

#### PROJECT ELEMENTS

- Launching Shaft Design and Groundwater control

#### PERIOD OF SERVICE

- June – August 2019

#### ROLE

- SOE Design – Engineer of Record (EoR)

#### COST

- N/A

#### OWNER

- Confidential

#### CLIENT REFERENCE

Huxted Tunneling

# Sanitary Sewer Pipeline

## Lake Buena Vista, FL



*Microtunneling Launching Shaft*

The project consists of new a sanitary sewer pipeline Installed using micro-tunneling technique. The project included a launching shaft and 2 micro-tunneling drives, with a 36-in. steel casing.

Subsurface & Tunnel Engineering llc (STE), was retained by Huxted Tunneling to serve as the Engineer of record (EoR) for the shaft design.

STE performed in depth analysis and design and provided recommendations for shaft construction. The launching shaft was

approximately 20 ft. diameter. The shaft excavation depth extended to 24 ft. below ground surface with presence of groundwater at 6 feet below ground surface. STE performed the analysis to confirm the adequacy of the proposed support system, designed and provided recommendations for the concrete plug at the shaft bottom of the to control groundwater, provided recommendations during excavation, including groundwater control excavation/support installation sequence.

#### DESIGN PACKAGES:

- STE performed in depth analysis, including geotechnical and structural analysis using CivilTech Shoring Suite and RISA 3D as well as MIDAS GTS NX software packages. The analysis included unbalanced surcharge loading on the shaft liner plates due to heavy crane presence.