

**AMENDMENT NO. 1
TO THE AGREEMENT FOR SERVICES
BETWEEN THE
CITY OF SANTA CLARA, CALIFORNIA,
AND
SOUDI CONSULTANTS, INC.**

PREAMBLE

This agreement ("Amendment No. 1") is entered into between the City of Santa Clara, California, a chartered California municipal corporation (City) and Soudi Consultants, Inc., a California corporation, (Contractor). City and Contractor may be referred to individually as a "Party" or collectively as the "Parties" or the "Parties to this Agreement."

RECITALS

- A. The Parties previously entered into an agreement entitled "Agreement for the Performance of Services By and Between the City of Santa Clara, California, and Soudi Consultants, Inc., dated July, 17, 2017 (Agreement); and
- B. The Parties entered into the Agreement for the purpose of having Contractor provide protection engineering services for various Electric Projects, and the Parties now wish to amend the Agreement.

NOW, THEREFORE, the Parties agree as follows:

AMENDMENT TERMS AND CONDITIONS

- 1. Section 5 of the Agreement, entitled "Term of Agreement" is amended to read as follows:

Unless otherwise set forth in this Agreement or unless this paragraph is subsequently modified by a written amendment to this Agreement, the term of this Agreement shall begin on the Effective Date of this Agreement and terminate five (5) years from the Effective Date.

- 2. Section Exhibit A of the Agreement, entitled "Scope of Services" is amended to read as follows:

The Services to be performed for the City by the Contractor under this Agreement are more fully described in the Contractor's proposals entitled, "Silicon Valley Power's Protection Services for Various Projects" dated July 6, 2017 and attached to the Agreement and Silicon Valley Power's Protection Services for Various Projects" dated June 3, 2020 attached to this Exhibit A as Exhibit A.1.

3. Section Exhibit B of the Agreement, entitled "Fee Schedule" is amended to read as follows:

In no event shall the amount billed to City by Contractor for services under this Agreement exceed one million three hundred eighty-six thousand five hundred dollars and zero cents (\$1,386,500.00), subject to budget appropriations.

4. Except as set forth herein, all other terms and conditions of the original Agreement shall remain in full force and effect. In case of a conflict in the terms of the Original Agreement and this Amendment No. 1, the provisions of this Amendment No. 1 shall control.

The Parties acknowledge and accept the terms and conditions of this Amendment No. 1 as evidenced by the following signatures of their duly authorized representatives.

CITY OF SANTA CLARA, CALIFORNIA
a chartered California municipal corporation

Approved as to Form:

Dated: _____

BRIAN DOYLE
City Attorney

DEANNA J. SANTANA
City Manager
1500 Warburton Avenue
Santa Clara, CA 95050
Telephone: (408) 615-2210
Fax: (408) 241-6771

"CITY"

SOUDI CONSULTANTS, INC.
a California corporation

Dated: 7/6/2020
By (Signature): *Farajollah Soudi*
Name: FARAJOLLAH SOUDI
Title: President
Principal Place of Business Address: 4230 Lilac Ridge Road
San Ramon, CA 94582
Email Address: Fsoudiconsultants.com
Telephone: (925) 964-1144

"CONTRACTOR"

**EXHIBIT A.1 TO AMENDMENT
SCOPE OF SERVICES
PROPOSAL**

Silicon Valley Power's Protection Services for Various Projects

(1) June 03, 2020

This proposal is for performance of additional protection services for the following projects as listed to be added to the existing July 11, 2017 agreement with Souidi Consultants, Inc.:

1. Oaks Junction Substation with Two (2) New Banks
2. Parker Substation Adding Bank#3
3. San Tomas Junction Substation with Three (3) New Banks
4. Engineering Support Consulting Service
5. Five SVP Power Houses Arc Flash Studies

1. Oaks Junction Substation with Two (2) New Banks:

Oaks Junction project proposal is for performance of: (a) Protection studies for various relay settings and coordination due to new Oaks Junction substation, (b) Determine setting points for new integrated 60kV lines, transformers, buses and 12kV switchgears relays, (c) Relay Settings and coordination study for East 60kV loops which is consist of Four (4) 60kV lines, (d)Conduct Arc Flash Hazard Analysis (AFHA) studies for both AC and DC based on IEEE 1584-2018 recommendation and SVP defined working distance and (e) Review Protection, Control and Automation (PCA) document for SVP's Oak Junction Substation created by SVP Engineer.

• **Oak Junction Substation PCA Document Review:**

Review and provide comments for SVP issued PCA document for the Oaks Junction Substation. The document should include 60kV lines and buses, 69kV/12kV transformers, 12kV main, tie and feeder protection, control and automation.

• **Review Logic Diagrams and Relay setting templates for Oak Junction Substation:**

Review Logic Diagrams and SEL relay setting templates for all new relays which includes: SEL-311L, SEL-587Z, SEL387E, SEL487E, SEL451-4 (Main, Tie and Feeder) and SEL751A relays for consistencies with PCA requirements.

- **Oak Junction Substation ASPEN Model:**

Check the new Oak Junction transformers nameplates and update the ASPEN OneLiner to include the Oak Junction substation with two new transformers.

- **Oak Junction Substation Relay Settings and Coordination Study:**

Relay settings and coordination study for two transformers at Oaks Junction substation. Each transformer is protected by two relays: SEL487E and SEL387E. Both relays will provide transformer differential protection and high side and low side overcurrent protections.

Relay setting and coordination studies for all low side main breakers using SEL451-5 and SEL751A relays.

Relay setting and coordination studies for all 12kV tie breakers and distribution feeders using SEL-451 and SEL-751A relays.

Relay settings for all bus differential relays (SEL587Z).

Relay settings and coordination study for two (2) 60kV breakers Line Differential relays (SEL-311L).

- **East Loop Relay Settings and Coordination Study:**

Relay settings and coordination study for East loop with total of four (4) two terminal lines (8 breakers) and check coordination with other 60kV loops breakers located at SRS and KRS substations with total of six (6) breakers.

East Loop: SRS – Kenneth, Kenneth – Memorex, Memorex – Oak Junction and Oak Junction – KRS.

Northeast, Central and South loops are located at KRS, and Northwest, Central, and South loops are located at SRS with total of six (6) breakers.

- **Arc Flash Hazard Analysis:**

Conduct Arc Flash Hazard Analysis (AFHA) study on 60kV/12kV and station Battery.

This study will perform the following functions:

1. Calculate Incident Energy based on IEEE 1584 recommendation and SVP defined working distance
2. Create a report for selecting Flame Resistance Personal Protective Equipment (PPE) based on the National Fire Protection Administration (NFPA) Code 70E.
3. Create Custom Equipment Labeling.

This study will include the 60kV, 12kV and station Battery.

The estimated total cost for Task #1 is \$84,500.

- **2. Parker Substation:**

Parker project proposal is for performance of: (a) Protection studies for various relay settings and coordination due to new transformer and customer switchgear at Parker substation, (b) Determine setting points for new integrated 60kV lines, transformers, buses relays, (c) Relay Settings and coordination study for the South 60kV loop which is consist of eight (8) 60kV lines and (d) Review Protection, Control and Automation (PCA) document for SVP's Parker Substation created by SVP Engineer. (e) Conduct Arc Flash Hazard Analysis (AFHA) studies for both AC and DC based on IEEE 1584-2018 recommendation and SVP defined working distance for working distances.

- **Parker Substation PCA Document Review:**

Review and provide comments for SVP issued PCA document for the Parker Substation. The document should include 60kV lines and buses, 69kV/12kV transformers, control and automation.

- **Review Logic Diagrams and Relay setting templates for Parker Substation:**

Review Logic Diagrams and SEL relay setting templates for all new relays which includes: SEL-311L, SEL-587Z, SEL387E, SEL487E for consistencies with PCA requirements.

- **Parker Substation ASPEN Model:**

Check the new Parker transformer nameplate and update the ASPEN OneLiner to include the new transformer data.

- **Parker Substation Relay Settings and Coordination Study:**

Relay settings and coordination study for three transformers at Parker substation. Each transformer is protected by two relays: SEL487E and SEL387E. Both relays will provide transformer differential protection and high side and low side overcurrent protections.

Relay settings and coordination study for two (2) 60kV breakers Line Differential relays (SEL-311L).

- **South Loops Relay Settings and Coordination Study:**

Relay settings and coordination study for the 60kV South loop consists of eight (8) two-terminal lines (16 breakers).

South Loop: KRS CB612 – CCA Loop Jct. CB12, CCA Loop Jct. CB22 – Parker CB42, Parker CB12 - Mathew CB12, Mathew CB42 – De La Cruz CB42, De La Cruz CB12 – Brokaw CB12, Brokaw CB42 – Serra CB12, Serra CB32 – Homestead CB32 and Homestead CB12 – SRS CB862.

The estimated total cost for Task #2 is \$58,500.

3. San Tomas Substation:

San Tomas project proposal is for performance of: (a) Protection studies for various relay settings and coordination due to new transformer and switchgear at San Tomas substation rebuild, (b) Determine setting points for new integrated 60kV lines, transformers, buses and 12kV switchgears relays, (c) Relay Settings and coordination study for the Northwest 60kV loop which is consist of five (5) 60kV lines, (d)Conduct Arc Flash Hazard Analysis (AFHA) studies for both AC and DC based on IEEE 1584-2018 recommendation and SVP defined working distance and (e) Review Protection, Control and Automation (PCA) document for SVP's San Tomas Substation created by SVP Engineer.

- **San Tomas Substation PCA Document Review:**

Review and provide comments for SVP issued PCA document for the San Tomas Substation. The document should include 60kV lines and buses, 69kV/12kV transformers, 12kV main, tie and feeder protection, control and automation.

- **Review Logic Diagrams and Relay setting templates for San Tomas Substation:**

Review Logic Diagrams and SEL relay setting templates for all new relays which includes: SEL-311L, SEL-587Z, SEL387E, SEL487E, SEL451-4 (Main, Tie and Feeder) and SEL751A relays for consistencies with PCA requirements.

- **San Tomas Substation ASPEN Model:**

Check the new San Tomas transformers nameplates and update the ASPEN OneLiner to include the San Tomas substation with two new transformers.

- **San Tomas Substation Relay Settings and Coordination Study:**

Relay settings and coordination study for three transformers at San Tomas substation. Each transformer is protected by two relays: SEL487E and SEL387E. Both relays will provide transformer differential protection and high side and low side overcurrent protections.

Relay setting and coordination studies for low side main breakers using SEL451-5 and SEL751A relays.

Relay setting and coordination studies for the 12kV tie breakers and distribution feeders using SEL-451 and SEL-751A relays.

Relay settings for 12kV bus differential relays (SEL587Z).

Relay settings and coordination study for two (2) 60kV breakers Line Differential relays (SEL-311L).

- **Northwest Loop Relay Settings and Coordination Study:**

Relay settings and coordination study for northwest loop with total of five (5) two terminal lines (10 breakers) and check coordination with other 60kV loops breakers located at SRS and NRS substations with total of four (4) breakers.

Northwest Loop: NRS CB522 – Mission CB62, Mission CB12 – Juliette CB12, Juliette CB22 – Central CB12, Central CB32 – San Tomas CB12, San Tomas CB42 – SRS CB983.

Central and South loops are located at SRS, and Northeast loop is located at NRS with total of four (4) breakers.

- **Arc Flash Hazard Analysis:**

Conduct Arc Flash Hazard Analysis (AFHA) study on 60kV/12kV and station Battery.

This study will perform the following functions:

4. Calculate Incident Energy based on IEEE 1584 recommendation and SVP defined working distance
5. Create a report for selecting Flame Resistance Personal Protective Equipment (PPE) based on the National Fire Protection Administration (NFPA) Code 70E.
6. Create Custom Equipment Labeling.

This study will include the 60kV, 12kV and station Battery.

The estimated total cost for Task #3 is \$96,500.

4. Engineering Support Consulting Service:

Provide various protection related consulting services and support. Some of these services can be on the following areas:

- Application of Transmission and Distribution Protection Schemes
- Relay and Coordination Setting Guidelines
- Designing Protection Schemes
- Analysis of the Protection Schemes Operation
- NERC Standard Compliance Evaluation Support.
- Various Transmission and Distribution Protection Support as Needed.
- Analysis of the Protection Schemes Operation
- Various Generation Protection Support as Needed.

The estimated total cost for Task #4 is \$50,000.

5. Five SVP Power Houses Arc Flash Studies

Conduct Arc Flash Hazard Analysis (AFHA) studies on the following five (5) SVP Power Houses: COGEN, Gianera, Highline, Stony Gorge and Black Butte.

Review the Power House drawings to identify the required data to perform the arc flash study.

Visit the Power House and collect all necessary data where there are available. Compile all data and identify any additional data that need to be provided by SVP engineers.

Model the system in either SKM or EasyPower software and calculate Incident Energy based on IEEE 1584-2018 recommendation and SVP defined working distance.

Create a report for selecting Flame Resistance Personal Protective Equipment (PPE) based on the National Fire Protection Administration (NFPA) Code 70E and customized Equipment Labeling.

The estimated total cost for Task #5 is \$112,000.

The estimated total cost for these five (5) new tasks is \$401,500