

**FIFTH AMENDMENT TO THE AMENDED AND  
RESTATED INTERCONNECTION AGREEMENT**

This Fifth Amendment to the Amended and Restated Interconnection Agreement ("Fifth Amendment") is entered into this \_\_\_\_day of \_\_\_\_\_2025, by and between the City of San Marcos, Texas (SMTX Utilities or "SMTXU") and LCRA Transmission Services Corporation ("LCRA TSC"), referred to individually as "Party" and collectively as "Parties".

**WHEREAS**, LCRA TSC and SMTXU entered into that certain Amended and Restated Interconnection Agreement executed January 17, 2017, as amended by that certain First Amendment, executed as of May 13, 2019, as amended by that certain Second Amendment, executed as of February 7, 2020, as amended by that certain Third Amendment executed as of June 1, 2021 as amended by that certain Fourth Amendment executed as of October 28, 2024 (collectively, as amended, the "Agreement");

**WHEREAS**, LCRA TSC will upgrade the 138-kV bus at San Marcos substation to a breaker-and-a-half configuration;

**WHEREAS**, SMTXU will coordinate with LCRA TSC at San Marcos substation concerning the existing SMTX 138-kV bus facilities and their five (5) URD circuits;

**WHEREAS**, LCRA TSC will upgrade the T200 Redwood – San Marcos 138kV transmission line; and

**WHEREAS**, LCRA TSC will install a temporary shoofly at the San Marcos substation to tie T322 + T273 and T200 and T230 together.

**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 Fifth Amendment is added to the Agreement in lieu thereof.
2. Facility Schedule No. 5A attached to this Fifth Amendment is added to the Agreement.
3. Facility Schedule No. 6A attached to this Fifth Amendment is added to the Agreement.

**IN WITNESS WHEREOF**, the Parties have caused this Fifth Amendment between LCRA TSC and between SMTXU 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: \_\_\_\_\_

Title: City Manager, City of San Marcos Texas

Date: \_\_\_\_\_

**LCRA TRANSMISSION SERVICES CORPORATION**

By: \_\_\_\_\_

Name: Sergio Garza

Title: LCRA Vice President, Transmission  
Design and Protection

Date: \_\_\_\_\_





**FIFTH AMENDMENT  
FACILITY SCHEDULE NO. 5A**

1. **Name:** Redwood
2. **Facility Location:** The Redwood substation is located at 1375 Wonder World Drive, San Marcos, Hays County, Texas.
3. **Points of Interconnection:** There are a total of twelve (12) points of interconnection at Redwood substation generally described as:
  - 3.1 where the 138 kV transformer bus connects to Operating Bus #1 for PWT-2.
  - 3.2 where the 138 kV transformer bus connects to Operating Bus #2 for PWT-2.
  - 3.3 where the incoming distribution line connects to the tubular bus between switches RW-321 and RW-323 at breaker RW-320.
  - 3.4 where the jumper from breaker RW-320, passing through CT-15, connects to the 4 hole pad on switch RW-319.
  - 3.5 where the jumper from breaker RW-320 connects to the 4 hole pad on switch RW-321.
  - 3.6 where the incoming distribution line connects to the tubular bus between switches RW-341 and RW-343 at breaker RW-340.
  - 3.7 where the jumper from breaker RW-340, passing through CT-11, connects to the 4 hole pad on switch RW-339.
  - 3.8 where the jumper from breaker RW-340 connects to the 4 hole pad on switch RW-341.
  - 3.9 where the jumper from switch RW-202 connects to the 12.5 kV Operating bus for PWT-2, T-2.
  - 3.10 where the jumper from switch RW-205 connects to the 12.5 kV Transfer bus for PWT-2, T-2.
  - 3.11 where the jumper from switch RW-102 connects to the 12.5 kV Operating bus for PWT-2, T-2.
  - 3.12 where the jumper from switch RW-105 connects to the 12.5 kV Transfer bus for PWT-2, T-2.
4. **Transformation Services Provided by LCRA TSC:** Yes for PWT-3, T-3 only, per separate Transformation Service Agreement
5. **Metering Services Provided by LCRA TSC:** Yes, per separate Wholesale Metering Service Agreement
6. **Delivery Voltage:** 138 kV for PWT-2; 12.5 kV for PWT-3
7. **Metered Voltage and Location:** The metered voltage is 12.5 kV. The metering current transformers are located in each individual bay. 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:**

**9.1 SMTX Utilities owns:**

- 9.1.1 One (1) power transformer PWT-2, T-2 with associated foundation, surge arresters, and protective relaying
- 9.1.2 One (1) circuit switcher CS-8235 with bypass switch 8236. 138 kV transformer bus with associated steel structures for PWT-2, 138 kV operating bus disconnect switches 8237 and 8238, and insulators
- 9.1.3 Three (3) distribution bays including A-frames, trusses, insulators, disconnect switches, surge arresters, 12.5 kV operating and transfer bus, and metering current transformers for PWT-2, T-2
- 9.1.4 Five (5) distribution circuit breakers RW-220, RW-230, RW-240, RW-320, RW-340
- 9.1.5 Disconnect switches in distribution bays 1-0 and 1-4

**9.2 LCRA TSC owns:**

The Redwood substation including, but not limited to, the following items:

- 9.2.1 One (1) 138 kV circuit switcher CS-19235 with bypass switch 19232 and disconnect switches 19237 and 19238
- 9.2.2 One (1) power transformer PWT-3, T-3 with associated surge arresters
- 9.2.3 Three (3) 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 for PWT-3, T-3
- 9.2.4 One (1) total circuit breaker RW-330
- 9.2.5 Station Service equipment for PWT-3
- 9.2.6 12.5 kV bus potential transformers for PWT-2, and PWT-3, and metering current transformers
- 9.2.7 Control house with station battery

**9.3 LCRA TSC is responsible for installing and will own the following to support the Project:**

- 9.3.1 Upgrading the existing T200 Redwood – San Marcos 138-kV transmission line to a minimum 105 deg. F ambient temperature rating of 940 MVA (MOT 482 deg. F) at 138-kV using bundled 959.6 ACSS/TW Suwannee conductor
- 9.3.2 Upgrade all Redwood substation equipment connected in-series with T200 at Redwood substation shall have a minimum rating of 2950 A at 105 deg. F ambient temperature.

**9.4 SMTXU is responsible for the following in association with the project:**

N/A

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

- 12.1** SMTXU and LCRA TSC are to share access to the Redwood substation by LCRA TSC locks in the gate and in the control enclosure doors.

- 12.2 LCRA TSC will provide SMTXU 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 SMTXU (if space is available) or LCRA TSC.
- 12.3 LCRA TSC will provide SMTXU with floor space (as available and as necessary) in its control houses for the installation of SMTXU required relay panel boards and equipment.
- 12.4 LCRA TSC will provide tripping and close inhibit contacts from LCRA TSC's 138 kV differential & breaker failure relaying panel to SMTXU's circuit switcher CS8235 relaying panel.
- 12.5 SMTXU will provide breaker failure initiate contacts from SMTXU's 138 kV circuit switcher CS8235 relaying panel to LCRA TSC's 138 kV bus differential & breaker failure relaying panel.
- 12.6 SMTXU will supply and provide relaying current transformers from SMTXU's Transformer T2 for use by LCRA TSC in LCRA TSC's 138 kV bus differential relaying scheme.
- 12.7 LCRA TSC and SMTXU shall design, provide, and coordinate their respective protection system equipment so that adjacent zones of protection overlap, in accordance with ERCOT Nodal Operating Guides.
- 12.8 LCRA TSC will make reasonable efforts to notify SMTXU in advance of any planned repairs or updates to LCRA TSC's system that may result in a temporary outage of the electrical operations on the SMTXU side of the Redwood substation.

**13. Project Responsibilities:**

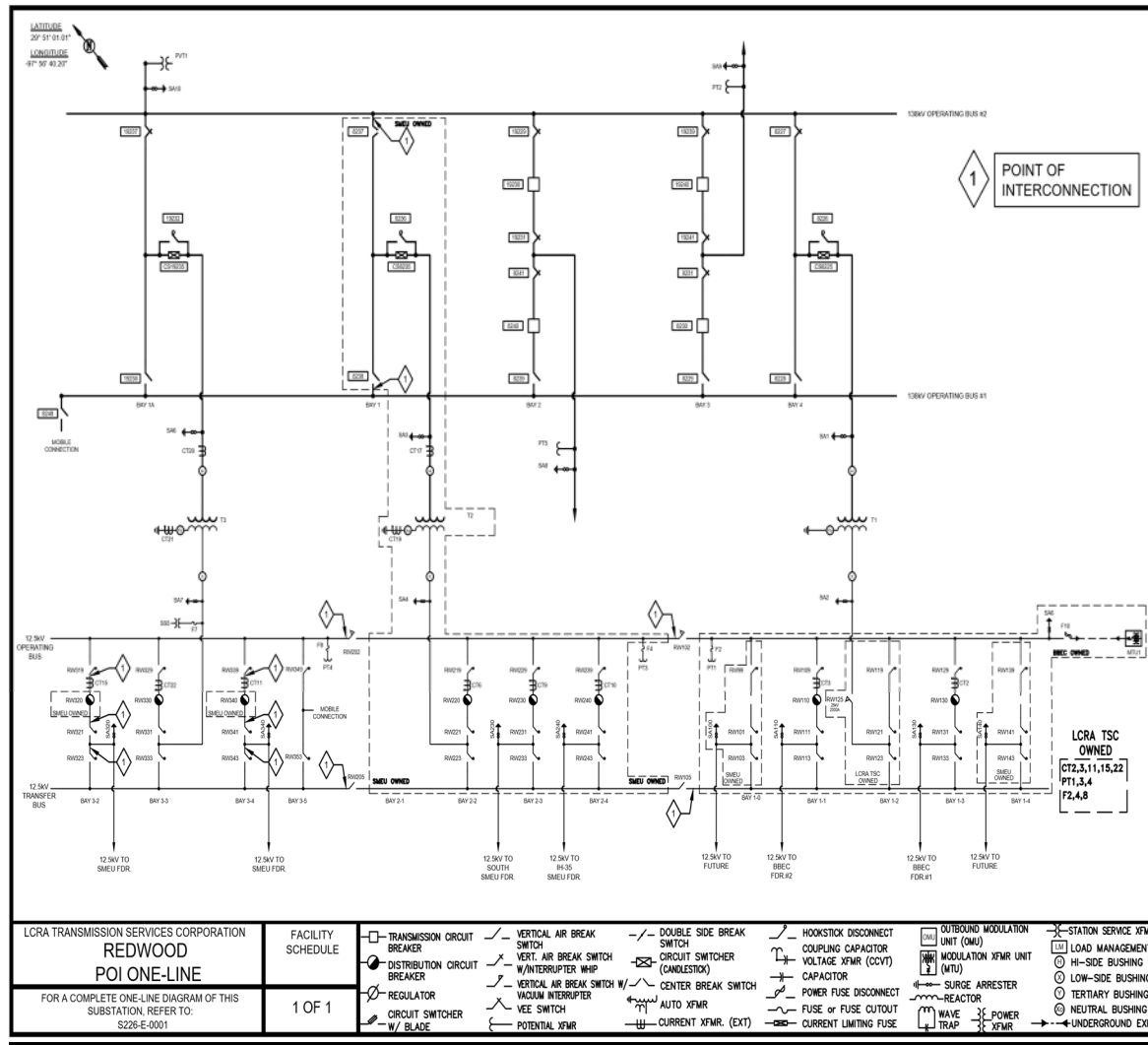
**13.1 Project Name:** Redwood Substation Addition

**13.2 Projected In-Service Date(s):** May 15, 2025

**13.3 Project Costs:** Each Party will be responsible for all costs incurred in connection with the design, procurement, and construction activities for the facilities it owns.

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# FIFTH AMENDMENT ONE LINE DRAWING 5A



**FIFTH AMENDMENT  
FACILITY SCHEDULE 6A**

1. **Name:** San Marcos
2. **Facility Location:** The San Marcos substation is located at 1301 River Road, San Marcos, Hays County, Texas.
3. **Points of interconnection:** There are two (2) Points of interconnection at San Marcos substation generally described as:
  - 3.1. where SMTXU's 138-kV jumper at the A-frame connects to LCRA TSC's 138-kV wire bus assembly to the T1 power transformer; and,
  - 3.2. where SMTXU's 138-kV jumper at the A-frame connects to LCRA TSC's 138-kV wire bus assembly to the T2 power transformer.
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 the two power transformers (T1 and T2). The two metering potential transformers are located on the two 12.5-kV operating buses.
8. **One Line Diagram Attached:** Yes
9. **Description of Facilities Owned by Each Party:**
  - 9.1. **SMTXU owns:**
    - 9.1.1. Two (2) transformers (T1 and T2) with associated surge arresters;
    - 9.1.2. Two (2) 138-kV circuit switchers (CS4975 and CS4985) and associated protective relaying packages;
    - 9.1.3. Six (6) 138-kV disconnect switches (4974, 3942, 3944, 4984, 4986 and 4987);
    - 9.1.4. Jumpers from the disconnect switches (3942, 3944, 4986 and 4987) to the LCRA TSC 138-kV operating and transfer buses;
    - 9.1.5. 138-kV transformer bus with associated steel structures and insulators;
    - 9.1.6. Two (2) 138 kV surge arresters (SA7 and SA9);
    - 9.1.7. All distribution and total circuit breakers including jumpers, protective relay packages and foundations;
    - 9.1.8. All distribution and total bays including A-frames, trusses, foundations, insulators, disconnect switches, surge arresters, 12.5-kV operating and transfer bus, and bus potential transformers;
    - 9.1.9. Protective relaying, SCADA, and communications located in LCRA TSC's 24' x 42' control enclosure; and
    - 9.1.10. Two (2) station service transformers (SS1 and SS2).



**9.2. LCRA TSC owns:**

- 9.2.1. The San Marcos substation property, perimeter fence, gravel, ground grid, and other appurtenances;
- 9.2.2. All 138-kV transmission facilities and associated protective relaying packages except those owned by SMTXU defined in Section 9.1;
- 9.2.3. 138-kV operating and transfer bus;
- 9.2.4. One (1) 138-kV bus potential transformer (PT1);
- 9.2.5. One (1) 138-kV bus differential and breaker failure relaying scheme;
- 9.2.6. Two (2) metering packages;
- 9.2.7. One (1) 138-kV surge arrester (SA6);
- 9.2.8. Underfrequency relay panel; and
- 9.2.9. Two (2) control enclosures (24'x36' and 24'x42') with battery banks, battery chargers, AC and DC panels, HVAC, and appurtenances;
- 9.2.10. One (1) microwave tower; and
- 9.2.11. One (1) battery enclosure.

**9.3 LCRA TSC is responsible for installing and will own the following to support the Project:**

- 9.3.1 Upgrade the LCRA TSC 138-kV bus at San Marcos substation to a breaker-an-a-half configuration:
  - 9.3.1.1 All San Marcos substation equipment shall have a minimum rating of 4000A at 105 deg. F ambient temperature
  - 9.3.1.2 All circuit breakers shall have 63 kAIC interrupting current rating
- 9.3.2 Add a new 24' x 60' control enclosure;
- 9.3.3 Add a 12' x 28' telecom shelter with propane tank;
- 9.3.4 Remove SMTXU disconnect switches (3942, 3944, 4986 and 4987) and associated wires and equipment in Bay 5 and Bay 6;
- 9.3.5 Remove SMTXU wire bus to the SMTXU A-Frames for T1 and T2;
- 9.3.6 Install 138-kV wire bus from the new LCRA TSC substation A-Frames in Bay 5 and Bay 6 to the SMTXU transformer A-frames;
- 9.3.7 Reconnect SMTXU's 138-kV jumpers at each SMTXU 138-kV A-frame structure to LCRA TSC's 138-kV wire bus assembly for the new Points of Interconnection located in Bay 5 and Bay 6;
- 9.3.8 Replace obsolete instrument transformers (CT5, CT6, PT5, PT6); and
- 9.3.9 Replace obsolete capacitor banks (CP1, CP2) with one (1) new 31.2 MVAR 138-kV capacitor bank.

**9.4 LCRA TSC is responsible for installing a temporary shoofly to support the Project:**

- 9.4.1 Install a temporary shoofly to tie T322 and T273 together and place modular substation on T322 for SMTXU load;
- 9.4.2 Install a temporary shoofly to tie T200 and T230 together; and
- 9.4.3 Temporary relaying changes at Kyle, Redwood, Strahan and Canyon.

**9.5 SMTXU is responsible for installing and will own the following to support the Project:**

- 9.5.1 Coordinate with LCRA TSC modifications to the 138-kV bus facilities at the Points of Interconnection and SMTXU's three URD circuits exiting out the west side of the San Marcos substation.
- 9.5.2 Transfer SMTXU distribution feeder load to be served from the LCRA TSC modular

substation.

**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:**

**12.1 Access and Physical Security**

12.1.1 SMTXU and LCRA TSC are to share access to the San Marcos substation by LCRA TSC hardened locks in the gate and in the control enclosure doors.

12.1.2 Physical security and access to the San Marcos substation shall be in accordance with LCRA TSC's physical security standards.

**12.2 Metering**

12.2.1 SMTXU will supply and allow LCRA TSC use of its 12.5-kV bus potential transformers PT3 and PT4 for metering.

12.2.2 SMTXU will supply and allow LCRA TSC use of transformer T1 and T2 metering current transformers for its metering.

**12.3 Relay and Control**

12.3.1 SMTXU will supply and allow LCRA TSC use of transformer T1 and T2 relaying current transformers for LCRA TSC's bus differential and breaker failure relaying scheme.

12.3.2 SMTXU will provide breaker failure initiate contacts from its circuit switchers CS4975 and CS4985 relaying panel to LCRA TSC's bus differential and breaker failure relaying panel.

12.3.3 LCRA TSC will provide tripping and close inhibit contacts from its bus differential and breaker failure relaying panel to SMTXU's circuit switchers CS4975 and CS4985 relaying panels.

12.3.4 LCRA TSC will provide SMTXU access to 125 VDC and 120/240 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 SMTXU.

12.3.5 SMTXU will supply and allow LCRA TSC use of SS1 and SS2 for primary and backup station power.

12.3.6 LCRA TSC and SMTXU shall design, provide, and coordinate their respective protection system equipment so that adjacent zones of protection overlap, in accordance with ERCOT Nodal Operating Guides.

12.3.7 LCRA TSC will provide SMTXU with floor space (as available and as necessary) in its control house for the installation of SMTXU required panels and equipment.

12.3.8 LCRA TSC will make reasonable efforts to notify SMTXU in advance of any planned repairs or updates to LCRA TSC's system that may result in a temporary outage of the electrical operations on the SMTXU side of the San Marcos substation.

**13. Project Responsibilities:**

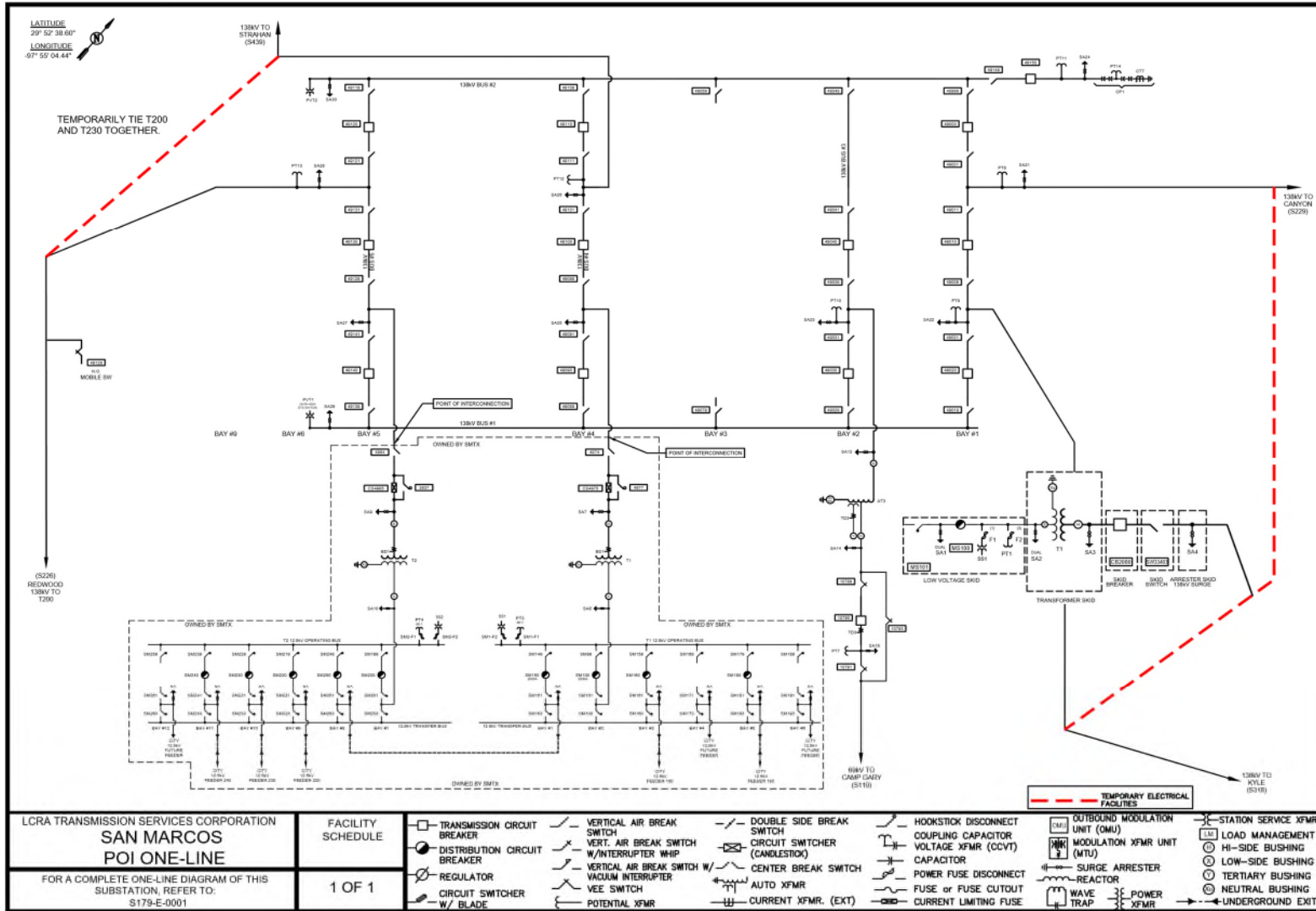
**13.1 Project Name:** Redwood to San Marcos Transmission Line Upgrade

**13.2 Projected In-Service Date(s):** June 30, 2025

**13.3 Project Costs:** Each Party will be responsible for all costs incurred in connection with the design, procurement, and construction activities for the facilities it owns

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# TEMPORARY CONSTRUCTION OF SHOOFLY ONE LINE DRAWING 6A



# FIFTH AMENDMENT ONE LINE DRAWING 6A

