

## RECOMMENDED ARTERIAL HIGHWAY IMPROVEMENTS

Traffic Engineering Studies, including classification of streets and highways in the area according to current traffic usage and service, inventories of physical features and traffic control devices, and speed and delay runs to determine average speeds and delays in the area, were also conducted during the summer of 1965. These inventories of highway accidents for specific locations worth to determine highway accident frequencies and severity, accident location studies were conducted in Dover and Somersworth to determine the average number of accidents reported during recent years. This represents a yearly loss to the public of close to one million dollars. Here, dots of varying diameters represent daily accident rates. The average rate in Dover and 250 per year in Somersworth was 600 per year. In Dover and 250 per year in Somersworth, there were 600 per year in Dover and 250 per year in Somersworth, and 600 per year in Somersworth.

The Dover-Somersworth Transportation Study was designed to provide a careful evaluation of arterial highway needs for two points in time — now and in 1985.

### Recommended Immediate Action Program

Early in the Study local officials in Dover and Somersworth were consulted and field reconnaissances were conducted to identify those situations and conditions in the two-city area where traffic flows and operations are unduly hazardous or impeded — in other words, locations on the arterial highway system most in need of immediate attention. To assist in the evaluation of alternative improvement schemes at these locations, manual peak period traffic counts were made. Data relating to accident frequency at these locations were also taken into consideration. From this analysis, recommendations were prepared for a series of low cost improvements which should be made on existing arterials so that these streets and highways can better and more safely serve current traffic demands. The purpose of this program was to highlight those locations where the greatest improvements could be accomplished at the least cost through the application of relatively low cost measures including channeling islands, pavement markings, stop and yield signs, turning movement regulations, curbside parking controls, and modernization of obsolete traffic signal installations.

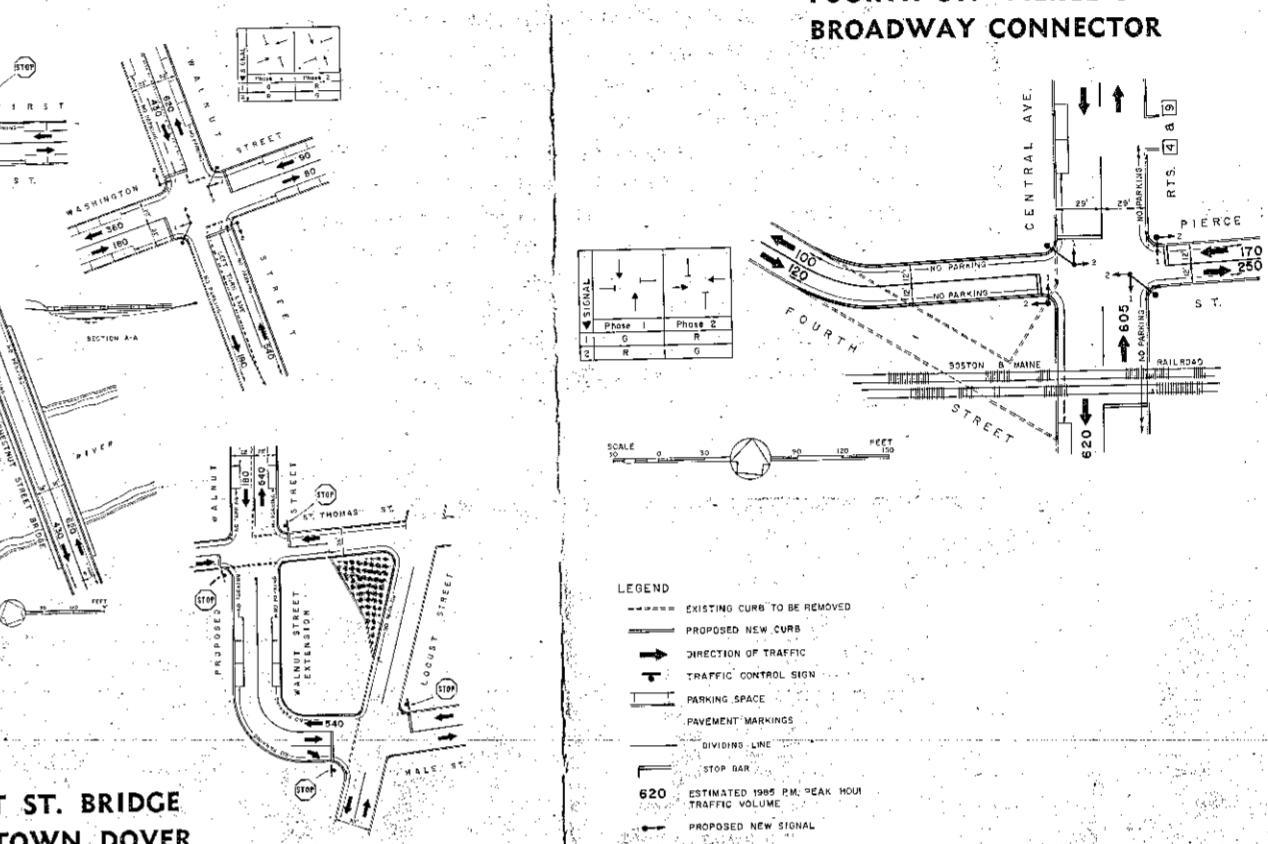
The immediate action program is made up of 13 proposals, which are illustrated on the reverse side. The total initial cost for proposed immediate action improvements at the eight locations in Dover is \$139,000; the total initial cost for proposed immediate action improvements at the five locations in Somersworth is \$32,000.

Accidents occurring at these locations accounted for 25 per cent of the total number of accidents in the two cities during recent years. Savings to the public resulting from accident reduction at these locations would alone pay for the recommended improvements within a very few years.

It is highly recommended that all 13 of the proposals be implemented as soon as possible.

### Recommended Improvements to Meet Future Needs

Traffic volumes on most of the arterial streets and highways in the Dover-Somersworth area are expected to increase by 1985, with very large proportional increases in traffic in some locations.



### Other Considerations

A number of alternative highway improvement schemes and proposals that have been made by others, particularly in the Dover Community Renewal Program, were considered in the Dover-Somersworth Transportation Study and are discussed at some length in the complete Study Report.

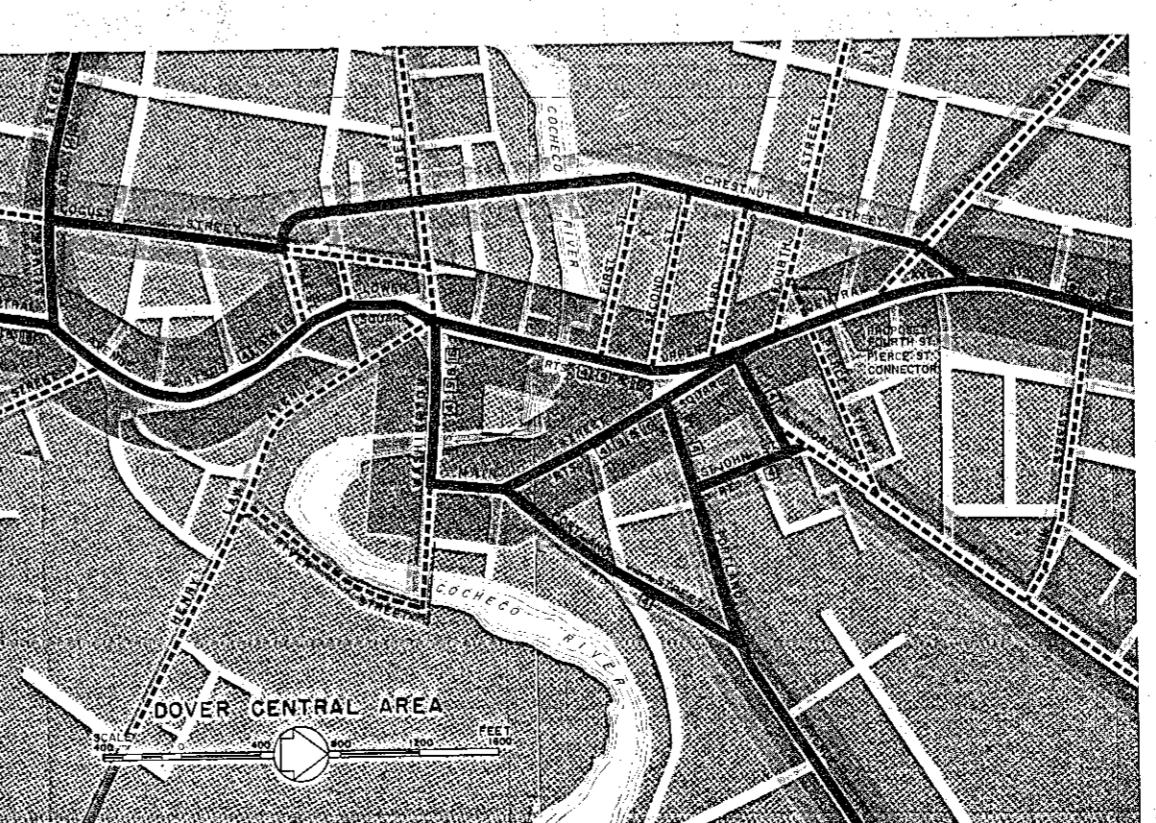
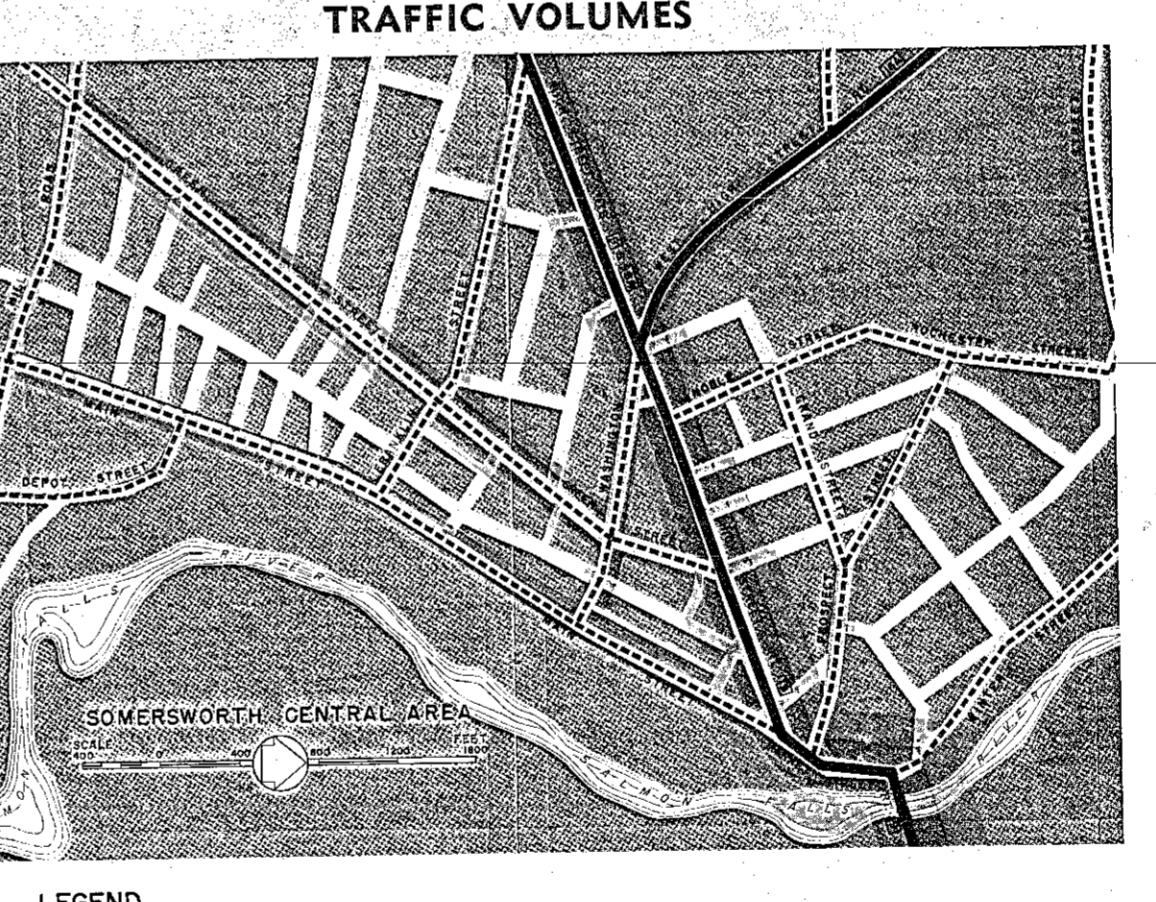
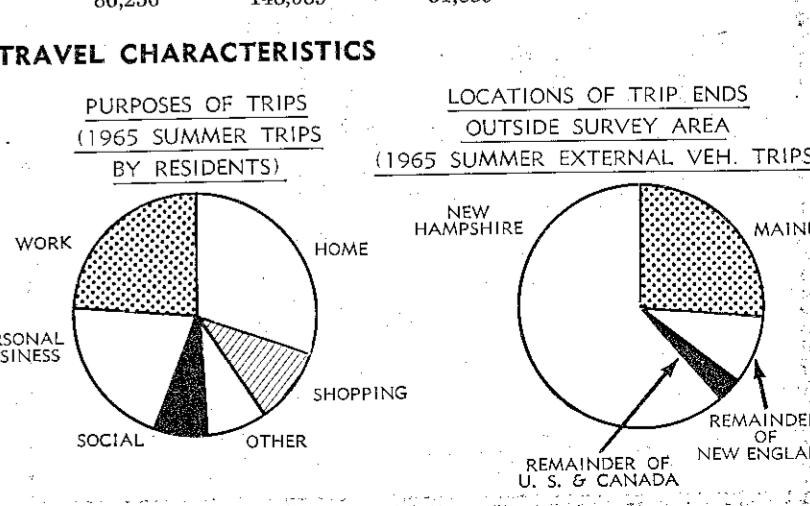
These include an analysis of the effect of removing tolls from the Spaulding Turnpike at Dover Point; a study of the desirability of adding ramp connections to the Spaulding Turnpike to and from the north at Washington Street — Tolend Road; and an investigation of the feasibility of constructing a new bridge across the Bellamy River to connect Dover Point with the Garrison Road section.

### AREA GROWTH

Future transportation needs in the Study Area will be fashioned by changes in the patterns and intensities of everyday activity of the people dependent upon the area in one way or another. Dover-Somersworth's "place on the map" will also have an influence in setting demands on local highway facilities. Located near the ocean beaches and other tourist attractions of the Atlantic coast, and sitting astride the gateway to the summer and winter playgrounds of central New Hampshire, the Dover-Somersworth area will feel the effects of the growing national pastime of traveling for recreation.

Summarized below are population, employment and land use statistics for the Dover and Somersworth portion of the internal survey area, which is that area bounded by the cordon line and encompassing the major portions of Dover and Somersworth and a corner of Rollinsford. Total numbers of vehicle driver trips, both automobiles and trucks, are also summarized below. Internal-internal trips are those that are made wholly within the cordon line; internal-external trips cross the cordon line once between origin and destination; external-external trips pass through the area without stopping.

	DOVER	1965	1985	Change 1985-1965	Percent Increase
Population	20,043	27,415	7,372	7,372	37
Employment					
Industrial	5,733	6,733	1,000	1,000	17
Retail Trade	1,495	2,343	948	948	64
Other Comm.	1,222	2,312	1,090	1,090	79
Public	560	970	410	410	73
Total	9,078	12,468	3,390	3,390	37
Land Use Acreages					
Residential	1,688	2,103	415	415	25
Commercial	102	311	119	119	62
Industrial	140	217	77	77	55
Public	259	357	98	98	38
Vacant	6,951	6,242	(-) 709	(-) 709	(-) 10
Total	9,230	9,230	—	—	—
SOMERSWORTH					
Population	8,640	11,308	2,668	2,668	24
Employment					
Industrial	3,161	3,701	540	540	17
Retail Trade	405	605	200	200	74
Other Comm.	320	546	226	226	67
Public	100	162	62	62	62
Total	3,992	5,114	1,122	1,122	28
Land Use Acreages					
Residential	581	749	168	168	29
Commercial	80	104	24	24	30
Industrial	59	107	48	48	81
Public	195	216	21	21	11
Vacant	4,337	4,096	(-) 261	(-) 261	(-) 1
Total	5,272	5,272	—	—	—
DOVER & SOMERSWORTH					
Vehicle Trips	46,004	74,676	28,674	28,674	62
Internal-Internal	33,287	59,557	26,270	26,270	79
External-External	6,959	13,854	6,895	6,895	99
Total	86,250	148,089	61,839	61,839	72



## 1965 SUMMER ORIGIN-DESTINATION & OTHER DATA COLLECTION SURVEYS

### DOVER-SOMERSWORTH TRANSPORTATION STUDY

#### Purpose

The Dover-Somersworth Transportation Study was conducted by Tippets-Abbett-McCarthy-Stratton for the New Hampshire Department of Public Works and Highways under the terms of an engineering agreement dated July 1, 1965. The Study is being financed by the State, with local matching funds from the cities of Dover and Somersworth, and with federal-aid contributed by the United States Bureau of Public Roads.

With the ultimate objective of selecting a recommended transportation system which will best meet the future needs of the area, plus a series of recommendations for immediate action to meet current critical needs, the Study has encompassed a wide range of transportation and land use planning activities.

#### Procedures

An origin-destination survey was conducted in the Dover-Somersworth area during the summer of 1965 for the purpose of obtaining data on the travel habits and desires of the people using the highway facilities in the area, to serve as the foundation for planning of future transportation facilities. Other field studies were conducted during the summer of 1965 for the purpose of acquiring a thorough knowledge of the physical and operating characteristics of the existing street and highway network.

An inventory of current land use was made in sufficient detail to provide an adequate basis for determining trip generation characteristics. Population, employment, average family income, vehicle ownership and other data were also gathered. Detailed forecasts of population growth and economic development to the year 1985 were made and allocated to the various sections of the Dover-Somersworth area in accordance with a generalized future land use plan.

Travel forecasting tools, in the form of mathematical models, were developed through analysis of the ways in which the various items of current travel data, socio-economic data and land use data are inter-related. Application of these models to future conditions, as described by forecasts of socio-economic and land use data, resulted in a projection of travel demands to 1985.

The adequacy of the existing arterial highway network in the Dover-Somersworth area to meet these forecasted demands was evaluated and alternative solutions at critical locations were evaluated. The existing arterial highway network was also evaluated from the viewpoint of the present, and particular attention was given to locations where traffic flows and operations are unduly hazardous or impeded.

#### Results

Out of these investigations have come the recommendations for improvements to the existing highways depicted in this Summary Report and described more fully in the complete Study Report. It is believed that if these recommendations are put into effect in the Dover-Somersworth area, the arterial highway system will be capable of safely and efficiently meeting the demands put upon it to the year 1985.

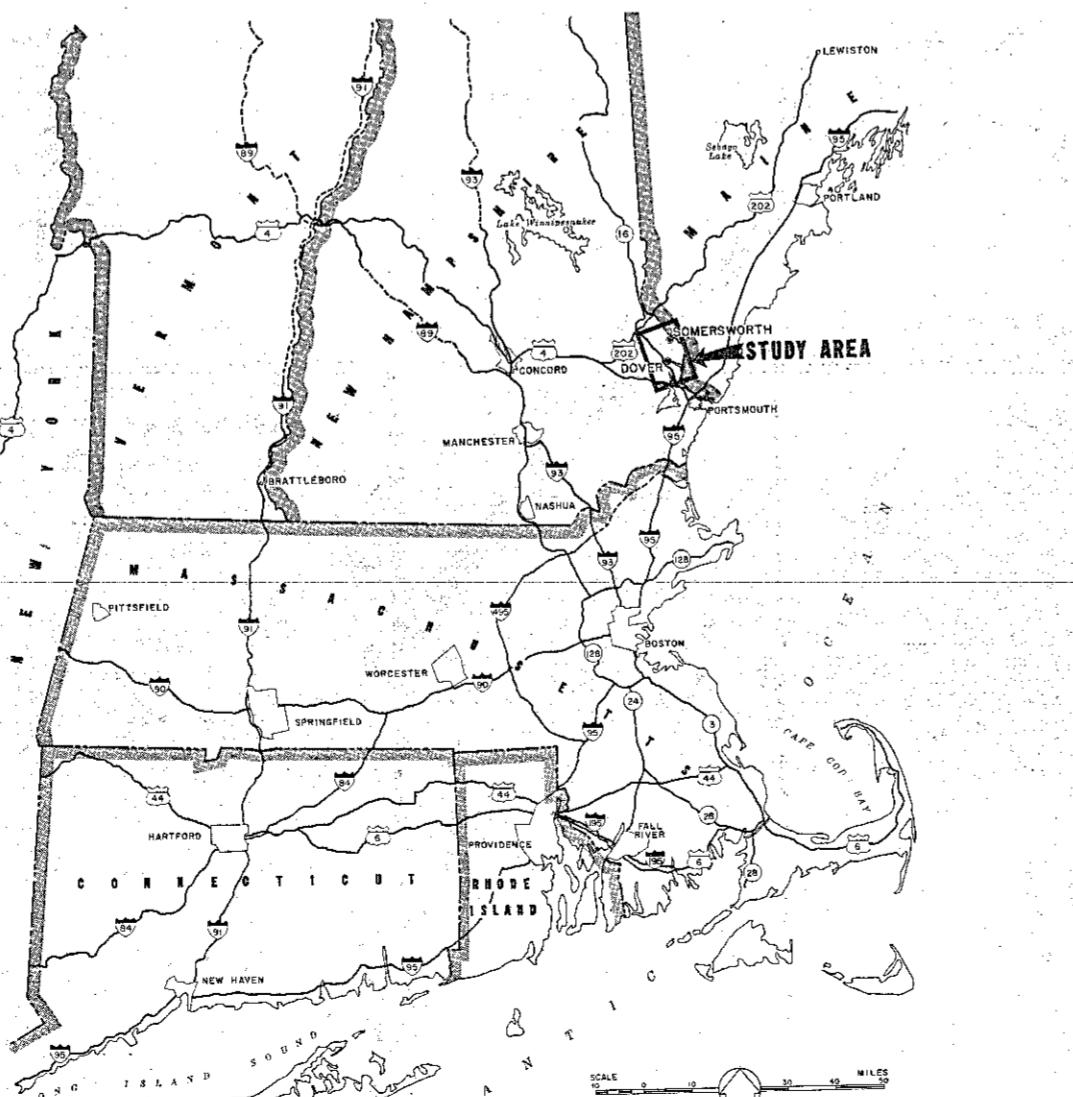
### DOVER-SOMERSWORTH, NEW HAMPSHIRE TRANSPORTATION STUDY

1965-1966

### SUMMARY REPORT

PREPARED FOR

NEW HAMPSHIRE DEPARTMENT OF PUBLIC WORKS & HIGHWAYS  
U. S. DEPARTMENT OF TRANSPORTATION, BUREAU OF PUBLIC ROADS  
CITIES OF DOVER AND SOMERSWORTH, N. H.



TIPPETTS - ABBETT - McCARTHY - STRATTON  
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**RECOMMENDED IMMEDIATE ACTION PROGRAM**

