Control Number: 35077

Item Number: 772

Addendum StartPage: 0

Project No. 35077

Seventh Amendment

INTERCONNECTION AGREEMENT

Between

LCRA Transmission Services Corporation

and

New Braunfels Utilities

October 11, 2017

777

SEVENTH AMENDMENT TO
INTERCONNECTION AGREEMENT

This Seventh Amendment to Interconnection Agreement ("Seventh Amendment") is made and entered into this 11 day of October, 2017, between New Braunfels Utilities ("NBU"), a municipally owned utility and LCRA Transmission Services Corporation ("LCRA TSC") collectively referred to hereinafter as the Parties.

WHEREAS, LCRA TSC and NBU entered into that certain Interconnection Agreement executed July 22, 2009, as amended by that certain Amendment No. 1, executed as of December 16, 2009, as amended by that certain Amendment No. 2, executed as of January 17, 2011, as amended by that certain Amendment No. 3, executed as of January 8, 2014, as amended by that certain Amendment No. 4, executed as of September 17, 2014, as amended by that certain Amendment No. 5, executed as of June 3, 2015, as amended by that certain Amendment No. 6, executed as of May 23, 2017 (collectively, as amended, the "Agreement");

WHEREAS, NBU upgraded circuit switchers and disconnect switches and LCRA TSC added 138 kV circuit breakers as part of the Freiheit Road Substation Upgrade Project at Freiheit Road Substation;

WHEREAS, LCRA TSC removed switch 2968 at Sheriff's Posse Substation;

WHEREAS, NBU and LCRA were parties, along with GVEC to the Marion Project Agreement dated May 12, 1978 which provided for coordinated development of a transmission system in the Marion area; LCRA TSC was assigned LCRA's interest in the Marion Project Agreement during the establishment of LCRA TSC on January 1, 2002; and for NBU the termination of the Marion Project Agreement coincided with the NBU termination of the LCRA wholesale power agreement;

WHEREAS, to benefit future development at Marion Substation, LCRA TSC has purchased both Marion 138 kV operating buses and the original control house previously owned through shared ownership by NBU and GVEC; and

WHEREAS, at Marion Substation LCRA TSC will provide a new control house along with relocation of the existing NBU panels from the original control house to the new control house in coordination with a project in which GVEC is installing a power transformer.

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

1. Exhibit "A" Amendment No. 6, attached to the Agreement, is deleted in its entirety and Exhibit "A" Amendment No. 7, attached to this Seventh Amendment, is substituted as Exhibit A of the Agreement as of the effective date of this Seventh Amendment.

2. Facility Schedule No. 2 (including the diagrams attached thereto) is deleted in its entirety and Facility Schedule No. 2, attached to this Seventh Amendment, is hereby added to the Agreement in lieu thereof.

3. Facility Schedule No. 2 (including the diagrams attached thereto), attached to this Seventh Amendment, will become effective upon execution of this Seventh Amendment by the Parties.

4. Facility Schedule No. 6 (including the diagrams attached thereto) is deleted in its entirety and Facility Schedule No. 6, attached to this Seventh Amendment, is hereby added to the Agreement in lieu thereof.

5. Facility Schedule No. 6 (including the diagrams attached thereto), attached to this Seventh Amendment, will become effective upon execution of this Seventh Amendment by the Parties.

6. Facility Schedule No. 7 (including the diagrams attached thereto) is deleted in its entirety and Facility Schedule No. 7, attached to this Seventh Amendment, is hereby added to the Agreement in lieu thereof.

7. Facility Schedule No. 7 (including the diagrams attached thereto), attached to this Seventh Amendment, will become effective upon execution of this Seventh Amendment by the Parties.

8. The changes described in this Seventh Amendment, and the diagrams attached thereto, will become effective upon execution of this Seventh Amendment.

Except as otherwise expressly provided in this Seventh Amendment, all the terms and conditions of the Agreement shall remain in full force and effect.

IN WITNESS WHEREOF, the Parties, acting through their authorized representatives, have executed this Seventh Amendment in two counterparts, each of which shall be deemed an original but shall constitute one and the same instrument.

NEW BRAUNFELS UTILITIES

By: _____

Name: Ian Taylor

Title: Chief Executive Officer

Date: 10/11/2017

LCRA TRANSMISSION SERVICES CORPORATION

By: _____

Name: Sergio Garza, P.E.

Title: LCRA Vice President, Transmission Design and Protection

Date: Aug 31, 2017

EXHIBIT A
Amendment No 7

FACILITY SCHEDULE NO.	LOCATION OF POINT(S) OF INTERCONNECTION (# of Points)	INTERCONNECTION VOLTAGE (KV)	EFFECTIVE DATE OF INTERCONNECTION
1	Comal (6)	138 kV	June 3, 2015
2	Freiheit Road (3)	138 kV	Date of 7th Amendment
3	Henne (6)	138 kV	May 23, 2017
4	Highway 46 (1)	138 kV	January 8, 2014
5	Hortontown (3)	138 kV	July 22, 2009
6	Sheriff's Posse (1)	138 kV	Date of 7th Amendment
7	Marion (2)	138 kV	Date of 7th Amendment
8	EC Mornhinweg (1)	138 kV	September 17, 2014
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FACILITY SCHEDULE NO. 2
Amendment 7

1. **Name:** Freiheit Road Substation

2. **Facility Location:** The Freiheit Road Substation is located at 1463 FM 1101, New Braunfels, Comal County, Texas 78130.

3. **Points of Interconnection:** There are three (3) Points of Interconnection in the Freiheit Road Substation generally described as:

   - where the 138 kV Transformer Bus 3 terminal connector bolts to the four hole pad on switch 3534.
   - where the 138 kV Transformer Bus 1 terminal connector bolts to the four hole pad on switch 3514.
   - where the 138 kV Transformer Bus 2 terminal connector bolts to the four hole pad on switch 3554.

4. **Transformation Services Provided by LCRA TSC:** No

5. **Metering Services Provided by LCRA TSC:** Yes, per Wholesale Metering Services Agreement between the Parties.

6. **Delivery Voltage:** 138 kV

7. **Metered Voltage and Location:** The metering voltage is 12.5 kV. The metering current transformers are located in the total bays for T2 and T3 and inside T1. The bus potential transformers are located on the 12.5 kV operating buses for T1, T2 and T3.

8. **One Line Diagram Attached:** Yes

9. **Description of Facilities Owned by Each Party:**

   NBU owns:
   The Freiheit Road Substation including, but not limited to the following items:
   - Four (4) 138 kV transformer bus bays with 4 a-frames, upper and lower trusses and foundations
   - Three (3) circuit switchers CS3515, CS3525 and CS3545; associated disconnect switches 3514, 3534, and 3554 ; bypass switches 3517, 3547 and 3557
   - One (1) 138 kV slipover bus diff current transformer CT5
   - Two (2) 12.5 kV external metering current transformers CT2 and CT3
   - Three (3) power transformers T1, T2 and T3 with associated surge arresters, foundations, jumpers and protective relaying
   - All distribution circuits including dead end insulators that attach to the dead end structure, conductors, and hardware

- All distribution circuit breakers including jumpers, protective relay packages and foundations
- All distribution and total bays including A-frames, trusses, insulators, disconnect switches, bus tie switches, surge arresters, 12.5 kV operating and transfer bus, bus potential transformers and associated cabling
- Three (3) station service SS1, SS2 and SS3 with associated fuses F1, F3 and F5
- One (1) control house (20' X 24') with batteries, battery charger and appurtenances
- Underfrequency relay equipment
- Substation property, ground grid, gravel, fencing and other appurtenances

LCRA TSC owns:

- Five (5) 138 kV bays identified as NBU bay #4 and LCRA TSC bays 2,3,4 and 5
- Five (5) 138 kV A-frame structures, upper and lower trusses , foundations, insulators and jumpers (NBU bay #4 and LCRA TSC bays 2,3,4 and 5)
- Five (5) 138 kV circuit breakers in a ring bus configuration 27780, 27790, 27800, 27810 and 27820 with foundations, jumpers and protective relaying
- Ten (10) 138 kV switches 27779, 27781, 27789, 27791, 27799, 27801, 27809, 27811, 27819 and 27821
- Two (2) 138 kV coupling capacitor voltage transformers CCVT2 and CCVT3
- Two (2) 138 kV surge arresters SA23 and SA24
- Three (3) 138 kV transformer bus differential and breaker failure relaying schemes BD1, BD2 and BD3
- Three (3) 138 kV transformer buses including structures, insulators, foundations and jumpers
- Three (3) metering packages
- One (1) control house (24' X 39') with batteries, battery charger and appurtenances

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:**
    - NBU and LCRA TSC are to share access to the substation by LCRA TSC locks in the gate, or by future technology to be determined by NBU in coordination with LCRA TSC.
    - NBU will share access to the NBU Freiheit Road control house. Access is obtained by contacting NBU's System Operations Control Center
    - LCRA TSC will share access to the LCRA TSC Freiheit Road control house. Access is obtained by calling LCRA TSC's System Operations Control Center using the intercom at the door of the control house.

- NBU will supply and allow LCRA TSC use of its 12.5 kV bus potential transformers PT1, PT2 and PT3 for LCRA TSC's metering.
- NBU will supply and allow LCRA TSC use of its 12.5 kV metering current transformers CT2 and CT3 and transformer T1 internal 12.5 kV metering current transformer for LCRA TSC's metering.
- NBU will supply and allow LCRA TSC use of transformer T3 and T1 relaying current transformers for use in LCRA TSC's 138 kV BD3 and BD1 transformer bus differential relaying schemes.
- NBU will supply and allow LCRA TSC use of relaying current transformer CT5 for use in LCRA TSC's 138 kV BD2 transformer bus differential relaying scheme.
- NBU will provide breaker failure initiate contacts from its circuit switchers CS3545, CS3515 and CS3525 relaying panels to LCRA TSC's 138 kV BD3, BD1 and BD2 bus differential & breaker failure relaying panels.
- LCRA TSC will provide tripping and close inhibit contacts from its 138 kV BD3, BD1 and BD2 transformer bus differential & breaker failure relaying panels to NBU's circuit switcher CS3545, CS3515 and CS3525 relaying panels.
- NBU will supply and allow LCRA TSC use of any of its station service SS1, SS2 or SS3 for LCRA TSC's primary and backup station service to LCRA TSC's control house. Station Service may be used for purposes directly relating to substation Operation, Maintenance, and Capital Upgrades.
- LCRA TSC and NBU 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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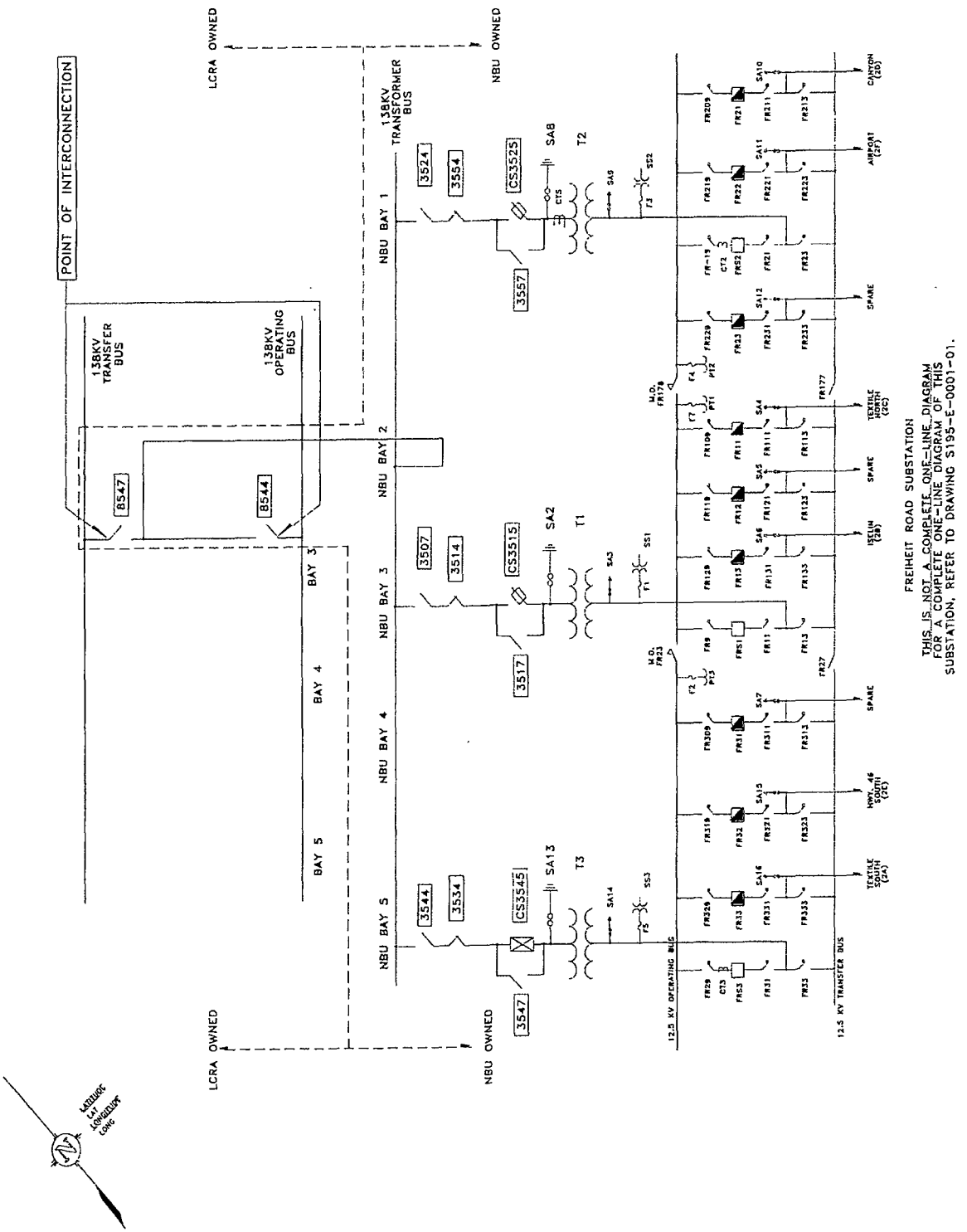
FREIHEIT ROAD ONE-LINE DIAGRAM

Amendment 7



FACILITY SCHEDULE NO. 6

1. **Name:** Sheriff's Posse Substation

2. **Facility Location:** The Sheriff's Posse Substation is located at 3943 IH 35 N., New Braunfels, Comal County, Texas 78132.

3. **Points of Interconnection:** There is one (1) Point of Interconnection in the Sheriff's Posse Substation generally described as:

   - where the 138 kV operating bus expansion connector bolts to the four hole pad on switch 2959.

4. **Transformation Services Provided by LCRA TSC:** No

5. **Metering Services Provided by LCRA TSC:** Yes, per Wholesale Metering Services Agreement between the Parties

6. **Delivery Voltage:** 138 kV

7. **Metered Voltage and Location:** The metering voltage is 12.5 kV. The metering current transformers are located inside T1 and T2. The bus potential transformers are located on the 12.5 kV operating bus for T1 and T2.

8. **One Line Diagram Attached:** Yes

9. **Description of Facilities Owned by Each Party:**

NBU owns:

The Sheriff's Posse Substation including, but not limited to, the following items:

- 138 kV dead-end structures, foundations, insulators and jumpers (except Schumansville bay)
- 138 kV operating bus including structures, insulators, foundations and jumpers (except Schumansville bay)
- Three (3) 138 kV switches 2967, 2969 and 2971
- One (1) 138 kV circuit breaker 2970NB including foundation, jumpers and protective relay package
- One (1) 138 kV bus differential and breaker failure relaying scheme
- One (1) 138 kV bus potential transformer PT2
- One (1) 138 kV surge arrester SA2
- Two (2) circuit switchers CS2965 and CS2975 with associated disconnect switches 2964 and 2974
- Two (2) power transformers T1 and T2 with associated surge arresters, foundations, jumpers, and protective relaying
- All distribution circuits including dead end insulators that attach to the dead end structure, conductors, and hardware

- All distribution circuit breakers including jumpers, protective relay packages and foundations
- All distribution and total bays including A-frames, trusses, insulators, disconnect switches, surge arresters, 12.5 kV operating and transfer bus, bus potential transformers and associated cabling
- Two (2) station service SS1 and SS2 with fuses F1 and F3
- One (1) control house with battery and battery charger
- Substation property, ground grid, gravel, fencing, and other appurtenances

LCRA TSC owns:

The Schumansville line bay and the following equipment and structures:

- 138 kV dead-end structures, foundations, insulators and jumpers
- 138 kV buswork including structures, insulators, foundations and jumpers
- One (1) 138 kV circuit breaker 2960 including foundation, jumpers and protective relay package
- Two (2) 138 kV switches 2959, and 2961
- One (1) 138 kV relaying current transformer CT3
- One (1) meter panel with meters
- One (1) 138 kV surge arrester SA1
- One (1) wave trap and line tuner WT1
- One (1) coupling capacitor CC1

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:**
    - NBU and LCRA TSC are to share access to the substation by LCRA TSC locks in the gates., or by future technology to be determined by NBU in coordination with LCRA TSC.
    - NBU will share access to the NBU Sheriff's Posse control house. Access is obtained by contacting NBU's System Operations Control Center.
    - NBU will supply and provide tripping and close inhibit contacts from its 138 kV bus differential and breaker failure panel to LCRA TSC's circuit breaker 2960 relaying panel.
    - LCRA TSC will supply and provide breaker failure initiate contacts from its circuit breaker 2960 relaying panel to NBU's 138 kV bus differential and breaker failure panel.
    - NBU will supply and allow LCRA TSC use of its 12.5 kV bus potential transformer PT1 and PT3 for LCRA TSC's metering.
    - NBU will supply and allow LCRA TSC use of transformers T1 and T2 metering current transformers for LCRA TSC's metering.
    - LCRA TSC and NBU shall design, provide, and coordinate their respective

protection system equipment so that adjacent zones of protection overlap, in accordance with ERCOT Nodal Operating Guides.

- NBU 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.
- NBU will provide LCRA TSC with floor space (as available and as necessary) in its control house for the installation of LCRA TSC required control, communications and SCADA equipment.

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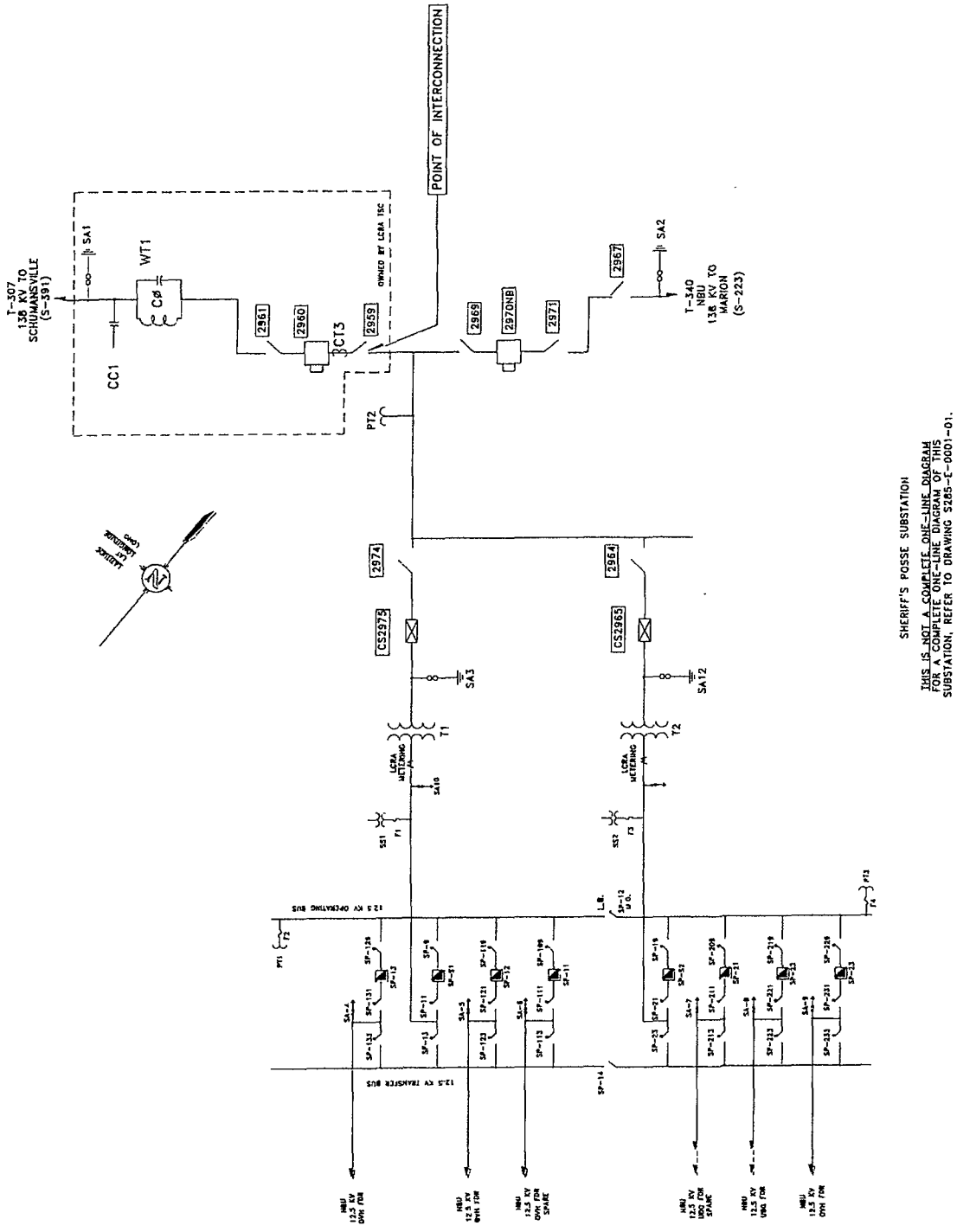
SHERIFF'S POSSE ONE-LINE DIAGRAM

Amendment 7



FACILITY SCHEDULE NO. 7
Amendment No 7

1. **Name:** Marion Substation

2. **Facility Location:** The Marion Substation is located at 1885 Creek Rd., Marion, Guadalupe County, Texas 78124.

3. **Points of Interconnection:** There are two (2) Points of Interconnection in the Marion Substation generally described as:

   - where the 138 kV operating bus #1 extension bolts to the four hole pad on switch 5679.
   - where the 138 kV operating bus #2 extension bolts to the four hole pad on switch 5699.

4. **Transformation Services Provided by LCRA TSC:** No

5. **Metering Services Provided by LCRA TSC:** No

6. **Delivery Voltage:** 138 kV

7. **Metered Voltage and Location:** N/A

8. **One Line Diagram Attached:** Yes

9. **Description of Facilities Owned by Each Party:**

   NBU owns:
   - Three (3) 138 kV circuit breakers 5680, 5690 and 5700 including foundations, jumpers and protective relay packages
   - Six (6) 138 kV switches 5679, 5681, 5689, 5691, 5699 and 5701 including foundations, structures and jumpers
   - Two (2) coupling capacitor voltage transformers CCVT9 and CCVT10
   - Two (2) surge arrester SA17 and SA18

   LCRA TSC owns:
   The Marion Substation including, but not limited to, the following items:
   - 138 kV bus #1 including structures, insulators, foundations, and jumpers
   - 138 kV bus #2 including structures, insulators, foundations, and jumpers
   - 138 kV bus extensions for 138 kV bus #1 and bus #2 including structures, foundations, and insulators
   - Two (2) 138 kV bus potential transformers PT9 and PT10
   - Two (2) 138 kV bus differential and breaker failure relaying schemes
   - Two (2) 138 kV power voltage transformers PVT1 and PVT2
   - Two (2) 138kV surge arresters SA24 and SA25

- Battery bank and charger
- Three (3) control houses (34' x 65') and (24' x 51') and (36' x 66')
- One (1) Battery House (12' x 21')
- Substation property, ground grid, gravel, fencing, and other appurtenances

10. **Operational Responsibilities of Each Party:** Each Party is 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:**
    - NBU and LCRA TSC are to share access to the substation by LCRA TSC locks in the gate and in the control house doors (24' X 51' and 34' X 65'), with regard to LCRA TSC physical security.
    - LCRA TSC will grant access to the LCRA TSC Marion control house (36'X 66'). Access is obtained by calling LCRA TSC's System Operations Control Center using the intercom at the door of the control house.
    - The Parties acknowledge the termination of the 1978 Marion Project Agreement by its own terms.
    - The existing NBU/GVEC-owned facilities listed below have been transferred to LCRA TSC:
        - 138 kV operating buses 1 and 2 and associated bus potential transformers: PT9 and PT10;
        - 138 kV bus differential relaying; and
        - Control house
    - LCRA TSC will provide NBU access to 125 VDC and 120 VAC power in the 24' X 51' control house. Circuits must have over current protection devices (OCPD) sized according to NEC standards.
    - LCRA TSC will provide NBU with floor space (as available and as necessary) in the 24' X 51' control house for the installation of NBU required relay panel boards and equipment.
    - LCRA TSC will provide tripping and close inhibit contacts from its 138 kV Bus #1 differential & breaker failure relaying panel to NBU's circuit breaker 5680 relaying panel.
    - LCRA TSC will provide tripping and close inhibit contacts from its 138 kV Bus #2 differential & breaker failure relaying panel to NBU's circuit breaker 5700 relaying panel.
    - NBU will provide breaker failure initiate contacts from its 138 kV circuit breaker 5680 relaying panel to LCRA TSC's 138 kV Bus #1 differential & breaker failure relaying panel.
    - NBU will provide breaker failure initiate contacts from its 138 kV circuit breaker 5700 relaying panel to LCRA TSC's 138 kV Bus #2 differential & breaker failure relaying panel.
    - NBU will supply and provide relaying current transformers from its circuit breaker 5680 for use by LCRA TSC in LCRA TSC's 138 kV Bus #1 differential relaying

scheme.

- NBU will supply and provide relaying current transformers from its circuit breaker 5700 for use by LCRA TSC in LCRA TSC's 138 kV Bus #2 differential relaying scheme.
- LCRA TSC and NBU 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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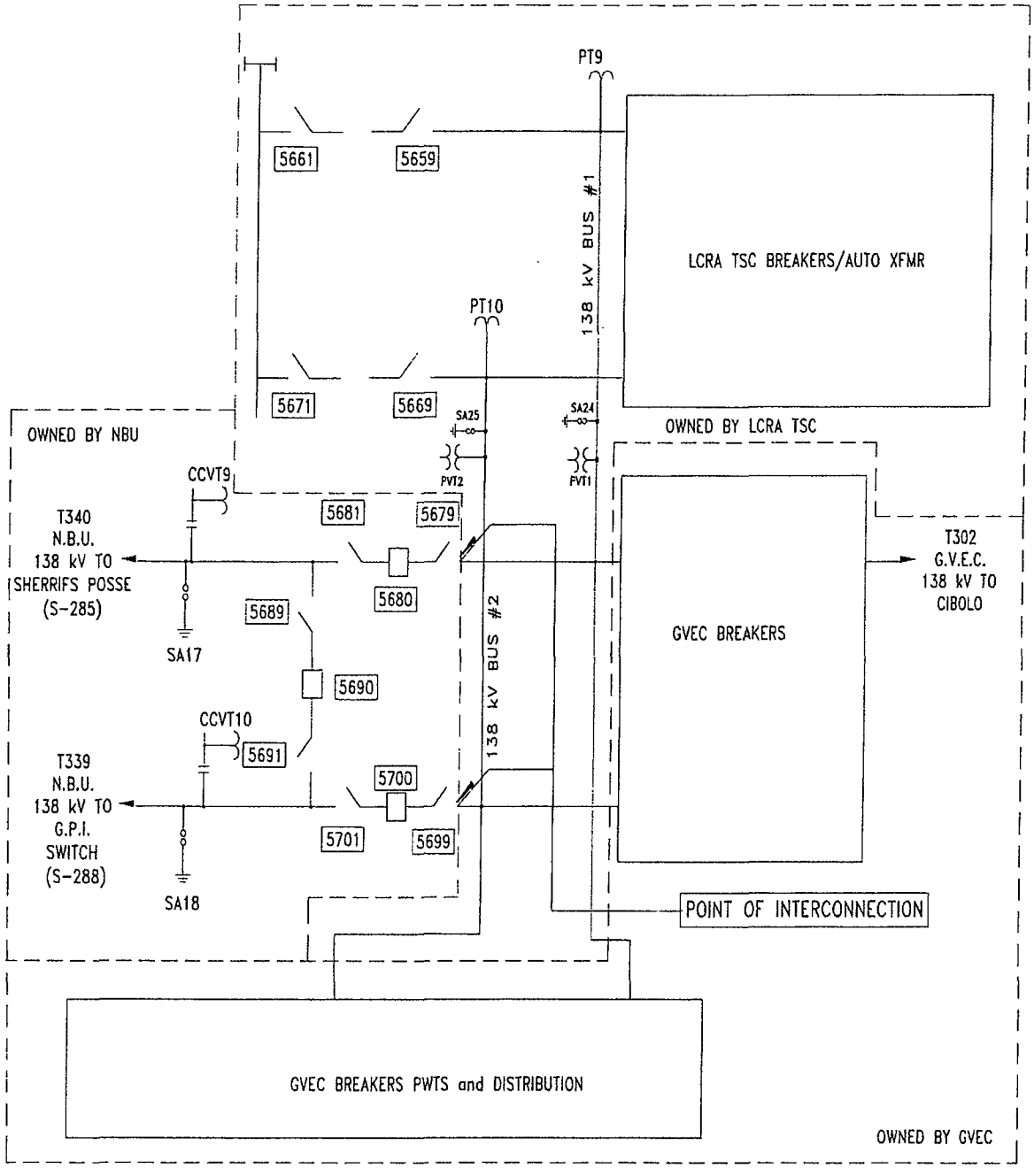
MARION ONE-LINE DIAGRAM

Amendment No 7



MARION SUBSTATION

THIS IS NOT A COMPLETE ONE-LINE DIAGRAM
FOR A COMPLETE ONE-LINE DIAGRAM OF THIS
SUBSTATION, REFER TO DRAWING S223-E-0001-01.