

2010 Individual Bridge Ratings Summary

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Weighted Average Bridge Rating

The Weighted Average Bridge Rating is a calculated value used to monitor the performance and communicate the effectiveness of the Bridge Program. The Weighted Average Bridge Rating is an adjusted average of the overall bridge condition ratings that accounts for the importance of the bridge as determined by its size. The weighted average is calculated using a size factor multiplier based on the deck area of the bridge as follows:

Size Factor Multiplier	Deck Area [ft ²]
1	Under 5,000
2	5,000 to 10,000
3	10,001 to 20,000
4	20,001 to 40,000
5	Over 40,000

By using the size factor, a bridge with a deck area of over 40,000 square feet will have five times the effect on the weighted average than a bridge with a deck area of under 5,000 square feet. Therefore, the Weighted Average Bridge Rating will be affected more by larger bridges which are typically more vital to the public and require more funds for maintenance, repair, and replacement.

The Weighted Average Bridge Rating was developed as a compromise between using no size factor (where the condition rating of single pedestrian bridge would effect the average bridge rating as much as the condition rating of a much larger bridge, like the Waldvogel Viaduct) and using a square foot size factor (where the condition rating of the larger viaducts would completely dominate the average bridge rating). Over the last 20 years, DOTE has used the Weighted Average Bridge Rating as an effective tool to prioritize and schedule repairs to all bridges regardless of their size.

