Way and Structures	\$ 77,067	\$15,278	19.8
Maint. of Equip.	95,820	23,409	24.5
Traffic	5,030	503	10.0
Transportation	285,296	64,562	22.6
Miscellaneous	2,749	0	0
General	22,371	4,884	21.8
Totals(per month)	<u>\$488,333</u>	<u>\$108,636</u>	<u>22.2(ave.)</u>
Totals(per year)	<u>\$5,859,996</u>	<u>\$1,303,632</u>	

## METHOD OF CALCULATING BASIC FIGURES

### Calculation of Average Month

Since we are interested in yearly savings rather than those for any one individual month, we felt it necessary to base our calculations on an average month. Expenses for an average month were determined by taking the total expenses over a twelve month period (See Appendix C) and computing the average. The latest twelve month period available at the time of this writing was from December, 1946 to November, 1947 inclusive. Therefore, the original or base figure on which the per cent saving for each account was figured is one twelfth of the total expense of this account for the twelve month period just mentioned. Although the per cent saving as given is not accurate for any particular month, this figure times twelve gives the proper total for an annual saving.

### Calculation of Train Miles

To determine the passenger train miles operated during an average month, the passenger train miles for each month of the twelve month period under consideration were totaled and then averaged. (See Table 1)

In addition, the total number of passenger train miles to be eliminated had to be determined. This calculation was based entirely on the tentative schedule of February 9, 1948 and the N.Y., N.H., & H. timetable (No. 164)

Table 1\*

<u>Month</u>		<u>Pass. Train Miles</u>
December	1946	84,281
January	1947	86,022
February	1947	75,697
March	1947	83,297
April	1947	83,075
May	1947	85,201
June	1947	89,529
July	1947	101,545
August	1947	102,964
September	1947	89,486
October	1947	83,027
November	1947	<u>77,752</u>
<b>TOTAL</b>		1,041,876
<b>AVE. MONTH</b>		86,823 Pass. Train Miles

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\* Obtained from the New Haven's statistical records

Table 2\*

Passenger Train Miles  
to be Eliminated

<u>Reduction in Scheduled Trains</u>	<u>Train Miles/wk.</u>
Boston - Braintree	444
Boston - Greenbush	725
Boston - Whitman - Plymouth	752
Boston - Campello - Middleboro	93
Boston - Hyannis	1,022
Buzzards Bay - Woods Hole	679
Boston - New Bedford	896
Braintree - Cohasset	534
Braintree - No. Abington - Whitman	731
Canton Junction - No. Easton	876
Myricks - Fall River	290
No. Abington - West Hanover	<u>134</u>
	7,176
Reduction in dead-heads operating on above listed routes	<u>598</u>
TOTAL	7,774
	<u>x4 1/3</u>
TOTAL PASS. TRAIN MILES TO BE ELIMINATED PER MONTH	33,687
<u>Pass. Tr. Miles to be eliminated</u>	<u>33,687</u>
<u>Pass. Tr. Miles presently operated</u>	<u>86,823</u>
	= 39%

-----

\* For calculations in arriving at these totals see  
Appendix D



revised to December 15, 1947. (See Table 2 and Appendix D) Through use of these tables we determined the trains to be eliminated, their routes, length of route, and frequency of operation per week. This same procedure was also followed where dead-heads<sup>1</sup> were to be eliminated. The totals were obtained on a weekly basis and then converted to a monthly basis by multiplying by  $4 \frac{1}{3}$  (weeks per month). Our calculation in Table 2 is that of total train miles (including dead-heads) eliminated per month stated as a percentage of the number of passenger train miles presently operated. This percentage came out to be 39% and is essential in determining savings directly related to total train miles operated.

Besides a reduction in service on the Old Colony routes as a whole, there are also four branches on which passenger service is proposed to be discontinued entirely. Since the Woods Hole, North Easton, Fall River, and West Hanover branches are to be eliminated entirely from passenger traffic, we found it necessary to calculate the percentage of train miles on these routes in relation to the total Old Colony train-mile figure. Table 3 gives the results of these calculations.

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<sup>1</sup> A dead-head is a train, running empty, moving from one station to another for the purpose of having that train available at the latter station for a scheduled run.

The incorporation of these figures into the report is explained fully under I.C.C. Account 202.

Table 3

Roads on Which Passenger Service Will Be Abandoned\*

<u>Reduction in Scheduled Trains</u>	<u>Train Miles/wk.</u>
Buzzards Bay - Woods Hole	679
Canton Junction - No. Easton	876
Myricks - Fall River	290
West Hanover - No. Abington	<u>134</u>
	1,979
Reduction in dead-heads on routes to be abandoned for passenger operation	<u>75</u>
TOTAL	2,054
	<u>x4 1/3</u>
TOTAL PASS. TRAIN MILES PER MONTH ON ROUTES TO BE ABANDONED	8,900

$$\frac{8,900}{86,823} = 10\%$$

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\* For calculations in arriving at these totals see  
Appendix D

## ANALYSIS OF EXPENSE ACCOUNTS

In the following section, each of the I.C.C. operating expense accounts is taken separately and its change, as a result of the new schedule, is determined. For each of the accounts the expense per average month during our test period is denoted as "Present Expense." This figure, less our estimate of what the saving will be, is given as "Estimated Expense." With each account the reasoning used in making the saving calculation is included. The basic figures used in the calculations are given in Tables 2 and 3.

### MAINTENANCE OF WAY AND STRUCTURES

#### 201. Superintendence

This account is grouped with Accounts 274(Injuries to Persons), 275(Insurance), 276(Stationery and Printing), and 277(Other Expenses), all of which are figured in the same manner. They are apportioned on the basis of all other Maintenance of Way and Structure charges exclusive of Account 227(General Office Building). The total expense of all Maint. of W. and S. accounts with the exception of those listed above is \$69,246. The savings on these accounts is \$13,722, giving a per cent saving of 19.8. This percentage, applied to Account 201, gives a saving of \$1,058.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$5,330	\$1,058	\$4,272

## 202. Roadway Maintenance

Since some of these trains run on track from which passenger service is to be eliminated entirely, while others run on track which will still be maintained for passenger service, it is necessary to make the expense calculations in two steps. The reason for this is that in the case of eliminated track we can get 100% elimination of maintenance costs charged to passenger service, while reduction in the number of trains on a route which will be used by other passenger trains will only partially reduce maintenance costs. Of the total train mileage eliminated, 10%, or 8,900 passenger train miles per month are on track on which all passenger service is being abandoned. Therefore, 10% of the charge to this account can be subtracted directly, with no alterations. This is the first step in the calculations.

As stated in "Method of Calculating Basic Figures," of the 86,800 passenger train miles run per month, 33,700 will be eliminated. Since the 10% mentioned above is a part of the latter figure, 8,900 miles must be subtracted in order to obtain the proper figure for the per cent of train miles to be eliminated on track which will still be maintained. As we can see from the following computations, the result is 32%. This figure

$$\frac{33,700 - 8,900}{86,800 - 8,900} = 32\%$$

will be used for the second step in our calculations.

In calculating this and several of the succeeding accounts we have used the 10% in its entirety and adjusted the 32% to what we believe is a reasonable figure. For this account the decrease in expense is not in direct proportion to the decrease in passenger train miles. We believe that approximately one half of 32%, or 15%, is a reasonable figure.

$$10\% \times 6,937 = 694$$

$$6,937 \text{ less } 694 = 6,243$$

$$15\% \times 6,243 = 937$$

$$6,243 \text{ less } 937 = 5,306$$

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$6,937	\$1,631	\$5,306

#### 208. Bridges, Trestles, and Culverts

The same reasoning is used in this account as in Account 202.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$3,747	\$882	\$2,865

#### 212. Ties

The same reasoning as Account 202.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$1,977	\$465	\$1,512

#### 214. Rails

The same reasoning as Account 202.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$684	\$160	\$524

216. Other Track Material

The same reasoning as for Account 202.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$2,319	\$545	\$1,774

218. Ballast

The same reasoning as for Account 202.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$658	\$155	\$503

220. Track Laying and Surfacing

The same reasoning as for Account 202.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$16,575	\$3,896	\$12,679

221. Fences, Snowsheds, and Signs

The same reasoning as for Account 202.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$1,024	\$242	\$782

227-0. Stations

The same reasoning as for Account 202.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$4,610	\$1,083	\$3,527

227-G.O. General Office Building

This account is determined on the basis of charges to all other operating expenses exclusive of Accounts 451 to 460 (general administration expenses). Charges to all operating expenses except those listed above are equal to \$466,160, while the savings for these same

accounts amount to \$103,715. This saving will be 22.2%.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$273	\$61	\$212

#### 229. Roadway Buildings

This saving was calculated in two parts. Here, as in Account 202, a 10% saving can be made due to that part of the road which will no longer be maintained. We feel that an additional saving of 10% can be made because of less use on the remainder of the road.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$544	\$103	\$441

#### 231. Water Stations

System charges are apportioned on the basis of Accounts 382(Yard Switching Fuel) and 394(Train Fuel). These latter accounts will have a minimum of a 15% saving. Therefore, we feel that a 15% reduction in this account is reasonable. This saving will be realized largely through less use of these facilities.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$448	\$67	\$381

#### 233. Fuel Stations

The same reasoning as for Account 231.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$295	\$44	\$251

#### 235-Shops

The total savings for Accounts 308 to 328(repairs

to equipment) were taken as a percentage of the present expense for these same accounts and applied to this account. For Accounts 308 to 328 the savings are \$18,319, and the present expense is \$71,538. Therefore the saving in this account is 25.6%.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$847	\$217	\$630

#### 235-Engine House

Charges to this account are apportioned on the basis of Accounts 308(Steam Locomotives-Repairs), 311(Other Locomotives-Repairs), 388(Enginehouse Expenses-Yard), and 400(Enginehouse Expenses-Train). Their present expense is \$52,397, and their estimated savings are \$15,728. Thus the saving applied to this account will be 30%.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$2,190	\$660	\$1,530

#### 247. Telegraph and Telephone Lines

Charges are apportioned on a train mile basis. Thus, as was previously mentioned in "Method of Calculating Basic Figures," the per cent saving will be the total train miles to be eliminated(33,687) over the total train miles presently operated(86,823). The saving is 39%.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$837	\$326	\$511



249. Signals and Interlockers

There will be 22% fewer trains passing the joint tower at South Station, thus reducing the Old Colony's proportionate share of that expense. Additional saving will be made through reduced use of signal facilities along Old Colony track. However, the additional saving probably will not be more than 10%. Therefore, we estimate the overall saving to be 15%.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$6,930	\$1,040	\$5,890

253. Power Plants

Reduction in the number of trains will have little effect upon this account. We consider any saving to be had as negligible.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$103	0	\$103

257. Power-Transmission Systems

This is a part of overhead expense which is charged directly to the Old Colony and will not be effected by any reduction in trains.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$426	0	\$426

265. Miscellaneous Structures

The same reasoning as for Account 202.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$143	\$33	\$110

269. Roadway Machines

The same reasoning as for Account 202.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$1,130	\$266	\$864

271. Small Tools and Supplies

The same reasoning as for Account 202.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$1,656	\$390	\$1,266

272. Removing Snow, Ice, and Sand

We estimate a 10% saving which applies to that part of the road on which passenger service will be entirely eliminated. The remainder of the road will have to be kept clear regardless of the number of trains using the rails.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$4,030	\$403	\$3,627

273. Public Improvements-Maintenance

The same reasoning as for Account 272.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$2,846	\$285	\$2,561

274. Injuries to Persons

This account is grouped with Accounts 201(Superintendence), 275(Insurance), 276(Stationery and Printing), and 277(Other Expenses). It is apportioned on the basis of all other Maintenance of Way and Structures

charges exclusive of 227-G.O. The total expense of all Maint. of W. and S. accounts except those mentioned above is \$69,246. The savings on these accounts is \$13,722, giving a saving of 19.8%. This percentage, applied to this account, gives a saving of \$338.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$1,712	\$338	\$1,374

275. Insurance

The same reasoning as for Account 274.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$284	\$55	\$229

276. Stationery and Printing

The same reasoning as for Account 274.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$137	\$27	\$110

277. Other Expenses

The same reasoning as for Account 274.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$85	\$17	\$68

278. Maintaining Joint Tracks, Yards, and Other Facilities

The charge is based upon the number of cars going into and out of the South Station (there being no other joint facilities with which the Old Colony has contact). The reduction in the number of trains handled at the South Station will be approximately 22% (See Appendix E).

Many of the trains will be increased in size, however, so the reduction in number of cars handled will be somewhat less than 22%. Considering also that the reduction in expense will not be in direct proportion to the reduction in cars because of a higher unit charge per car, we believe the final saving figure to be approximately 10%.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$8,290	\$829	\$7,461

TOTAL	<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
	\$77,067	\$15,278	\$61,789

#### MAINTENANCE OF EQUIPMENT

##### 301. Superintendence

This account is grouped with Accounts 332(Injuries to Persons), 333(Insurance), 334(Stationery and Printing), and 335(Other Expenses). It is apportioned on the basis of all other Maintenance of Equipment charges exclusive of Accounts 329(Dismantling Retired Equipment), 331(Equipment-Depreciation), and 336(Joint Maintenance of Equipment Expenses). The total expense of all Maint. of Equip. accounts except those listed above is \$74,003 per month. The savings on these accounts would be \$18,950, giving a per cent saving of 25.6. This per-

centage, applied to this account, gives a saving of \$1,190.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$4,650	\$1,190	\$3,460

### 302. Shop Machinery

This account is apportioned on the same basis as Account 235-Shops. The saving here would be approximately 25.6%.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$2,160	\$553	\$1,607

### 304-a. Power-Plant Machinery

The same reasoning as for Account 302.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$305	\$78	\$227

### 308. Steam Locomotives-Repairs

The original figure for repairs was obtained on the basis of an average cost per locomotive mile. Since approximately 39% of the locomotive miles will be eliminated, it would seem that a 39% reduction in this charge is possible as classified repairs must be made every four years irrespective of mileage. However, the full amount cannot be realized because there will be a 25% reduction in the number of locomotives, and a higher unit cost per locomotive will result when the decrease in service is put into effect. Therefore, we feel justified in deducting only 30%.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$35,902	\$10,780	\$25,122

### 311. Other Locomotives-Repairs

The same reasoning as for Account 308.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$4,260	\$1,278	\$2,982

### 317. Passenger-Train Cars-Repairs

Since this account is calculated on a passenger car mile basis, a 24.7% saving might seem reasonable (See Appendix F). However, the reduction in the number of trains will necessitate increasing the passenger capacity of certain other trains by adding cars. Therefore, we have reduced the saving figure to 20%, which we feel is a fair estimate.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$29,050	\$5,810	\$23,240

### 326. Work Equipment-Repairs

This account is apportioned on the same basis as Account 201 (Superintendence, Maintenance of Way and Structures) except that Accounts 235 and 253 are excluded. The present total expense for the accounts used to calculate Account 201, less Accounts 235 and 253, is \$66,106. The estimated saving is \$12,845, giving a 19.4% reduction in expense. This figure, applied to this account gives a saving of \$252.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$1,298	\$252	\$1,046

328. Miscellaneous Equipment

This account is apportioned on the same basis as Account 326.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$1,028	\$199	\$829

329. Dismantling Retired Equipment

We do not feel that a reduction in trains will have any effect upon this account.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$104	0	\$104

331 Equipment-Depreciation

Under the new schedule fewer locomotives and passenger cars will be required. The new plan calls for 18 locomotives and 144 passenger cars as opposed to the present 24 locomotives and 156 passenger cars. The "Comet" and one gas-electric rail car and trailer will also be eliminated. As a result of this decrease in the amount of equipment, we feel that a 20% saving is reasonable for this account.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$12,477	\$2,495	\$9,982

332. Injuries to Persons

This account is grouped with Accounts 301, 333, 334, and 335. It is apportioned on the basis of all other Maintenance of Equipment charges exclusive of Accounts 329, 331, and 336. The total expense of all

Maint. of Equip. accounts except those listed above is \$74,003 per month. The savings on these accounts would be \$18,950, giving a saving of 25.6%. This percentage, applied to this account, gives a saving of \$351.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$1,370	\$351	\$1,019

### 333. Insurance

The same reasoning as for Account 332.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$395	\$101	\$294

### 334. Stationery and Printing

The same reasoning as for Account 332.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$157	\$40	\$117

### 335. Other Expenses

The same reasoning as for Account 332.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$103	\$26	\$77

### 336. Joint Maintenance of Equipment Expenses

The per cent saving for this account was figured on the same basis as for Account 278.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$2,561	\$256	\$2,305

TOTAL	<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
	\$95,820	\$23,409	\$72,411



## TRAFFIC

## 351-359 (General traffic expenses)

All expenses under Traffic are totalled together and apportioned on the basis of Passenger Revenue. The decrease in revenue as a result of the new schedule will, it is estimated, be about 8%. We do, therefore, feel that a 10% saving for all Traffic accounts is a reasonable figure.

	<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
TOTAL	\$5,030	\$503	\$4,527

## TRANSPORTATION

371. Superintendence

This account is grouped with Accounts 410 (Stationery and Printing) and 414 (Insurance). It is apportioned on the basis of all other Transportation charges. The total present expense for all accounts in the Transportation group exclusive of those mentioned above is \$270,794. The estimated saving for these accounts is \$61,281, giving a reduction of 22.6%

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$11,400	\$2,580	\$8,820

372. Dispatching Trains

This account is figured on a train mile basis, resulting in a net saving of 39%

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$1,412	\$550	\$862

373. Station Employees

We have estimated a 15% saving for this account. This includes the saving due to elimination of the Woods Hole, North Easton, Fall River, and West Hanover branches as well as general savings to be had through reduction in service at the individual stations.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$21,390	\$3,210	\$18,180

376. Station Supplies and Expenses

The reasoning for this account is the same as for Account 373. We have deducted 15%.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$3,759	\$564	\$3,195

377. Yardmasters and Yard Clerks

Although there will be a 39% reduction in the number of trains operating, the reduction in personnel requirements will not be in direct proportion. We believe that a 15% reduction is very reasonable for this account.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$3,260	\$489	\$2,771

378. Yard Conductors and Brakemen

The same reasoning as for Account 377.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$9,610	\$1,442	\$8,168

379. Yard Switch and Signal Tenders

The same reasoning as for Account 377.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$754	\$113	\$641

380. Yard Enginemen

The same reasoning as for Account 377.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$481	\$72	\$409

381. Yard Motormen

The same reasoning as for Account 377.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$4,260	\$638	\$3,622

382. Yard Switching Fuel

With a reduction of 39% in the overall train operation it may seem as though a full 39% reduction is justifiable in this account. A good part of this saving is lost, however, because of the fact that there will merely be reduction in the amount of operation for most of the locomotives. Thus much of the expense will continue because fuel and water are needed to keep steam up even while the locomotives are idle in the yard. We do, therefore, believe that a 15% reduction is justifiable.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$1,338	\$201	\$1,137

385. Water for Yard Locomotives

The same reasoning as for Account 382.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$35	\$5	\$30

386. Lubricants for Yard Locomotives

The same reasoning as for Account 382.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$123	\$18	\$105

387. Other Supplies for Yard Locomotives

Same reasoning as for Account 382.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$31	\$5	\$26

388. Enginehouse Expenses-Yard

This account is calculated on the same basis as Account 308.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$1,975	\$592	\$1,383

389. Yard Supplies and Expenses

Because of less wear and tear on the facilities of the yard we believe that a 15% saving is reasonable.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$137	\$21	\$116

390. Operating Joint Yards and Terminals

This charge is based almost entirely upon the number of passengers making use of the South Station facilities. Though the estimated overall reduction in passenger traffic is 5 to 10%, there will be only a 3% reduction in passenger traffic through South Station. Therefore, a 3% saving is estimated.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$41,500	\$1,245	\$40,255

392. Train Enginemen

These expenses are charged directly to the Old Colony line. It might appear that a 39% saving could be made, but because of various Union regulations concerning the working hours of enginemen as well as the impossibility of cutting personnel in direct proportion to trains, the actual saving will be somewhat less. Under the proposed schedule it seems possible that 9 of the present 33 engine crews could be eliminated. This would amount to a 27.2% reduction, the figure which we used for the estimated per cent saving.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$21,410	\$5,800	\$15,610

393. Train Motormen

Here, as in Account 392, it impossible to cut personnel the full 39% since this expense does not decrease in direct proportion to a reduction in train service. We feel that a 25% elimination of motormen is possible, and we have taken this figure for the per cent saving.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$5,830	\$1,458	\$4,372

394. Train Fuel

This is a direct charge to the Old Colony. Saving will not be in direct proportion to the reduction in train miles, however, because of the necessity for

keeping steam up whether the locomotive is actually in use or not. Our estimate for this account is 25%.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$33,500	\$8,375	\$25,125

#### 397. Water for Train Locomotives

The same reasoning as for Account 394.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$1,120	\$280	\$840

#### 398. Lubricants for Train Locomotives

Since this account is apportioned on a locomotive mile basis, we have deducted the full 39%.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$954	\$372	\$582

#### 399. Other Supplies for Train Locomotives

The same reasoning as for Account 398.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$244	\$95	\$149

#### 400. Enginehouse Expenses-Train

This account is apportioned on a train mile basis. Rather than deduct the full 39%, however, we feel that only 30% is justifiable. The elimination of train miles will raise the unit cost per mile for those train miles which will still continue, thus reducing the saving.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$10,260	\$3,078	\$7,182

401. Trainmen

As in Account 392, the saving is not directly proportional to the reduction in number of trains operated. The actual cut in trainmen would be 18.5%, which we have taken as our estimated per cent saving.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$47,700	\$8,850	\$38,850

402. Train Supplies and Expenses

This expense is determined on a car mile basis. It is estimated by the Old Colony Transportation Committee that the reduction in car miles will be 24.9% (See Appendix F). However, it is expected that some trains operating under the proposed schedule will carry more cars per train than is done under present operation. Furthermore, those trains continuing operation will carry more passengers per car than is now done. Thus we have reduced the 24.9% to 20%.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$17,900	\$3,580	\$14,320

404. Signal and Interlocker Operation

This account will not be effected by a reduction in the number of trains.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$9,200	0	\$9,200

405. Crossing Protection

In this account we are taking into consideration

the program now under way to eliminate manual operation of crossing signals. With the installation of automatic signalling devices, it is planned that the majority of men now employed at crossings will no longer be necessary. Considering the labor to be saved by this plan as well as the labor no longer chargeable to passenger service at any crossings on the Woods Hole, North Easton, Fall River, or West Hanover branches, we believe that a 75% saving on this account is entirely justifiable.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$25,700	\$19,265	\$6,435

406. Drawbridge Operation

The saving on this account will be negligible.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$590	0	\$590

407. Telephone and Telegraph Operation

The saving here is figured on a train mile basis, giving a 39%, the same as Account 372.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$926	\$361	\$565

410. Stationery and Printing

This account is grouped with Accounts 371 and 414(Insurance). It is apportioned on the basis of all other Transportation charges. From Account 371 we can see that 22.6% is approximately the proper saving for



this account.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$2,358	\$533	\$1,825

#### 411. Other Expenses

Since the principal item in this account is the payment to the New England Transportation Company for operating bus service in lieu of unprofitable passenger trains, we do not feel that elimination of trains will reduce this figure appreciably.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$332	0	\$332

#### 414. Insurance

This account is grouped with Accounts 371 and 410. The deduction is 22.6% (See Account 371).

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$744	\$168	\$576

#### 415. Clearing Wrecks

With 39% fewer train miles, we feel that a full 39% saving is possible.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$75	\$29	\$46

#### 416. Damage to Property

The same reasoning as for Account 415.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$251	\$98	\$153

417. Damage to Livestock on Right of Way

The same reasoning as for Account 415.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$4	\$2	\$2

419. Loss and Damage-Baggage

Charges are apportioned on the basis of passenger revenue. Since it is estimated that the loss in revenue will be about 8%, we believe it is reasonable to deduct 10%.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$153	\$15	\$138

420. Injuries to Persons

Since the number of passengers will decrease only a small amount (about 8%), we will deduct only 10% from this account.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$4,580	\$458	\$4,122

TOTAL	<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
	\$285,296	\$64,562	\$220,734

## MISCELLANEOUS

441. Dining and Buffet Service

This charge is the result of dining service in trains from New York to the Cape. No saving can be

realized by means of the new schedule.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$446	0	\$446

#### 442. Hotels and Restaurants

As in the case of Account 441, no saving can be realized through the new schedule.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$2,303	0	\$2,303

	<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
TOTAL	\$2,749	0	\$2,749

### GENERAL

#### 451-460(general administrative expenses)

All accounts in this group are taken together and apportioned on the basis of all other operating expenses exclusive of Account 461. The saving on all accounts with the exception of Account 461 is 22.2%. The computations for arriving at this percentage are given under Account 227-G.O..

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$21,900	\$4,860	\$17,040

#### 461. General Joint Facilities

This account is treated the same as other charges

to joint facilities at this point. Other joint facility charges have ranged from 3 to 10% so we feel justified in deducting 5% on this account.

<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
\$471	\$24	\$447

TOTAL	<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
	\$22,371	\$4,884	\$17,487

TOTAL FOR ALL GROUPS	<u>Present Expense</u>	<u>Saving</u>	<u>Est. Expense</u>
	\$488,333	\$108,636	\$379,697

## CONCLUSIONS

Our estimated saving on all operating expenses is \$108,636 per average month. This is the equivalent of \$1,303,632 per year. However, in light of the fact that the Old Colony passenger service has been operating under a large deficit every year from as far back as 1937 (See Table 4) and the passenger and freight income together have shown over a three million dollar deficit for the years 1946 and 1947 (See Table 5), the estimated savings are neither sufficient to meet the requirements of the reorganization plan or sufficient to meet the requirements of a railroad to be operated on a financially sound basis. Therefore, we feel the railroad justified in its desire to discontinue its operation, unless the tentative schedule is effected immediately, along with an increase in rates.

Table 4

Deficits Incurred in Operation of Old Colony  
Passenger Service\*

Year	Deficit
1937	\$2,636,141
1941	\$1,655,606
1942	\$1,246,525
1943	\$1,370,192
1944	\$2,334,945
1945	\$2,486,404
1946	\$3,625,879
1947	\$3,600,239

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\* The N.Y., N.H. & H. R.R. Co., Old Colony Income Account  
(D.P.U. No. 8064)

Table 5

Deficits Incurred in Operation of Old Colony  
Passenger and Freight Service\*

Year	Deficit
1944	\$365,665
1945	\$1,257,869
1946	\$3,941,367
1947	\$3,145,318

On March 23, 1948 the New Haven R.R. gave some operating data for the month of September, 1946 at a mass Department of Public Utilities' hearing. These data included operating expenses and the New Haven's estimated savings on the basis of the reduced operating schedule as set forth in the tentative schedule of February, 1948. These data provide an interesting comparison which we have shown in Table 6.

Table 6

	Recapitulation of Thesis Results			New Haven Figures for Sept., 1946		
	Original	Saving	%	Original	Saving	%
Maint. of Way & Str.	77,067	15,278	19.8	84,552	6,912	8.2
Maint. of Equip.	95,820	23,409	24.5	93,035	23,895	26.0
Traffic	5,030	503	10.0	4,062	310	7.6
Trans.	285,296	64,562	22.6	293,919	54,482	18.5
Misc.	2,749	0	0			
General	22,371	4,884	21.8	17,271	3,045	17.5
<b>TOTALS</b>	<b>488,333</b>	<b>108,636</b>	<b>22.2</b>	<b>492,839</b>	<b>88,644</b>	<b>18.0</b>

\* The N.Y., N.H. & H. R.R. Co., Old Colony Income Account  
(D.P.U. No. 8064)

Discussion of Discrepancies Between Our Estimated Savings  
and Those of the New Haven R.R.

The New Haven figures were based on one test month whereas we attempted to circumvent the problem of fluctuation in rail traffic by using one twelfth of a year as an average month.

A major discrepancy is to be noted in the Transportation group of operating expenses. This may be due to Account 405, Crossing Protection. A program is now under way to eliminate manual operation of many crossing signals. As a result we feel justified in estimating a 75% saving for this account. However, if we had taken a 10% and 15% saving as done and explained in Account 202, savings would have been only \$6,040 per month in comparison to our 75% saving equal to \$19,265 per month. This would have dropped down our per cent saving for Transportation from 22.6 to 18.0 which is comparable to the 18.5% saving estimated by the New Haven.

The other major discrepancy may be found in the Maintenance of Way and Structures. However, we have made our estimates judiciously and feel them correct. It is possible and highly probable that the New Haven has made its estimates much more conservatively than we have. However, this seems only natural due to the fact that the Railroad is interested in making a sound case, from a public point of view, for dropping the Old Colony.

We feel it necessary to again point out that the savings figure which has been obtained is in relation to the original expense figures of the period December, 1946 to November, 1947, inclusive. During the past two and one half years inflationary trends have sent commodity prices steadily upward. Labor costs have risen proportionately and have been reflected in the expense accounts of the railroad. Because of this change in the price and wage level, the two sets of results cannot be compared without giving consideration to the fact that each set of figures was for a separate period and that the economic background for each period was different.



## APPENDICES

- A Comparison of Existing and Tentative Schedules on Various Lines of the Old Colony Railroad
- B Segregation Formula
- C Old Colony Operating Expenses by Individual Account for the Months, December, 1946 Through November, 1947
- D Trains to be Eliminated and Train Mileage Involved (Per Week) as per Schedule of February 9, 1948
- E Determination of Per Cent Reduction in Trains to be Handled in South Station per Week
- F Calculation of Per Cent Reduction in Car Miles

COMPARISON OF EXISTING AND TENTATIVE SCHEDULES ON  
VARIOUS LINES OF OLD COLONY RAILROAD

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Boston and Braintree

	Present			Proposed		
	<u>Out-bound</u>	<u>In-bound</u>	<u>Total</u>	<u>Out-bound</u>	<u>In-bound</u>	<u>Total</u>
Monday-Friday	24	20	44	19	18	37
Saturday	19	17	36	18	17	35
Sunday	<u>9</u>	<u>8</u>	<u>17</u>	<u>5</u>	<u>4</u>	<u>9</u>
Total per Week	148	125	273	118	111	229

Under the proposed plan the following trains would be discontinued:

<u>Outbound</u>		<u>Inbound</u>	
<u>Lv. Boston</u>	<u>Frequency</u>	<u>Due Boston</u>	<u>Frequency</u>
5:25 AM	Ex. Sun.	7:05 AM	Ex. S. & S.
6:05 AM	Ex. S. & S.	9:45 AM	Ex. S. & S.
6:25 AM	Ex. Sun.	1:20 PM	Sun. only
7:05 AM	Ex. S. & S.	8:30 PM	Sun. only
8:35 AM	Ex. S. & S.	10:05 PM	Sun. only
10:15 AM	Sun. only	11:35 PM	Sun. only
2:15 PM	Sun. only		
4:38 PM	Ex. S. & S.		
9:00 PM	Sun. only		
10:30 PM	Sun. only		

Boston and Greenbush

	Present			Proposed		
	<u>Out-bound</u>	<u>In-bound</u>	<u>Total</u>	<u>Out-bound</u>	<u>In-bound</u>	<u>Total</u>
Monday-Friday	6	6	12	5	5	10
Saturday	7	6	13	4	4	8
Sunday	<u>4</u>	<u>4</u>	<u>8</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total per Week	41	40	81	29	29	58

Under the proposed plan the following trains would be discontinued:

<u>Outbound</u>		<u>Inbound</u>	
<u>Lv. Boston</u>	<u>Frequency</u>	<u>Due Boston</u>	<u>Frequency</u>
9:15 AM	Sun. only	8:45 AM	Sun. only
12:30 PM	Sat. only	8:55 AM	Ex. S. & S.
1:00 PM	Sun. only	11:45 AM	Sun. only
4:32 PM	Sat. only	3:30 PM	Sat. only
6:00 PM	Sun. only	4:45 PM	Sun. only
7:15 PM	Ex. Sun.	8:45 PM	Sun. only
10:00 PM	Sun. only	10:20 PM	Ex. Sun.

Boston and Whitman-Plymouth

	<u>Present</u>			<u>Proposed</u>		
	<u>Out-bound</u>	<u>In-bound</u>	<u>Total</u>	<u>Out-bound</u>	<u>In-bound</u>	<u>Total</u>
Monday-Friday	5	5	10	4	4	8
Saturday	6	6	12	4	4	8
Sunday	<u>3</u>	<u>4</u>	<u>7</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total per Week	34	35	69	24	24	48

Under the proposed plan the following trains would be discontinued:

<u>Outbound</u>		<u>Inbound</u>	
<u>Lv. Boston</u>	<u>Frequency</u>	<u>Due Boston</u>	<u>Frequency</u>
9:30 AM	Daily	9:45 AM	Sun. only
12:35 PM	Sat. only	12:25 PM	Sun. only
1:15 PM	Sun. only	3:50 PM	Sat. only
6:15 PM	Sun. only	4:45 PM	Ex. Sun.
		5:10 PM	Sun. only
		9:10 PM	Sun. only

Boston and Campello-Middleboro

	Present			Proposed		
	Out-bound	In-bound	Total	Out-bound	In-bound	Total
Monday-Friday	6	7	13	4	5	9
Saturday	6	7	13	4	5	9
Sunday	<u>2</u>	<u>3</u>	<u>5</u>	<u>2</u>	<u>2</u>	<u>4</u>
Total per Week	38	45	83	26	32	58

Under the proposed plan the following trains would be discontinued:

Outbound		Inbound	
Lv. Boston	Frequency	Due Boston	Frequency
5:48 AM	Ex. Sun.	9:25 AM	Ex. Sun.
2:00 PM	Ex. Sun.	8:10 PM	Ex. Sun.
		8:10 PM	Sun. only

Boston and Hyannis

	Present			Proposed		
	Out-bound	In-bound	Total	Out-bound	In-bound	Total
Monday-Friday	3	4	7	2	3	5
Saturday	3	4	7	2	3	5
Sunday	<u>2</u>	<u>2</u>	<u>4</u>	<u>2</u>	<u>2</u>	<u>4</u>
Total per Week	20	26	46	14	20	34

Under the proposed plan the train leaving Boston except Sunday at 2:00 P.M. and the train due Boston except Sunday at 9:25 A.M. would be discontinued.

Buzzards Bay and Woods Hole

It is proposed that the following New England Transportation Company highway motor coach service would be substituted for the three round trips of week-day and two round trips of Sunday only train service operated between Buzzards Bay and Woods Hole:

	<u>Sun.</u> <u>only</u> <u>A.M.</u>	<u>Ex.</u> <u>Sun.</u> <u>A.M.</u>	<u>Ex.</u> <u>Sun.</u> <u>P.M.</u>	<u>Sun.</u> <u>only</u> <u>P.M.</u>	<u>Ex.</u> <u>Sun.</u> <u>P.M.</u>	<u>Ex.</u> <u>Sun.</u> <u>P.M.</u>	<u>Sun.</u> <u>only</u> <u>P.M.</u>
<u>SOUTHBOUND</u>							
Lv. Buzzards Bay	9:40	9:45	1:35	5:10	5:30	6:30	8:30
Due Monument Beach	9:49	9:54	--	--	--	6:39	8:39
Pocasset	9:53	9:58	--	--	--	6:43	8:43
Cataumet	9:58	10:03	--	--	--	6:48	8:48
North Falmouth	10:02	10:07	ff	ff	ff	6:52	8:52
West Falmouth	10:08	10:13	ff	ff	ff	6:58	8:58
Falmouth	10:16	10:21	2:01	5:36	5:56	7:06	9:06
Due Woods Hole	10:25	10:30	2:10-	5:45	6:05	7:15	9:15
	<u>A.M.</u>	<u>A.M.</u>	<u>P.M.</u>	<u>P.M.</u>	<u>P.M.</u>	<u>P.M.</u>	<u>P.M.</u>

	<u>Ex.</u> <u>Sun.</u> <u>A.M.</u>	<u>Sun.</u> <u>only</u> <u>A.M.</u>	<u>Ex.</u> <u>Sun.</u> <u>A.M.</u>	<u>Ex.</u> <u>Sun.</u> <u>P.M.</u>	<u>Sun.</u> <u>only</u> <u>P.M.</u>	<u>Ex.</u> <u>Sun.</u> <u>P.M.</u>	<u>Sun.</u> <u>only</u> <u>P.M.</u>
<u>NORTHBOUND</u>							
Lv. Woods Hole	6:30	8:20	10:53	4:53	5:55	6:05	9:25
Falmouth	6:38	8:28	11:01	5:01	6:03	6:13	9:33
West Falmouth	6:46	8:36	11:09	5:09	6:11	ff	ff
North Falmouth	6:52	8:42	11:15	5:15	6:17	ff	ff
Cataumet	6:56	8:46	11:19	5:19	6:21	--	--
Pocasset	7:01	8:51	11:24	5:24	6:26	--	--
Monument Beach	7:05	8:55	11:28	5:28	6:30	--	--
Due Buzzards Bay	7:15	9:05	11:38	5:38	6:40	6:40	10:00
	<u>A.M.</u>	<u>A.M.</u>	<u>A.M.</u>	<u>P.M.</u>	<u>P.M.</u>	<u>P.M.</u>	<u>P.M.</u>

(ff) - Stops on signal to receive or discharge passengers.

The above service would provide connections at Buzzards Bay with all passenger train service to be operated between Buzzards Bay and Boston.

Boston and New Bedford

	Present			Proposed		
	Out-bound	In-bound	Total	Out-bound	In-bound	Total
Monday-Friday	5	5	10	4	4	8
Saturday	5	5	10	3	3	6
Sunday	<u>2</u>	<u>3</u>	<u>5</u>	<u>1</u>	<u>2</u>	<u>3</u>
Total per Week	32	33	65	24	25	49

Under the proposed plan the following trains would be discontinued:

Outbound		Inbound	
Lv. Boston	Frequency	Due Boston	Frequency
8:45 AM	Ex. Sun.	9:35 AM	Sat. only
9:30 AM	Sun. only	5:00 PM	Ex. Sun.
2:40 PM	Sat. only	11:20 PM	Sun. only

Braintree and Cohasset

Under the proposed plan Eastern Massachusetts Street Railway Co. highway motor coach station-to-station service would be substituted for the following four round trips of week-day train service now performed by the COMET, assuming the Eastern Mass. has or obtains necessary authority:

Southbound		Northbound	
Lv. Braintree	Frequency	Lv. Cohasset	Frequency
9:53 AM	Ex. Sun.	10:25 AM	Ex. Sun.
11:53 AM	Ex. Sun.	12:25 PM	Ex. Sun.
1:48 PM	Ex. S. & S.	2:19 PM	Ex. S. & S.
3:46 PM	Ex. Sun.	4:17 PM	Ex. Sun.

Braintree and North Abington-Whitman

Under the proposed plan Eastern Massachusetts Street Railway Co. highway motor coach station-to-station service would be substituted for the following six round trips of week-day train service now performed by the COMET, assuming the Eastern Mass. has or obtains necessary authority:

Southbound		Northbound	
<u>Lv. Braintree</u>	<u>Frequency</u>	<u>Lv. Whitman</u>	<u>Frequency</u>
10:54 AM	Ex. Sun.	9:25 AM	Ex. Sun.
12:52 PM	Ex. Sun.	11:25 AM	Ex. Sun.
2:50 PM	Ex. S. & S.	1:19 PM	Ex. S. & S.
4:45 PM	Sat. only	3:16 PM	Ex. S. & S.
4:46 PM	Ex. S. & S.	@ 7:10 PM	Ex. Sun.
7:50 PM	Ex. Sun.	9:10 PM	Ex. Sun.
10:10 PM	Ex. Sun.		

(@) - Originates at North Abington

The N.Y., N.H. & H. R.R. Co.  
Boston, Massachusetts  
February 9, 1948-g

Under the proposed plan in addition to the reduced operation, as listed on the previous pages, train service will be abandoned on the following branches.

Canton Jct. - No. Easton

Myricks - Fall River

No. Abington - West Hanover (Comet)

It is proposed that these areas be provided with motor coach service.

APPENDIX B

-----  
FORMULA FOR SEGREGATION  
OF INCOME  
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NEW HAVEN, CONNECTICUT  
DECEMBER 10TH, 1936



OPERATING EXPENSES

MAINTENANCE OF WAY AND STRUCTURES

- Account 202 - Roadway Maintenance
- 208 - Bridges, Trestles and Culverts
- 212 - Ties
- 214 - Rails
- 216 - Other Track Material
- 218 - Ballast
- 220 - Track Laying and Surfacing
- 221 - Fences, Snow Sheds and Signs
- 272 - Removing Snow, Ice, and Sand
- 273 - Public Improvements - Maintenance

Road - Assigned directly

Yard, Passenger - Assigned directly except at joint terminals where apportioned on the basis of the number of passenger cars handled for each line.

The use factors at the joint points are based on test checks covering one week each month.

Account 227 - Station and Office Buildings

General Office Building - Apportioned on basis of Accounts 451-460 inclusive (General Expenses).

Yard - Assigned directly except at joint stations where apportioned on same basis as Accounts 202-221 - Yard.

Station - Assigned directly except at joint terminals where apportioned on basis of charges to Account 373.

- Account 229 - Roadway Buildings
- 269 - Roadway Machinery
- 271 - Small Tools and Supplies

System charges are apportioned on basis of charges to 202-265 excluding 227(General Office).

- Account 231 - Water Stations
- 233 - Fuel Stations

System charges are apportioned on basis of Accounts 382 and 394 (Yard and Road Fuel).

Account 235 - Shops and Enginehouses

Shops - System charges are apportioned on basis of Account 308-328 inclusive (Equipment Repairs).

Enginehouses - System charges are apportioned on basis of Accounts 308 and 311 (Locomotive Repairs) and Accounts 388 and 400 (Enginehouse Expenses).

Account 247 - Telegraph and Telephone Lines

System charges are apportioned on basis of Account 372 (Dispatching Trains).

Account 249 - Signals and Interlockers

Assigned directly except at joint towers where apportioned on basis of number of trains passing the tower, determined by periodic tests.

Account 253 - Power Plants

Shop Power - Same basis as Account 235 - Shops.

Account 257 - Power Transmission Systems

Assigned directly.

Account 265 - Miscellaneous Structures

278 - Maintaining Joint Tracks, Yards, and Other Facilities-Dr.

Assigned directly except at joint terminals where pro rated on the appropriate use factors.

Account 201 - Superintendence

274 - Injuries to Persons

275 - Insurance

276 - Stationery and Printing

277 - Other Expenses

System charges are apportioned on the basis of all other Maintenance of Way and Structures charges exclusive of Account 227 - General Office Buildings.

MAINTENANCE OF EQUIPMENT

Account 302 - Shop Machinery

304a- Power Plant Machinery-Shop Power

System charges are apportioned on basis of Accounts 308-328 inclusive (Equipment Repairs).

Account 308 - Steam Locomotives - Repairs

The mileage made by each type of locomotive is being currently compiled by leased and mortgaged lines. To this actual mileage is applied the average cost per mile for repairs by types during the year ending March, 1936. As subsequent months' figures become available, the average cost per mile will be revised to represent the latest available year. Where this computation results in a charge to Account 308 for the month greater or less than the actual, proportionate adjustment is made in the charges for all types of locomotives. This method is used to eliminate the effect of wide fluctuations in costs by types during a given month.

Account 311 - Other Locomotives - Repairs

Locomotive miles by types and lines are being currently compiled and the charges are apportioned on a locomotive mile basis. Because of the uniformity of types and regularity of expenditures, no adjustment is necessary.

Account 317 - Passenger Train Cars - Repairs

Passenger train car miles are currently being compiled, and system costs are apportioned on a car mile basis.

- Account 326 - Work Equipment-Repairs
- 328 - Miscellaneous Equipment-Repairs

Same as Account 201 (Superintendence, M. of W. & S. but excluding Accounts 235 and 253).

- Account 331 - Equipment-Depreciation
- 329 - Equipment-Retirements

Depreciation and Retirement charges are apportioned in the same manner as the appropriate repair account for each type of equipment.

Account 336 - Maintaining Joint Equipment-Dr.

Assigned directly except at joint terminals where allocated on the basis of the appropriate use factor.

- Account 301 - Superintendence
- 332 - Injuries to Persons
- 333 - Insurance
- 334 - Stationery and Printing
- 335 - Other Expenses

Apportioned on the basis of charges to all other Maintenance of Equipment accounts exclusive of Depreciation, Retirements and Joint Facility.

TRAFFIC

All passenger charges are apportioned on basis of Account 102 (Passenger Revenue) assigned to each line.

TRANSPORTATION

Account 372 - Dispatching Trains

Passenger charges are apportioned on a train mile basis.

Account 373 - Station Employees

Assigned directly except at joint stations which are treated as follows:

Passenger - Ticket selling expenses are apportioned on basis of the actual number of tickets sold for each line during the month (each multiple trip ticket being counted as one). Mail and baggage handling expenses are apportioned on the number of pieces handled, as determined from a test week each month. Other expenses are apportioned on the basis of the number of passengers of each line using the station as determined from periodic tests.

Account 376 - Station Supplies and Expenses

Assigned directly except at joint stations where prorated on the basis of Account 373 (Station Employees).

- Account 377 - Yardmasters and Yard Clerks
- 378 - Yard Conductors and Brakemen
- 379 - Yard Switch and Signal Tenders
- 380 - Yard Enginemen
- 381 - Yard Motormen
- 382 - Yard Switching Fuel
- 385 - Water for Yard Locomotives
- 386 - Lubricants for Yard Locomotives
- 387 - Other Supplies for Yard Locomotives
- 388 - Enginehouse Expenses-Yard
- 389 - Yard Supplies and Expenses

Assigned directly except at joint yards where the apportionment is on the basis of the cars handled for each line, as determined from a test week each month.

Account 390 - Operating Joint Yards and Terminals-Dr.

Assigned directly except at joint terminals where analysis is made and charges and credits are assigned on the basis of the appropriate use factors.

- Account 392 - Train Enginemen
- 393 - Train Motormen
- 394 - Train Fuel
- 401 - Trainmen

Assigned directly except on runs over two or more lines where expenses are apportioned on a train mile basis.

Account 397 - Water for Train Locomotives

System charges are apportioned on the basis of Account 394 (Road Fuel).

- Account 398 - Lubricants for Train Locomotives
- 399 - Other Supplies for Train Locomotives

Passenger charges are apportioned on a locomotive mile basis.

- Account 400 - Enginehouse Expenses-Train
- 415 - Clearing Wrecks
- 416 - Damage to Property
- 417 - Damage to Live Stock on Right-of-Way
- 420 - Injuries to Persons

Passenger charges are apportioned on a train mile basis.

Account 402 - Train Supplies and Expenses

Passenger charges are apportioned on a car mile basis.

- Account 404 - Signal and Interlocker Operation
- 405 - Crossing Protection
- 406 - Drawbridge Operation

Assigned directly except at joint points where they are apportioned on the basis of the number of train and yard

movements of each line using the facility.

Account 407 - Telegraph and Telephone Operation

Same as Account 372 (Dispatching Trains).

Account 411 - Other Expenses

The principal item in this account is the payment to the New England Transportation Co. for operating bus service in lieu of unprofitable passenger trains. The studies on which the payment is based are analyzed and each line is charged its proper proportion. Other charges in this account are treated the same as Account 371 (Superintendence).

Account 419 - Loss and Damage-Baggage

System charges are apportioned on the basis of Passenger Revenue.

- Account 371 - Superintendence
- 410 - Stationery and Printing
- 411 - Other Expenses
- 414 - Insurance

System charges are apportioned on the basis of all other Transportation accounts.

MISCELLANEOUS OPERATIONS

Account 441 - Dining and Buffet Service

System charges are apportioned on the basis of dining car miles operated on each line.

Account 442 - Hotels and Restaurants

Assigned directly except at joint stations, where apportioned on the basis of passengers of each line using the station.

GENERAL

- Account 451 - Salaries and Expenses of General Officers
- 452 - Salaries and Expenses of Clerks and Attendants
- 453 - General Office Supplies and Expenses
- 454 - Law Expenses
- 455 - Insurance
- 457 - Pensions
- 458 - Stationery and Printing
- 459 - Valuation Expenses
- 460 - Other Expenses

System charges are apportioned on the basis of the charges to all other operating expenses except Account 461 and the General Office proportion of Account 227.

Account 461 - General Joint Facilities-Dr.

Assigned directly except at joint terminals where treated the same as other charges or credits for Joint Facilities at that point.



# Old Colony Passenger & Freight Study

## Passenger

### Maintenance of Way Structures

Account	1946	1947	1947	1947	1947	1947	1947	1947	1947	1947	1947	Total 1946-47	Ave. Month	
	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct			Nov
201	6,065.78	5,838.70	5,336.54	5,067.35	4,669.35	5,128.62	4,761.19	4,911.79	4,591.48	4,448.05	4,450.02	4,923.77	63,982	5,330
202-R	6,102.16	5,976.68	7,172.25	8,118.87	5,578.96	4,298.33	5,151.37	6,382.23	5,796.07	7,688.74	5,041.16	6,376.71	78,233	6,525
202-Y	889.30	188.14	447.76	778.33	272.11	123.12	433.68	173.57	112.03	339.00	249.28	118.55	4,941	412
205-R	3,313.22	876.02	5,749.83	1,618.15	5,132.10	4,632.44	5,238.68	2,582.66	1,223.24	2,411.41	1,018.23	1,038.54	44,968	3,743
205-Y	44.25	—	—	—	—	—	—	—	—	2,615.37	—	3.43	44	4
212-R	3,420.06	582.37	354.16	658.88	2,022.04	4,464.34	3,371.58	918.8	13.30	538.47	5,249.66	370.54	23,061	1,940
212-Y	1370	—	122.85	813	72.43	19.62	2.23	38.61	276.3	765.09	2,929	3.26	450	37
214-R	524.90	576.75	73.23	285.63	163.64	1,374.24	1,122.8	770.50	1,070.94	668.22	101.53	95.63	7,655	638
214-Y	189.74	45.44	22.00	140.65	53.38	24.92	9.66	8.01	15.43	19.05	6.05	19.71	547	46
216-R	6,735.04	2,378.46	444.97	2,81.34	1,443.58	5,011.79	4,129.15	901.33	526.65	321.95	230.31	24.72	25,501	3,124
216-Y	59.10	776.46	24.45	253.24	74.47	2.33	4.92	3.99	19.331	50.31	6.79	41.25	2,345	195
218-R	1,711.40	953.51	80.71	2,349.94	6.36	215.57	778.70	216.76	69.13	212.27	2471.14	323.22	7,897	657
218-Y	—	—	—	3.16	4.2	—	182	—	—	—	3.2	—	8	1
220-R	18,611.88	15,130.35	13,576.75	12,423.41	14,711.67	17,220.24	17,744.83	14,926.13	15,113.47	13,717.98	15,471.01	13,602.88	149,808	15,610
220-Y	8,415.26	7,475.54	1,046.92	5,748.74	1,404.48	401.14	76.73	84.76	283.17	739.36	311.48	323.57	9,181	765
221-R	369.58	340.24	732.66	1,037.67	1,714.47	1,800.54	524.70	432.66	1,441.04	874.25	1,312.05	1,171.90	12,116	1,021
221-Y	—	24	16.50	46	88	—	—	—	—	1.16	—	—	34	3
227-0	5,772.73	4,444.62	6,102.11	4,284.70	4,615.90	2,734.74	4,021.49	4,902.55	4,411.34	5,474.40	4,658.72	3,992.64	55,347	4,610
227-60	285.02	36.16	301.49	288.95	166.49	154.90	388.94	197.12	140.09	885.50	100.84	111.90	3,280	273
229	628.06	596.24	558.04	668.65	406.41	483.35	493.18	265.83	352.30	231.05	2,074.4	248.05	6,543	544
231	2,494.83	333.00	448.22	1,600.52	2,610.09	411.70	739.35	571.57	629.82	422.09	246.68	410.81	5,377	448
233	421.88	237.05	547.45	3,290.07	230.24	9.14	232.47	1,096.41	337.44	157.96	137.05	148.02	3,643	295
235-44	1,658.94	1,724.93	1,026.47	831.44	574.44	381.27	1,070.35	736.40	671.90	911.14	888.04	288.68	19,170	1,477
235-EN	3,703.04	1,353.57	1,706.83	2,074.47	2,424.84	2,401.01	2,574.57	2,421.17	3,357.14	1,747.79	2,024.58	2,815.04	26,267	3,190
241	—	—	—	—	—	—	—	—	—	—	—	—	—	—
247	742.04	878.57	823.83	940.85	713.25	873.95	838.78	837.44	6,146.22	972.57	1,444.76	937.65	19,040	1,537
249	12,774.27	17,202.46	5,734.49	6,201.41	7,574.15	6,546.62	4,474.41	5,542.61	8,065.92	6,457.84	3,990.53	13,020.86	83,199	6,930
253	33.57	54.13	57.27	56.61	116.37	260.25	115.13	314.79	39.74	50.75	74.47	58.74	1,259	103
257	3,248.57	240.22	365.94	640	282.48	35.13	—	15.80	62.81	—	12.22	67.11	5,103	426
265	9.28	279.01	125.97	253.22	123.44	5.2	37.47	63.69	163.53	211.24	363.70	527.97	1,711	143
266	—	—	—	—	—	—	—	—	—	—	—	—	—	—
269	1,245.64	1,174.55	1,202.11	1,167.94	1,019.32	633.45	451.62	819.19	783.79	702.44	525.08	648.25	13,560	1,130
271	1,784.27	1,573.61	1,582.14	1,946.14	1,623.81	1,534.45	1,584.67	1,360.57	1,224.14	1,744.46	1,063.18	1,590.44	19,876	1,656
272	6,945.73	8,989.28	10,170.51	893.39	372.05	243.04	135.78	274.61	177.54	652.15	76.91	1,009.19	48,378	4,030
273	3,119.44	4,045.35	5,040.03	6,243.74	1,365.04	3,552.83	1,406.44	1,721.28	2,004.66	1,024.74	2,526.71	1,826.07	34,118	2,846
274	5240.24	722.58	693.15	384.08	1,011.56	1,208.74	404.43	1,074.44	1,772.24	2,001.11	2,058.54	1,441.30	29,529	1,712
275	337.70	346.62	330.04	271.02	246.37	244.63	258.72	270.53	277.12	237.43	19.25	312.48	3,405	284
276	117.61	94.95	152.30	163.88	104.50	124.09	224.14	82.38	108.25	778.2	100.64	126.06	1,644	137
277	37.65	54.26	94.44	52.82	193.06	69.70	45.16	214.97	211.08	43.92	75.47	92.01	1,011	85
278	8,232.47	6,964.20	6,357.55	4,601.42	4,22.45	10,208.02	10,214.62	6,748.57	7,247.32	7,454.87	10,207.53	7,040.06	99,527	8,240
279	—	—	—	—	—	—	—	—	—	—	—	—	—	—
281	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>92,785.96</b>	<b>77,421.71</b>	<b>77,496.04</b>	<b>70,826.15</b>	<b>68,686.40</b>	<b>78,774.97</b>	<b>67,118.17</b>	<b>61,344.57</b>	<b>63,044.05</b>	<b>67,371.36</b>	<b>62,162.44</b>	<b>67,022.28</b>	<b>924,685</b>	<b>77,056</b>

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APPENDIX C

# Old Colony Passenger & Freight Study

## Maintenance of Equipment

Account	1946	1947	1947	1947	1947	1947	1947	1947	1947	1947	1947	1947	1947	1947	Total 1946-1947	Avg. Month
	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec			
301	4,104.29	3,791.42	4,121.14	4,136.32	5,012.10	4,704.91	5,520.44	5,415.18	5,416.01	5,905.26	5,258.99	5,252.15			55,802	4,650
302	3,294.20	1,890.59	1,788.40	1,878.87	2,221.75	3,019.42	2,132.45	2,246.20	2,008.91	1,848.89	2,246.55	1,794.50			25,971	2,160
304-A	336.53	124.41	274.66	179.61	415.76	452.98	368.37	424.44	523.86	336.76	584.97	441.49			3,666	305
304-B	-	-	-	-	-	-	-	-	-	-	-	-			-	-
305	-	-	-	-	-	-	-	-	-	-	-	-			-	-
306-R	3946.28	32,145.09	24,352.65	35,241.50	39,721.44	35,221.21	49,444.44	28,722.44	36,941.39	30,851.18	43,205.00	42,444.24			425,540	35,420
306-Y	572.58	864.12	373.74	558.68	352.85	205.55	815.99	1,078.81	1,444.25	470.66	444.19	571.53			5,772	472
311	7,232.77	3,614.48	4,013.07	4,022.24	3,701.89	3,925.24	4,012.20	6,243.02	6,414.19	5,342.81	4,441.70	4,520.49			51,032	4,260
314	-	-	-	-	-	-	-	-	-	-	-	-			-	-
317	27,142.24	34,410.24	27,692.76	29,643.92	27,607.97	24,432.39	24,921.12	32,432.24	24,117.22	31,652.59	31,448.26	38,220.64			349,431	29,050
323	-	-	-	-	-	-	-	-	-	-	-	-			-	-
326	1,712.47	1,511.41	1,246.61	965.19	1,165.29	1,521.01	1,021.69	843.66	554.26	928.23	789.12	1,241.88			15,576	1,298
328	1,052.11	1,029.54	980.17	1,239.36	1,035.71	848.37	904.40	732.07	965.07	720.23	585.83	874.14			12,313	1,028
329	99.20	97.41	93.41	42.29	140.25	145.54	110.65	14.31	232.54	94.87	121.46	198.86			1,247	104
330	-	-	-	-	-	-	-	-	-	-	-	-			-	-
331-A	8,911.36	7,444.76	9,507.59	9,300.10	9,463.63	9,905.26	10,256.64	11,508.44	11,253.58	19,536.12	10,017.86	9,862.62			124,260	10,380
331-B	7,051.24	2,053.89	1,902.80	1,912.00	1,990.35	1,955.84	2,444.23	3,622.53	3,508.70	2,742.71	2,072.19	2,078.90			25,152	2,097
332	1,583.72	1,405.24	2,572.80	2,432.96	2,898.67	1,846.99	1,244.39	885.22	1,144.04	1,533.63	2,239.61	1,124.83			16,414	1,378
333	342.64	367.37	409.78	404.00	421.15	368.16	444.36	426.95	474.47	447.03	428.59	434.28			4,733	395
334	116.90	231.45	85.39	141.53	158.09	175.54	182.25	187.91	168.84	154.24	148.40	141.53			1,882	157
335	66.71	47.53	70.15	47.24	302.83	85.17	63.64	372.34	333.34	60.16	76.90	93.95			1,242	103
336	4,538.73	2,453.66	2,148.33	2,799.04	2,226.64	2,200.42	2,319.12	4,422.74	2,192.24	3,360.63	4,628.24	3,955.58			30,770	2,581
337	-	-	-	-	-	-	-	-	-	-	-	-			-	-
Total	74,071.17	72,012.31	87,544.52	96,249.07	97,645.46	95,746.54	103,476.64	86,616.26	103,261.17	106,065.24	145,911.55	145,522.64			1,139,835	94,986

## Traffic

351																
352																
353																
354																
355																
356																
357																
358																
359																
Total	5,711.93	4,535.46	4,701.09	5,694.46	4,942.44	5,124.26	5,121.25	7,428.76	7,046.44	6,722.04	4,742.26	5,504.02			60,401	5,030

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Old Colony Passenger & Freight Study  
Passenger  
 Transportation

Account	1946	1947	1947	1947	1947	1947	1947	1947	1947	1947	1947	1947	1947	1947	Total 1946-1947	Ave. Month
	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov				
371	19,962.50	11,561.62	11,007.15	11,548.01	11,192.07	11,702.14	11,811.01	13,445.71	13,928.22	19,227.77	18,430.32	12,722.18		136,924	11,400	
372	1,352.40	1,380.19	1,322.05	1,413.25	1,281.09	1,572.22	1,474.52	1,761.81	1,790.17	1,728.64	1,652.89	1,492.41		16,954	1,412	
373	24,062.29	21,570.54	19,162.66	21,046.38	20,626.89	21,955.12	24,212.82	24,265.07	27,001.34	22,257.18	25,189.80	20,962.60		236,090	21,390	
374																
376	3120.79	6,493.23	4,322.07	3,765.28	3,303.94	1,926.17	1,722.96	1,044.15	1,422.32	3,622.07	2,946.27	2,625.74		45,077	3,759	
377	3,332.22	3,465.63	3,290.38	3,216.06	3,211.16	3,285.10	2,762.22	3,458.91	3,658.90	3,314.74	3,221.82	3,475.91		39,080	3,260	
378	2,582.27	9,114.07	9,383.62	10,912.03	9,892.81	10,088.60	9,896.65	11,882.08	11,280.78	10,423.22	10,505.06	11,222.54		115,264	9,610	
379	3,222.98	1,854.24	2,255.89	209.01	2,227.75	2,019.33	1,911.21	2,533.94	2,068.20	2,161.52	2,921.13	1,304.74		9,054	754	
380	466.62	473.06	411.73	636.71	434.70	576.90	365.70	501.19	529.54	467.39	412.71	97.10		5,780	482	
381	4,530.38	9,502.59	8,912.21	8,382.10	9,114.88	9,252.57	9,182.87	9,621.20	9,259.54	9,285.22	9,572.87	9,392.10		51,160	4,260	
382	1,370.06	1,359.24	1,216.10	1,379.40	1,459.14	1,422.51	1,125.70	1,201.78	1,268.93	1,028.98	1,420.81	1,522.25		16,048	1,338	
383																
384																
385	74.01	6.63	101.91	51.03	6.21	22.03	17.10	7.67	26.31	20.38	4.22	12.28		425	35	
386	137.64	78.67	122.92	225.01	92.31	91.28	114.78	124.07	172.21	145.84	96.32	87.37		1,473	123	
387	172.29	22.18	8.17	36.26	16.17	58.83	62.98	74.88	99.94	83.94	34.63	156.52		377	31	
388	1,127.21	1,212.21	1,110.30	2,586.38	2,225.23	2,100.01	2,192.70	2,145.40	1,985.87	1,208.68	1,153.84	1,214.27		23,704	1,975	
389	100.63	225.69	99.11	125.39	142.11	112.88	177.89	106.76	108.54	219.97	65.90	91.22		1,648	137	
390	42,453.89	42,222.80	40,778.42	43,776.63	38,508.11	41,465.79	38,116.90	41,042.28	46,603.24	48,601.93	46,649.22	47,246.64		497,628	41,500	
391																
392	14,490.15	22,440.04	20,001.68	24,322.11	21,042.38	21,584.18	23,900.13	27,118.53	27,123.22	24,222.53	22,010.17	24,878.53		257,320	21,410	
393	9,302.63	9,916.87	4,132.64	5,902.18	5,312.55	5,290.05	6,201.10	6,347.98	7,843.92	5,742.70	5,338.25	5,067.42		70,007	5,830	
394	39,802.74	35,742.96	35,263.98	35,744.04	32,202.82	32,576.52	34,426.55	37,446.98	37,065.52	34,112.02	34,506.94	35,912.44		402,877	33,500	
395																
396																
397	1,672.79	511.62	918.45	1,450.24	1,166.44	887.11	1,843.46	1,924.29	953.30	1,692.38	1,333.77	1,105.88		13,444	1,120	
398	1,258.59	1,211.67	753.68	898.77	936.76	613.86	961.12	1,061.78	798.55	1,042.64	702.87	674.53		11,451	954	
399	137.35	319.13	2,048.3	1,811.29	1,941.13	2,441.34	447.11	571.35	323.78	409.02	366.25	379.82		2,930	244	
400	19,305.71	19,879.66	8,461.85	19,468.77	13,146.51	13,146.51	13,146.51	13,146.51	13,146.51	13,146.51	13,146.51	13,146.51		123,100	10,260	
401	49,514.00	39,741.02	43,879.84	59,146.88	45,986.81	46,217.97	58,844.29	58,532.45	57,791.26	58,532.45	46,195.61	46,113.18		574,227	47,780	
402	15,632.30	19,070.45	17,765.79	17,700.95	14,814.98	14,966.54	15,586.72	23,736.82	23,022.07	22,440.34	17,727.22	17,958.00		214,996	17,900	
404	9,652.23	9,303.80	6,446.52	9,383.44	8,628.12	9,586.76	9,594.36	10,305.37	10,008.15	19,428.63	9,246.79	8,922.60		110,542	9,200	
405	24,128.59	24,118.83	23,582.40	25,425.61	24,562.90	24,562.90	24,562.90	24,562.90	24,562.90	24,562.90	24,562.90	24,562.90		308,020	25,700	
406	66.25	357.39	572.96	625.71	621.23	715.49	636.49	658.02	898.67	836.45	765.24	815.07		7,089	590	
407	883.63	866.40	541.24	966.61	892.62	883.90	1,092.99	1,145.82	978.58	1,082.28	905.38	919.53		11,103	926	
408																
410	1,831.77	3,422.49	1,944.64	2,067.69	2,313.71	2,496.42	3,521.23	3,045.60	3,762.75	2,581.77	2,682.46	2,244.61		28,267	2,358	
411	146.37	157.49	344.43	450.67	780.75	1,671.19	2,094.1	893.84	1,054.47	258.23	3,139.45	357.90		3,964	332	
412																
413																
414	774.24	743.14	742.23	767.45	736.13	727.56	720.11	740.06	864.31	837.78	776.97	744.32		8,930	744	
415	330.38	1.58	3.77	7.19	216.00	16.15	75.38	345.25	137.24	165.37	44.97	13.77		892	74	

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# Old Colony Passenger & Freight Study

## Passenger Transportation (Continued)

Ac't	1946 Dec	1947 Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Total 1946-1947	Ave. Month
416	347.03	57.91	421.06	227.30	246.60	278.53	203.79	586.42	3.20	332.18	8.38	244.54	3,013	251
417	—	3.80	—	—	3.37	—	—	—	—	—	43.06	—	50	4
418	—	—	—	—	—	—	—	—	—	—	—	—	—	—
419	214.01	189.23	128.60	178.57	132.34	114.65	129.41	198.49	75.78	123.33	136.39	85.30	1,839	153
420	5,899.29	3,024.15	3,442.10	4,328.57	6,058.33	5,786.05	4,229.08	6,473.67	6,123.04	3,728.03	5,444.24	7,602.50	55,008	4,580
<b>Total</b>	<b>29,472.57</b>	<b>28,058.29</b>	<b>27,371.31</b>	<b>27,136.57</b>	<b>27,446.97</b>	<b>26,546.64</b>	<b>26,952.94</b>	<b>28,772.13</b>	<b>33,742.26</b>	<b>26,502.21</b>	<b>709,092.46</b>	<b>305,676.04</b>	<b>592,521</b>	<b>285,420</b>
<i>Miscellaneous</i>														
441	—	—	—	—	—	—	532.76	1,362.16	1,328.48	4,271.15	—	—	5,352	446
442	2,371.96	2,405.01	2,274.89	2,306.11	2,226.95	2,312.53	2,209.35	2,232.16	2,313.04	2,414.03	2,174.23	1,939.09	27,612	2,303
445	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>2,371.96</b>	<b>2,405.01</b>	<b>2,274.89</b>	<b>2,306.11</b>	<b>2,226.95</b>	<b>2,312.53</b>	<b>2,209.35</b>	<b>2,232.16</b>	<b>2,313.04</b>	<b>2,414.03</b>	<b>2,174.23</b>	<b>1,939.09</b>	<b>33,165</b>	<b>2,760</b>
<i>General</i>														
451	—	—	—	—	—	—	—	—	—	—	—	—	—	—
452	—	—	—	—	—	—	—	—	—	—	—	—	—	—
453	—	—	—	—	—	—	—	—	—	—	—	—	—	—
454	—	—	—	—	—	—	—	—	—	—	—	—	—	—
455	—	—	—	—	—	—	—	—	—	—	—	—	—	—
456	29,276.71	23,270.50	29,742.20	21,808.05	23,099.20	23,099.91	22,799.11	23,745.02	23,957.98	25,072.32	24,978.92	23,928.95	263,422	21,900
457	—	—	—	—	—	—	—	—	—	—	—	—	—	—
458	—	—	—	—	—	—	—	—	—	—	—	—	—	—
459	—	—	—	—	—	—	—	—	—	—	—	—	—	—
460	—	—	—	—	—	—	—	—	—	—	—	—	—	—
461	448.08	577.38	420.71	415.84	448.08	488.14	453.44	446.47	480.98	468.99	485.19	521.05	5,664	471
462	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>29,724.79</b>	<b>23,847.88</b>	<b>21,162.91</b>	<b>22,224.89</b>	<b>23,547.19</b>	<b>23,512.05</b>	<b>23,972.45</b>	<b>24,412.52</b>	<b>24,438.96</b>	<b>25,544.21</b>	<b>25,164.11</b>	<b>23,451.00</b>	<b>269,086</b>	<b>22,400</b>
<i>Grand Total</i>														
	<b>505,633.38</b>	<b>477,206.62</b>	<b>479,448.74</b>	<b>483,576.26</b>	<b>470,724.48</b>	<b>469,606.67</b>	<b>509,764.90</b>	<b>504,082.96</b>	<b>637,708.95</b>	<b>524,022.09</b>	<b>512,028.74</b>	<b>479,622.08</b>	<b>5,853,714.22</b>	<b>487,733</b>

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APPENDIX D

-a-

TRAINS TO BE ELIMINATED AND TRAIN MILEAGE  
INVOLVED (PER WEEK) AS PER SCHEDULE  
OF FEBRUARY 9, 1948

Boston - Braintree

601	10.1	x	6
603		x	5
651		x	6
607		x	5
605		x	5
617		x	1
687		x	1
689		x	5
657		x	1
659		x	1
697 (added)		x	6

303

Braintree - Boston

604	10.1	x	5
610		x	5
692		x	1
642		x	1
654		x	1
656		x	1

141.4

444.4

Boston - Greenbush

645	27.8	x	1
681		x	1
641		x	1
673		x	1
695		x	1
697		x	6
699		x	1

333.6

Greenbush - Boston

690	27.8	x	1
664		x	5
684		x	1
680		x	1
686		x	1
688		x	1
698		x	6
682 (added Greenbush to Hingham)	<u>10.6</u>	x	5

391.8

725.4

Boston - Whitman - Plymouth

721	37.4 x 7
733	21.1 x 1
727	37.4 x 1
729	<u>x 1</u>

357.7

Plymouth - Whitman - Boston

730	37.4 x 1
724	x 1
734	21.1 x 1
720	37.4 x 6
728	x 1
726	<u>x 1</u>

395.1

752.8

Boston - Campello - Middleboro

741	21.6 x 6
773	(part of Hyannis run-see Hyannis)
743	(extended to Middleboro) 13.0 x 5
781	(extended to Middleboro) <u>13.0 x 1</u>

51.6

Middleboro - Campello - Boston

762	(part of Hyannis run-see Hyannis)
744	20.0 x 6
796	(part of Woods Hole run-see Hyannis)
742	(extended to Middleboro) <u>13.0 x 6</u>

42

93.6

Boston - Hyannis

773	79.2 x 6
-----	----------

475.2

Hyannis - Boston

762	79.2 x 6
-----	----------

475.2  
950.4

Woods Hole - Boston

796	72.0 x 1
-----	----------

72.0

1,022.4

-c-

Buzzards Bay - Woods Hole

793	17.4	x 6
793		x 1
795		x 6
797		x 6
789		x 1
		<hr/>

348.0

Woods Hole - Buzzards Bay

790	17.4	x 6
780		x 1
794		x 6
786		x 6
796 (part of Woods Hole - Boston)		
		<hr/>

330.6

678.6

Boston - New Bedford

803	56.0	x 6
807		x 1
811		x 1
		<hr/>

448.0

New Bedford - Boston

806	56.0	x 1
814		x 6
820		x 1
		<hr/>

448.0

896.0

Braintree - Cohasset

665	11.6	x 6
667		x 6
669		x 5
671		x 6
		<hr/>

266.8

Cohasset - Braintree

668	11.6	x 6
670		x 6
672		x 5
674		x 6
		<hr/>

266.8

533.6

-d-

Braintree - No. Abington - Whitman

705	11.0	x 6
707		x 5
709		x 5
751		x 1
711		x 5
723		x 6
753		x 6

357.0

Whitman - No. Abington - Braintree

708	11.0	x 6
710		x 6
712		x 5
714		x 5
716		x 6
722		x 6

372.8

729.8

Canton Junction - No. Easton

All trains to be eliminated

437.9

No. Easton - Canton Junction

All Trains to be eliminated

437.9

875.8

Myricks - Fall River

895	10.0	x 5
897		x 6
889		x 6

170.0

Fall River - Myricks

892	10.0	x 6
894		x 6

120.0

290.0

No. Abington - West Hanover (Comet)

B-3	3.2	x 6
B-7		x 1
B-9		x 5
B-11		x 6
B-13		x 6

76.8



-e-

West Hanover - No. Abington (Comet)

B-4	3.2	x 6
B-6		x 6
716		x 6

57.6

134.4

DEAD-HEADS TO BE DROPPED UNDER THE PROPOSED SCHEDULE

Train No.	Points of Destination	Miles Travelled Per Trip	No. of Trips Per Wk.	Total Train Miles Per Wk.
<u>Via Atlantic</u>				
623	So. Station-Nantasket Jct.	18.25	5	91.3
735	Dover Street	17.2	6	103.2
703	No. Abington - Whitman	3.4	6	20.4
725	Braintree - No. Abington	7.6	1	7.6
600	Braintree - Dover Street	9.6	7	67.2
736	Braintree - No. Abington	7.6	1	7.6
738	Whitman - No. Abington	3.4	1	3.4
640	Braintree - So. Station	10.1	5	50.5
694	Braintree - Dover Street	9.6	5	48.0
746	Whitman - Dover Street	20.6	6	123.6
791	Buzzards Bay - Woods Hole	17.4	1	17.4
<u>No. Abington - West Hanover Branch</u>				
B-5	No. Abington - W. Hanover	3.2	6	19.2
B-10	" "	3.2	5	16.0
B-12	" "	3.2	6	19.2
736	" "	3.2	1	<u>3.2</u>
TOTAL DEAD-HEAD TRAIN MILES PER WK.				597.8

PASSENGER TRAIN MILES  
TO BE ELIMINATED

<u>Reduction in Scheduled Trains</u>	<u>Train Miles/wk.</u>
Boston - Braintree	444
Boston - Greenbush	725
Boston - Whitman - Plymouth	752
Boston - Campello - Middleboro	93
Boston - Hyannis	1022
Buzzards Bay - Woods Hole	679
Boston - New Bedford	896
Braintree - Cohasset	534
Braintree - No. Abington - Whitman	731
Canton Junction - No. Easton	876
Myricks - Fall River	290
No. Abington - West Hanover	<u>134</u>
	7,176
Reduction in Dead-Heads operating on above listed tracks	<u>598</u>
TOTAL	7,774
TOTAL PASS. TRAIN MILES TO BE ELIMINATED PER MONTH	<u>33,687</u> x4 1/3

APPENDIX E

DETERMINATION OF PER CENT REDUCTION IN TRAINS TO  
BE HANDLED IN SOUTH STATION  
PER WEEK

Trains Presently Operated

Via Atlantic

Outbound	268	
Inbound	<u>256</u>	
		524

Via New Bedford

Outbound	33	
Inbound	<u>33</u>	
		<u>66</u>
		590

Trains To Be Eliminated

Via Atlantic

Outbound	63	
Inbound	<u>51</u>	
		114

Via New Bedford

Outbound	8	
Inbound	<u>8</u>	
		<u>16</u>
		130

Reduction in trains handled in So. Station =  $\frac{130}{590} = 22\%$

APPENDIX F\*

Summary of Car Miles Presently Operated (Timetable No. 164)

	Car Miles
Weekly Totals	104,961
<u>Elimination Under Proposed Schedule</u>	
Whitman - W. Hanover - Cohasset (Comet)	5,984
North Easton Branch	1,110
New Bedford	1,120
Fall River	1,144
Newport	61
Braintree	3,778
Plymouth	2,475
Greenbush	2,985
Whitman	126
Campello	1,008
Hyannis	5,044
Woods Hole Branch	<u>1,216</u>
	26,051

$$\frac{26,051}{104,961} = 24.9\% \text{ reduction in car miles}$$

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\* An estimate calculated by the Old Colony Transportation Committee, courtesy of Prof. Carlton E. Tucker, M.I.T.