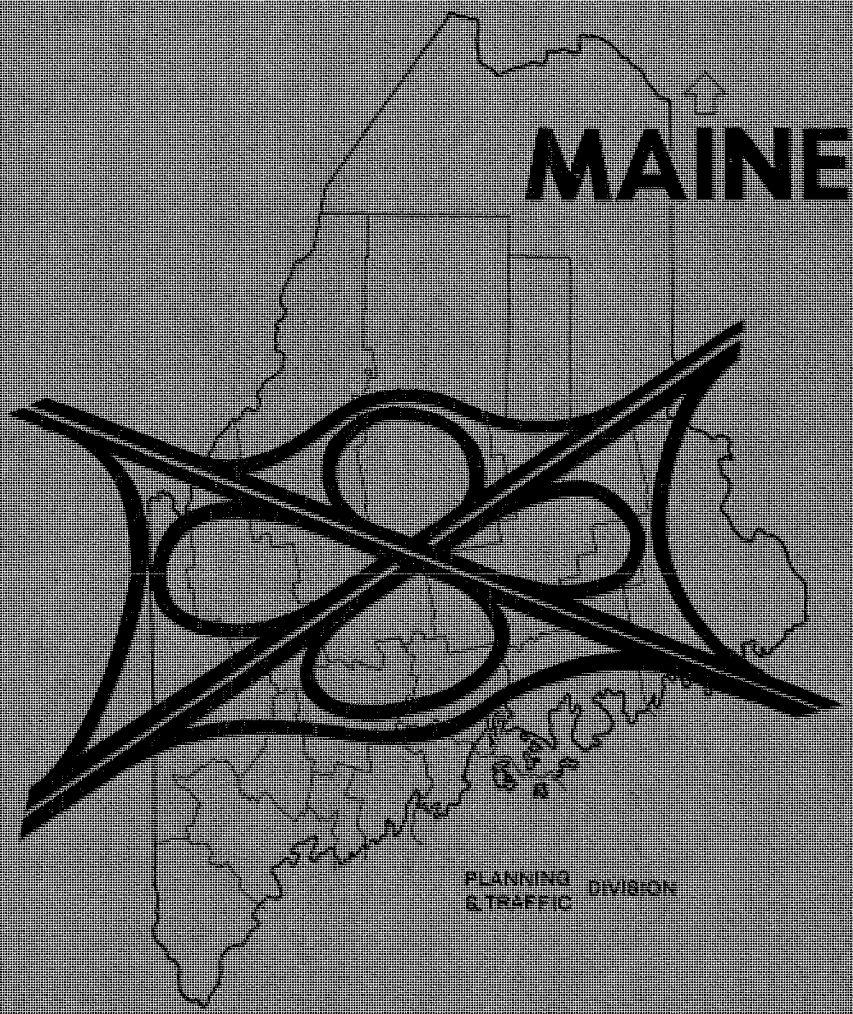
STATE HIGHWAY COMMISSION

EAST-WEST HIGHWAY

COST ESTIMATE REPORT



EAST-WEST HIGHWAY

COST ESTIMATE

REPORT

Prepared by: The Maine State Highway Commission

January 1969

Maine State Highway Commission

AUGUSTA, MAINE 04330

January 8, 1969

To the Honorable Senate and
House of Representatives of the
One Hundred and Fourth Legislature -

In accordance with the wishes of the 103rd Maine Legislature as expressed in the provisions of LD 1241, entitled AN ACT PROVIDING FOR A COST-ESTIMATE STUDY OF AN EAST-WEST MULTI-PURPOSE HIGHWAY THROUGH MAINE, the State Highway Commission herewith submits the enclosed report. The 342 mile facility is estimated, as proposed, to cost some $450,000,000 at current cost levels.

Respectfully,

MAINE STATE HIGHWAY COMMISSION

David H. Stevens, Chairman

Bertrand A. Lacharite

Steven D. Shaw

TABLE OF CONTENTS

LIST OF FIGURES

INTRODUCTION

The One Hundred and Third Maine Legislature directed the State Highway Commission to make a cost estimate study of an East-West highway as described in the following Act as well as to estimate the time required to complete the proposed highway. It should be noted that although the location is defined in the Act, no determination of an appropriate location is implied in this report. A copy of the Act follows:

STATE OF MAINE

IN THE YEAR OF OUR LORD NINETEEN HUNDRED
SIXTY-SEVEN

H.P. 833 -- L.D. 1241

AN ACT Providing for a Cost-Estimate Study of an East-West Multi-Purpose Highway Through Maine.

Be it enacted by the People of the State of Maine, as follows:

Sec. I. East-west multi-purpose highway. The State Highway Commission shall arrange for a cost-estimate study of the following east-west highway construction and the estimated time of completing this system.

This system would consist of a main east-west route and 3 spurs all being 4-lane, double-barreled-limited-access construction of the interstate highway design.

The main route would be from a 4-lane International Bridge across the St. Croix River near the Calais Country Club and proceeding west via Charlotte, Northfield, Deblois and East Holden connecting with a new 4-lane bridge over the Penobscot River which would connect with Route 395. This route would use Routes 395 and 95 as far as a point 1½ miles south of the Pittsfield interchange. It would then proceed west via Skowhegan, Norridgewock, Farmington Falls, Livermore Falls, West Paris, Norway and Fryeburg.

A spur would extend from East Holden to the Mt. Desert Island Bridge.

A spur would extend from Farmington Falls to Rangeley and terminate at the Quebec border in the Town of Bowmantown, which is the northwest corner of Maine. A spur would run from Fryeburg to Gorham and Portland.

Sec. 2. Appropriation. There is allocated from the General Highway Fund the sum of $1,000 to carry out the purpose of this Act.

CONCLUSIONS

Given the basic location of the proposed East-West Highway in the Legislative Act passed by the 103rd Maine Legislature, the State Highway Commission reviewed the location and estimated the cost of constructing a four-lane limited-access highway between Calais and Fryeburg with associated spurs to be some $450,000,000 at the 1967 construction cost level. The proposed highway is approximately 342 miles in length, including spurs.

Assuming the same level of construction as prevailed during the Interstate Highway program, namely an average of 15 miles per year, a total of nearly 23 years would be required to complete the construction of the proposed facility. Engineering manpower and contractor capability could be increased by the employment of consultants and through the use of large construction contracts if it were desirable to shorten the construction period. In this instance, a construction period of ten to fifteen years might be envisioned.

DESCRIPTION OF ROUTE

The four-lane limited access highway as described in the Legislative Act would extend southwesterly from a junction with U. S. Route 1 in the vicinity of the Calais Country Club and run generally westerly about midway between U. S. Route 1 and State Route 9 to Waltham, thence sweep northwesterly to Brewer and across the Penobscot River to Interstate Route 395. From Main Street (U. S. Route 1A) in Bangor this highway would run conjointly with Interstate Routes 395 and 95 to a point just west of Pittsfield. From that point to Farmington Falls the facility would generally parallel U. S. Route 2. At Farmington Falls, this route would swing southwesterly to Livermore Falls and thence extend westerly via South Paris to the westerly terminus at Fryeburg. Interchanges were located on the route for the purpose of estimating costs and at points where general highway service would be provided. Figure 1, which follows, shows the general location of the proposed facility, and a more detailed map showing the main highway, spurs and interchange locations is enclosed in the pocket inside of the back cover.

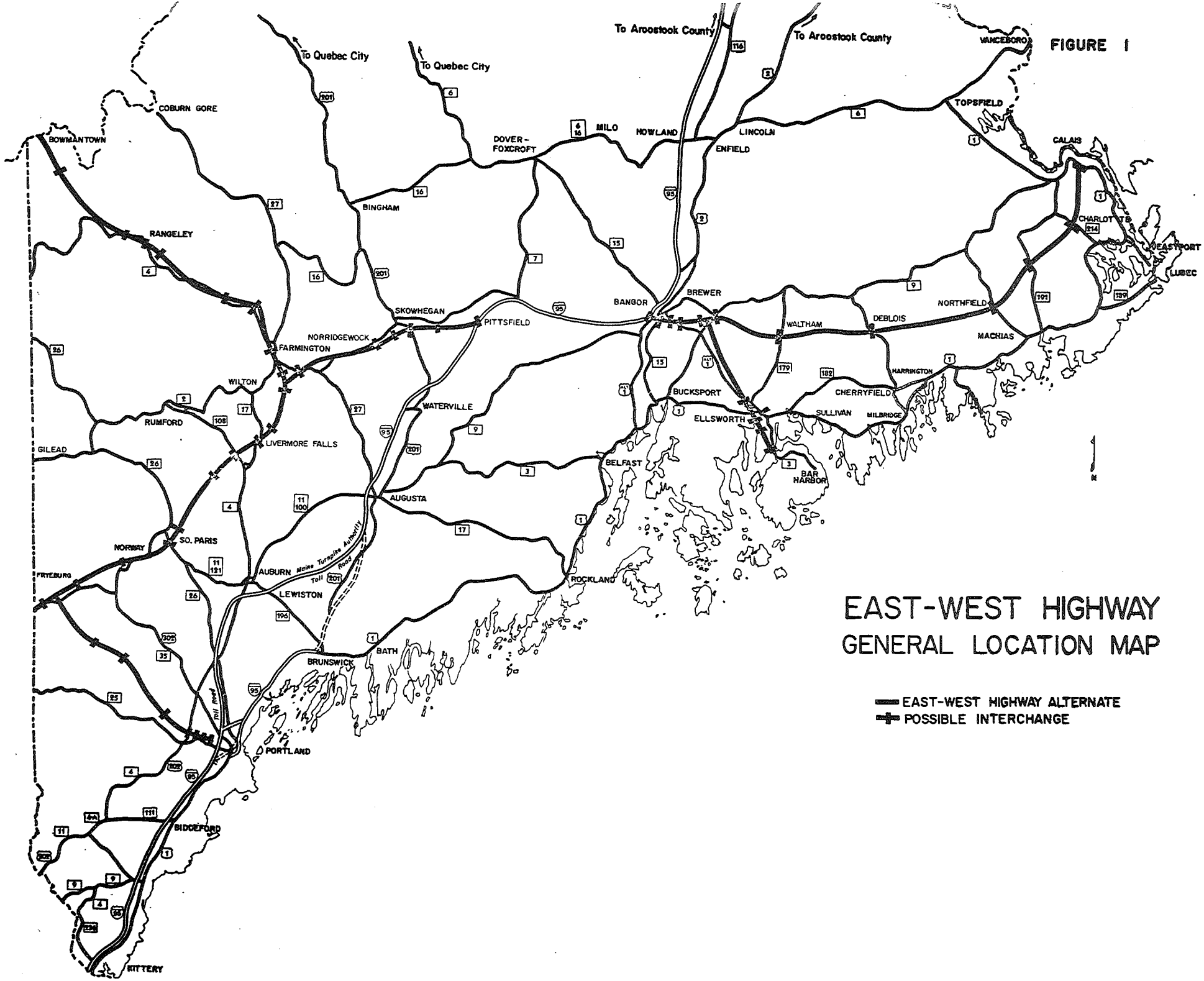


FIGURE 1
To Aroostook County
To Aroostook County
To Quebec City
To Quebec City
VANCEBORO
TOPSFIELD
CALAIS
COBURN GORE
BOWMANTOWN
DOVER-FOXCROFT
MILO
HOWLAND
LINCOLN
ENFIELD
BINGHAM
RANGELEY
CHARLOTTE
EASTPORT
LUBEC
SKOWHEGAN
PITTSFIELD
BANGOR
BREWER
NORTHFIELD
NORRIDGEWOCK
FARMINGTON
WALTHAM
DEBLOIS
MACHIAS
WILTON
WATERVILLE
HARRINGTON
CHERRYFIELD
BUCKSPORT
RUMFORD
ELLSWORTH
SULLIVAN
MILBRIDGE
GILEAD
LIVERMORE FALLS
BELFAST
BAR HARBOR
AUGUSTA
SO. PARIS
NORWAY
Maine Turnpike Authority Toll Road
AUBURN
FRYEBURG
LEWISTON
ROCKLAND
BATH
BRUNSWICK
PORTLAND
BIDDEFORD
KITTERY
EAST-WEST HIGHWAY
GENERAL LOCATION MAP
EAST-WEST HIGHWAY ALTERNATE
POSSIBLE INTERCHANGE

FUNCTION OF ROUTE

The expressed function of the proposed East-West Highway is to provide improved highway travel facilities from upper New York, the Province of Quebec and midwest United States and Canada to Maine and the Canadian Maritime Provinces. A concomitant function is to assure more expeditious connections between areas in north central Maine and between the Bangor-Brewer urban complex and the more populous sections of Washington County.

Several other alternates are under consideration by various agencies to determine the most feasible location for an East-West highway to meet the expressed need.

LOCATION, COSTS AND CONSTRUCTION PERIOD

Location The general location was set forth in the Public Law. The more detailed location upon which the estimate was based was determined by the Commission's Location Section as a result of a preliminary review of U.S.G.S. Topographic maps and visual inspection of the major side road crossing locations.

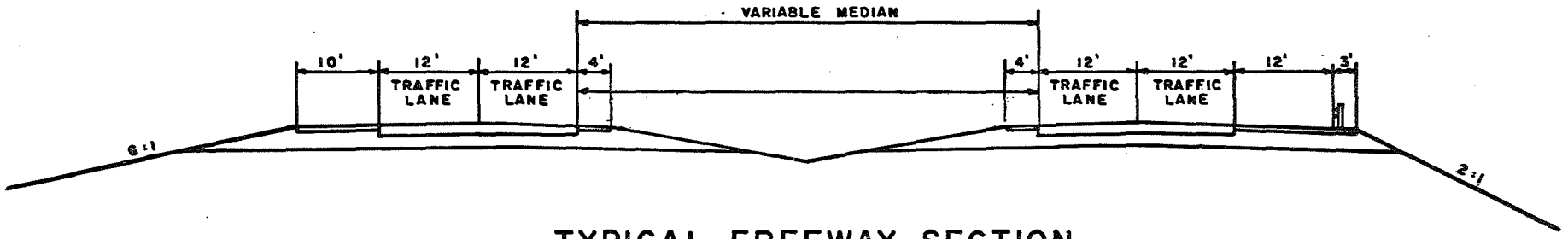
Costs Right of way estimates were based on figures obtained from the Interstate Highway cost estimates of 1967, from which similar types of land and right of way costs were extracted and applied to the subject estimate. Typical sections of the proposed highway and interchange ramps are shown in Figure 2.

Several completed Interstate projects dating back to June 1962 were reviewed and the costs per mile were computed to determine roadway costs on this proposal. The terrain was analyzed and the projects were categorized into three major groups; heavy, medium, or light grading. Costs were then adjusted to 1967 prices using a graph showing price trends as compiled by the State Highway Commission's computer section.

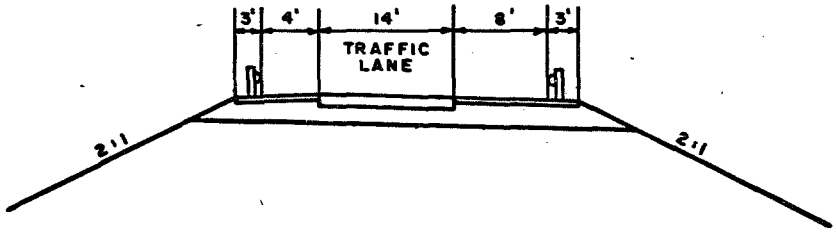
Roadside improvement estimates were based on the average cost of completed rest area and/or scenic turnouts. Frequency of facilities was estimated at 30 miles for each.

The costs of structures were estimated by the Commission's Bridge Division. Major river and stream crossings were estimated on an individual basis and normal side road overpasses were estimated on a 250 foot median width basis.

Figure 2



TYPICAL FREEWAY SECTION



TYPICAL RAMP SECTION

The estimates for interchange costs were based on average costs for diamond-type design as constructed on the Interstate Highway.

Signing costs were estimated on a basis of Interstate Highway costs per mile of roadway plus a lump sum at each interchange, and a lump sum for each private and public crossing was allowed for utility adjustments. A summation of costs is shown at the end of this report.

Construction Period Based upon experience during the Interstate Highway construction program, it is estimated that 15 miles per year would be constructed, requiring a total construction period of 22.8 years for the entire East-West proposal. Engineering manpower and contractor capability could be increased by the employment of consultants and through the use of large construction contracts if it were desirable to shorten the construction period. In this instance, a construction period of ten to fifteen years might be envisioned.

EAST-WEST MULTI-PURPOSE HIGHWAY COST ESTIMATE INCLUDING * SPURS

TOTAL 341.9 Miles

1.	Preliminary Engineering (5% lines 3 thru 9)	$ 18,872,297
2.	Right of Way	4,089,875
3.	Roadway	273,520,000
4.	Roadway Improvements	8,699,500
	a. Scenic Turnouts	
	b. Rest Areas	
	c. Landscaping	
5.	Structures (Rivers and Streams)	20,370,000
6.	Structures (Side Roads)	42,000,000
7.	Interchanges	29,400,000
8.	Signing	2,393,300
9.	Utility Adjustments	1,063,156
10.	Sub-total, Lines 3 thru 9	377,445,956
11.	Construction Eng. & Contingencies, 10% Line 10	37,744,596
12.	Total Cost of Construction, Lines 10 & 11	415,190,552
13.	Total Estimated Cost, Lines 1, 2 & 12	438,152,724

"Say $450,000,000"

* Spurs = 143.1 miles include Fryeburg to Portland, Farmington to Bowmantown, Holden to Bar Harbor.

The estimate of costs by various sections is as follows:

Calais to Bangor	$118,499,131
Pittsfield to Farmington	49,954,725
Farmington to N.H. Boundary (Fryeburg)	93,174,666
Bar Harbor Spur	33,203,883
Bowmantown Spur	90,741,606
Portland Spur	52,578,713
	$438,152,724