



Legislation Details (With Text)

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Title:	Concur with the Riverwalk Commission and select Alternative No. 1, repair the Moser Tower in one phase, to address the structural condition of the tower and direct the Riverwalk Commission to prepare construction plans and documents in 2020 such that the work can be performed in 2021		
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Attachments:	1. Addendum to Moser Tower Structural Assessment, 2. Corrosion and Material Durability Analysis, 3. Special Structural Analysis Report		

Date	Ver.	Action By	Action	Result
3/3/2020	1	City Council	directed staff	Pass

CITY COUNCIL AGENDA ITEM

ACTION REQUESTED:

Concur with the Riverwalk Commission and select Alternative No. 1, repair the Moser Tower in one phase, to address the structural condition of the tower and direct the Riverwalk Commission to prepare construction plans and documents in 2020 such that the work can be performed in 2021

DEPARTMENT: Transportation, Engineering and Development

SUBMITTED BY: William J. Novack, Director of TED/City Engineer

BOARD/COMMISSION REVIEW:

At their February 12, 2020 meeting the Riverwalk Commission unanimously approved Alternative No. 1, repair the Moser Tower in one phase, as the recommended alternative to the Naperville City Council.

BACKGROUND:

In the late 1990's, a group of local leaders wanted to build a unique and significant improvement to mark the beginning of the new millennium. The Millennium Carillon Foundation (MCF) was established and started raising private funds to design and construct the tower and carillon to be built on the Naperville Riverwalk. Originally envisioned to cost approximately \$3 million, the MCF started construction with some generous donations, pledges and a line of credit backed by the City. As construction progressed, it became apparent that the cost was much higher than \$3 million and not many donors remained. By 2000, the tower and carillon were partially constructed and operational.

After finding some pieces of fallen concrete near the base of the tower in 2006, the City stepped in to complete construction of the tower. With financial backing from the City, the MCF and City hired a different contractor to complete the tower. Due to a reduced budget to complete the tower, some

elements of the original design were eliminated. Features eliminated included enclosing the bottom half of the tower in glass for aesthetics and protecting the elevator from the outside elements and weather.

By 2007 the carillon and tower were completed and back in operation. The City and Naperville Park District entered into an agreement for the carillon and visitor center operations, where the City reimburses the Park District for their labor, programming and annual general maintenance of the facilities. For 2020 the City will reimburse the Park District \$106,795.

Since the Moser Tower and carillon are located on the Naperville Riverwalk, both are Riverwalk assets and within the scope of the Riverwalk Commission (RWC). In accordance with asset management best practices, the RWC had a structural assessment of the tower performed in 2015 to establish a baseline condition. With the tower only fifteen years old, the RWC was surprised when the initial findings of the assessment revealed a fair amount of corroded structural steel and many cracks in the precast concrete units of the tower.

With limited information on how the tower was constructed and what exactly was causing the strains observed, the RWC's consultant provided preliminary cost estimates in the \$3 to \$3.7 million range to repair the tower (depending on whether the lower level of the tower would be enclosed or not).

News of the tower's condition prompted interest from many specialty contractors and consultants. In 2017 and 2018 the RWC consultant worked with many of these firms to perform a deeper analysis of the structure and determine the causes of the deterioration. Further structural modelling was completed in 2019 leading to the final report.

The final report includes three alternatives to address the tower:

1. Repair the tower
2. Repair the tower and enclose the lower portion of it in glass as originally designed
3. Inspect the tower regularly and eventually take it down when it is no longer structurally safe

Each of these alternatives has both a capital cost and annual maintenance costs:

Alternative	Capital Cost	Annual Structural Maintenance Cost	Total Cost over 30 Years
Alternative #1	\$1,499,000	\$26,667	\$2,299,000
Alternative #2	\$2,418,000	\$21,667	\$3,068,000
Alternative #3	\$726,000	\$28,333	\$1,576,000

DISCUSSION:

The Riverwalk Commission's Planning, Design and Construction (PDC) Committee discussed the carillon extensively during the last two months. The PDC evaluated the two alternatives to repair the tower to determine if one was preferred over the other. It was determined that simply repairing the tower (Alternative #1) was a better option than repairing and enclosing it (Alternative #2) for the following reasons:

- Enclosing the tower does not weather-proof the structure from the elements since the upper half of the tower will still be outside
- Enclosing the tower has the highest initial capital cost, without any true benefit that anyone could identify

- Enclosing the tower will also have increased annual operational costs not included above since the enclosed portion will need to be ventilated

As the pros and cons of Alternatives #1 and #3 were discussed, the PDC noted that Alternative #3 resulted in many questions about how to address taking down the tower. Questions not considered and not included in the above costs include:

1. Beyond removing the carillon and its 72 commemorative bells from the tower, what becomes of the bells and what will the associated costs be?
2. How should past donor recognition be reconciled, especially in conjunction with the displaced bells?
3. Should anything be put in place after the tower is taken down to commemorate it or otherwise fill the void?
4. What potential future accommodations of the Moser statue are warranted?

When adding the 1999 and 2006 construction costs together, the total cost to the community for the tower is over \$7 million. The PDC noted that the difference in total 30-year cost between Alternatives #1 and #3 is just \$720,000. For that incremental difference, the Moser tower could continue to stand and reflect the dreams and aspirations of those who envisioned the tower as an icon for Naperville. It was interesting listening to the RWC student member who noted that he and his friends only know of the Riverwalk with the carillon tower in place; they never knew the area without it. They view it as an integral part of the Riverwalk and would be disappointed if it were taken down.

The RWC supported Alternative #1 at their February 12th meeting for the following reasons:

1. The 72 commemorative bells donated by members of the community
2. Along with the Riverwalk, the Moser Tower and carillon have become a focal point of Naperville
3. Alternative No. 1 preserves history and honors our past
4. The additional testing and structural analysis have shrunk the difference in cost between preserving the tower and taking it down such that preservation is now the easy decision
5. The 30-year annual maintenance cost provides a clear indication of future costs
6. As part of the process, the RWC met with many of the donors of the tower and felt their passion and commitment to this tribute to the turn of the century

For all these reasons the Naperville Riverwalk Commission unanimously recommends Alternative #1, repairing the tower. In addition to supporting Alternative #1, the PDC further recommends that the tower be repaired in a single phase instead of multiple phases over several years. Single phase repair is preferred due to:

1. Single phase repair is lower cost than multiple phases
2. Completing the repairs in one season reduces impact to users of the Riverwalk and the carillon
3. The single phase would involve only one contractor, eliminating the contractor from one phase blaming another phase's contractor for doing something incorrectly
4. The single phase would limit the negative public perception of how long it's taking to do the repairs.

The following supporting reports are included:

1. Addendum to Moser Tower Structural Assessment
2. Corrosion and Material Durability Analysis
3. Special Structural Analysis

FISCAL IMPACT:

Alternative No. 1 has a capital cost of \$1.5 million in 2021, with an annual maintenance cost of \$26,667 for the next 30 years. A decision on the funding source will be made later in 2020 as part of the budget process. Because the carillon is a cultural amenity of the City, it could be considered eligible for funding out of the Food and Beverage fund. A portion of the annual Food and Beverage funds were allocated over several years to pay off the City's prior financial commitment to the carillon. While the cost to prepare the plans and contract documents is not known yet, \$200,000 has been budgeted in the current fiscal year to complete this work so construction can occur in 2021.