

Olmos Dam Rehabilitation (SA-33), San Antonio TX

The Olmos Dam is located in San Antonio Texas. To provide stability from overturning and sliding, The Judy Company installed 68 Class I tendons. The Dam rehabilitation was challenging due to limited access. A platform had to be constructed for the drill and crew to sit atop the dam.

An additional challenge included low clearance below an underpass. The project was just recently awarded a Project of the Year award for its class. We are proud to be part of the team that helped win the award.

Abstract:

"The City of San Antonio has suffered from numerous floods on the San Antonio River throughout its history. In response to major floods in 1913 and 1921, the City implemented a flood control improvements program. Olmos Dam, finished in 1929 and located six miles north of downtown, was built as a flood retarding concrete gravity dam with no emergency spillway. Flood releases were made through six outlet tunnels regulated by slide gates. In 1974, an engineering study indicated that the dam did not have sufficient discharge capacity to prevent overtopping at PMF and the structure did not meet acceptable safety factors for events larger than the 100-year flood. As a result, modifications began in 1978 to replace 1,500 feet of the non-overflow section with an uncontrolled spillway and to add post-tensioned anchors to the non-overflow sections. As early as 1984, problems were reported with some of the bar anchors. In 1995, posttensioned strand anchors were added to a select area of the dam to again increase its resistance to sliding and overturning. Subsequent inspection and testing of the anchors at Olmos Dam demonstrated a progressive deterioration of the anchors and a reduction in their capacity to hold the required load. Thus, in 2007 Bexar County embarked on a study to evaluate alternatives to stabilize Olmos Dam. Several alternatives were considered for

stabilizing the dam in addition to strand anchors. However, strand anchors were far more cost effective in the final analysis and would have little or no effect on the historic appearance of the dam. Thus, Olmos Dam headed into its third round of anchors."

Read the entire article here: <http://ussdams.com/proceedings/2012Proc/1041.pdf>



