

LASER TRACKING AND LASER SCANNING SERVICES

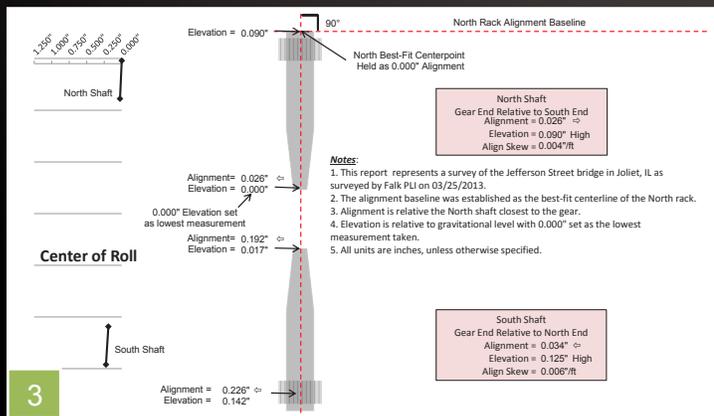
Moveable Bridge Work – Joliet, IL

Bridges have long been an integral backbone of the American roadway system – many having unique design and maintenance requirements. Moveable bridges present unique maintenance challenges due to the complexity of the mechanical structures comprised of hundreds of custom-made parts and the inconvenience associated with extended detours.

Falk PLI was called upon to provide critical measurements on moveable bridges in Joliet, IL. These bridges were built in the early 1930s as part of the project to widen the canal and move barges from Lake Michigan, through the Mississippi River, and into the Gulf of Mexico.

Through the use of Laser Tracker technology we were able to treat the bridge as an entire unit rather than using the measurements to correlate a relationship between the pinion shafts and the upper rack section. With the unprecedented accuracy of the Laser Tracker we were able to define a truer center for the bore/sleeves machining requirements. These measurements were used for the replacement and recommended repairs of the pinion shaft on one of the bridges.

The Laser Tracker allows 3D measurements to be taken on objects more quickly and accurately: each measurement having 3D (X,Y, Z) coordinates with an accuracy of .001". Measurements can be provided up to 10,000 observations/second yielding excellent statistical redundancy and repeatability.



- 1 Moveable Bridge
- 2 Existing Bridge Structure
- 3 Jefferson Bridge Sample report

