

Control Number: 35077



Item Number: 958

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**Project No. 35077**

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**First Amended and Restated**  
**INTERCONNECTION AGREEMENT**  
**Between**  
**City of San Marcos, Texas**  
**and**  
**LCRA Transmission Services Corporation**

**Dated**  
**May 13, 2019**

958  
1

**FIRST AMENDMENT TO AMENDED AND  
RESTATED INTERCONNECTION  
AGREEMENT**

This First Amendment to the Amended and Restated Interconnection Agreement ("this Agreement") is entered into this 13<sup>th</sup> day of May, 2019, by and between the City of San Marcos, Texas (San Marcos Electric Utility or "SMEU" or "City") and LCRA Transmission Services Corporation ("LCRA TSC"), referred to individually as "Party" and collectively as "Parties".

**WHEREAS**, LCRA TSC will purchase the control house and other appurtenances from SMEU, at Hilltop substation;

**WHEREAS**, LCRA TSC will purchase the control house and other appurtenances from SMEU, at Strahan Substation; and,

**WHEREAS**, SMEU has installed a new power transformer (PWT), at Ranch Road 12 Substation.

NOW, THEREFORE, in consideration of the premises and of the mutual covenants and conditions herein set forth, the Parties agree to amend the Agreement as follows:

1. Exhibit "A" is deleted in its entirety, and the Exhibit "A" attached to this First Amendment is added to the Agreement in lieu thereof.
2. Facility Schedule No. 1, (including the diagrams attached thereto) is deleted in its entirety, and Facility Schedule No. 1 attached to this First Amendment is added to the Agreement in lieu thereof.
3. Facility Schedule No. 2, (including the diagrams attached thereto) is deleted in its entirety, and Facility Schedule No. 2 attached to this First Amendment is added to the Agreement in lieu thereof.
4. Facility Schedule No. 4, (including the diagrams attached thereto) is deleted in its entirety, and Facility Schedule No. 4 attached to this First Amendment is added to the Agreement in lieu thereof.

Except as otherwise expressly provided for herein, the Agreement will continue in full force and effect in accordance with its terms.

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IN WITNESS WHEREOF, the Parties have caused this First Amendment between LCRA Transmission Services Corporation and San Marcos Electric Utility, Texas to be executed in several counterparts, each of which shall be deemed an original but all shall constitute one and the same instrument.

**CITY OF SAN MARCOS, TEXAS**


By: 

Name: Bert Lumbreras

Title: City Manager, City of San Marcos,  
Texas

Date: 05/14/19

**LCRA TRANSMISSION SERVICES CORPORATION**

By: 

Name: Sergio Garza, P.E.

Title: LCRA Vice President, Transmission  
Design and Protection

Date: 05/13/2019



## EXHIBIT A

[illegible]

## **FACILITY SCHEDULE NO. 1**

1. **Name:** Hilltop Substation
2. **Facility Location:** The Hilltop Substation is located at 321 Lamar Ave., San Marcos, Hays County, Texas.
3. **Points of Interconnection:** There are two (2) Points of Interconnection in the Hilltop Substation generally described as:
  - where the jumper from LCRA TSC's 138-kV operating bus connects to SMEU's switch 2554
  - where the jumper from LCRA TSC's 138-kV operating bus connects to SMEU's switch 9554
4. **Transformation Services Provided by LCRA TSC:** No
5. **Metering Services Provided by LCRA TSC:** Yes, per separate Wholesale Metering Service Agreement
6. **Delivery Voltage:** 138-kV
7. **Metered Voltage and Location:** The metered voltage is 12.5-kV. The metering current transformers are located in bay 2 and bay 4 of the distribution system and in power transformer T2. The metering potential transformers are located on the 12.5-kV operating buses.
8. **One Line Diagram Attached:** Yes
9. **Description of Facilities Owned by Each Party:**

San Marcos Electric Utilities owns:

The Hilltop Substation

- Two (2) power transformers T1 and T2 with associated surge arresters, and protective relaying
- Two (2) circuit switchers CS2555 and CS9555 with 138-kV disconnect switch 2554 and 9554
- One (1) circuit switcher bypass switch 9557
- All distribution circuit breakers
- 12.5-kV steel structures, 12.5-kV operating and transfer buses, switches, insulators, fused cutouts, and distribution class surge arresters
- One (1) 12.5-kV bus tie switch HI65
- One (1) 12.5-kV potential transformer PT2 with fuse F8
- One (1) load management system LM

- Three (3) Station Service SS1, SS2 and SS3 with associated fuses
- Substation property, ground grid, gravel, fencing, and other appurtenances

**LCRA TSC owns:**

- Two (2) 138-kV circuit breakers 9540 and 9550 with foundations and protective relaying
- Six (6) 138-kV switches 9539, 9541, 9543, 9549, 9551, and 9553
- Two (2) 138-kV dead-end towers with associated bus, insulators, and surge arresters SA6, SA7
- Two (2) coupling capacitor voltage transformers CCVT1 and CCVT2
- Two (2) wave traps with tuners WT1 and WT2
- One (1) 138-kV Operating Bus with associated steel supporting structures and insulators
- Jumpers from LCRA TSC's 138-kV operating bus to the Points of Interconnection at SMEU's disconnect switches 2554 and 9554
- Underfrequency relay panel
- One (1) 12.5-kV metering potential transformer PT1 with fuse F2
- One (1) 138-kV bus potential transformer PT5
- One (1) 138-kV surge arrester SA5
- One (1) 138-kV motor operated switch 9538
- Two (2) 12.5-kV metering current transformers CT1 and CT3
- One (1) 138-kV relaying current transformer CT4
- One (1) 138-kV bus, bus differential and breaker failure relaying package.
- Control House with station battery and charger, HVAC, and other appurtenances.
- One (1) AC distribution panel
- Two (2) DC distribution panels

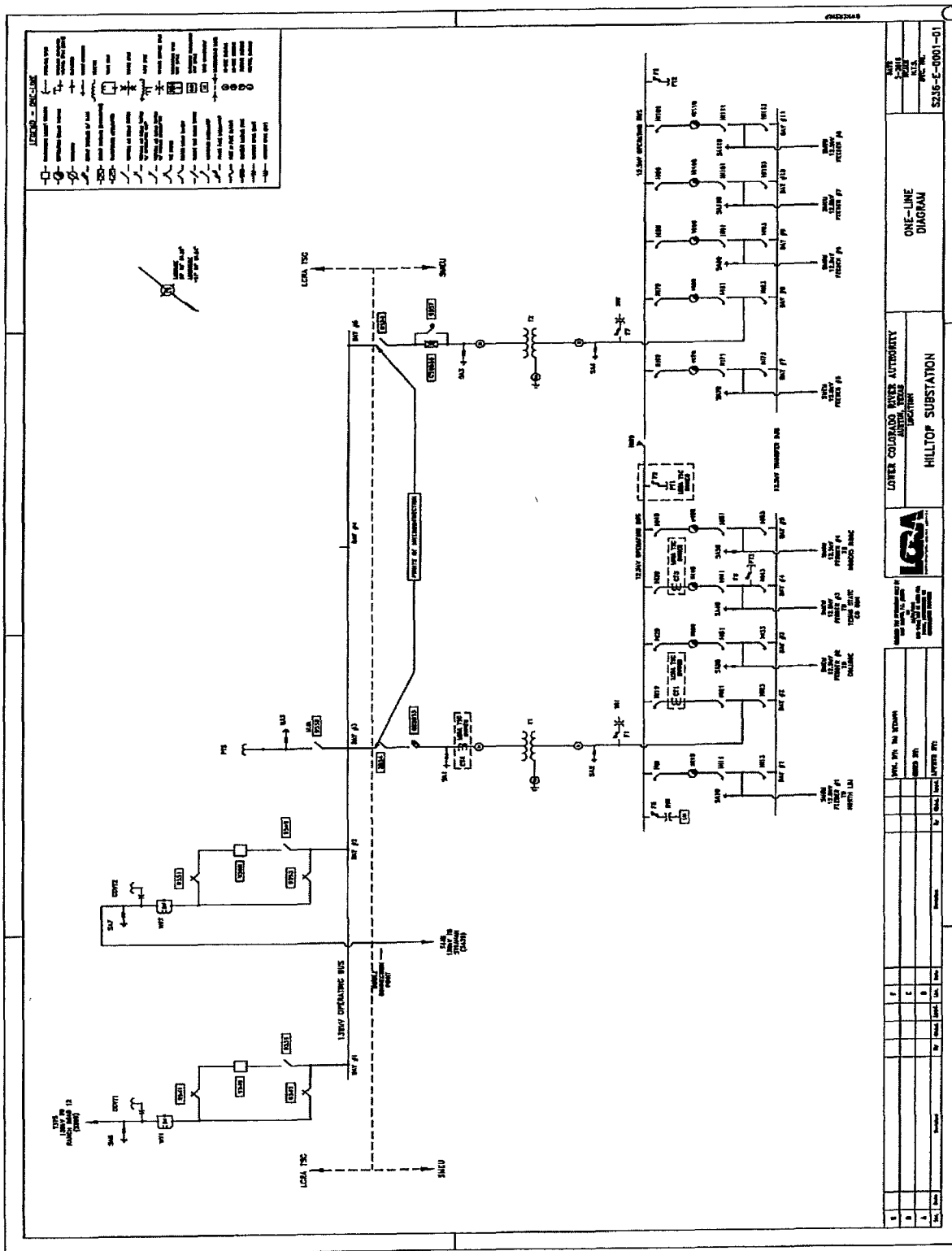
- 10. Operational Responsibilities of Each Party:** Each Party will be responsible for the operation of the equipment it owns. LCRA TSC shall operate the SMEU 138-kV equipment, including monitoring the SMEU power transformer alarms.
- 11. Maintenance Responsibilities of Each Party:** Each Party will be fully responsible for the maintenance of the equipment it owns.
- 12. Other Terms and Conditions:**
  - SMEU and LCRA TSC are to share access to the substation by LCRA TSC locks in the gate and in the control house doors.
  - LCRA TSC will provide SMEU access to 125 VDC and 120 VAC power. Circuits must have over current protection devices (OCPD) sized according to NEC standards. Panel boards containing the OCPD may belong to either LCRA TSC (if space is available) or SMEU.
  - LCRA TSC will provide SMEU access to 120 VAC power. Circuits must have over current protection devices (OCPD) sized according to NEC standards. Panel boards containing the OCPD may belong to either SMEU (if space is available) or LCRA TSC.

- LCRA TSC will provide SMEU with floor space (as available and as necessary) in its control houses for the installation of SMEU required relay panel boards and equipment.
- SMEU shall supply and provide metering current transformers from power transformer T2 for LCRA TSC metering.
- SMEU shall supply and provide 12.5-kV bus potential transformer PT2 for LCRA TSC metering.
- LCRA TSC will provide tripping and close inhibit contacts from LCRA TSC's 138-kV differential & breaker failure relaying panel to SMEU's circuit switcher CS2555 relaying panel.
- LCRA TSC will provide tripping and close inhibit contacts from LCRA TSC's 138-kV bus differential & breaker failure relaying panel to SMEU's circuit switcher CS9555 relaying panel.
- SMEU will provide breaker failure initiate contacts from SMEU's 138-kV circuit switcher CS2555 relaying panel to LCRA TSC's 138-kV-bus differential & breaker failure relaying panel.
- SMEU will provide breaker failure initiate contacts from SMEU's 138-kV circuit switcher CS9555 relaying panel to LCRA TSC's 138-kV bus differential & breaker failure relaying panel.
- SMEU will supply and provide relaying current transformers from SMEU's Transformer T2 for use by LCRA TSC in LCRA TSC's 138-kV bus differential relaying scheme.
- LCRA TSC and SMEU shall design, provide, and coordinate their respective protection system equipment so that adjacent zones of protection overlap, in accordance with ERCOT Nodal Operating Guides.

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### HILLTOP ONE-LINE DIAGRAM



## FACILITY SCHEDULE NO. 2

1. **Name:** Strahan Substation
2. **Facility Location:** The Loop 82/Strahan Substation is located at 709 Aquarena Springs Dr. (Loop 82), San Marcos, Hays County, Texas.
3. **Point of Interconnection:** There is one (1) Point of Interconnection in the Strahan Substation: where the 12.5-kV bus terminates at the power transformer T1 LV bushings.
4. **Transformation Services Provided by LCRA TSC:** Yes, per separate Transformation Service Agreement
5. **Metering Services Provided by LCRA TSC:** Yes, per separate Wholesale Metering Service Agreement
6. **Delivery Voltage:** 12.5-kV
7. **Metered Voltage and Location:** The metered voltage is 12.5-kV. The metering current transformers are located in T1. The metering potential transformers are located on the 12.5-kV operating bus.
8. **One Line Diagram Attached:** Yes
9. **Description of Facilities Owned by Each Party:**

San Marcos Electric Utilities owns:

- Substation property, ground grid, gravel, fencing, and other appurtenances
- Five (5) distribution circuit breakers ST510, ST520, ST530, ST550, and ST560
- 15-kV (60:1 ratio) bus potential transformers
- Six (6) distribution and total bays including A-frames, trusses, insulators, disconnect switches, surge arresters, 12.5-kV operating and transfer bus, bus potential transformers, and metering current transformers

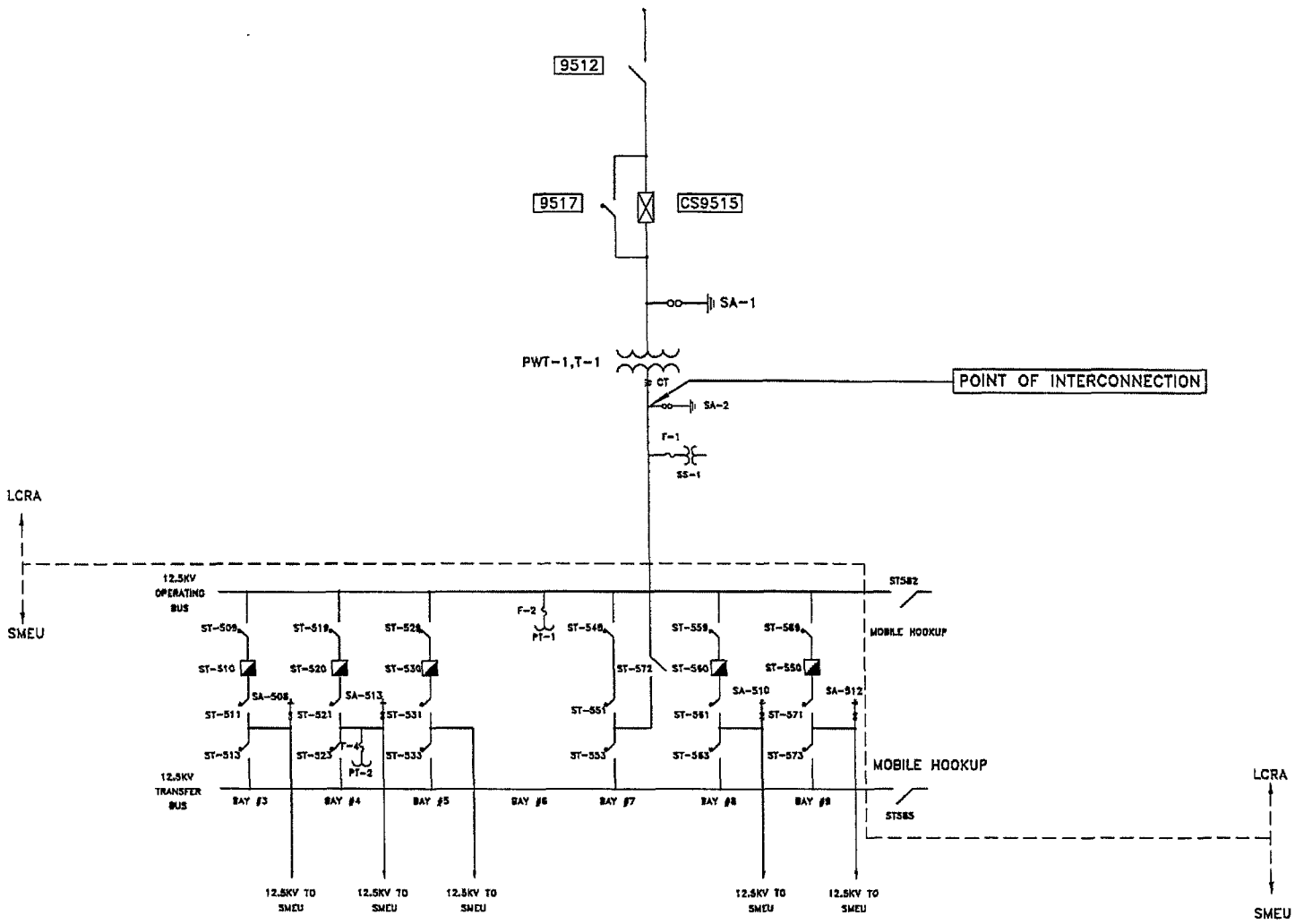
LCRA TSC owns:

- One (1) 138-kV Ring bus including structures, insulators, hardware, foundations, and jumpers
- Three (3) 138-kV circuit breakers 9720, 9730 and 10780 with foundations and protective relaying
- Six (6) 138-kV switches 9719, 9721, 9729, 9731, 10779, and 10781
- One (1) power transformer T1 with associated surge arresters
- Two (2) coupling capacitor voltage transformers CCVT1 and CCVT2
- Two (2) wave traps with tuners WT1 and WT2
- One (1) 138-kV circuit switcher CS9515 with bypass switch 9517 and disconnect switch 9512

- Two (2) mobile transformer disconnect switches ST582 and ST585 on the ends of the 12.5-kV operating and transfer buses
  - Station Service equipment
  - Control house with station battery and charger, HVAC and other appurtenances.
  - Two (2) AC distribution panels
  - Two (2) DC distribution panels
10. **Operational Responsibilities of Each Party:** Each Party will be responsible for the operation of the equipment it owns.
11. **Maintenance Responsibilities of Each Party:** Each Party will be fully responsible for the maintenance of the equipment it owns.
12. **Other Terms and Conditions:**
- The City and LCRA TSC are to share access to the substation by LCRA TSC locks in the gate and in the control house doors.
  - LCRA TSC will provide SMEU access to 125 VDC. Circuits must have over current protection devices (OCPD) sized according to NEC standards. Panel boards containing the OCPD may belong to either SMEU (if space is available) or LCRA TSC.
  - LCRA TSC will provide SMEU access to 120 VAC power. Circuits must have over current protection devices (OCPD) sized according to NEC standards. Panel boards containing the OCPD may belong to either SMEU (if space is available) or LCRA TSC.
  - LCRA TSC will provide SMEU with floor space (as available and as necessary) in its control houses for the installation of LCRA TSC required relay panel boards and equipment.
  - LCRA TSC and SMEU shall design, provide, and coordinate their respective protection system equipment so that adjacent zones of protection overlap, in accordance with ERCOT Nodal Operating Guides.

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## STRAHAN ONE-LINE DIAGRAM



### STRAHAN SUBSTATION

**THIS IS NOT A COMPLETE ONE-LINE DIAGRAM**  
**FOR A COMPLETE ONE-LINE DIAGRAM OF THIS**  
**SUBSTATION, REFER TO DRAWING S439-E-0001-01.**

## FACILITY SCHEDULE NO. 4

1. **Name:** Ranch Road 12 Substation
2. **Facility Location:** The Ranch Road 12 Substation is located at 2701 RR 12, San Marcos, Hays County, Texas.
3. **Point of Interconnection:** There is one (1) point of interconnection at Ranch Road 12 Substation: where the jumper from LCRA TSC's 138-kV operating bus connects to SMEU's switch 30154
4. **Transformation Services Provided by LCRA TSC:** No
5. **Metering Services Provided by LCRA TSC:** Yes, per separate Wholesale Metering Service Agreement
6. **Delivery Voltage:** 138-kV
7. **Metered Voltage and Location:** The metered voltage is 12.5-kV. The metering current transformers are located in T2. The metering potential transformers are located on the 12.5-kV operating bus.
8. **One Line Diagram Attached:** Yes
9. **Description of Facilities Owned by Each Party:**

San Marcos Electric Utility owns:

- Substation property, ground grid, gravel, fencing, and other appurtenances
- One (1) power transformer T2 with associated surge arresters and protective relaying
- One (1) circuit switchers CS30155 with 138-kV disconnect switch 30154
- One (1) circuit switcher bypass switch 30157
- Three (3) distribution bays including A-frames, trusses, insulators, disconnect switches, surge arresters, and 12.5-kV operating and transfer bus
- 12.5-kV bus potential transformers
- Three (3) distribution circuit breakers RR80, RR90, and RR100
- Station Service equipment
- Control house with station battery and charger
- AC and DC distribution panels

LCRA TSC owns:

- One (1) 138-kV Operating bus including structures, insulators, hardware, foundations, and jumpers
- Two (2) 138-kV line interrupting motor operated switches MO3969 and MO3959
- Two (2) 138-kV dead-end towers with associated foundations, insulators and

- jumpers
- Underfrequency relay panel

10. **Operational Responsibilities of Each Party:** Each Party will be responsible for the operation of the equipment it owns. LCRA TSC shall operate the SMEU 138-kV equipment, including monitoring the SMEU power transformer alarms.

11. **Maintenance Responsibilities of Each Party:** Each Party will be fully responsible for the maintenance of the equipment it owns.

12. **Other Terms and Conditions**

- SMEU and LCRA TSC are to share access to the substation by LCRA TSC locks in the gate and in the control house doors.
- SMEU will provide LCRA TSC access to 125 VDC and 120 VAC power. Circuits must have over current protection devices (OCPD) sized according to NEC standards. Panel boards containing the OCPD may belong to either SMEU (if space is available) or LCRA TSC.
- SMEU will provide LCRA TSC with floor space (as available and as necessary) in its control houses for the installation of LCRA TSC required relay panel boards and equipment.
- SMEU shall supply and provide metering current transformers from power transformer T2 for LCRA TSC metering.
- SMEU shall supply and provide 12.5-kV bus potential transformer PT2 for LCRA TSC metering.
- LCRA TSC and SMEU shall design, provide, and coordinate their respective protection system equipment so that adjacent zones of protection overlap, in accordance with ERCOT Nodal Operating Guides.

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# RANCH ROAD 12 ONE-LINE DIAGRAM

