KGI Kalluri Group, Inc.
Consulting Engineers & Project Managers

Electrical

Date Completed:

2018

Construction Cost:

$14.3 Million

Client or Owner's Rep:

Mr. Ian D. Pietz, P.E.
Sr. Project Manager, BGE

Highlights:

- ✓ **12.47 kV Medium Voltage Electrical Switchgear**
- ✓ **Site Electrical**
- ✓ **Planning, PER, Design Phase and Construction Phase Services**
- ✓ **Electrical Studies**
- ✓ **Complicated Construction Phasing**
- ✓ **Rehabilitation**

Southeast Water Purification Plant (SEWPP) Treatment Modules Rehabilitation, Transfer Pump Station Improvements and Electrical Substation Improvements – Package 1

City of Houston | Houston, Texas

Project Description | SEWPP is a surface water treatment plant with two treatment modules (TM1 and TM2) with a total treatment capacity of 200 mgd. This project included several plant improvements at TM1 and TM2 including construction of a new Electrical Building with 12.47 kV Switchgears.

Services Provided | As a sub-consultant to BGE, Inc., KGI was responsible for all of the electrical during preliminary engineering, final design and construction phases of the project. Some of the major improvements included:

- Modifications to Existing 138 kV Substation and Substation Electrical Building
- New Electrical Building
- Relocation of two existing 3,000 kVA 12.47 kV:4.16 kV transformers
- New 12.47 kV Electrical Distribution 1 (ED1) Transfer Pumps (TPM) switchgears
- Install new soft starters for four existing High Service Pumps ranging from 2000 HP to 2,750 HP
- Demolition of existing ED1 and TPM Switchgears
- Construction Phasing Plan to keep the existing plant in service at all times
- Underground duct bank and manhole system for the 12.47kV electrical distribution system
- Electrical Studies consisting Short Circuit, Coordination (including final relay settings), Motor Starting and Load Flow

Photos: *Electrical Building and 12.47 kV Electrical Distribution (ED1) Switchgear*