# **HYDE COUNTY**

# Application #:\_\_\_\_\_

# **Application for Conditional Use Permit (CUP)**

Applicant/Owner Signature:

Application Fee-\$200.00

211 S. Harth Ave. Madiso	on, SD 57042		
Phone #: 605-256-8269		Current Zoning: A	G
Legal Description for Reque	sted CUP (attach a	additional sheets if nece	ssary):
Quarter SW	_Section	Township110N	Range <del>73W</del>
General Area or Street Add	ress 1050' North o substation.	of the 211 st section lin	e. Directly across from the WAPA
Reason for Requesting CUP	Please see atta detailed projec		nd write up documents for
-	to convert 230 kV substations. It wi	electricity from WAPA's ill then be converted to 1	· · · · · · · · · · · · · · · · · · ·
We currently have a signed for this site. Also easement in this substation will a Dakota Energy and Central In the purposition.	ourchase agreemenave been aquired dd much better ele Electric.  se/intended use o	ent and signed plat out for from neighboring landov	boring property owners: or approval on these 5.9 acres proposed whers for our future new line. Our new nembers we serve in this area through
	· ·	project write up.	
Attach plans and/or deadditional documenta	tion as necess	•	The board may request

Application #:		
The Hyde County Board of Adjustment takes the following action on the above application number: Approved as applied Approved with following the special conditions:		
Denied for the following r	reasons:	
Chairperson, Hyde County Board of Adjustment		
Attest by Hyde County Auditor	Date	
within two (2) years of approval or if the	ally expire if the use permitted has not been started use permitted ceases for a period of twelve (12) if the property and remains valid for any future if the property does not change.	
Official Use Only  Date Application Filed:  Dates Published:  Hearing Date:		
Notice of Board Action Sent to: Landowner		

# **HYDE COUNTY**

Application #: <u>CUP 2024-CO</u>2

# **Application for Conditional Use Permit (CUP)**

Application Fee-\$200.00

Phone #: <u>805-256-828</u>	9	Current Zon	ing: AG			
Legal Description for Re				):		
Quarter SW	Section <sup>15</sup>	Township	110NRa	inge	377	
General Area or Street A	Address <u>1050' North</u> aubstation.	of the 211 at sec	iloo iine. Di	ractiy s	ross from the M	<u> 1</u> 97
Reason for Requesting C	CUP: <u>Please see an</u> detailed projec		ope and wr	is up d	ocuments for	- -
1. Describe the sp	pecial circumstances			•		_
Mili os delivered to other Dana Electric, Gentral Eli	ERE substations. Il v	dievace ed aerd liv	ed to 12.47	C/ and c	istributed by	_
We currently have a sign for this site. Also easems line and this substation w Dakota Energy and Cent	mi have been aquire: ill, add much better e rai Slectric.	ent and signed plai Thom raighboring legitical railability is	t out for appi landowners o our memb	oval on	these 5.9 acres or utum new line. Ot	- '0608 The
•	rpose/intended use attached scope an					_
4. Additional Info	ermation:					_
Attach plans and/or	drawings for re	view by the bo	ard. The	board	may request	_
	•	•			•	

# Application #: CUP 2024-002

The Hyde County Board of Adjustment takes the	following action on the above application number:
X_Approved as applied	
Approved with following the	he special conditions:
Denied for the following re	easons:
	78301131
1	
An Swens	3-5-24
Chairperson, Hyde County Board of Adjustment	Date
MarilaRic	3-5-2024
Attest by Hyde County Auditor	Date
A STANGLARY OF THE STAN	
	" if the real mannitted has not been started
	lly expire if the use permitted has not been started use permitted ceases for a period of twelve (12)
	f the property and remains valid for any future
owners or operators as long as the use of	
-	
Official Use Only	
Date Application Filed: 2-15-2034	Application Fee Receipt # (non-refundable): 26463
Dates Published: 2-22-24 cnd 2-24-24	reprincipant to the state of th
Hearing Date: <u> 3-5-202</u> 부	
Notice of Board Action Sent to: Landowner	Zoning Administrator:
Further Action Required:	
/	

# **Hyde County Auditor**

412 Commercial Ave. SE Highmore, SD 57345 1-605-852-2519 Fax: 1-605-852-3178

March 7, 2024

East River Electric Power Cooperative 211 S. Harth Ave. Madison, SD 57042

To whom it may concern:

Enclosed please find a copy of the Application for Conditional Use Permit #2024-002. The action that was taken by the Board of Adjustment is on the back of the form. If you have any questions feel free to call 605.852.2519.

Respectfully,

Marilyn Ring

Hyde County Auditor

Enclosure

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MAR 1 3 2024 FILE RECEIVED MADISON, SD	EASTR	VER
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	FILE	Eleverant parts space
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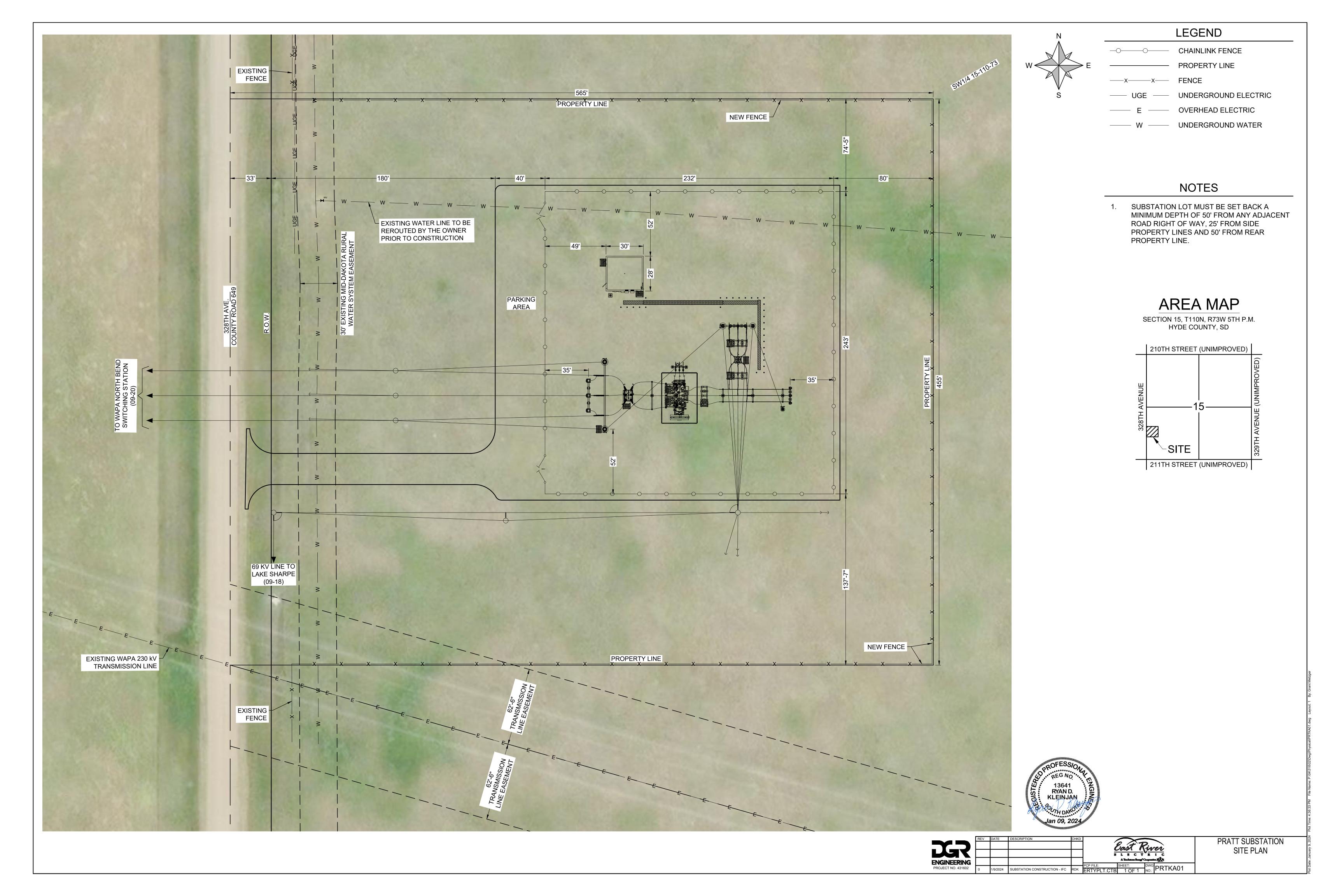
Nō	026463	OFFICE OF COUNTY TREASURER  Hyde County, South Dakota  Highmore, S. Dak., March 1, 20 21
Receiv	ved of EASH 1 WO NUNCM money for 700	Electric Power Coxp. red and W/100 Dollars ing Building (CUP)
Credit	10+324.0	<u>C</u> Fund
\$	200.00	By Muller Hand County Treasurer.

PRINTED BY LAR-JO'S 605-225-4922

#### **Pratt Substation**

The Pratt Substation is a new facility required to accommodate planned and projected load growth and to mitigate planning criteria violations. Pratt Substation will be a 230-69kV substation constructed at or near the location of WAPA's North Bend Switching Station (loan code 1005-0205). The substation will feature a 230 kV line terminal, a new 230-69 kV transformer and a 69 kV terminal build for a future ring to provide 69 kV sources for member cooperatives Oahe Electric, Central Electric and Dakota Energy. The 230-69 kV transformer will be rated 36/48/60 MVA and include an LTC. The 69kV yard will initially have a terminal for the Pratt to Lake Sharpe tie line (loan code 805-0005) with future network capabilities for additional 69kV lines for the area to provide better protection coordination, reliability and redundancy in transmission service.







# Project Scope of Work Pratt Substation

3/22/2023

#### **Project Description**

A new 230 – 69 kV supply substation with a single autotransformer to support Oahe Electric system. The high side is designed as a radial tie to WAPA North Bend substation, and a single 69 kV transmission line brought into a deadend on the lowside. The ultimate arrangement consists of ability to build out the entire 69 kV ring and add a future 69 kV transmission line.

#### **Member Co-Op**

Dakota Energy

#### Location

TBD 328<sup>rd</sup> St, Holabird, SD, 57540

GPS Coordinates: 44°19'37.56"N, 99°36'9.85"W

# **Major Equipment**

- (1) 230GrdY/132.8 69GrdY/39.8 12.47 kV, 36/48/60 MVA autotransformer
- (1) 230 kV circuit breaker, 1200 A rated, 1200:5 MR CTs, 40 kA
- (1) 230 kV GOAB disconnect switch, vertically mounted, 2000 A
- (6) 230 kV station class arresters, 180 kV duty cycle, 144 kV MCOV
- (3) 230 kV PT
- (1) 69 kV circuit breaker, 2000 A rated, 2000:5 MR CTs, 40 kA
- (1) 69 kV GOAB disconnect switch, horizontally mounted, 1200 A, whips
- (2) 69 kV GOAB disconnect switch, horizontally mounted, 1200 A
- (6) 69 kV station class arrester, 60 kV duty cycle, 48 kV MCOV
- (6) 69 kV PT
- (3) 12.47 kV tertiary station class arrester, 18 kV duty cycle, 15.3 kV MCOV
- (3) 13.2 kV tertiary PTs



- (1) 12.47 kV connected tertiary SSVT (AC study to determine kVA rating for general and ultimate arrangements)
- (5) 25 kV tertiary fused disconnect switches
- (1) 125 VDC battery bank, 60 cells (DC study to determine Ah rating for general and ultimate arrangements, 24 hour run time)
- (1) Battery charger (DC study to determine A rating for general and ultimate arrangements)
- (1) Pre-cast control building (sized for ultimate build out)

#### **Bus Design**

Avian protection is required for 25 kV and below equipment bushings, insulators, cutouts, switches, and jumpers. Bus study shall be used to determine span supports, insulators, and support fittings. EHV connectors shall be used on 230 kV bus.

#### 230 kV Bus

- All insulators and spacing shall be to 230 kV
  - o 16' phase spacing for switches with arcing horns
- 2" Schedule 40 Aluminum alloy bus 6063-T6 (1217 A summer rating)

## 230 kV Jumpers

Single 477 ACSR "Hawk" (568 A summer rating)

#### 69 kV Bus

- All insulators and spacing shall be to 69 kV
  - o 10' phase spacing for switches with arcing horns
- 4" Schedule 40 Aluminum alloy bus 6063-T6 (2534 A summer rating)

## 69 kV Jumpers

- Parallel 1272 AAC "Narcissus" per phase (2010 A combined summer rating) to switches, breakers, transformer
- Single 477 ACSR "Hawk" (568 A summer rating) to transformer, PTs
- Single 4/0 AAC (331 A summer rating) to arresters



#### 12.47 kV Bus

- All insulators and spacing shall be to 15 kV
- 2" Schedule 40 Aluminum alloy bus 6063-T6 (1217 A summer rating)

#### 12.47 kV Jumpers

- Single 477 ACSR "Hawk" (568 A summer rating) to transformer
- Single #1/0 ACSR "Raven" (209 A summer rating) to PTs, SSVT, switches

#### **AC Station Service**

- Primary station service will be fed from SSVT on the autotransformer tertiary and secondary station service will be from distribution cooperative.
   Transfer switches will be installed to choose between primary/secondary station service feed and a portable generator.
- AC study to be completed to properly size the transformers and equipment for general and ultimate arrangements.

#### **Site Work**

- The substation site area will be 219' x 243' with two gates. A gravel parking pad will be provided on the south side of the substation with one driveway off the road per site plan.
- Conduit fill and cable trench fill calculations to be performed and wireway systems sized to meet requirements of ultimate build out.
- High resistivity rock added or replaced shall be 4" depth minimum and extend 5' beyond the fence and gate swing.

# Civil/Structural

- Steel structures shall be built to minimum heights required by RUS and NESC standards for the following structures. Structures and foundations shall be built for consideration in both general and ultimate arrangements.
  - o (1) 230 kV H-frame single bay deadend
  - o (1) 230 kV 3-phase voltage transformer stand
  - o (1) 230 kV 3-phase bus support single leg
  - o (1) 69 kV H-frame double bay deadend (ultimate)



- (3) 69 kV switch stands double leg
- (3) 69 kV 3-phase bus supports single leg
- (2) 69 kV 3-phase voltage transformer stand
- o (1) 12.47 kV tertiary PT/SSVT stand
- (8) switch platforms for switches, breakers, and building
- o (1) oil containment
- o (1) static mast

#### **Protection and Control**

- Two (2) transmission line panels will each utilize a line protection package containing an SEL 411L/421 relay pair and breaker control switches. These panels will provide the following protections:
  - Current differential scheme (if applicable)
  - Step Distance scheme
  - Communication assisted tripping schemes and DTT (if applicable)
  - Backup overcurrent protection
  - Breaker Failure
  - Sync check for breaker closing
  - Breaker Reclosing
  - Hot-Line Tagging
  - Manual breaker tripping and closing.
  - The panel will include the following for one of the breakers on the line:
    - Hot-Line Tag control switch
    - Reclose Enable/Disable control switch
    - Breaker Failure Lockout Relay
    - Auto/Manual Sync selector switch
    - Local/Supervisory selector switch
    - Trip/Close control switch
- One (1) Transformer protection panel will utilize transformer protection package containing an SEL 387/387E relay pair and breaker control switches. This panel will provide the following protections on the transformer and the 230kV bus.
  - O Differential protection zone around the transformer.



- Differential protection zone around the transformer and 230kV breaker(s).
- o Overcurrent protection on primary and secondary windings.
- Overvoltage and overcurrent protection on the tertiary winding (if applicable).
- One (1) Bus differential protection panel will utilize two (2) SEL-487B relays and breaker control switches. This panel will provide the following protections on the south 69kV bus.
  - Differential protection
  - Backup overcurrent protection
  - The panel will include the panel cutout provisions for one of the future line breakers adjacent to the bus:
    - Hot-Line Tag control switch
    - Reclose Enable/Disable control switch
    - Breaker Failure Lockout Relay
    - Auto/Manual Sync selector switch
    - Local/Supervisory selector switch
    - Trip/Close control switch
- Manual tripping for all breakers will be handled via RTU and local control switches.

# Metering

 One (1) metering panel will utilize a total of one (1) Nexus 1500 meter to meter the 69kV bus.

# **Phasing**

- Phasing per the following (Based on the transformer):
- A − H3, X3
- B − H2, X2
- C−H1, X1

#### **Communications**

Substation



- Communications to this facility will be via fiber optic connections to WAPA
   North Bend and to East River Lake Sharpe substations. Fiber optic cables
   will be brought into the substation control building and terminate into a
   patch panel, then interface to equipment in the East River communications
   rack
- 2-2" conduit will be provided from the new control building past the west side of the parking area for connection to WAPA's North Bend and 2-2" conduit will be provided from the control building to 10' past the substation fence on the south side of the fence for connection to OPGW on the Lake Sharpe line and a future fiber connection. These conduits will provide diverse pathways for the fiber optic communications cables into the substation.
- Two communications racks shall be provided with 4" cable management on each side of the racks

#### IT

Rack space accommodations for 20 Rack Units of comm equipment.

#### **SCADA**

- Two (2) Supervisory Panels will each utilize the following:
  - SEL Axion RTU
    - Collect hardwired alarms and status points for SER time precision data.
      - Relay trips, 52A status of breaker(s), Lockout Relay trips, Breaker Failure trips, Relay Hardware Alarms, Transformer device trips, and control house alarms.
    - Send hardwired commands to relays for SCADA breaker control.
      - Manual breaker tripping
  - SEL-3610 Port Server
    - Send and receive data and commands that do not need SER time precision.



- DNP data from relays
- Send and receive remote bit data to and from relays.
- Communicate with SEL-2414 in transformer(s).
- SEL-3610 Remote Access Server
  - Allow restricted access to relays to pull event records.
- SEL-2100 Logic Processor
  - Communicate with SEL-2505s in breaker(s)
  - Communicate with SEL-2505 in transformer (if applicable)
- SEL-2440 DPAC
  - Monitor relay and breaker DC circuits.
- SEL-2407 GPS clock
- AMI Member Supplied
- $\circ$  N/A
- Load Management Owner Supplied
- N/A

## **NERC/CIP Requirements**

 Not BES due to feed from WAPA being radial but card reader and camera provisions will be installed on building. Two holes and conduits by each walk in door for keycard/camera outside and a hole at each corner of building for outdoor cameras.

# **Local Building Code/Permitting Requirements**

- County Planning and Zoning
  - Permitted Use as Public Utility Facility
  - Plat Approval
  - Address Assignment with sheriff's department
- County Road Highway Department
  - Approach Permit

#### **Schedule**

- Purchase Agreement Signed: 2/7/2024
- Substation TOPO / Plat: Prior to 3/17/2024
- Line Route TOPO: Prior to 3/31/2024

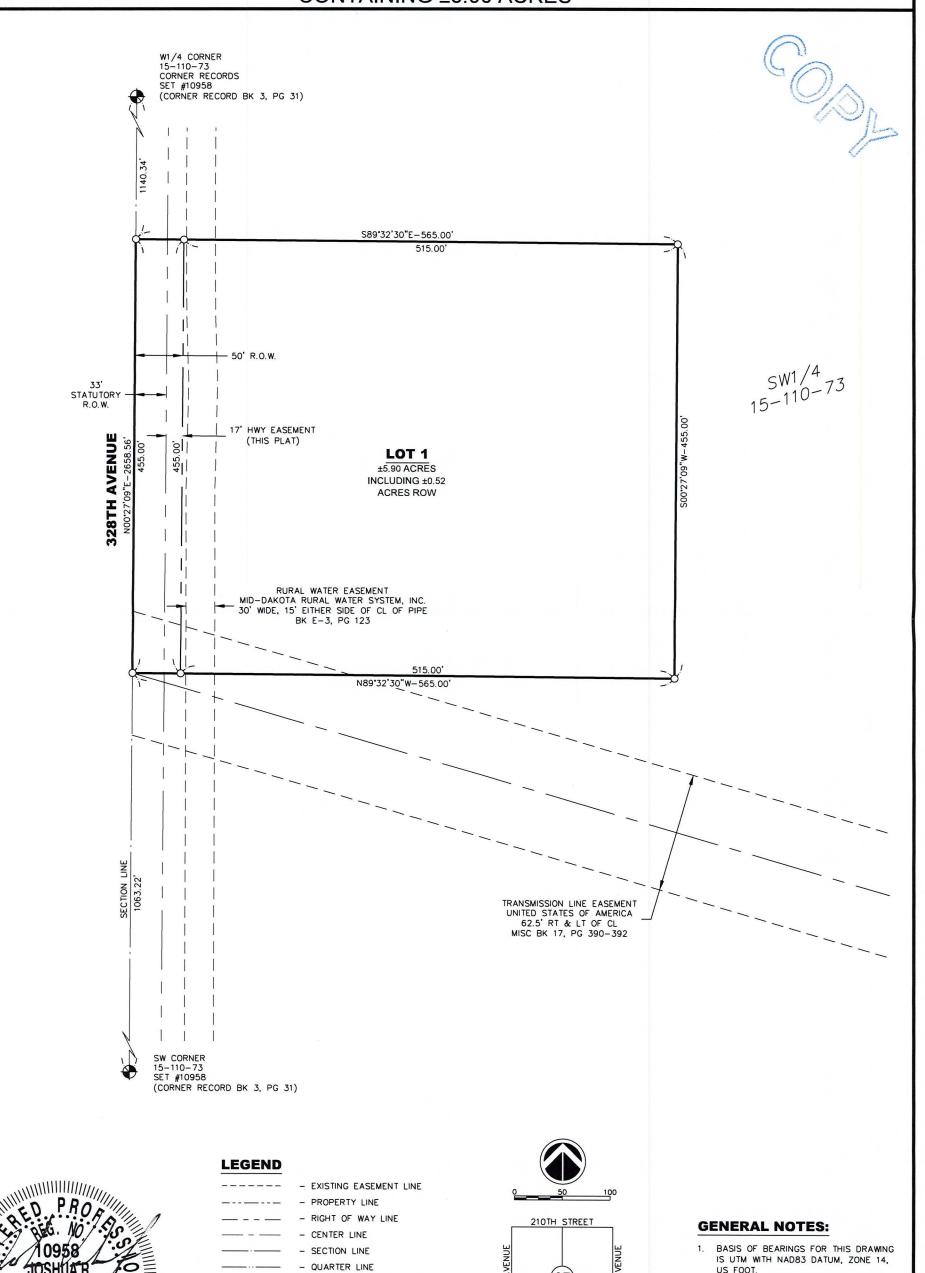


- Transmission & substation design March-July 2024.
- ROW and substation purchase March-May 2024.
- RUS Approval September 2024.
- Grading, foundations, and below grade work for substation October-November 2024.
- Transmission & substation above grade construction December 2024-March 2025.
- Commissioning April-May 2025.
- In service date May 2025.

# PLAT OF LOT 1

# **PRATT SUBSTATION ADDITION**

IN THE SW1/4 OF SECTION 15, TOWNSHIP 110 NORTH, RANGE 73 WEST OF THE 5TH P.M., HYDE COUNTY, SOUTH DAKOTA CONTAINING ±5.90 ACRES



- PLATTED PROPERTY LINE

- FOUND SECTION CORNER

- SET 5/8" X 18" CAPPED REBAR

- PREVIOUSLY PLATTED DIMENSION

0

(100.00')

LOCATION

211TH STREET

**KEY MAP** 

SECTION 15-110-73

RESEARCH OF EXISTING EASEMENTS OF RECORD WAS NOT PERFORMED.

ENGINEERING dgr.com

DGR ENGINEERING 1300 S. HIGHLINE AVENUE SIOUX FALLS, SD 57110

(605) 339-4157 office

(605) 339-4175 fax

## PLAT OF LOT 1

# PRATT SUBSTATION ADDITION

IN THE SW1/4 OF SECTION 15, TOWNSHIP 110 NORTH, RANGE 73 WEST OF THE 5TH P.M., HYDE COUNTY, SOUTH DAKOTA CONTAINING ±5.90 ACRES

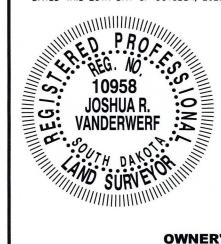
#### **SURVEYOR'S CERTIFICATE**

I, JOSHUA VANDERWERF, A REGISTERED LAND SURVEYOR UNDER THE LAWS OF THE STATE OF SOUTH DAKOTA DO HEREBY CERTIFY THAT ON OR BEFORE JUNE 13TH, 2023, I HAVE SURVEYED A PORTION OF THE SW1/4 OF SECTION 15, TOWNSHIP 110 NORTH, RANGE 73 WEST OF THE 5TH P.M., HYDE COUNTY, SOUTH DAKOTA AND PLATTED THE SAME INTO LOT 1 OF PRATT SUBSTATION ADDITION IN THE SWI/4 OF SECTION 15, TOWNSHIP 110 NORTH, RANGE 73 WEST OF THE 5TH P.M., HYDE COUNTY, SOUTH DAKOTA, WITH ACRES AND DIMENSIONS AS SHOWN ON THE ABOVE PLAT

THE SAME SHALL HEREAFTER BE KNOWN AND DESCRIBED AS LOT 1 OF PRATT SUBSTATION ADDITION IN THE SWI/4 OF SECTION 15, TOWNSHIP 110 NORTH, RANGE 73 WEST OF THE 5TH P.M., HYDE COUNTY, SOUTH DAKOTA.

I FURTHER CERTIFY THAT THE ABOVE PLAT CORRECTLY REPRESENTS THE SAME TO THE BEST OF MY KNOWLEDGE AND BELIEF AND THAT THIS SURVEY WAS PERFORMED AT THE REQUEST AND UNDER THE DIRECTION OF THE OWNERS FOR THE PURPOSE OF TRANSFER.

DATED THIS 26TH DAY OF OCTOBER, 2023.



REG. NO. 10958

#### **OWNER'S CERTIFICATE**

WE, THE UNDERSIGNED, DO HEREBY CERTIFY THAT WE ARE THE OWNERS OF ALL LAND INCLUDED IN THE ABOVE PLAT AND THAT SAID PLAT HAS BEEN MADE AT OUR REQUEST AND IN ACCORDANCE WITH OUR INSTRUCTIONS FOR THE PURPOSES (INDICATED HEREIN), AND THAT THE DEVELOPMENT OF THIS LAND SHALL CONFORM TO ALL EXISTING APPLICABLE ZONING, SUBDIVISION AND EROSION AND SEDIMENT CONTROL REGULATIONS.

WE HEREBY DEDICATE TO THE PUBLIC FOR PUBLIC USE FOREVER THE STREETS, ROADS AND WE HEREBY DEDICATE TO THE POBLIC FOR PUBLIC USE FOREVER THE STREET, ROADS AND ALLEYS, PARKS AND PUBLIC GROUNDS, IF ANY, AS SHOWN ON SAID PLAT, INCLUDING ALL SEWERS, CULVERTS, BRIDGES, WATER DISTRIBUTION LINES, SIDEWALKS AND OTHER IMPROVEMENTS ON OR UNDER THE STREETS, ALLEYS, PARKS AND PUBLIC GROUNDS WHETHER SUCH IMPROVEMENTS ARE SHOWN OR NOT. WE ALSO HEREBY GRANT EASEMENTS TO RUN WITH THE LAND FOR WATER, DRAINAGE, SEWER, GAS, ELECTRIC, TELEPHONE OR OTHER PUBLIC UTILITY LINES OR SERVICES UNDER, ON OR OVER THOSE STRIPS OF LAND DESIGNATED HEREON

ON THIS DAY OF FEB , 2025, BEFORE ME, APPEARED LAWREND PETERSON, WHO ACKNOWLEDGED HIMSELF TO BE THE OWNER AND THAT HE AS SAID O AND BEING AUTHORIZED TO DO SO, EXECUTED THE FOREGOING INSTRUMENTS FOR THE PURPOSE THEREIN CONTAINED. , 2023, BEFORE ME, APPEARED <u>LAWRENCE D.</u> F THE OWNER AND THAT HE AS SAID OWNER

IN WITNESS THEREOF, I HAVE HEREUNTO SET MY HAND AND OFFICIAL SEAL

JESSE WYATT EHLERS SEAL NOTARY PUBLIC SEAL S SOUTH DAKOTA 

Oct, 21, 2028 MY COMMISSION EXPIRES:

ON THIS \_\_\_\_\_\_\_ DAY OF \_\_\_\_\_\_\_, 2028, BEFORE ME, APPEARED KAYLEEN M. PETERSON, WHO ACKNOWLEDGED HERSELF TO BE THE OWNER AND THAT SHE AS SAID OWN AND BEING AUTHORIZED TO DO SO, EXECUTED THE FOREGOING INSTRUMENTS FOR THE PURPOSE THEREIN CONTAINED.

IN WITNESS THEREOF, I HAVE HEREUNTO SET MY HAND AND OFFICIAL SEAL

JESSE WYATT EH<del>LERS</del> MY COMMISSION EXPIRES:

SOUTH DAKOTA

#### **COUNTY PLANNING DIRECTOR'S CERTIFICATE**

I, PLANNING DIRECTOR, OF HYDE COUNTY, DO HEREBY CERTIFY THAT THIS PLAT HAS BEEN REVIEWED BY ME OR MY AUTHORIZED AGENT AND HAS BEEN APPROVED.

APPROVED THIS 5 DAY OF FEBRUARY , 2028

PLANNING DIRECTOR

Kesolution 2024-010

#### **COUNTY AUDITOR CERTIFICATE**

I DO HEREBY CERTIFY THAT THE ABOVE CERTIFICATE OF APPROVAL IS TRUE AND CORRECT INCLUDING THE SIGNATURES THEREON.

DATED THIS DAY OF CONTROL 2024

AUDITOR HYDE COUNTY,

ROAD AUTHORITY CERTIFICATE

(NAME) KWY SUR (AGENCY), DO HEREBY CERTIFY THAT THIS PLAT AND ACCESS LOCATION HAS BEEN REVIEW BY ME OR MY AUTHORIZED AGENT AND THAT THIS PLAT IS RECOMMENDED FOR APPROVAL.

DATED THIS \_\_\_\_ DAY OF \_\_

COUNTY ROAD AUTHORITY HYDE OUNTY, SOUTH DAKOTA

## TREASURER'S CERTIFICATE

I, TREASURER OF HYDE COUNTY, SOUTH DAKOTA, DO HEREBY GERTIFY, THAT ALL TAXES WHICH ARE LIENS UPON ANY LAND INCLUDED IN THE ABOVE (AND FOREGOING) PLATS, AS SHOWN BY THE RECORDS OF MY OFFICE, HAVE BEEN FULLY PAID.

DATED THIS 5 DAY OF FEBRUARY, 2022

## **DIRECTOR OF EQUALIZATION**

I, DIRECTOR OF EQUALIZATION OF HYDE COUNTY, SOUTH DAKOTA, DO HEREBY CERTIFY THAT A COPY OF THE ABOVE PLAT HAS BEEN FILED AT MY OFFICE.

DATED THIS 5 DAY OF February

**REGISTER OF DEEDS** 

FILED FOR RECORD THIS 6th DAY OF FEDERALL , 2028, AT 228 P.M. AND RECORDED IN BOOK \_\_\_\_\_ OF PLATS ON PAGE 58

HARRISTER OF ONLY REGISTER OF

REGISTER OF DEEDS HYDE COUNTY, SOUTH DAKOTA

Book: 6 PLAT Page: 58 Pages: 2 Hyde County, SD Rec Fee:\$ 60.00 Doc: 20240023 Filed for record on 2/6/2024 at 2:28 PM Pamela Hamlin, Register of Deeds

**ENGINEERING** 

DGR ENGINEERING SIOUX FALLS, SD 57110 (605) 339-4157 office (605) 339-4175 fax dgr.com

Deputy