



## Hard Rock Casino Tunnel

Hollywood, Florida

Over the course of a year, Keller exceeded the client's expectations by consistently completing all aspects of the work ahead of schedule.



### The project

The \$1.8 billion expansion of The Seminole Tribe of Florida's Hard Rock Casino includes an iconic, guitar-shaped 36-story hotel tower and resort, and various low-level structures housing resort amenities. The design included the construction of a complex 800-ft long valet tunnel to facilitate smooth traffic flow.

## The challenge

A 125-ft long section of the tunnel ran beneath an existing multi-story parking garage with just 16 ft of clearance, requiring an alternate design approach to the traditional sheet pile-driving technique. Additional headroom constraints were created by an existing \$8 million, 200-ft long television screen adjacent to the garage entrance.

## The solution

Keller designed and installed approximately 1,350 running ft of internally-braced sheet pile earth retention in open headroom tunnel areas. In the areas with headroom constraints, Keller designed and constructed about 250 running ft of 5 to 10-ft thick, maximum 16-ft deep, H-beam reinforced soilcrete gravity walls. The overall scope of Keller's contract also included vibro compaction and vibro replacement ground improvement performed under several low-rise structures and installation of micropiles in low headroom areas to support new heavy foundations. Keller also installed an auger cast foundation system for the tower structure.

## Project facts

### Owner(s)

Seminole Tribe of Florida

### Keller business unit(s)

Keller

### Main contractor(s)

Suffolk-Yates, A Joint Venture, LLC

### Engineer(s)

Langan Engineering

### Solutions

Support of excavation  
Deep foundations

### Markets

Institutional  
Sports and entertainment

### Techniques

CFA (auger cast) / ACIP piles  
Sheet piles  
Wet soil mixing  
Vibro compaction  
Vibro stone columns (vibro replacement)

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