



## HB 23-1276: Scope of Bridge And Tunnel Enterprise

### OVERVIEW

One of the key missions of the Bridge and Tunnel Enterprise (BTE) is to finance, repair, reconstruct, and replace bridges that have received a rating of "Poor". HB23-1276 enables the BTE to also address:

- Preventative Maintenance on Good and Fair-Rated Bridges
- The replacement of Fair-rated bridges when bundled within a project that is addressing a Poor-rated bridge

These instrumental updates will lead to cost efficiencies and will help extend the life cycle of Colorado's bridge inventory. Without further flexibility, approximately 60%- 80% of Colorado's annual dedicated Bridge Funding will be relegated to only be used to address approximately 4% of Colorado's state-owned bridge population. 4% of Colorado's state-owned bridge population.

### BACKGROUND

Since the Bridge and Tunnel Enterprise's inception in 2009, the enterprise has successfully been executing its business purpose by decreasing the percentage of poor-rated bridges statewide from 9% to 4%. While there is still work to be done to address Colorado's poor-rated bridges, bridge maintenance statewide will stay at a lower level of service statewide without further flexibility.

Under current statute, BTE funding cannot be used to perform preventative maintenance treatments on the majority of CDOT's bridges. If timely preventative maintenance treatments are not performed, it is expected that the service life of a bridge will decrease, creating an increase

in the number of bridges requiring major rehabilitation or replacement over time. As bridges deteriorate from good condition to fair condition, the structures typically require more extensive maintenance and repair on an increasing frequency, which increases the resource levels needed to maintain the bridge inventory in a state of good repair.

Additionally, this bill includes an exemption process that would allow BTE to include fair-rated bridges within a project to address poor-rated bridges if packaging the bridges results in schedule acceleration and/or cost savings. This will resolve common scenarios which create inefficiencies in the delivery of the bridge program.

BTE's Focus

### National Bridge Inventory (NBI) Rating Scale



## PREVENTATIVE MAINTENANCE BENEFITS

### Increased return on investment

- Bridge replacement and major rehabilitation are capital-intensive treatments. With regular preventative maintenance, the life span of bridges can be prolonged, resulting in an increased return on investment for recent high-cost bridge replacement and rehabilitation projects.

### Reduce life-cycle costs

- Bridges that receive regular preventative maintenance remain in good condition for a longer portion of their service lives. This results in fewer high-cost treatments over the bridge's life span.

### Reduced impacts to the traveling public

- Bridges that receive regular preventative maintenance require fewer and shorter duration planned lane closures over their service lives when compared to bridges that are not maintained.
- When bridges do not receive preventative maintenance, the frequency and severity of planned and emergency repairs increase more rapidly over the bridge's service life, resulting in more unplanned lane closures.

### Increased safety and improved user experience

- Ride quality and appearance of bridges is improved and the probability of property damage resulting from bridge condition (potholes, damaged joints, etc.) is reduced with regular preventative maintenance

## BENEFITS OF BUNDLING POOR AND FAIR-RATED BRIDGES

In circumstances where there are adjacent bridges (two bridges side-by-side carrying traffic in opposing directions or bridges along the same corridor), BTE may replace one of the two structures for safety reasons once it is rated in poor condition. At this time, the second bridge will have many of the same safety issues, and be expected to fall to poor condition within the next 3-5 years, however, BTE cannot replace it due to statutory limitations.

Similar circumstances often arise for a segment of a corridor. Since the bridges along a corridor are generally constructed within the same timeframe, they will often fall to poor condition one by one over the course of 5-10 years, requiring the Enterprise to mobilize multiple times to replace the poor-rated structures one at a time.

Packaging fair-rated bridges into projects to address poor-rated bridges will allow the Enterprise to further optimize the delivery of the bridge program by:

- **Capitalizing on the potential cost and schedule efficiencies afforded by addressing multiple bridge needs as part of a larger project or program**
- **Reducing the need to mobilize to a remote work location to address bridges one at a time**
- Reducing throwaway work that can be required to replace adjacent bridges one at a time (e.g. construction of retaining walls for grade differentials, overbuild to accommodate construction phasing needs, etc.).
- Reducing impacts to the traveling public and improving public perception regarding the efficiency of project delivery
  - Eliminating the need to deliver multiple bridge projects at a single location or numerous bridge projects along a corridor over the course of many years, which can prolong impacts to the public
  - Maintenance of traffic and construction phasing can be optimized, resulting in fewer weaves, traffic patterns, and other disruptions as well as improved safety.

