

The new Margaret McDermott Bridge over the Trinity River in Dallas, Texas was intended to replace the I-30 bridge built in the late 50s to early 60s. Now, the opening of the bridge, which cost \$115 million to build—much of which was covered by taxpayer money—and features a design resembling a suspension bridge, 10 main lanes with one reversible high occupancy vehicle (HOV) lane, four frontage road lanes, as well as cycling and walking facilities, is facing major delays, not to mention cost increases.

In order to cut project costs earlier on, the Texas Department of Transportation and the contractors working on the project were pushed to accept value engineering—a method for improving the value of goods or products and services, but which generally amounts to cutting corners. Due to VE, the new bridge system designed by architect, structural engineer, painter, and sculptor Santiago Calatrava never underwent proper cable fatigue testing, despite Calatrava's wishes.

Less than a year after the final arch of the bridge was lifted into place, one of the cables used to secure the bridge's pedestrian deck cracked as it was vibrated and twisted by strong winds. Within a period of five weeks following the first cable break, two other cable rods cracked and failed.

Despite the fact that strong winds are predominant in this locale, proper testing to see if the cable rods would be able to withstand these levels of wind was disregarded. Although there is a lot of finger pointing when it comes to who is to blame for putting off proper testing, recently released documents attest that Calatrava pushed the city of Dallas to undergo testing to see if the cables would be able to withstand the region's strong winds before they were installed. Calatrava even offered front the money to cover the costs of testing until the city was able to pay it back. Despite his efforts, it was decided that the cable fatigue testing would be eliminated in favor of cost savings.

Value Engineering Results in Project Cost Increase

According to a letter sent out by the Texas Department of Transportation on January 30th, the bill for repairs and delays will cost about \$1 million per month and will be the city's responsibility. The original savings due to value engineering for this project amounted to a total of \$30,000—considerably less than the cost of repairs they are now facing.

For now, the two cable-stayed structures of the Margaret McDermott Bridge system remain closed as no one is willing to certify that they are safe for use. In fact, the city official that has been overseeing the project, reported last week that the only problem was "a long-range maintenance issue." As it stands, the city is unwilling to admit that human safety is a



Dallas' Margaret McDermott Bridge Eliminates Testing to Save Money

problem and continues to state that the bridge has passed key tests and will not remain closed for much longer.

Read more about the project on [The Dallas Observer](#).

[More information about modern bridge inspection technologies](#), visit the Giatec blog.