

The Commonwealth of Massachusetts

SPECIAL REPORT OF THE DEPARTMENT OF
PUBLIC WORKS RELATIVE TO A NEW
BRIDGE OVER SAUGUS RIVER BETWEEN
REVERE AND LYNN.

[Metropolitan Affairs.]

DEPARTMENT OF PUBLIC WORKS,
STATE HOUSE, BOSTON, December 1, 1931.

To the Honorable Senate and House of Representatives of the Commonwealth of Massachusetts.

In accordance with the provisions of chapter 51, Resolves of 1931, the Department of Public Works presents herewith its report upon the preparation of surveys, estimates of cost, plans and specifications for the construction of a new bridge and approaches thereto over Saugus River between Point of Pines in the city of Revere and the city of Lynn.

Chapter 51, Resolves of 1931, follows:

RESOLVE PROVIDING FOR THE MAKING AND PREPARATION BY THE DEPARTMENT OF PUBLIC WORKS OF SURVEYS, ESTIMATES, PLANS AND SPECIFICATIONS FOR THE CONSTRUCTION OF A NEW BRIDGE OVER THE SAUGUS RIVER BETWEEN THE POINT OF PINES IN THE CITY OF REVERE AND THE CITY OF LYNN.

Resolved, That the department of public works is hereby authorized and directed to make and prepare surveys, estimates of cost, plans and specifications for the construction of a new bridge and approaches thereto over the Saugus river between the Point of Pines in the city of Revere and the city of Lynn to replace a bridge commonly known as the Saugus River bridge, and may expend therefor from the highway fund such sum, not exceeding seventy thousand dollars, as may be hereafter appropriated. Said department shall report to the

general court a statement of the estimated cost of the construction of said bridge and approaches and its recommendations, together with drafts of legislation necessary to carry the same into effect, by filing the same with the clerk of the house of representatives on or before the first Wednesday of December in the current year, and shall, at the same time, file a copy thereof with the budget commissioner.

The Department has accordingly had surveys made, estimates of cost, and prepared plans and specifications for the construction of said new bridge and approaches thereto over Saugus River. The plans and specifications of said bridge are on file in the office of the Department.

LOCATION.

The Saugus River Bridge spans Saugus River at its mouth and connects the city of Revere and city of Lynn. Its importance, however, as a traffic route rests in its being on one of the principal routes from Metropolitan Boston to Lynn, Salem, Capé Ann and the North Shore.

TRAFFIC.

In August, 1930, highway traffic counts indicated a total for a Wednesday of 15,000 cars in sixteen hours and for a Sunday a total of 25,000 cars in sixteen hours. Having in mind the probable increase in the traffic during the next fifty years, it is believed that the new bridge should have a roadway width of 60 feet.

The river traffic is important, and all of the shipping is dependent on the draw in this bridge for access to the sea. The total number of openings in 1930 was 320 and for 1929 the total was 390 openings, consisting mostly of barges with coal and sand for the General Electric Company and a few pleasure craft.

It is believed that in the opinion of the United States engineers the draw should have a clear opening of 100 feet, and the regulations of the government further require that it shall have an underclearance at mean high water of at least 20 feet, with the foundations of the piers at the draw deep enough to allow dredging the channel to a depth of 30 feet at mean low water.

PRESENT BRIDGE.

The bridge is a pile and timber trestle with a bascule draw and was built in 1905 by the then Metropolitan Park Commission. In 1921 the northerly end was partially destroyed by fire, and temporary repairs were made. The bridge has a total length of 1,215 feet between abutments, with a roadway 26 feet in width and a sidewalk 6 feet wide on the easterly side. The draw is of steel of the two-leaf bascule type, surfaced with wood, and has a clear opening of 50 feet.

The abutments are of masonry faced with stone, and the piers supporting the draw span are of concrete, which has been seriously eroded by salt water, and are in rather poor condition. The fixed portion of the bridge is made up of 71 wooden trestle bents, 29 on the south side of the draw and 42 on the north side. The surface of the roadway on the southerly end is of wood block covered with tar or asphalt, and, while rough, is in fair condition. The northerly end of the bridge, which was rebuilt after the fire, has a wooden plank deck which is in very poor condition. The sidewalk and railings are in fair condition.

Many of the piles are decayed and badly eaten by marine borers. The timber work is seriously decayed in many places, and the bridge requires constant attention and repairs at considerable expense.

NEW BRIDGE.

The location of the new bridge has been fixed just westerly of the present structure and will permit the construction of the new bridge without disturbing the old one. This will allow traffic to continue as at present until the new bridge is completed, thus saving the cost of a temporary structure.

The bridge recommended for this location has a clear roadway width of 60 feet, with one sidewalk 8 feet wide and a refuge sidewalk 2.5 feet wide. The total length of the structure between abutments is 1,250 feet. The bridge is of the deck type, the roadway slab and sidewalk

resting directly upon seven lines of steel girders. The roadway is to have a bituminous concrete surface, and the sidewalks are to have a concrete wearing surface.

The draw span, conforming in appearance with the steel approach spans, is of a two-leaf, rolling lift, bascule type, with operating machinery capable of opening the draw in forty-five seconds.

There are five spans of the plate girder construction extending to the Revere shore, and seven spans on the northerly end extending from the draw to the Lynn abutment. On both ends are filled approaches extending to meet the grade of the present roadways. The maximum grade on the approaches is 4 per cent with a vertical curve over the center of the bridge, where the roadway will be about 25 feet above the roadway of the present bridge.

ESTIMATED COST.

The estimated cost, including allowance for construction, engineering and property damages, is \$1,315,000.

The Department recommends that the said bridge and approaches be constructed by this Department and that the apportionment of cost be made as follows:

1. The cost of construction to be borne one-half by the Commonwealth and one-half by the cities and towns of the Metropolitan Parks District.

2. The cost of maintenance of the bridge and draw, and of the operation of the draw, to be borne by the Metropolitan District Commission.

Respectfully submitted,

DEPARTMENT OF PUBLIC WORKS,

FRANK E. LYMAN,

Commissioner of Public Works.

RICHARD K. HALE,

H. A. MACDONALD,

Associate Commissioners.

The Commonwealth of Massachusetts

In the Year One Thousand Nine Hundred and Thirty-Two.

An Act authorizing Construction of a New Bridge over the Saugus River between the Point of Pines in the City of Revere and the City of Lynn.

Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:

1 SECTION 1. The department of public works, here-
2 inafter called the department, is hereby authorized
3 and directed to construct a new bridge, with a draw,
4 over the Saugus river between the Point of Pines in
5 the city of Revere and the city of Lynn, and said
6 bridge shall connect with the metropolitan parkway
7 and the state highway in said cities, respectively.

1 SECTION 2. The department may, on behalf of
2 the commonwealth, take by eminent domain, under
3 chapter seventy-nine of the General Laws, or acquire
4 by purchase or otherwise, such public or private
5 lands, public parks or reservations, or parts thereof
6 or rights therein, and lands or rights therein under
7 the control of the metropolitan district commission
8 and/or public ways, as it may deem necessary for
9 carrying out the provisions of this act, including such
10 land or rights in land as may be necessary for the
11 construction of any necessary drainage outlets; pro-
12 vided, that no damages shall be paid for public lands
13 or parks, parkways or reservations so taken.

1 SECTION 3. The cost of constructing said bridge
2 and land takings for the same, including any dam-
3 ages awarded or paid on account of any taking of
4 land or property therefor, or any injury to the same,
5 and any sums paid for lands or rights purchased,
6 including also the interest on any money borrowed
7 by the state treasurer on the credit of the common-
8 wealth under section five, and all other expenses
9 incurred in carrying out the provisions of section one,
10 shall be deemed to be the cost of the work; provided,
11 that such cost shall not exceed, in the aggregate
12 dollars.

1 SECTION 4. Fifty per cent of the cost of the work
2 authorized by section one shall be paid by the com-
3 monwealth from such appropriations as may here-
4 after be made, not exceeding dollars being
5 paid from the Highway Fund of nineteen hundred and
6 thirty-two and the balance from the Highway Fund
7 of nineteen hundred and thirty-three; fifty per cent
8 of the cost of such work shall be paid by the mu-
9 nicipalities of the metropolitan parks district, in-
10 cluding the cities of Lynn and Revere, in proportion
11 to the respective taxable valuations of the property
12 of said municipalities as defined by section fifty-nine
13 of chapter ninety-two of the General Laws.

1 SECTION 5. So much of the cost of the work au-
2 thorized by section one as is provided to be paid
3 ultimately by the municipalities of the metropolitan
4 parks district shall, in the first instance, be paid by the
5 commonwealth. On or before June tenth of the year
6 nineteen hundred and thirty-two, and of each subse-
7 quent year until the work is completed and the entire

8 cost thereof ascertained, the department shall ascer-
9 tain and certify to the state treasurer the amount ex-
10 pended for the work authorized since the beginning of
11 work or since the last certificate of cost was filed by
12 the department, including interest paid by the com-
13 monwealth on temporary loans, and shall also ascer-
14 tain and certify to the state treasurer the amount due
15 from each municipality aforesaid to meet its share of
16 the amount then certified. The amount due as afore-
17 said from each municipality shall be assessed and
18 collected by the state treasurer in the apportionment
19 and assessment of the annual state tax, and shall be
20 applied to the payment of principal and interest of
21 the notes issued as hereinafter provided to meet the
22 cost of the work authorized.

23 The state treasurer shall, upon request of the de-
24 partment and subject to the approval of the governor
25 and council, issue and sell at public or private sale
26 temporary notes of the commonwealth, to an amount
27 to be specified from time to time by the department,
28 sufficient to provide means for the payment in the
29 first instance of that part of the cost of the work
30 which is to be borne ultimately by the municipalities
31 of the metropolitan parks district. All such tempo-
32 rary notes shall be issued, and may be renewed, for
33 such maximum term of years as the governor may
34 recommend to the general court in accordance with
35 section three of Article LXII of the amendments to the
36 constitution of the commonwealth, and shall bear
37 interest at such rate as shall be fixed by the state
38 treasurer, with the approval of the governor and
39 council. The total amount of all notes issued here-
40 under shall not exceed the sum of dollars.

1 SECTION 6. When the work herein authorized
2 shall have been completed, said bridge and the ap-
3 proach at the southerly end of said bridge connecting
4 with the metropolitan parkway shall be transferred to
5 the control of the metropolitan district commission,
6 and the cost of maintenance of said bridge and ap-
7 proach and of the maintenance and operation of the
8 draw in said bridge shall be borne by the municipal-
9 ities of the metropolitan parks district.