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Background and History of Martin's Point Bridge in Falmouth-Portland, August 31, 2010

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Background and History of Martin's Point Bridge in Falmouth-Portland



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Martin's Point Bridge Circa 1850 – Oil Painting

Martin's Point Bridge History

Excerpted from "Images of America – Falmouth, The Falmouth Historical Society" p18 Published 2009

- **Petitions for a bridge between Martin's Point and Mackey's (Mackworth) Point began in 1807, but the embargo act, the War of 1812, and a depression delayed its building until 1828. Huge chunks of ice destroyed this toll bridge in 1861 just as the Civil War began. Rebuilt after the war at county expense, it opened as a free bridge in 1868. Wooden piles, placed in the river upstream to break up the ice flows in the winter, became convenient for the cormorants to perch upon and dry their wings. The old toll house, no longer needed, was moved across the road and became a private home.**

1869 Copy of Newspaper Clipping Detailing Transfer of Land for Martin's Point Bridge

MARTIN'S POINT BRIDGE.—A meeting of the stockholders of Martin's Point Bridge was held at the office of George A. Thomas, Esq. clerk of the corporation, yesterday morning, to decide by their votes if they would ratify the conveyance of the franchises of the corporation to the county of Cumberland. The stockholders present voted to do so.

The following preamble and resolutions were adopted:

Whereas, previous to the destruction of Martin's Point Bridge by the storm of Nov. 3, 1861, said corporation was indebted to Elias Thomas (its Treasurer and largest stockholder,) in the sum of about six thousand dollars, for cash advanced by him at various times, for the repair and rebuilding of said bridge; and,

Whereas, on account of said advances by said E. Thomas; it was voted at a regular annual meeting of said corporation, held before the destruction of said bridge; that said Elias Thomas have a lien on the stock and property of said bridge, and that the same be subjected to the payment of said sum, to said E. Thomas, with interest thereon; and,

Whereas, since the destruction of said bridge in Nov. 1861; said Elias Thomas—in consideration of the County of Cumberland building a new bridge on the site of said M. P. Bridge; and in consideration of the payment to him by certain taxpayers of Falmouth, in said county of the sum of eight hundred dollars, for his sole aid and benefit—did in July 1868 agree to relinquish to said county of Cumberland all the interest of said M. P. Bridge in the stone wall, piling, and other property of said bridge and the rights and franchises therein. And in January 1869, said hundred dollars having been paid by said taxpayers, to said Elias Thomas; said E. Thomas did convey to said county of Cumberland, by bill of sale, all of said stone wall, piling, &c., and all the rights and franchises of said M. P. Bridge. Now therefore, in consideration of the premises,

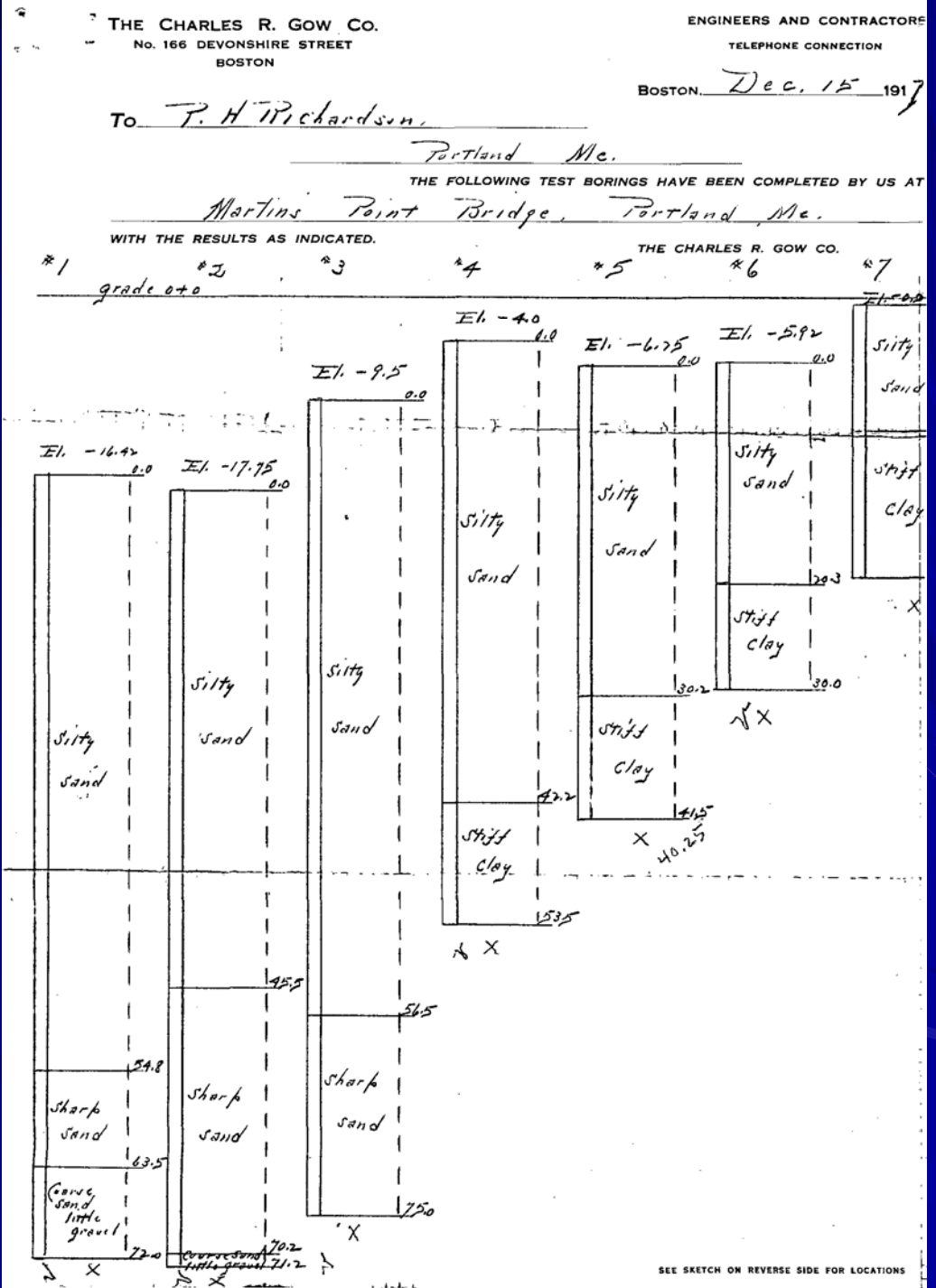
Resolved, That we, the stockholders in said Martin's Point Bridge Corporation, do hereby ratify and confirm said conveyance by said E. Thomas to said County of Cumberland; and the payment of said eight hundred dollars to him for his use and benefit.

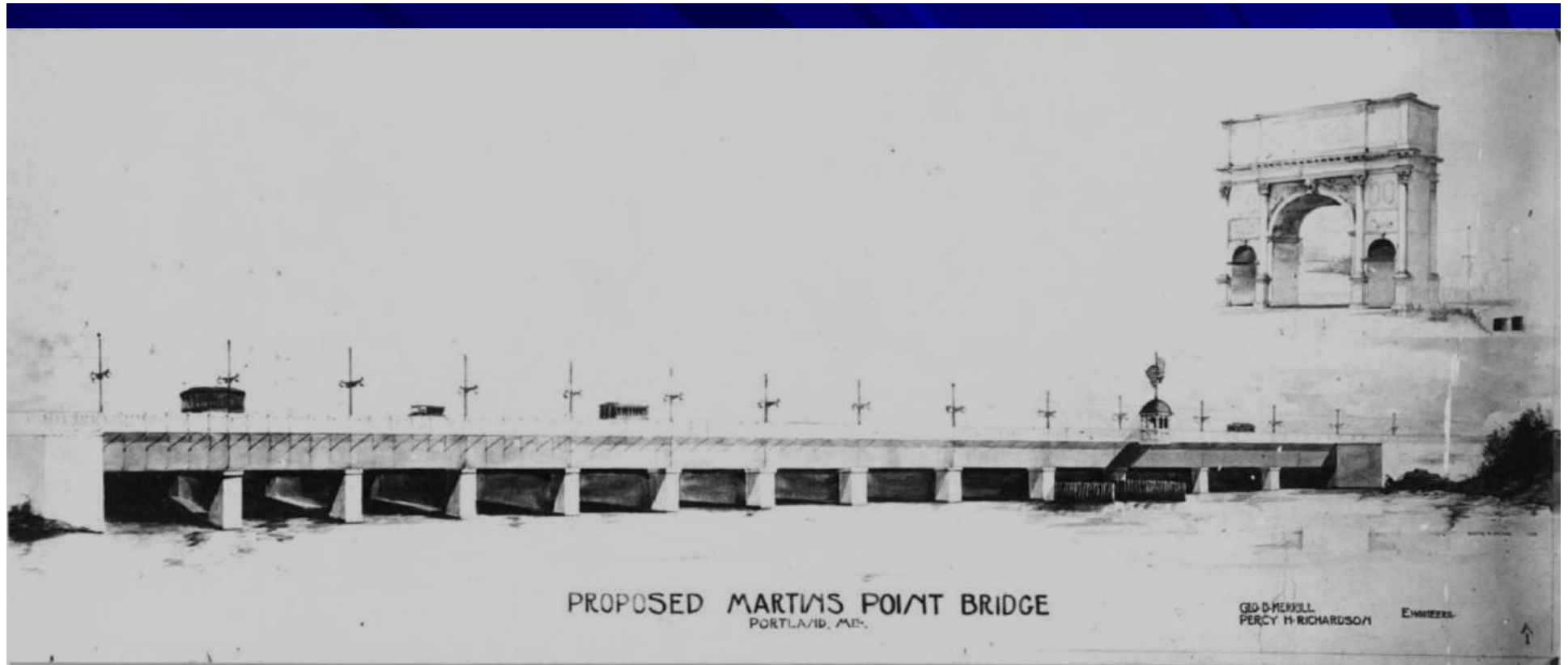
Resolved, That a copy of the above be certified by the Clerk, and filed with the County Commissioners of Cumberland County at their next meeting.

Martin's Point Bridge History

- Boring Logs, dated Dec. 15, 1917, sent to Engineer, Percy H. Richardson
- Engineer developed drawing of proposed Martin's Point Bridge, probably around 1917 - not built
- Trolley service discontinued, probably around late 20s to early 30s
- Trolley rails removed from approaches in 1933
- Former bridge rehabilitated to accommodate 3 lanes of motor traffic in winter of 1933-34

1917 Boring Log





Proposed Martin's Point Bridge Circa 1917 – Not Built

Three-Lane Traffic Opened On Martin Point Bridge



By Staff Photographer

Three-lane traffic on Martin Point Bridge at the Portland-Falmouth line is now provided. The highway department has been busy most of the Winter strengthening the side of the bridge where electric cars formerly ran by sinking new piling and trussing the whole structure to stand the burden of motor traffic. The added width and freedom from trolley interference make the bridge much safer for motor traffic. Photo was taken from the Portland end of the bridge.

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1934 Article about Former Martin's Point Bridge



**Former Martin's Point Bridge
Looking Towards Portland
and Lift Span**

Martin's Point Bridge History

- **Current Martin's Point Bridge designed in 1940 and constructed in 1941-43 and originally had:**
 - **1400' long**
 - **46' clear roadway width with 2'6" walkways**
 - **Twin lift-span navigation span – 75' clear between piers; 50' clear between fenders**
 - **Vertical navigation clearance = 12' at mean high tide**
 - **Painted steel beams with concrete deck**
 - **Timber piles**



**Current Martin's Point Bridge Under Construction
1941-42**



**Current Martin's Point Bridge Under Construction
1941-42**



**Current Martin's Point Bridge Under Construction
1941-42**



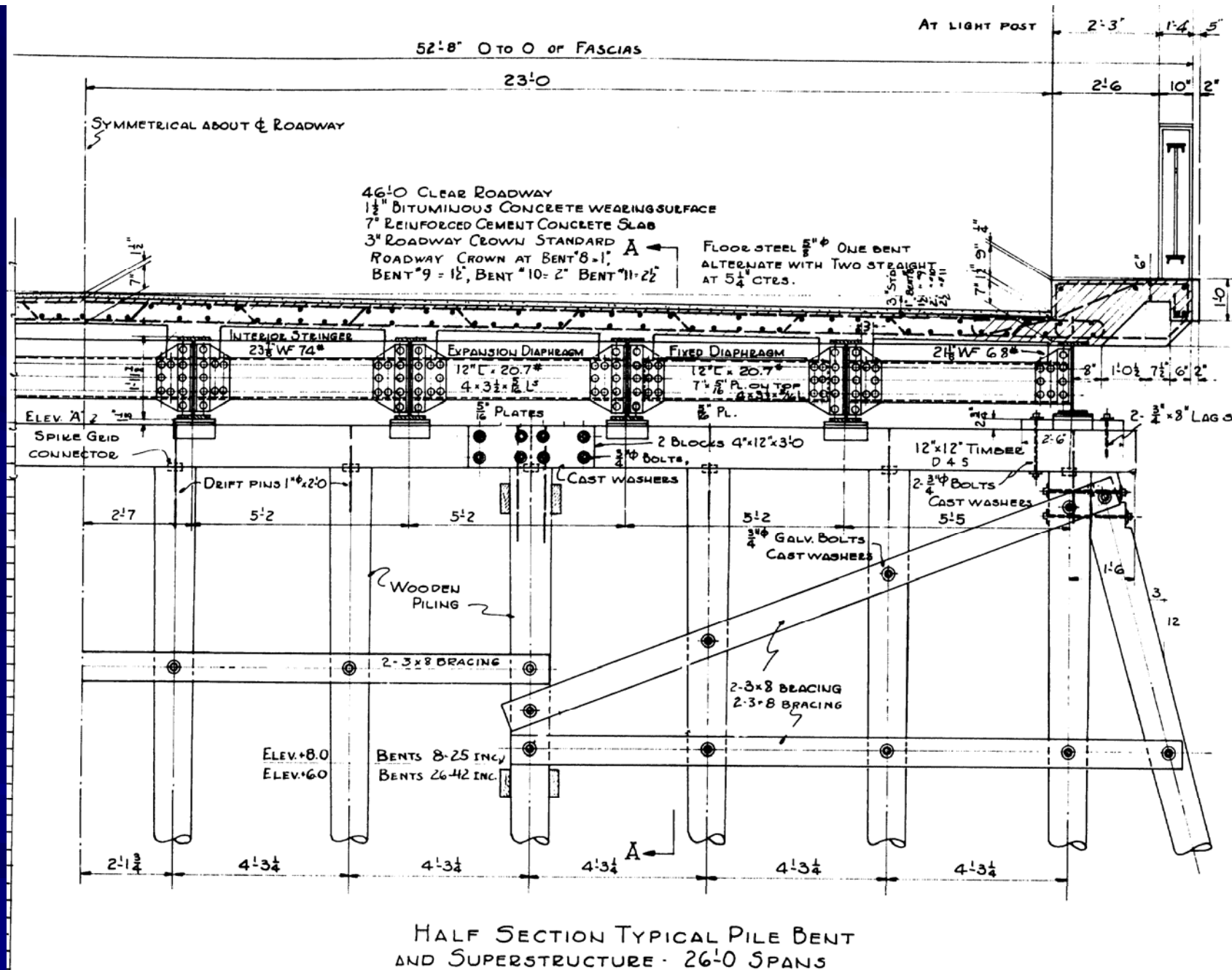
Martin's Point Bridge
1943



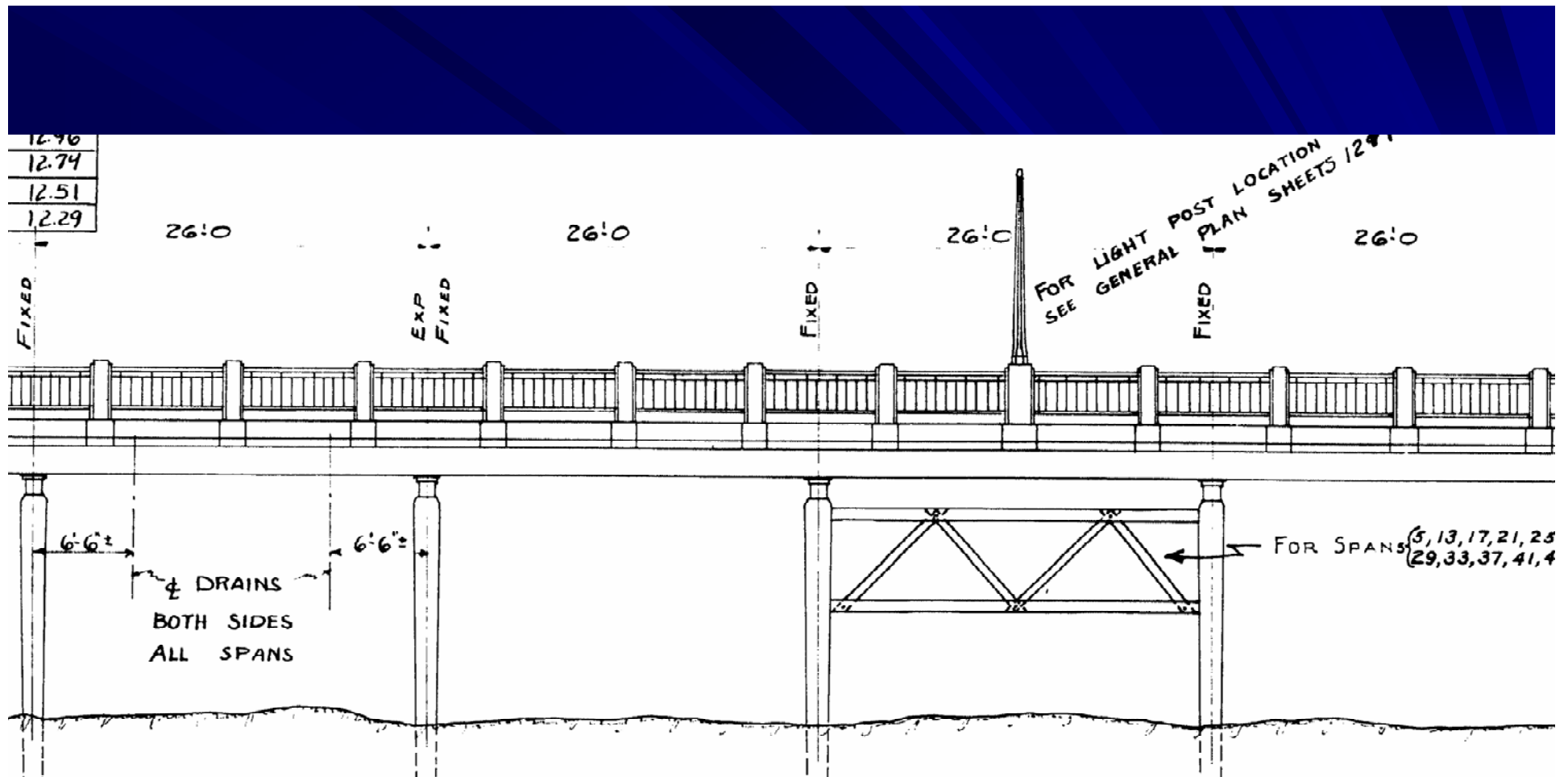
**Martin's Point Bridge
1943**



**Martin's Point Bridge
1943**



Martin's Point Bridge – Original Typical Cross Section Details



Martin's Point Bridge – Original Typical Bridge Rail Details

Martin's Point Bridge History

- Frequency of lift span openings dwindled over the years, especially since 1970:
 - 1966 – 61
 - 1967 – 47
 - 1968 – 43
 - 1969 – 57
 - 1970 – 7
 - 1971 – 6
 - 1972 – 7
 - 1973 – 13
 - 1974 – 4
 - 1975 – 6
- Lift span last opened in 1976 for vessel since decommissioned
- MaineDOT first applied to US Coast Guard to close bridge to navigation in 1979

Martin's Point Bridge History

- **Martin's Point Bridge has undergone frequent maintenance and repair throughout its life, including:**
 - **Lift span machinery**
 - **Electrical components**
 - **Wearing surface**
 - **Piles and pile caps**
 - **Fender system**
 - **Etc.**

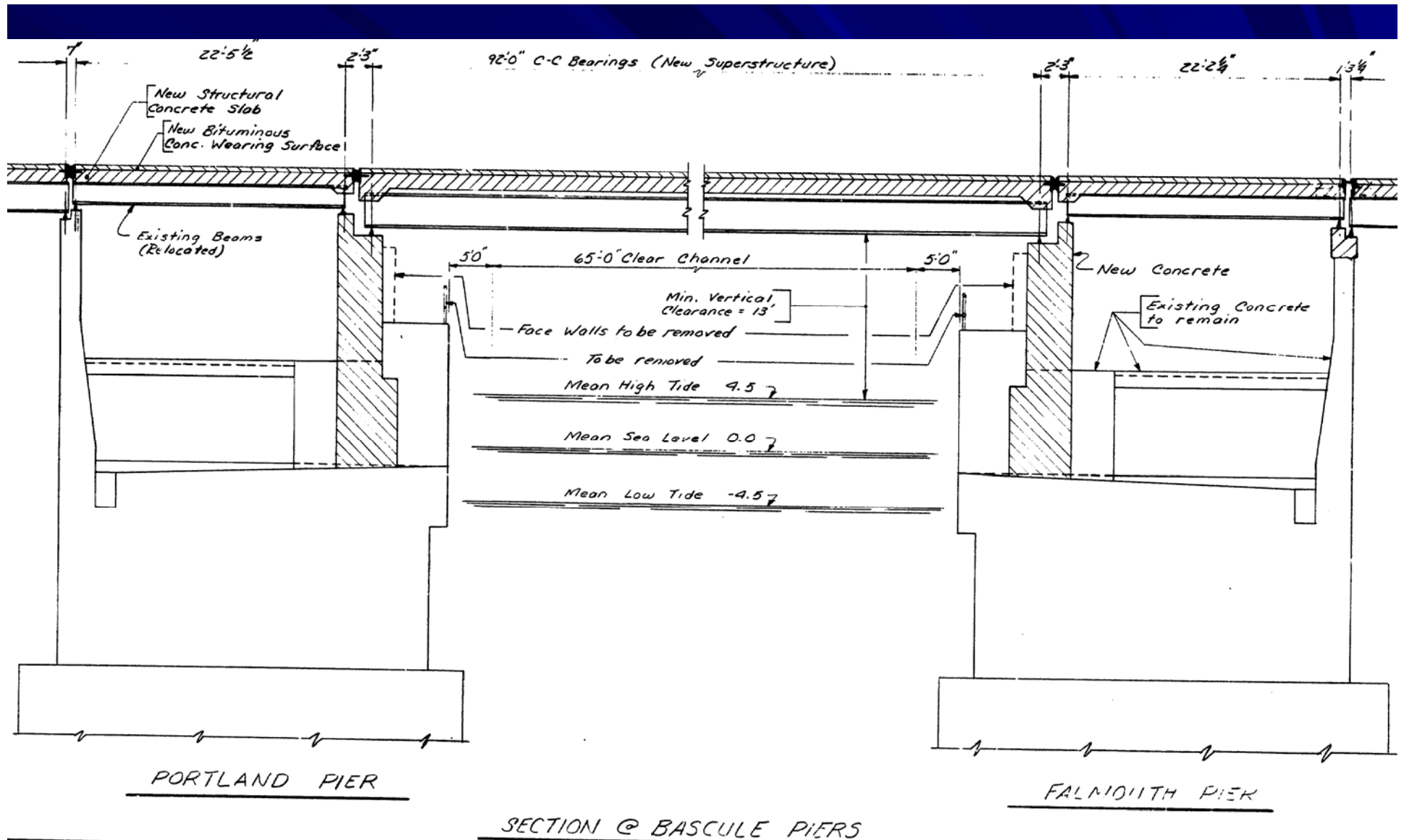
Martin's Point Bridge History

- **Martin's Point Bridge underwent significant rehabilitation in 1991 that included:**
 - **New concrete deck**
 - **44' clear roadway width**
 - **New 6' clear separated sidewalk on downstream side with fishing platform**
 - **Replacement of twin lift-span navigation span with one simple 92' fixed span**
 - **Rehabilitated bascule piers - blocked in windows**
 - **Vertical navigation clearance = 13' at mean high tide**
 - **Etc.**

Martin's Point Bridge History

- Bridge lane configuration re-stripped from 4 lanes down to 2 lanes with wide shoulders and painted median
- Additional pile repairs done in 2003





Martin's Point Bridge – 1991 Lift Span Replacement Details

Current Condition of Existing Martin's Point Bridge

- **Concrete Deck: Rated 7 out of 10 = Good**
- **Steel Beams: Some significant deterioration of beam ends**
- **Superstructure (beams and deck): Rated 4 out of 10 = Poor**
- **Substructure (abutments and piers): Rated 4 out of 10 = Poor**
- **Sufficiency Rating (SR) = 34.8 out of 100**
 - **SR encompasses condition ratings of various components plus functionality of structure (widths, clearances, grades, curves, etc.)**
 - **SR less than 50 = replacement needed**

Traffic Counts on Martin's Point Bridge

Actual		Projected		Projected		Projected	
Year	AADT	Year	AADT	Year	AADT	Year	AADT
1981	12,990	2001	15,590				
1997	15,910	2017	19,090				
2007	15,180	2010	15,640	2020	17,200	2030	18,770

Known Issues, Concerns, and Needs from MaineDOT's Perspective

- Need to replace the existing bridge due to its current deteriorating condition
- Need to accommodate bicyclists, pedestrians, and fishing activities while facilitating the movement of two lanes of vehicular traffic
- Need to maintain two lanes of traffic during construction
- Need a good quality, durable, well constructed, low maintenance bridge designed to last 100 years

Known Issues, Concerns, and Needs from MaineDOT's Perspective (cont.)

- Falmouth Police Dept. requested a 15' vertical navigation clearance at high tide, which is 2' more than existing
- Need to minimize wetland impacts
- Need to minimize right-of-way impacts, especially to any historically significant structures
- Need to minimize impacts to Martin's Point new driveway construction