

## MEMORANDUM

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**TO:** Heritage Preservation Commission

**FROM:** Nicholas Baker, City Planner, (612) 673-3310

**DATE:** April 5, 2017

**SUBJECT:** Discussion Item, Boom Island-Nicollet Island Bridge Rehabilitation

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At the regular meeting of Tuesday, January 31 2017, the Heritage Preservation Commission considered an application submitted by the Minneapolis Park and Recreation Board for the property located between 501 Ramsey Street Northeast and 206 Island Avenue East in the St. Anthony Falls Historic District – a Certificate of Appropriateness to allow rehabilitation of and alterations to the existing Boom Island-Nicollet Island Bridge (PLAN3458). Notwithstanding staff recommendation, the Commission **denied** this application based on the following findings:

**Finding #1:** The timber ties, steel stringers, and other components of the deck system are integral components of the original bridge design.

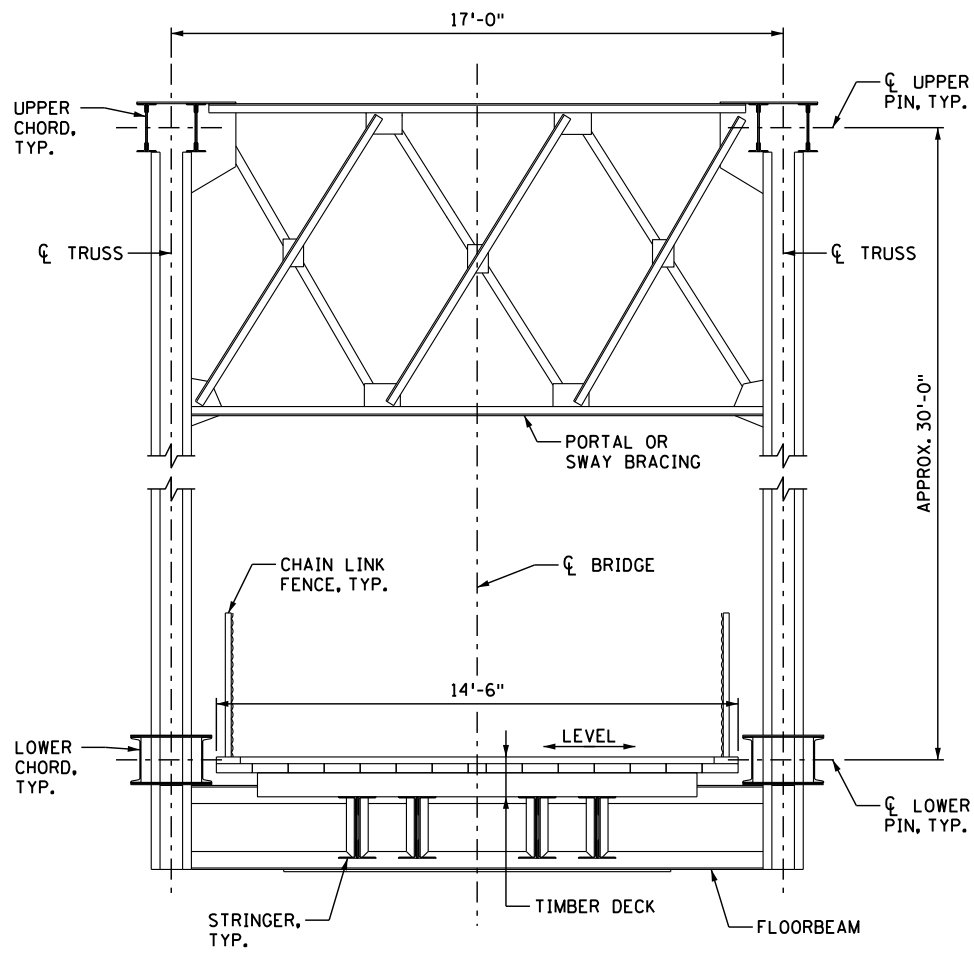
**Finding #2:** The removal of the interior stringers and original timber ties and the introduction of a new, reinforced concrete deck system would significantly degrade the bridge's historic integrity.

**Finding #3:** The conditions of approval recommended by staff would be insufficient to mitigate the loss of historic fabric and proposed structural changes to the functioning of the deck system.

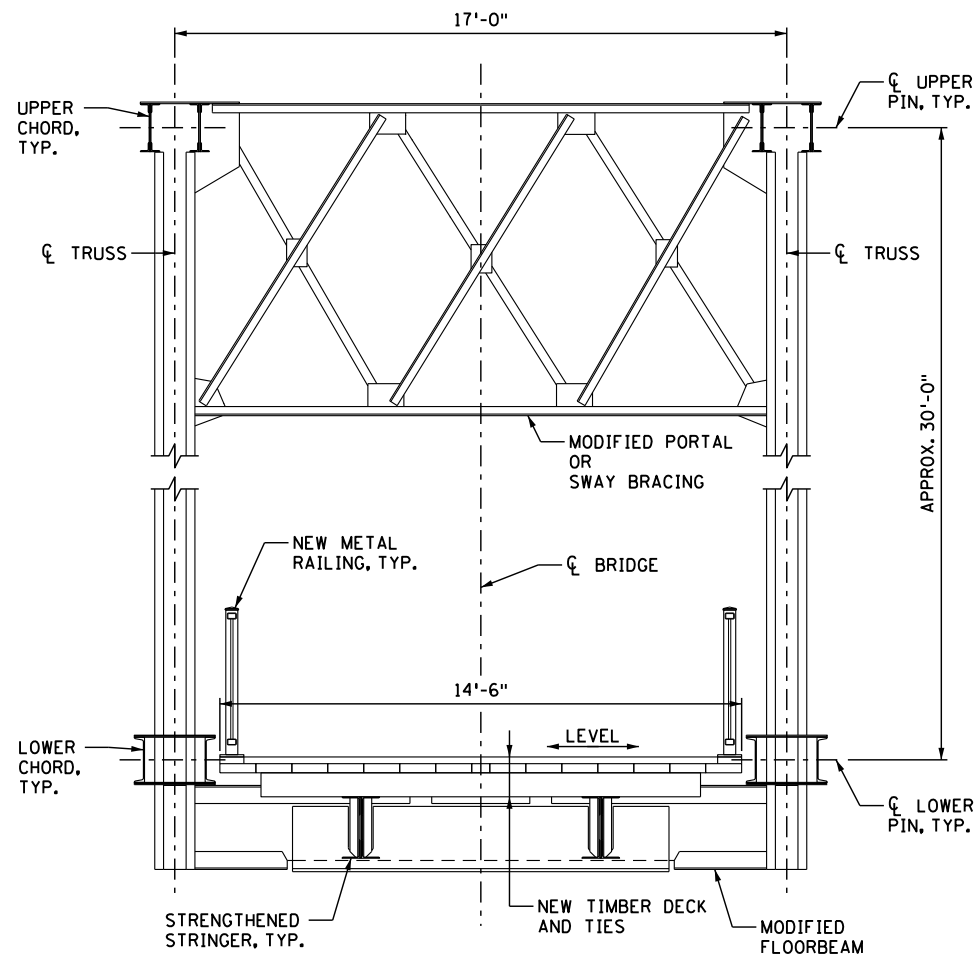
The applicant has now developed a revised proposal that would include the previously proposed abutment repairs and bearing replacement, portal, hip joint, and floor beam repairs, repainting, and railing replacement - but with several significant changes in response to the Commission's findings. Now proposed are additional steel repairs to restore the structural integrity of the existing exterior stringers, and in-kind replacement of the existing timber ties and wood decking – largely retaining the bridge's original structural design and avoiding the introduction of new, incompatible materials. They have also provided cost estimates for the in-kind replacement of the existing interior stringers, which are significantly deteriorated, however they have stated that the significant cost of this project element exceeds currently available funding, and they are currently proposing removal of these elements with possible restoration at a later date.

The new proposal would still result in the loss of some historic fabric, however it would avoid the most significant of the previously proposed changes - the introduction of a new deck system and material - while preserving the bridge's structural functioning.

Attached for your review and discussion a new proposed section and revised cost estimates provided by the applicant.



EXISTING TRANSVERSE SECTION



PROPOSED TRANSVERSE SECTION

# Bridge No. 93835 (Pedestrian Truss Bridge Between Boom Island and Nicollet Island)

Engineer's Estimate 3/23/2017

|                                       |                       |          | INTERIOR STRINGER REPLACEMENT<br>DURING MAIN PROJECT |              | NO INTERIOR STRINGER<br>REPLACEMENT DURING MAIN<br>PROJECT |              |
|---------------------------------------|-----------------------|----------|--|--------------|--|--------------|
| Description                           | Estimated<br>Quantity | Unit     | Unit Price   | Extension    | Unit Price   | Extension    |
| <b>Mobilization/Site Preparation</b>  |                       |          |  |              |  |              |
| MOBILIZATION                          | 1                     | LUMP SUM | \$215,020.39   | \$215,020.39 | \$171,820.39   | \$171,820.39 |
| REMOVALS                              | 1                     | LUMP SUM | \$112,392.90   | \$112,392.90 | \$112,392.90   | \$112,392.90 |
| <b>Abutment and Truss Repair</b>      |                       |          |  |              |  |              |
| RECONSTRUCT BEARINGS                  | 1                     | LUMP SUM | \$19,968.20  | \$19,968.20  | \$19,968.20  | \$19,968.20  |
| CONCRETE SURFACE REPAIR               | 55                    | SQ FT    | \$148.20   | \$8,151.00   | \$148.20   | \$8,151.00   |
| FLOOR BEAM REPAIR                     | 7                     | EACH     | \$17,481.20  | \$122,368.40 | \$17,481.20  | \$122,368.40 |
| EXTERIOR STRINGER REPAIRS             | 1                     | LUMP SUM | \$180,000.00   | \$180,000.00 | \$180,000.00   | \$180,000.00 |
| INTERIOR STRINGER REPLACEMENT         | 1                     | LUMP SUM | \$288,000.00   | \$288,000.00 | \$0.00   | \$0.00       |
| PORTAL REPAIR                         | 2                     | EACH     | \$3,338.60   | \$6,677.20   | \$3,338.60   | \$6,677.20   |
| ADD NEW BOLT                          | 9                     | EACH     | \$160.95   | \$1,448.55   | \$160.95   | \$1,448.55   |
| TIMBER DECK & TIES                    | 1                     | LUMP SUM | \$118,000.00   | \$118,000.00 | \$118,000.00   | \$118,000.00 |
| METAL RAILING                         | 354                   | LIN FT   | \$196.83   | \$69,677.82  | \$196.83   | \$69,677.82  |
| ORGANIC ZINC-RICH PAINT SYSTEM        | 1                     | LUMP SUM | \$430,920.00   | \$430,920.00 | \$430,920.00   | \$430,920.00 |
| RECONSTRUCT TIMBER WALLS              | 1                     | LUMP SUM | \$9,576.00   | \$9,576.00   | \$9,576.00   | \$9,576.00   |
| <b>Civil Items</b>                    |                       |          |  |              |  |              |
| TRAFFIC CONTROL                       | 1                     | LUMP SUM | \$3,480.00   | \$3,480.00   | \$3,480.00   | \$3,480.00   |
| COMMON EXCAVATION                     | 1                     | LUMP SUM | \$10,509.00  | \$10,509.00  | \$10,509.00  | \$10,509.00  |
| CLEAR AND GRUB                        | 1                     | LUMP SUM | \$5,354.00   | \$5,354.00   | \$5,354.00   | \$5,354.00   |
| REMOVE BITUMINOUS TRAIL               | 29                    | SQ YD    | \$60.20  | \$1,745.80   | \$60.20  | \$1,745.80   |
| SITE GRADING                          | 1                     | LUMP SUM | \$4,430.00   | \$4,430.00   | \$4,430.00   | \$4,430.00   |
| 6" AGGREGATE BASE, CLASS 5            | 1                     | LUMP SUM | \$2,550.00   | \$2,550.00   | \$2,550.00   | \$2,550.00   |
| 10" CONCRETE SIDEWALK                 | 475                   | SQ FT    | \$21.98  | \$10,442.40  | \$21.98  | \$10,442.40  |
| CURB & GUTTER                         | 45                    | LIN FT   | \$68.20  | \$3,069.00   | \$68.20  | \$3,069.00   |
| TRENCH DRAIN                          | 30                    | LIN FT   | \$140.90   | \$4,227.00   | \$140.90   | \$4,227.00   |
| CASTING (NEENAH R-4990-HX) TYPE Q LID | 30                    | LIN FT   | \$176.40   | \$5,292.00   | \$176.40   | \$5,292.00   |
| EROSION & SEDIMENT CONTROL            | 1                     | LUMP SUM | \$2,480.00   | \$2,480.00   | \$2,480.00   | \$2,480.00   |
| SITE RESTORATION (SEED & MULCH)       | 1                     | LUMP SUM | \$12,710.00  | \$12,710.00  | \$12,710.00  | \$12,710.00  |
| <b>ENGINEER'S ESTIMATE SUBTOTAL =</b> |                       |          |  | \$ 1,648,490 |  | \$ 1,317,290 |
| <b>10% CONTINGENCY =</b>              |                       |          |  | \$164,849    |  | \$131,729    |
| <b>ENGINEER'S ESTIMATE TOTAL =</b>    |                       |          |  | \$1,813,339  |  | \$1,449,019  |

## Notes:

1. Average bid prices received 2/14/17 were used where available.
2. Exterior stringer repairs include a small contingency (12.5%) because repair is not vetted at this time. Will consist of plating existing stringer.
3. Railing cost is valid for an ornamental railing or industrial railing.
4. A 10% contingency is included for inflation to 2018 dollars and other minor additions.
5. Interior stringer replacement project assumes a 20% contingency. This cost may vary greatly depending on when it occurs.

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| <b>ENGINEER'S ESTIMATE INTERIOR STRINGER REPLACEMENT PROJECT =</b> | <b>\$475,000</b> |
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