Appendix B Site Plans

N

Franklin Switch
69 kV
1.77 Miles
Franklin Sub
161 kV
5.54 Miles
161 kV
12.24 Miles
Winchester Switch
Kahoka Switch
69 kV
9.20 Miles
Winchester Sub
161 kV
7.49 Miles
69 kV
10.42 Miles
Williamstown Sub
69 kV
10.43 Miles
Lewistown Switch

Bentonsport
Bonaparte
Primrose
West Point
Franklin
Lee
Farmington
Donnellson
Sterling
Shimek State Forest - Lick Creek Unit
Charlie Heath Memorial Conservation Area
Clark Conservation Area
Anson
Nauvoo
Montrose
Chambersburg
MISSOURI
IOWA
Peaksville
Fox Valley Lake Conservation Area
Revere
Luray
Medill
Kahoka
Clark
Mooar
Sandusky
Keokuk
Wyaconda
Vayland
Warsaw
Great Riv Nat'l Wildlife Ref
Antioch
Gregory Landing
St Patrick
Derrahs
Deer Ridge
Deer Ridge Conservation Area
Fenway
Meyer
Benjamin
Canton
Monticello
La Belle
Lewistown
Earthstar Geographics, Iowa DNR, Missouri Dep
Garmin, Sa

J40 · 103 · 2 · 81 · V · K · 27 · 218 · 61 · J72 · W62 · C · 136 · 32 · 16 · D · A · E · BB · 6 · 12 · X28

Stanley Consultants co.

Substation Site
- Existing
- Proposed

Transmission Centerline
- Existing Line / Proposed Rebuild
- Proposed New Construction
- Proposed ITC Joint Use
- Proposed Ameren Joint Use

1:192,000
0 3.5 7 14 Miles

NEP MO-IA Transmission Line
Overview Map

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N

Franklin Switch

250th Ave

69 kV
1.77 Miles

Pitman Creek

Pitman Creek

Pitman Creek

Otte Rd

Otte Rd

Otte Rd

Otte R

161 kV
5.54 Miles

Franklin Sub

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SafeGraph, GeoTechnologies, Inc, METI/NASA, USG

Substation Site
- Existing
- Proposed

Transmission Centerline
- Existing Line / Proposed Rebuild
- Proposed New Construction
- Proposed ITC Joint Use
- Proposed Ameren Joint Use

Stanley Consultants co.

1:8,400

0 0.3 0.6 Miles

NEP MO-IA Transmission Line

Franklin Switch Station to Franklin Sub

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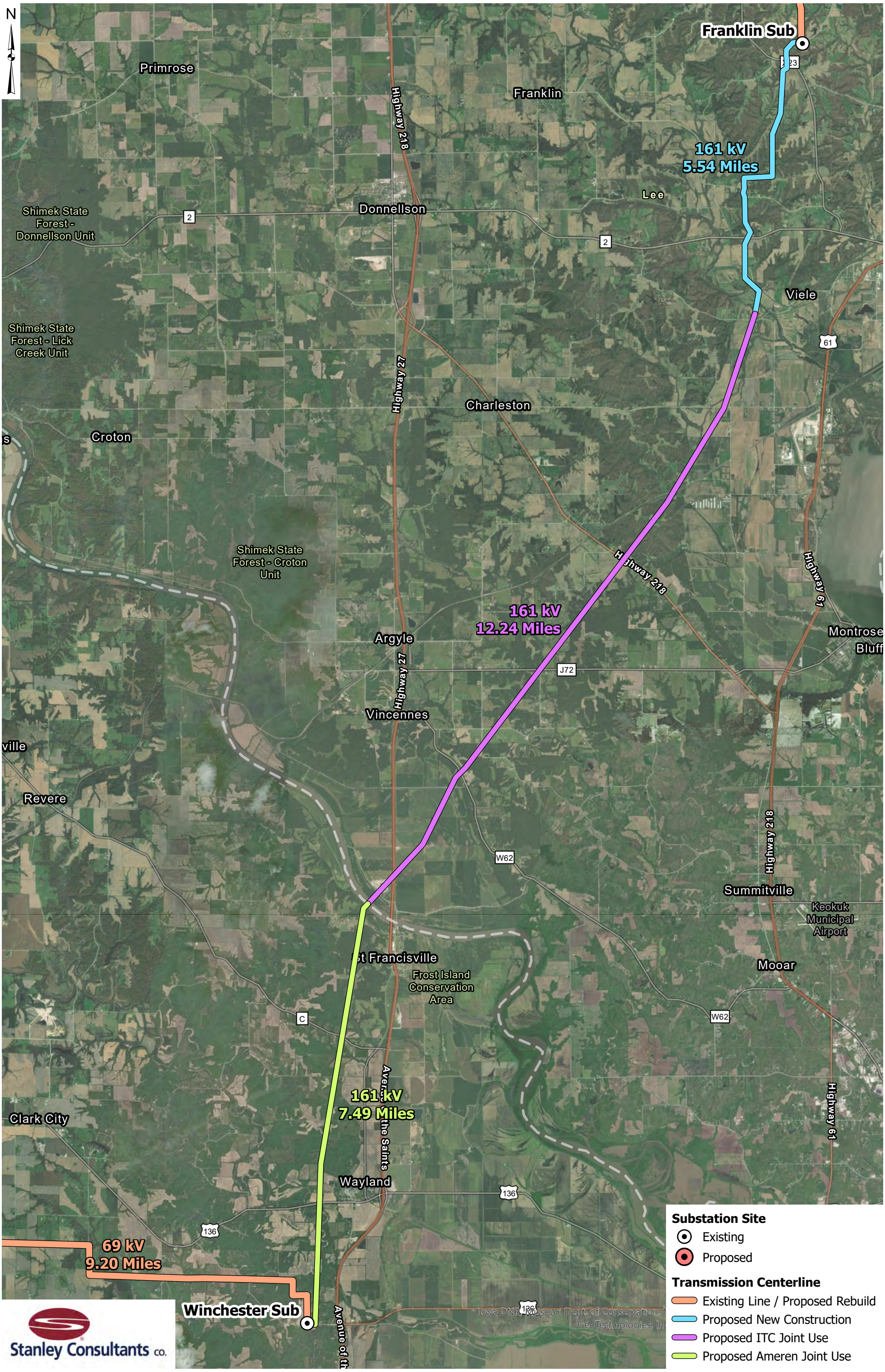
N
Franklin Sub
Primrose
Franklin
Highway 218
161 kV
5.54 Miles
Lee
Shimek State Forest - Donnellson Unit
Donnellson
2
Viele
61
Shimek State Forest - Lick Creek Unit
Highway 27
Charleston
Croton
Shimek State Forest - Croton Unit
Highway 61
161 kV
12.24 Miles
Argyle
Montrose
Bluff
J72
Vincennes
Revere
W62
Summitville
Keokuk Municipal Airport
Mooar
Frost Island Conservation Area
C
161 kV
7.49 Miles
Clark City
Wayland
136
69 kV
9.20 Miles
Winchester Sub
Substation Site
Existing
Proposed
Transmission Centerline
Existing Line / Proposed Rebuild
Proposed New Construction
Proposed ITC Joint Use
Proposed Ameren Joint Use
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Miles
NEP MO-IA Transmission Line
Franklin Sub to Winchester Sub
Stanley Consultants co.
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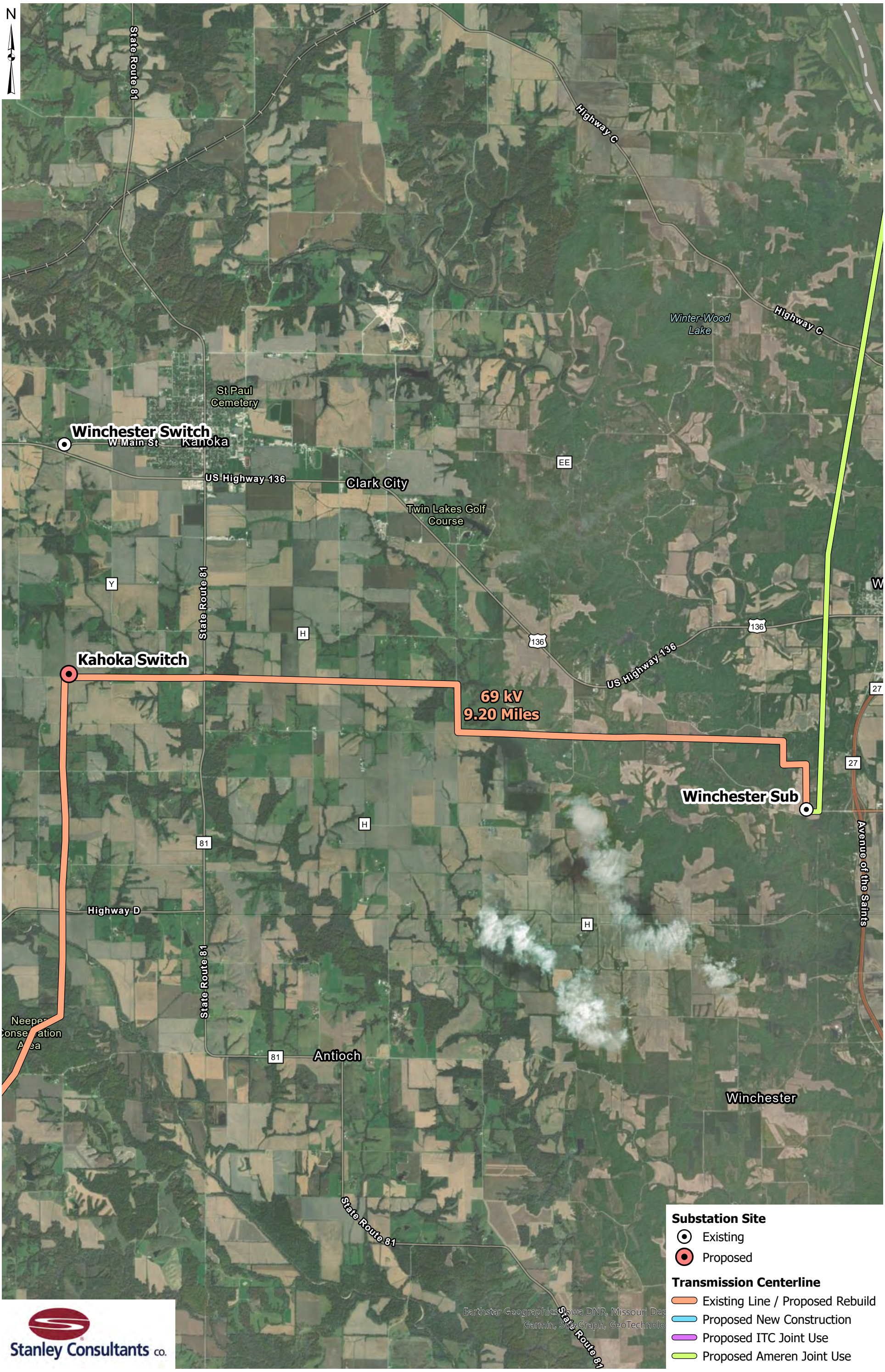
N
State Route 81
Highway C
Winter-Wood Lake
Highway C
St Paul Cemetery
Winchester Switch
W Main St
Kahoka
US Highway 136
Clark City
EE
Twin Lakes Golf Course
Y
State Route 81
H
136
136
US Highway 136
Kahoka Switch
69 kV
9.20 Miles
27
27
Winchester Sub
81
H
Avenue of the Saints
Highway D
H
State Route 81
Neeper Conservation Area
81
Antioch
Winchester
State Route 81
State Route 81
Substation Site
Existing
Proposed
Transmission Centerline
Existing Line / Proposed Rebuild
Proposed New Construction
Proposed ITC Joint Use
Proposed Ameren Joint Use
Stanley Consultants co.
1:60,000
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Miles
NEP MO-IA Transmission Line
Winchester Sub to Kahoka Switch Station
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N

Kahoka Switch

69 kV
9.20 Miles

69 kV
10.42 Miles

Williamstown Sub

69 kV
10.43 Miles

Y
HH
H
81
M
FF
State Route 81
Highway D
Neeper
Neeper Conservation Area
Antioch
Williamstown
State Hwy E
Highway A

Missouri Dept. of Conservation, Missouri DNR, Esri,

Stanley Consultants co.

Substation Site
- Existing
- Proposed

Transmission Centerline
- Existing Line / Proposed Rebuild
- Proposed New Construction
- Proposed ITC Joint Use
- Proposed Ameren Joint Use

1:48,000
0 1.75 3.5 Miles

NEP MO-IA Transmission Line
Kahoka Switch Station to Williamstown Sub

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N

69 kV
10.42 Miles

Williamstown Sub

Williamstown

State Hwy E

State Highway A

Deer Ridge
Conservation
Area

Deer
Ridge
Community

69 kV
10.43 Miles

State Highway A

State Highway A

Luttrell
Farms
Lake

Lewistown Switch

Lewistown

Missouri Dept. of Conservation, Missouri DNR, Esri,

Y

H

6

16

Substation Site

- Existing
- Proposed

Transmission Centerline

- Existing Line / Proposed Rebuild
- Proposed New Construction
- Proposed ITC Joint Use
- Proposed Ameren Joint Use

Stanley Consultants co.

1:48,000

0 1.75 3.5 Miles

NEP MO-IA Transmission Line

Williamstown Sub to Lewistown Switch Station

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Appendix C NEPA Scoping and Consultation Documentation

Stanley Consultants INC.
2658 Crosspark Road
Suite 100
Coralville, IA 52241
319.259.6658
stanleyconsultants.com

February 2, 2023

Kelly Poole
Sovereign Lands Coordinator
Iowa Department of Natural Resources
502 East 9th Street, 4th Floor
Des Moines, IA 50319-0034

SUBJECT: Northeast Missouri Electric Power Cooperative – Missouri to Iowa Transmission Line Environmental Assessment

Dear Kelly:

Northeast Missouri Electric Power Cooperative (NEP/Applicant) is in the process of performing an environmental assessment pursuant to the National Environmental Policy Act (NEPA) for the United States Department of Agriculture (USDA), Rural Development to assess the environmental impacts of a transmission line rebuild and construction project (Project). NEP has proposed to rebuild approximately 52 miles of transmission line to support a larger capacity, construct six miles of new transmission line, and conduct improvements at an existing substation to support higher voltages and additional transmission lines. This project stretches from Lewis County, Missouri, to Lee County, Iowa, and intends to obtain funding through the Rural Utility Services (RUS) Federal Grant Program.

The purpose of the Project is to provide the following benefits to the NEP transmission system:

- Provide additional transmission capacity in the Iowa portion of NEP's power system.
- Improve reliability in the area surrounding the project in both Iowa and Missouri portions of the system.
- Provide economic power to existing power by adequately meeting projected load from within the NEP system.

Approval of the proposed Project will result in the rebuild/ construction and operation of overhead electric transmission lines and distribution facilities. The majority of Project corridor would be rebuilt on existing utility easements, owned by NEP and others, to accommodate a new double-circuit line, with a small portion (approximately six miles) requiring easement acquisition and development of a new Right-of-Way and transmission line installation. Additionally, the Winchester Substation will be expanded.

The topography throughout the Project corridor varies, but generally consists of rills, ravines, intermittent and ephemeral creeks, and perennial streams and rivers in major valleys. Land uses within the project area, at lower elevations, is agricultural and residential development. Land use at higher elevations is predominately undeveloped deciduous forests with some residential development.

Project construction is expected take place over the course of several years as development of the route will be broken into sections. As stated, most of the Project is within existing utility right-of-way (ROW). Grading of the new utility easement will be minimized to the extent feasible and will focus on maintaining

original contours. When possible, wetlands and other Waters of the United States (WOTUS) will be avoided and there will be minimal impacts when avoidance is not feasible.

The project involves several segments of transmission line and the Winchester Substation improvements. The attached figure, "NEP_MO-IA_Transmission_MapSeries.pdf," provides the geographical location of each section below:

- **Franklin Tap to Franklin Substation, 1.77 miles of double circuit 69 kV line rebuild**: this portion of the project will consist of rebuilding the existing Franklin Tap with single metal pole structures following the existing right-of-way.
- **Franklin Sub to Winchester Substation, 25.27 miles of 161 kV (operated at 69 kV) new line construction as single circuit new line and double circuit with existing ITC/Ameren 161 kV transmission line**: this portion of the project will tie the existing Winchester Substation with the existing Franklin Substation. The new NEP line will be a single circuit line (5.54 miles) to connect with an existing ITC/Ameren 161 kV transmission line and create a double circuit with the existing ITC (Iowa, 12.24 miles) and Ameren (Missouri, 7.49 miles) 161 kV following the existing ITC/Ameren right-of-way using single metal pole structures.
- **Winchester 69 kV to 12.47 kV Substation Improvements**: this portion of the project will involve upgrading the Winchester Substation to accommodate the new Franklin Sub to Winchester Sub transmission line and the rebuild Winchester Tap (below).
- **Winchester Tap to Winchester Substation, 9.20 miles of 161 kV (operated at 69 kV) line rebuild**: this portion of the project will consist of rebuilding the existing Winchester Tap with single metal pole structures following the existing right-of-way.
- **Winchester Tap to Williamstown Tap, 10.42 miles of 161 kV (operated at 69 kV) line rebuild**: this portion of the project will consist of rebuilding the existing Winchester Tap to Williamstown Tap with single metal pole structures following the existing right-of-way.
- **Williamstown Tap to Lewistown Switch Station: 10.43 miles of 161 kV (operated at 69 kV) line rebuild**: this portion of the project will consist of rebuilding the existing Williamstown Tap to Lewistown Switch Station with single metal pole structures following the existing right-of-way.

The above transmissions line will generally use 60 to 80 foot tall single-pole steel structures with spacing of generally 250 – 400 feet apart. Structures will be direct embedded 10 – 20 feet deep in drilled holes approximately 3 – 4 feet in diameter. Holes will be back filled with rock and any spoils removed and surrounding disturbance restored to original condition. At certain locations on the route, down-guys and anchors will be used to support the line. Anchors will have helical fins and will be installed by rotating the helical fins into the ground. In addition to direct embed steel poles, engineered laminated wood structures will also be utilized and directed buried in a similar manner to direct embed steel poles. Self-supporting steel structures may be used on the project. These structures will require a drilled pier concrete foundation, the size of which is anticipated to be 3-5 feet in diameter and 10-15 feet deep. Installed pole will generally have a height of 60 – 75 feet and will be supporting electrical transmission conductor.

Upgrades to the Winchester Substation will consist of expanding the footprint of the existing substation and adding equipment necessary to accommodate the new and rebuilt transmission circuits. The expanded area around the existing substation will be graded to level, a copper grounding grid will be installed below the soil surface, and approximately 6 inches of crushed rock will be added across the site. Also, within the site,

various structure foundations will be installed to a depth of between five and ten feet. The site will be enclosed by a chain-link fence with posts installed directly in the ground.

Upon Completion of construction, operations at the substation sites are expected to generate 4 – 10 trips per year for maintenance and inspection. The transmission corridor will be visited at least once a year and vegetation management will be provided through manual upkeep. The planned operational life of the installed facilities is approximately 50 years.

To initiate the process, RUS has asked that information regarding State listed species, critical habitat, and migratory birds be obtained from your office. Rural Development, as the lead Federal agency, is responsible for compliance with Section 7(a)(2) of the Endangered Species Act and will provide determinations of effect as appropriate during the consultation process. Please note that other applicable regulatory agencies will be contacted for their review of this project. The proposal should not represent a "major construction activity" as defined in 50 CFR 402.02. We request a list of any State listed or proposed threatened or endangered species and designated or proposed critical habitat that may be present in the Project corridor. In addition, please advise of present concerns you may have related to possible effects of the proposed Project on such species or critical habitat, as well as any other wildlife concerns.

We request your review of this Project and ask that you provide information on any concerns, resources, or potential impacts that you believe the forthcoming Environmental Assessment should address. We would appreciate any recommendations you may have to mitigate or avoid environmental impacts. Also, please share any information regarding additional review requirements that your agency may have. We would appreciate a response within **30 days** of your receipt of this request.

Please submit your comments on this Project to me at DusingMegan@stanleygroup.com. You may also mail responses to me at 2658 Crosspark Road Suite 100, Coralville, Iowa, 52241. Should you have any questions or would like additional information, please do not hesitate to contact me at the email address listed above or at (319) 259-6600.

Sincerely,

Megan Dusing

Megan Dusing, PWS
Project Manager
Stanley Consultants, Inc.
Enclosures: Project Figures and Overview Maps

Project Figures

N

Franklin Switch
69 kV
1.77 Miles
Franklin Sub
161 kV
5.54 Miles
161 kV
12.24 Miles
Winchester Switch
Kahoka Switch
69 kV
9.20 Miles
Winchester Sub
161 kV
7.49 Miles
69 kV
10.42 Miles
Williamstown Sub
69 kV
10.43 Miles
Lewistown Switch

Bentonsport
Bonaparte
Primrose
West Point
Franklin
Lee
Farmington
Donnellson
Sterling
Shimek State Forest - Lick Creek Unit
Charlie Heath Memorial Conservation Area
Clark Conservation Area
Anson
Nauvoo
Montrose
Chambersburg
MISSOURI
IOWA
Peaksville
Fox Valley Lake Conservation Area
Revere
Luray
Medill
Kahoka
Clark
Mooar
Sandusky
Keokuk
Wyaconda
Vayland
Warsaw
Great Riv Nat'l Wildlife Ref
Antioch
Gregory Landing
St Patrick
Derrahs
Deer Ridge
Deer Ridge Conservation Area
Fenway
Meyer
Benjamin
Canton
Monticello
La Belle
Lewistown
Earthstar Geographics, Iowa DNR, Missouri Dep
Garmin, Sa

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Stanley Consultants co.

Substation Site
- Existing
- Proposed

Transmission Centerline
- Existing Line / Proposed Rebuild
- Proposed New Construction
- Proposed ITC Joint Use
- Proposed Ameren Joint Use

1:192,000
0 3.5 7 14 Miles

NEP MO-IA Transmission Line
Overview Map

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N

Franklin Switch

250th Ave

69 kV
1.77 Miles

Pitman Creek

Pitman Creek

Pitman Creek

Otte Rd

Otte Rd

Otte Rd

Otte R

161 kV
5.54 Miles

Franklin Sub

Esri Community Maps Contributors, Iowa DNR, © O
SafeGraph, GeoTechnologies, Inc, METI/NASA, USG

Substation Site
- Existing
- Proposed

Transmission Centerline
- Existing Line / Proposed Rebuild
- Proposed New Construction
- Proposed ITC Joint Use
- Proposed Ameren Joint Use

Stanley Consultants co.

1:8,400

0 0.3 0.6 Miles

NEP MO-IA Transmission Line

Franklin Switch Station to Franklin Sub

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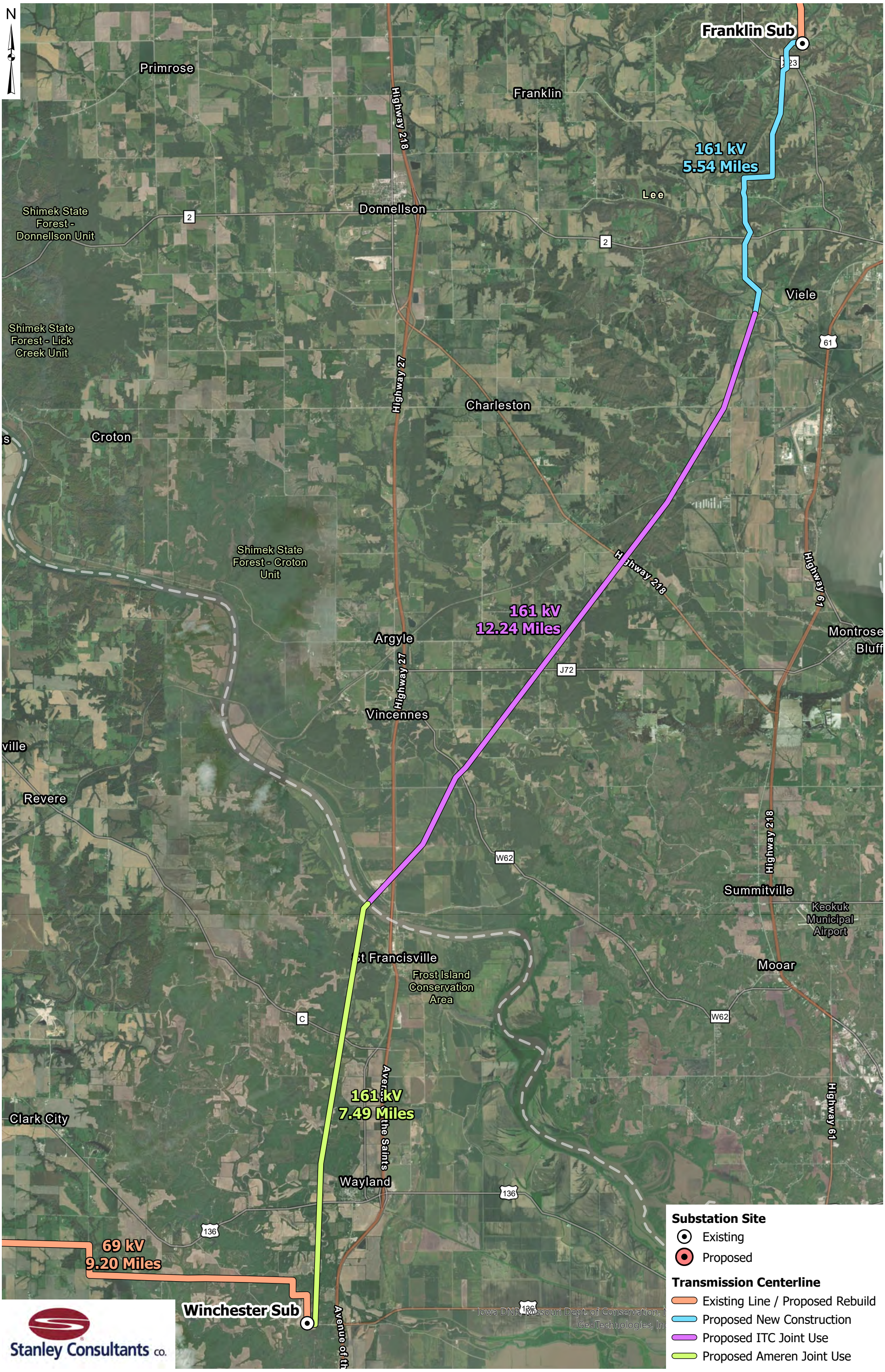
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Franklin Sub
Primrose
Franklin
Highway 218
161 kV
5.54 Miles
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Shimek State Forest - Donnellson Unit
Donnellson
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61
Shimek State Forest - Lick Creek Unit
Highway 27
Charleston
Croton
Shimek State Forest - Croton Unit
Highway 61
161 kV
12.24 Miles
Argyle
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161 kV
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69 kV
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Substation Site
Existing
Proposed
Transmission Centerline
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Proposed ITC Joint Use
Proposed Ameren Joint Use
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Miles
NEP MO-IA Transmission Line
Franklin Sub to Winchester Sub
Stanley Consultants co.
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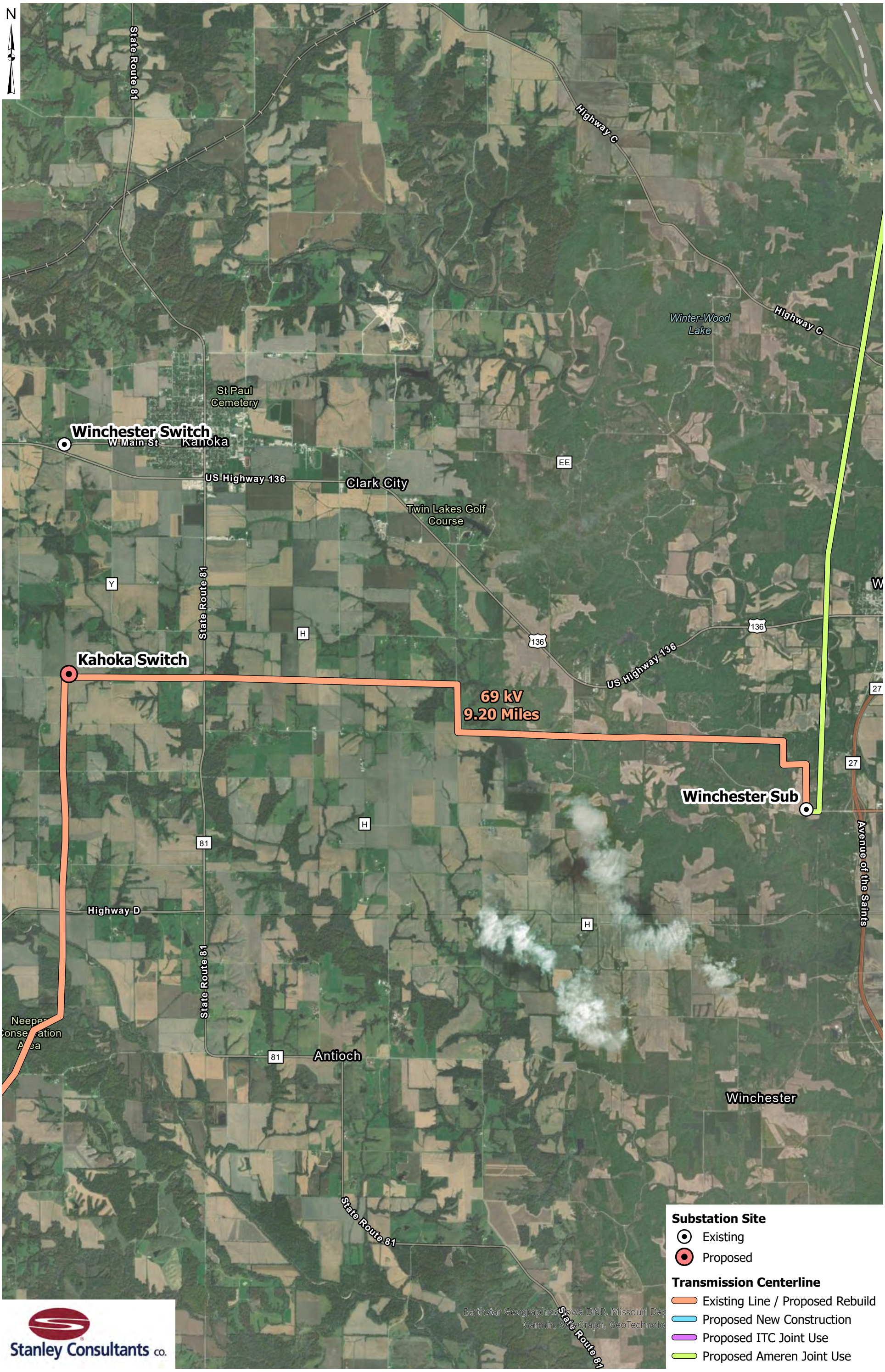
N
State Route 81
Highway C
Winter-Wood Lake
Highway C
St Paul Cemetery
Winchester Switch
W Main St
Kahoka
US Highway 136
Clark City
EE
Twin Lakes Golf Course
Y
State Route 81
H
136
136
US Highway 136
Kahoka Switch
69 kV
9.20 Miles
27
27
Winchester Sub
81
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Avenue of the Saints
Highway D
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State Route 81
Neeper Conservation Area
81
Antioch
Winchester
State Route 81
State Route 81
Substation Site
Existing
Proposed
Transmission Centerline
Existing Line / Proposed Rebuild
Proposed New Construction
Proposed ITC Joint Use
Proposed Ameren Joint Use
Stanley Consultants co.
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Miles
NEP MO-IA Transmission Line
Winchester Sub to Kahoka Switch Station
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N

Kahoka Switch

69 kV
9.20 Miles

69 kV
10.42 Miles

Williamstown Sub

69 kV
10.43 Miles

Y
HH
H
81
M
FF
State Route 81
Highway D
Neeper
Neeper Conservation Area
Antioch
Williamstown
State Hwy E
Highway A

Missouri Dept. of Conservation, Missouri DNR, Esri,

Stanley Consultants co.

Substation Site
- Existing
- Proposed

Transmission Centerline
- Existing Line / Proposed Rebuild
- Proposed New Construction
- Proposed ITC Joint Use
- Proposed Ameren Joint Use

1:48,000
0 1.75 3.5 Miles

NEP MO-IA Transmission Line
Kahoka Switch Station to Williamstown Sub

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N

69 kV
10.42 Miles

Williamstown Sub

Williamstown

State Hwy E

State Highway A

Deer Ridge
Conservation
Area

Deer
Ridge
Community

69 kV
10.43 Miles

State Highway A

State Highway A

Luttrell
Farms
Lake

Lewistown Switch

Lewistown

Missouri Dept. of Conservation, Missouri DNR, Esri,

Y

H

6

16

Substation Site

- Existing
- Proposed

Transmission Centerline

- Existing Line / Proposed Rebuild
- Proposed New Construction
- Proposed ITC Joint Use
- Proposed Ameren Joint Use

Stanley Consultants co.

1:48,000

0 1.75 3.5 Miles

NEP MO-IA Transmission Line

Williamstown Sub to Lewistown Switch Station

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Stanley Consultants INC.
2658 Crosspark Road
Suite 100
Coralville, IA 52241
319.259.6658
stanleyconsultants.com

January 20, 2023

USDA - NRCS
10500 Buena Vista Court
Des Moines, Iowa 50322

SUBJECT: Northeast Missouri Electric Power Cooperative – Missouri to Iowa Transmission Line Environmental Assessment

Dear Matt, Curt, and Adriana:

Northeast Missouri Electric Power Cooperative (NEP/Applicant) is in the process of performing an environmental assessment pursuant to the National Environmental Policy Act (NEPA) for the United States Department of Agriculture (USDA), Rural Development to assess the environmental impacts of a transmission line rebuild and construction project (Project). NEP has proposed to rebuild approximately 52 miles of transmission line to support a larger capacity, construct six miles of new transmission line, and conduct improvements at an existing substation to support higher voltages and additional transmission lines. This project stretches from Lewis County, Missouri, to Lee County, Iowa, and intends to obtain funding through the Rural Utility Services (RUS) Federal Grant Program.

The purpose of the Project is to provide the following benefits to the NEP transmission system:

- Provide additional transmission capacity in the Iowa portion of NEP's power system.
- Improve reliability in the area surrounding the project in both Iowa and Missouri portions of the system.
- Provide economic power to existing power by adequately meeting projected load from within the NEP system.

Approval of the proposed Project will result in the rebuild/ construction and operation of overhead electric transmission lines and distribution facilities. The majority of Project corridor would be rebuilt on existing utility easements, owned by NEP and others, to accommodate a new double-circuit line, with a small portion (approximately six miles) requiring easement acquisition and development of a new Right-of-Way and transmission line installation. Additionally, the Winchester Substation will be expanded.

The topography throughout the Project corridor varies, but generally consists of rills, ravines, intermittent and ephemeral creeks, and perennial streams and rivers in major valleys. Land uses within the project area, at lower elevations, is agricultural and residential development. Land use at higher elevations is predominately undeveloped deciduous forests with some residential development.

Project construction is expected take place over the course of several years as development of the route will be broken into sections. As stated, most of the Project is within existing utility right-of-way (ROW). Grading of the new utility easement will be minimized to the extent feasible and will focus on maintaining original contours. When possible, wetlands and other Waters of the United States (WOTUS) will be avoided and there will be minimal impacts when avoidance is not feasible.

The project involves several segments of transmission line and the Winchester Substation improvements. The attached figure, "NEP_MO-IA_Transmission_MapSeries.pdf," provides the geographical location of each section below:

- **Franklin Tap to Franklin Substation, 1.77 miles of double circuit 69 kV line rebuild**: this portion of the project will consist of rebuilding the existing Franklin Tap with single metal pole structures following the existing right-of-way.
- **Franklin Sub to Winchester Substation, 25.27 miles of 161 kV (operated at 69 kV) new line construction as single circuit new line and double circuit with existing ITC/Ameren 161 kV transmission line**: this portion of the project will tie the existing Winchester Substation with the existing Franklin Substation. The new NEP line will be a single circuit line (5.54 miles) to connect with an existing ITC/Ameren 161 kV transmission line and create a double circuit with the existing ITC (Iowa, 12.24 miles) and Ameren (Missouri, 7.49 miles) 161 kV following the existing ITC/Ameren right-of-way using single metal pole structures.
- **Winchester 69 kV to 12.47 kV Substation Improvements**: this portion of the project will involve upgrading the Winchester Substation to accommodate the new Franklin Sub to Winchester Sub transmission line and the rebuild Winchester Tap (below).
- **Winchester Tap to Winchester Substation, 9.20 miles of 161 kV (operated at 69 kV) line rebuild**: this portion of the project will consist of rebuilding the existing Winchester Tap with single metal pole structures following the existing right-of-way.
- **Winchester Tap to Williamstown Tap, 10.42 miles of 161 kV (operated at 69 kV) line rebuild**: this portion of the project will consist of rebuilding the existing Winchester Tap to Williamstown Tap with single metal pole structures following the existing right-of-way.
- **Williamstown Tap to Lewistown Switch Station: 10.43 miles of 161 kV (operated at 69 kV) line rebuild**: this portion of the project will consist of rebuilding the existing Williamstown Tap to Lewistown Switch Station with single metal pole structures following the existing right-of-way.

The above transmissions line will generally use 60 to 80 foot tall single-pole steel structures with spacing of generally 250 – 400 feet apart. Structures will be direct embedded 10 – 20 feet deep in drilled holes approximately 3 – 4 feet in diameter. Holes will be back filled with rock and any spoils removed and surrounding disturbance restored to original condition. At certain locations on the route, down-guys and anchors will be used to support the line. Anchors will have helical fins and will be installed by rotating the helical fins into the ground. In addition to direct embed steel poles, engineered laminated wood structures will also be utilized and directed buried in a similar manner to direct embed steel poles. Self-supporting steel structures may be used on the project. These structures will require a drilled pier concrete foundation, the size of which is anticipated to be 3-5 feet in diameter and 10-15 feet deep. Installed pole will generally have a height of 60 – 75 feet and will be supporting electrical transmission conductor.

Upgrades to the Winchester Substation will consist of expanding the footprint of the existing substation and adding equipment necessary to accommodate the new and rebuilt transmission circuits. The expanded area around the existing substation will be graded to level, a copper grounding grid will be installed below the soil surface, and approximately 6 inches of crushed rock will be added across the site. Also, within the site,

various structure foundations will be installed to a depth of between five and ten feet. The site will be enclosed by a chain-link fence with posts installed directly in the ground.

Upon Completion of construction, operations at the substation sites are expected to generate 4 – 10 trips per year for maintenance and inspection. The transmission corridor will be visited at least once a year and vegetation management will be provided through manual upkeep. The planned operational life of the installed facilities is approximately 50 years.

We are requesting information on the possible effects of the proposal on important farmland and any recommendations you have to minimize or avoid these effects. We also seek your assessment of the compatibility of the proposal with state and local government or any private programs and policies to protect important farmland. The NRCS form AD-1006 is enclosed as well as the soils report for the Project corridor. To ensure compliance with the Farmland Protection Policy Act and to support the NEPA process, RUS requests that the USDA Natural Resources Conservation Service review the enclosed project-specific information and complete Parts II, IV, and V on the enclosed NRCS-CPA-106.

We request your review of this Project and ask that you provide information on any concerns, resources, or potential impacts that you believe the forthcoming Environmental Assessment should address. We would appreciate any recommendations you may have to mitigate or avoid environmental impacts. Also, please share any information regarding additional review requirements that your agency may have. We would appreciate a response within **30 days** of your receipt of this request.

Please submit your comments on this Project to me at DusingMegan@stanleygroup.com. You may also mail responses to me at 2658 Crosspark Road Suite 100, Coralville, Iowa, 52241. Should you have any questions or would like additional information, please do not hesitate to contact me at the email address listed above or at (319) 259-6600.

Sincerely,

Megan Dusing

Megan Dusing, PWS
Project Manager
Stanley Consultants, Inc.
Enclosures: Form NRCS-CPA-106, Project Figures, Soils Report

Form NRCS-CPA-106

U.S. DEPARTMENT OF AGRICULTURE
Natural Resources Conservation Service

NRCS-CPA-106
(Rev. 1-91)

FARMLAND CONVERSION IMPACT RATING FOR CORRIDOR TYPE PROJECTS

PART I *(To be completed by Federal Agency)*	3. Date of Land Evaluation Request **2/2/23**	4. Sheet 1 of **1**
1. Name of Project **NEP Missouri to Iowa Enviro Assessment**	5. Federal Agency Involved **Rural Utility Services**	
2. Type of Project **Overhead Transmission Line/Substation**	6. County and State **Lee Co Iowa; Lewis Co & Clark Co, Missouri**	

PART II *(To be completed by NRCS)*	1. Date Request Received by NRCS	2. Person Completing Form
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form). YES ☐ NO ☐		4. Acres Irrigated | Average Farm Size
5. Major Crop(s)	6. Farmable Land in Government Jurisdiction Acres: %	7. Amount of Farmland As Defined in FPPA Acres: %
8. Name Of Land Evaluation System Used	9. Name of Local Site Assessment System	10. Date Land Evaluation Returned by NRCS

PART III *(To be completed by Federal Agency)*	Alternative Corridor For Segment ____ Corridor A	Corridor B	Corridor C	Corridor D
A. Total Acres To Be Converted Directly	7			
B. Total Acres To Be Converted Indirectly, Or To Receive Services	0			
C. Total Acres In Corridor	2776			
PART IV *(To be completed by NRCS) Land Evaluation Information*				
A. Total Acres Prime And Unique Farmland				
B. Total Acres Statewide And Local Important Farmland				
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted				
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value				
PART V *(To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)*				
PART VI *(To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))* — Maximum Points				
1. Area in Nonurban Use — 15	15			
2. Perimeter in Nonurban Use — 10	10			
3. Percent Of Corridor Being Farmed — 20	20			
4. Protection Provided By State And Local Government — 20	0			
5. Size of Present Farm Unit Compared To Average — 10	5			
6. Creation Of Nonfarmable Farmland — 25	0			
7. Availablility Of Farm Support Services — 5	5			
8. On-Farm Investments — 20	5			
9. Effects Of Conversion On Farm Support Services — 25	0			
10. Compatibility With Existing Agricultural Use — 10	0			
TOTAL CORRIDOR ASSESSMENT POINTS — 160	60	0	0	0
PART VII *(To be completed by Federal Agency)*				
Relative Value Of Farmland (From Part V) — 100	0	0	0	0
Total Corridor Assessment (From Part VI above or a local site assessment) — 160	60	0	0	0
TOTAL POINTS *(Total of above 2 lines)* — 260	60	0	0	0

1. Corridor Selected:	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used?
A	**7**	**2/1/23**	YES ☐ NO ☑

5. Reason For Selection:

The route was selected following discussion and coordination with property owners and use of existing utility easements. Selection based on least amount of impact to farmland.

Signature of Person Completing this Part: *Megan Dusing* DATE **2/2/23**

NOTE: Complete a form for each segment with more than one Alternate Corridor

Clear Form

U.S. DEPARTMENT OF AGRICULTURE
Natural Resources Conservation Service

NRCS-CPA-106
(Rev. 1-91)

FARMLAND CONVERSION IMPACT RATING FOR CORRIDOR TYPE PROJECTS

PART I *(To be completed by Federal Agency)*		3. Date of Land Evaluation Request **10/6/23**	4. Sheet 1 of **1**
1. Name of Project	**NEP Missouri to Iowa Environmental Assess**	5. Federal Agency Involved **Rural Utility Services**	
2. Type of Project	**Overhead Transmission Line - New Const.**	6. County and State **Lee County, Iowa**	
PART II *(To be completed by NRCS)*		1. Date Request Received by NRCS **10/11/23**	2. Person Completing Form **Patrick Chase**
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form).	YES ☑ NO ☐	4. Acres Irrigated **1,091**	Average Farm Size **263**
5. Major Crop(s) **Corn**	6. Farmable Land in Government Jurisdiction Acres: **277,648** % **80**	7. Amount of Farmland As Defined in FPPA Acres: **274,090** % **80**	
8. Name Of Land Evaluation System Used **CSR2**	9. Name of Local Site Assessment System **Lee County, IA**	10. Date Land Evaluation Returned by NRCS **11/15/23**	

PART III *(To be completed by Federal Agency)*	Alternative Corridor For Segment ____ Corridor A	Corridor B	Corridor C	Corridor D
A. Total Acres To Be Converted Directly	**0**			
B. Total Acres To Be Converted Indirectly, Or To Receive Services	**958**			
C. Total Acres In Corridor	**958**	**0**	**0**	**0**
PART IV *(To be completed by NRCS) Land Evaluation Information*				
A. Total Acres Prime And Unique Farmland	**350**			
B. Total Acres Statewide And Local Important Farmland	**444**			
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted	**0**			
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value	**60**			
PART V *(To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)*				
PART VI *(To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))* — Maximum Points				
1. Area in Nonurban Use — **15**				
2. Perimeter in Nonurban Use — **10**				
3. Percent Of Corridor Being Farmed — **20**				
4. Protection Provided By State And Local Government — **20**				
5. Size of Present Farm Unit Compared To Average — **10**				
6. Creation Of Nonfarmable Farmland — **25**				
7. Availablility Of Farm Support Services — **5**				
8. On-Farm Investments — **20**				
9. Effects Of Conversion On Farm Support Services — **25**				
10. Compatibility With Existing Agricultural Use — **10**				
TOTAL CORRIDOR ASSESSMENT POINTS — **160**	**0**	**0**	**0**	**0**
PART VII *(To be completed by Federal Agency)*				
Relative Value Of Farmland (From Part V) — **100**				
Total Corridor Assessment (From Part VI above or a local site assessment) — **160**	**0**	**0**	**0**	**0**
TOTAL POINTS *(Total of above 2 lines)* — **260**	**0**	**0**	**0**	**0**

1. Corridor Selected:	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used?
			YES ☐ NO ☐

5. Reason For Selection:

Signature of Person Completing this Part: | DATE

NOTE: Complete a form for each segment with more than one Alternate Corridor

Clear Form

CORRIDOR - TYPE SITE ASSESSMENT CRITERIA

The following criteria are to be used for projects that have a linear or corridor - type site configuration connecting two distant points, and crossing several different tracts of land. These include utility lines, highways, railroads, stream improvements, and flood control systems. Federal agencies are to assess the suitability of each corridor - type site or design alternative for protection as farmland along with the land evaluation information.

(1) How much land is in nonurban use within a radius of 1.0 mile from where the project is intended?
More than 90 percent - 15 points
90 to 20 percent - 14 to 1 point(s)
Less than 20 percent - 0 points

(2) How much of the perimeter of the site borders on land in nonurban use?
More than 90 percent - 10 points
90 to 20 percent - 9 to 1 point(s)
Less than 20 percent - 0 points

(3) How much of the site has been farmed (managed for a scheduled harvest or timber activity) more than five of the last 10 years?
More than 90 percent - 20 points
90 to 20 percent - 19 to 1 point(s)
Less than 20 percent - 0 points

(4) Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland?
Site is protected - 20 points
Site is not protected - 0 points

(5) Is the farm unit(s) containing the site (before the project) as large as the average - size farming unit in the County ? (Average farm sizes in each county are available from the NRCS field offices in each state. Data are from the latest available Census of Agriculture, Acreage or Farm Units in Operation with $1,000 or more in sales.)
As large or larger - 10 points
Below average - deduct 1 point for each 5 percent below the average, down to 0 points if 50 percent or more below average - 9 to 0 points

(6) If the site is chosen for the project, how much of the remaining land on the farm will become non-farmable because of interference with land patterns?
Acreage equal to more than 25 percent of acres directly converted by the project - 25 points
Acreage equal to between 25 and 5 percent of the acres directly converted by the project - 1 to 24 point(s)
Acreage equal to less than 5 percent of the acres directly converted by the project - 0 points

(7) Does the site have available adequate supply of farm support services and markets, i.e., farm suppliers, equipment dealers, processing and storage facilities and farmer's markets?
All required services are available - 5 points
Some required services are available - 4 to 1 point(s)
No required services are available - 0 points

(8) Does the site have substantial and well-maintained on-farm investments such as barns, other storage building, fruit trees and vines, field terraces, drainage, irrigation, waterways, or other soil and water conservation measures?
High amount of on-farm investment - 20 points
Moderate amount of on-farm investment - 19 to 1 point(s)
No on-farm investment - 0 points

(9) Would the project at this site, by converting farmland to nonagricultural use, reduce the demand for farm support services so as to jeopardize the continued existence of these support services and thus, the viability of the farms remaining in the area?
Substantial reduction in demand for support services if the site is converted - 25 points
Some reduction in demand for support services if the site is converted - 1 to 24 point(s)
No significant reduction in demand for support services if the site is converted - 0 points

(10) Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of surrounding farmland to nonagricultural use?
Proposed project is incompatible to existing agricultural use of surrounding farmland - 10 points
Proposed project is tolerable to existing agricultural use of surrounding farmland - 9 to 1 point(s)
Proposed project is fully compatible with existing agricultural use of surrounding farmland - 0 points

Project Figures

N

Franklin Switch
69 kV
1.77 Miles
Franklin Sub
161 kV
5.54 Miles
161 kV
12.24 Miles
Winchester Switch
Kahoka Switch
69 kV
9.20 Miles
Winchester Sub
161 kV
7.49 Miles
69 kV
10.42 Miles
Williamstown Sub
69 kV
10.43 Miles
Lewistown Switch

Bentonsport
Bonaparte
Primrose
West Point
Franklin
Lee
Farmington
Donnellson
Sterling
Shimek State Forest - Lick Creek Unit
Charlie Heath Memorial Conservation Area
Clark Conservation Area
Anson
Nauvoo
Montrose
Chambersburg
MISSOURI
IOWA
Peaksville
Fox Valley Lake Conservation Area
Revere
Luray
Medill
Kahoka
Clark
Mooar
Sandusky
Keokuk
Wyaconda
Vayland
Warsaw
Great Riv Nat'l Wildlife Ref
Antioch
Gregory Landing
St Patrick
Derrahs
Deer Ridge
Deer Ridge Conservation Area
Fenway
Meyer
Benjamin
Canton
Monticello
La Belle
Lewistown
Earthstar Geographics, Iowa DNR, Missouri Dep
Garmin, Sa

J40 · 103 · 2 · 81 · V · K · 27 · 218 · 61 · J72 · W62 · C · 136 · 32 · 16 · D · A · E · BB · 6 · 12 · X28

Stanley Consultants co.

Substation Site
- Existing
- Proposed

Transmission Centerline
- Existing Line / Proposed Rebuild
- Proposed New Construction
- Proposed ITC Joint Use
- Proposed Ameren Joint Use

1:192,000
0 3.5 7 14 Miles

NEP MO-IA Transmission Line
Overview Map

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N

Franklin Switch

250th Ave

69 kV
1.77 Miles

Pitman Creek

Pitman Creek

Pitman Creek

Otte Rd

Otte Rd

Otte Rd

Otte R

161 kV
5.54 Miles

Franklin Sub

Esri Community Maps Contributors, Iowa DNR, © O
SafeGraph, GeoTechnologies, Inc, METI/NASA, USG

Substation Site
- Existing
- Proposed

Transmission Centerline
- Existing Line / Proposed Rebuild
- Proposed New Construction
- Proposed ITC Joint Use
- Proposed Ameren Joint Use

Stanley Consultants co.

1:8,400

0 0.3 0.6 Miles

NEP MO-IA Transmission Line

Franklin Switch Station to Franklin Sub

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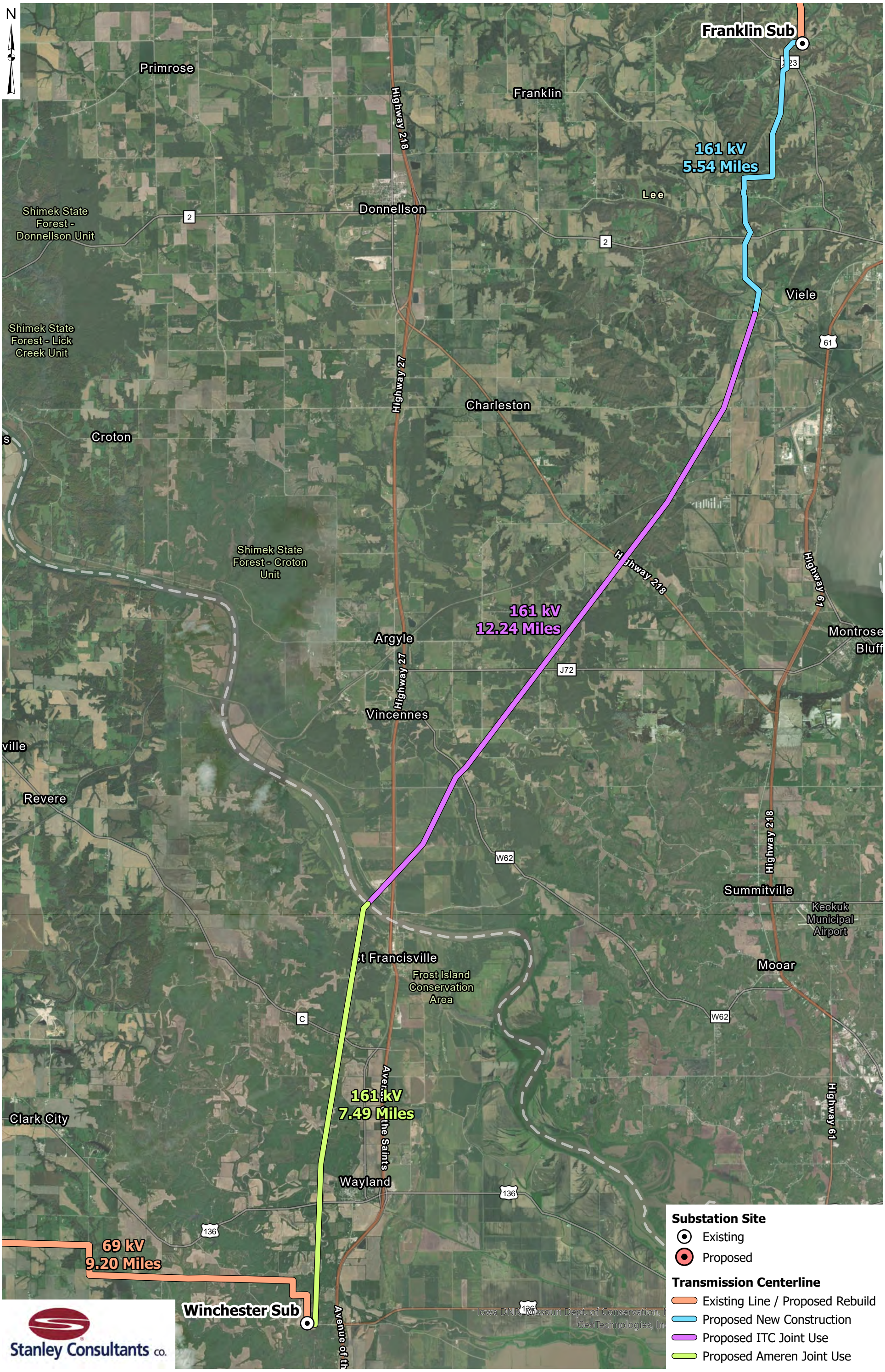
N
Franklin Sub
Primrose
Franklin
Highway 218
161 kV
5.54 Miles
Lee
Shimek State Forest - Donnellson Unit
Donnellson
2
Viele
61
Shimek State Forest - Lick Creek Unit
Highway 27
Charleston
Croton
Shimek State Forest - Croton Unit
Highway 61
161 kV
12.24 Miles
Argyle
Montrose
Bluff
J72
Vincennes
Revere
W62
Summitville
Keokuk Municipal Airport
Mooar
Frost Island Conservation Area
C
161 kV
7.49 Miles
Clark City
Wayland
136
69 kV
9.20 Miles
Winchester Sub
Substation Site
Existing
Proposed
Transmission Centerline
Existing Line / Proposed Rebuild
Proposed New Construction
Proposed ITC Joint Use
Proposed Ameren Joint Use
1:96,000
0
3.5
7
Miles
NEP MO-IA Transmission Line
Franklin Sub to Winchester Sub
Stanley Consultants co.
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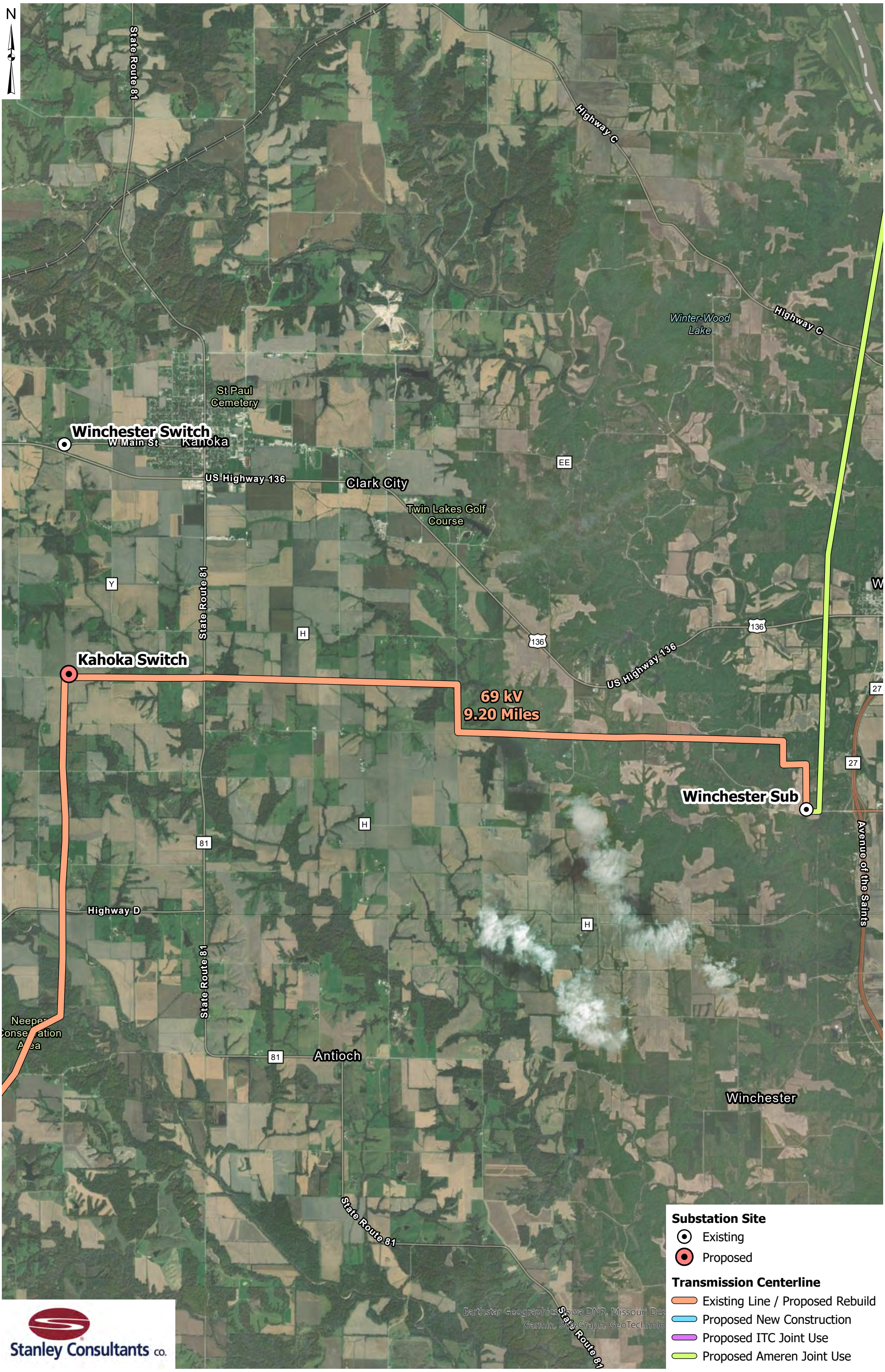
N
State Route 81
Highway C
Winter-Wood Lake
Highway C
St Paul Cemetery
Winchester Switch
W Main St
Kahoka
US Highway 136
Clark City
EE
Twin Lakes Golf Course
Y
State Route 81
H
136
136
US Highway 136
Kahoka Switch
69 kV
9.20 Miles
27
27
Winchester Sub
81
H
Avenue of the Saints
Highway D
H
State Route 81
Neeper Conservation Area
81
Antioch
Winchester
State Route 81
State Route 81
Substation Site
Existing
Proposed
Transmission Centerline
Existing Line / Proposed Rebuild
Proposed New Construction
Proposed ITC Joint Use
Proposed Ameren Joint Use
Stanley Consultants co.
1:60,000
0
2
4
Miles
NEP MO-IA Transmission Line
Winchester Sub to Kahoka Switch Station
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N

Kahoka Switch

69 kV
9.20 Miles

69 kV
10.42 Miles

Williamstown Sub

69 kV
10.43 Miles

Y
HH
H
81
M
FF
State Route 81
Highway D
Neeper
Neeper Conservation Area
Antioch
Williamstown
State Hwy E
Highway A

Missouri Dept. of Conservation, Missouri DNR, Esri,

Stanley Consultants co.

Substation Site
- Existing
- Proposed

Transmission Centerline
- Existing Line / Proposed Rebuild
- Proposed New Construction
- Proposed ITC Joint Use
- Proposed Ameren Joint Use

1:48,000
0 1.75 3.5 Miles

NEP MO-IA Transmission Line
Kahoka Switch Station to Williamstown Sub

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N

69 kV
10.42 Miles

Williamstown Sub

Williamstown

State Hwy E

State Highway A

Deer Ridge
Conservation
Area

Deer
Ridge
Community

69 kV
10.43 Miles

State Highway A

State Highway A

Luttrell
Farms
Lake

Lewistown Switch

Lewistown

Missouri Dept. of Conservation, Missouri DNR, Esri,

Y

H

6

16

Substation Site

- Existing
- Proposed

Transmission Centerline

- Existing Line / Proposed Rebuild
- Proposed New Construction
- Proposed ITC Joint Use
- Proposed Ameren Joint Use

Stanley Consultants co.

1:48,000

0 1.75 3.5 Miles

NEP MO-IA Transmission Line

Williamstown Sub to Lewistown Switch Station

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Stanley Consultants INC.
2658 Crosspark Road
Suite 100
Coralville, IA 52241
319.259.6658
stanleyconsultants.com

February 3, 2023

Hannah Roos
Environmental Review Coordinator
Missouri Department of Conservation
PO Box 180
Jefferson City, MO 65101

SUBJECT: Northeast Missouri Electric Power Cooperative – Missouri to Iowa Transmission Line Environmental Assessment

Dear Hannah:

Northeast Missouri Electric Power Cooperative (NEP/Applicant) is in the process of performing an environmental assessment pursuant to the National Environmental Policy Act (NEPA) for the United States Department of Agriculture (USDA), Rural Development to assess the environmental impacts of a transmission line rebuild and construction project (Project). NEP has proposed to rebuild approximately 52 miles of transmission line to support a larger capacity, construct six miles of new transmission line, and conduct improvements at an existing substation to support higher voltages and additional transmission lines. This project stretches from Lewis County, Missouri, to Lee County, Iowa, and intends to obtain funding through the Rural Utility Services (RUS) Federal Grant Program.

The purpose of the Project is to provide the following benefits to the NEP transmission system:

- Provide additional transmission capacity in the Iowa portion of NEP's power system.
- Improve reliability in the area surrounding the project in both Iowa and Missouri portions of the system.
- Provide economic power to existing power by adequately meeting projected load from within the NEP system.

Approval of the proposed Project will result in the rebuild/ construction and operation of overhead electric transmission lines and distribution facilities. The majority of Project corridor would be rebuilt on existing utility easements, owned by NEP and others, to accommodate a new double-circuit line, with a small portion (approximately six miles) requiring easement acquisition and development of a new Right-of-Way and transmission line installation. Additionally, the Winchester Substation will be expanded.

The topography throughout the Project corridor varies, but generally consists of rills, ravines, intermittent and ephemeral creeks, and perennial streams and rivers in major valleys. Land uses within the project area, at lower elevations, is agricultural and residential development. Land use at higher elevations is predominately undeveloped deciduous forests with some residential development.

Project construction is expected take place over the course of several years as development of the route will be broken into sections. As stated, most of the Project is within existing utility right-of-way (ROW). Grading of the new utility easement will be minimized to the extent feasible and will focus on maintaining

original contours. When possible, wetlands and other Waters of the United States (WOTUS) will be avoided and there will be minimal impacts when avoidance is not feasible.

The project involves several segments of transmission line and the Winchester Substation improvements. The attached figure, "NEP_MO-IA_Transmission_MapSeries.pdf," provides the geographical location of each section below:

- **Franklin Tap to Franklin Substation, 1.77 miles of double circuit 69 kV line rebuild**: this portion of the project will consist of rebuilding the existing Franklin Tap with single metal pole structures following the existing right-of-way.
- **Franklin Sub to Winchester Substation, 25.27 miles of 161 kV (operated at 69 kV) new line construction as single circuit new line and double circuit with existing ITC/Ameren 161 kV transmission line**: this portion of the project will tie the existing Winchester Substation with the existing Franklin Substation. The new NEP line will be a single circuit line (5.54 miles) to connect with an existing ITC/Ameren 161 kV transmission line and create a double circuit with the existing ITC (Iowa, 12.24 miles) and Ameren (Missouri, 7.49 miles) 161 kV following the existing ITC/Ameren right-of-way using single metal pole structures.
- **Winchester 69 kV to 12.47 kV Substation Improvements**: this portion of the project will involve upgrading the Winchester Substation to accommodate the new Franklin Sub to Winchester Sub transmission line and the rebuild Winchester Tap (below).
- **Winchester Tap to Winchester Substation, 9.20 miles of 161 kV (operated at 69 kV) line rebuild**: this portion of the project will consist of rebuilding the existing Winchester Tap with single metal pole structures following the existing right-of-way.
- **Winchester Tap to Williamstown Tap, 10.42 miles of 161 kV (operated at 69 kV) line rebuild**: this portion of the project will consist of rebuilding the existing Winchester Tap to Williamstown Tap with single metal pole structures following the existing right-of-way.
- **Williamstown Tap to Lewistown Switch Station: 10.43 miles of 161 kV (operated at 69 kV) line rebuild**: this portion of the project will consist of rebuilding the existing Williamstown Tap to Lewistown Switch Station with single metal pole structures following the existing right-of-way.

The above transmissions line will generally use 60 to 80 foot tall single-pole steel structures with spacing of generally 250 – 400 feet apart. Structures will be direct embedded 10 – 20 feet deep in drilled holes approximately 3 – 4 feet in diameter. Holes will be back filled with rock and any spoils removed and surrounding disturbance restored to original condition. At certain locations on the route, down-guys and anchors will be used to support the line. Anchors will have helical fins and will be installed by rotating the helical fins into the ground. In addition to direct embed steel poles, engineered laminated wood structures will also be utilized and directed buried in a similar manner to direct embed steel poles. Self-supporting steel structures may be used on the project. These structures will require a drilled pier concrete foundation, the size of which is anticipated to be 3-5 feet in diameter and 10-15 feet deep. Installed pole will generally have a height of 60 – 75 feet and will be supporting electrical transmission conductor.

Upgrades to the Winchester Substation will consist of expanding the footprint of the existing substation and adding equipment necessary to accommodate the new and rebuilt transmission circuits. The expanded area around the existing substation will be graded to level, a copper grounding grid will be installed below the soil surface, and approximately 6 inches of crushed rock will be added across the site. Also, within the site,

various structure foundations will be installed to a depth of between five and ten feet. The site will be enclosed by a chain-link fence with posts installed directly in the ground.

Upon Completion of construction, operations at the substation sites are expected to generate 4 – 10 trips per year for maintenance and inspection. The transmission corridor will be visited at least once a year and vegetation management will be provided through manual upkeep. The planned operational life of the installed facilities is approximately 50 years.

To initiate the process, RUS has asked that information regarding State listed species, critical habitat, and migratory birds be obtained from your office. Rural Development, as the lead Federal agency, is responsible for compliance with Section 7(a)(2) of the Endangered Species Act and will provide determinations of effect as appropriate during the consultation process. Please note that other applicable regulatory agencies will be contacted for their review of this project. The proposal should not represent a "major construction activity" as defined in 50 CFR 402.02. We request a list of any State listed or proposed threatened or endangered species and designated or proposed critical habitat that may be present in the Project corridor. In addition, please advise of present concerns you may have related to possible effects of the proposed Project on such species or critical habitat, as well as any other wildlife concerns.

We request your review of this Project and ask that you provide information on any concerns, resources, or potential impacts that you believe the forthcoming Environmental Assessment should address. We would appreciate any recommendations you may have to mitigate or avoid environmental impacts. Also, please share any information regarding additional review requirements that your agency may have. We would appreciate a response within **30 days** of your receipt of this request.

Please submit your comments on this Project to me at DusingMegan@stanleygroup.com. You may also mail responses to me at 2658 Crosspark Road Suite 100, Coralville, Iowa, 52241. Should you have any questions or would like additional information, please do not hesitate to contact me at the email address listed above or at (319) 259-6600.

Sincerely,

Megan Dusing

Megan Dusing, PWS
Project Manager
Stanley Consultants, Inc.
Enclosures: Project Figures and Overview Maps

Project Figures

N

Franklin Switch
69 kV
1.77 Miles
Franklin Sub
161 kV
5.54 Miles
161 kV
12.24 Miles
Winchester Switch
Kahoka Switch
69 kV
9.20 Miles
Winchester Sub
161 kV
7.49 Miles
69 kV
10.42 Miles
Williamstown Sub
69 kV
10.43 Miles
Lewistown Switch

Bentonsport
Bonaparte
Primrose
West Point
Franklin
Lee
Farmington
Donnellson
Sterling
Shimek State Forest - Lick Creek Unit
Charlie Heath Memorial Conservation Area
Clark Conservation Area
Anson
Nauvoo
Montrose
Chambersburg
MISSOURI
IOWA
Peaksville
Fox Valley Lake Conservation Area
Revere
Luray
Medill
Kahoka
Clark
Mooar
Sandusky
Keokuk
Wyaconda
Vayland
Warsaw
Great Riv Nat'l Wildlife Ref
Antioch
Gregory Landing
St Patrick
Derrahs
Deer Ridge
Deer Ridge Conservation Area
Fenway
Meyer
Benjamin
Canton
Monticello
La Belle
Lewistown
Earthstar Geographics, Iowa DNR, Missouri Dep
Garmin, Sa

J40 · 103 · 2 · 81 · V · K · 27 · 218 · 61 · J72 · W62 · C · 136 · 32 · 16 · D · A · E · BB · 6 · 12 · X28

Stanley Consultants co.

Substation Site
- Existing
- Proposed

Transmission Centerline
- Existing Line / Proposed Rebuild
- Proposed New Construction
- Proposed ITC Joint Use
- Proposed Ameren Joint Use

1:192,000
0 3.5 7 14 Miles

NEP MO-IA Transmission Line
Overview Map

\gfs\projects\Northeast_Missouri_Electric_Power_Coop\GIS-Data\307360\02-Workspace\NEP_MO-IA_NW1.aprx

N

Franklin Switch

250th Ave

69 kV
1.77 Miles

Pitman Creek

Pitman Creek

Pitman Creek

Otte Rd

Otte Rd

Otte Rd

Otte R

161 kV
5.54 Miles

Franklin Sub

Esri Community Maps Contributors, Iowa DNR, © O
SafeGraph, GeoTechnologies, Inc, METI/NASA, USG

Substation Site
- Existing
- Proposed

Transmission Centerline
- Existing Line / Proposed Rebuild
- Proposed New Construction
- Proposed ITC Joint Use
- Proposed Ameren Joint Use

Stanley Consultants co.

1:8,400

0 0.3 0.6 Miles

NEP MO-IA Transmission Line

Franklin Switch Station to Franklin Sub

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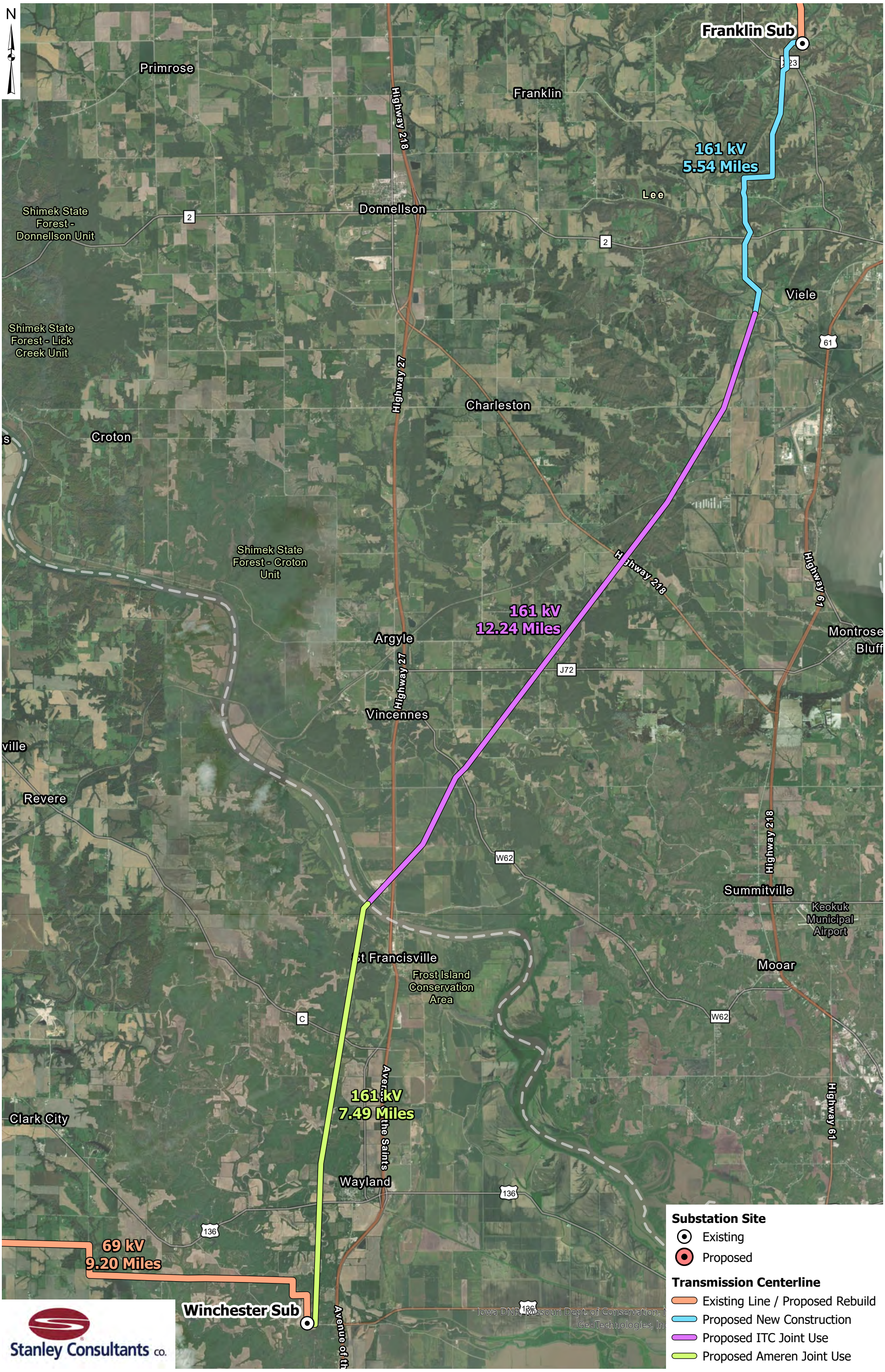
N
Franklin Sub
Primrose
Franklin
Highway 218
161 kV
5.54 Miles
Lee
Shimek State Forest - Donnellson Unit
Donnellson
2
Viele
61
Shimek State Forest - Lick Creek Unit
Highway 27
Charleston
Croton
Shimek State Forest - Croton Unit
Highway 61
161 kV
12.24 Miles
Argyle
Montrose
Bluff
J72
Vincennes
Revere
W62
Summitville
Keokuk Municipal Airport
Mooar
Frost Island Conservation Area
C
161 kV
7.49 Miles
Clark City
Wayland
136
69 kV
9.20 Miles
Winchester Sub
Substation Site
Existing
Proposed
Transmission Centerline
Existing Line / Proposed Rebuild
Proposed New Construction
Proposed ITC Joint Use
Proposed Ameren Joint Use
1:96,000
0
3.5
7
Miles
NEP MO-IA Transmission Line
Franklin Sub to Winchester Sub
Stanley Consultants co.
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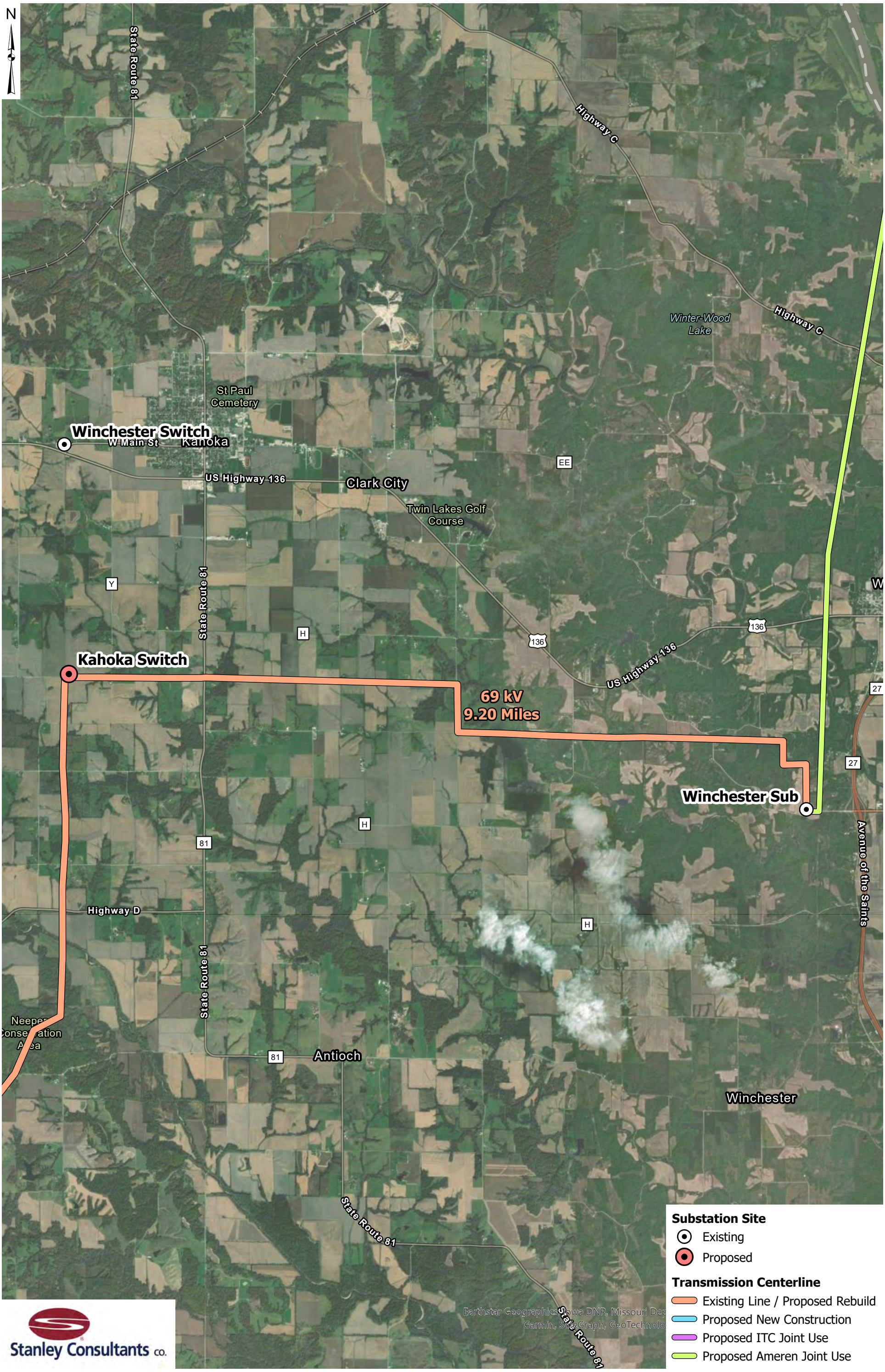
N
State Route 81
Highway C
Winter-Wood Lake
Highway C
St Paul Cemetery
Winchester Switch
W Main St
Kahoka
US Highway 136
Clark City
EE
Twin Lakes Golf Course
Y
State Route 81
H
136
136
US Highway 136
Kahoka Switch
69 kV
9.20 Miles
27
27
Winchester Sub
81
H
Avenue of the Saints
Highway D
H
State Route 81
Neeper Conservation Area
81
Antioch
Winchester
State Route 81
State Route 81
Substation Site
Existing
Proposed
Transmission Centerline
Existing Line / Proposed Rebuild
Proposed New Construction
Proposed ITC Joint Use
Proposed Ameren Joint Use
Stanley Consultants co.
1:60,000
0
2
4
Miles
NEP MO-IA Transmission Line
Winchester Sub to Kahoka Switch Station
\gfs\projects\Northeast_Missouri_Electric_Power_Coop\GIS-Data\307361\02-Workspace\NEP_MO-IA_NW1.aprx

N

Kahoka Switch

69 kV
9.20 Miles

69 kV
10.42 Miles

Williamstown Sub

69 kV
10.43 Miles

Y
HH
H
81
M
FF
State Route 81
Highway D
Neeper
Neeper Conservation Area
Antioch
Williamstown
State Hwy E
Highway A

Missouri Dept. of Conservation, Missouri DNR, Esri,

Stanley Consultants co.

Substation Site
- Existing
- Proposed

Transmission Centerline
- Existing Line / Proposed Rebuild
- Proposed New Construction
- Proposed ITC Joint Use
- Proposed Ameren Joint Use

1:48,000
0 1.75 3.5 Miles

NEP MO-IA Transmission Line
Kahoka Switch Station to Williamstown Sub

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N

69 kV
10.42 Miles

Williamstown Sub

Williamstown

State Hwy E

State Highway A

Deer Ridge
Conservation
Area

Deer
Ridge
Community

69 kV
10.43 Miles

State Highway A

State Highway A

Luttrell
Farms
Lake

Lewistown Switch

Lewistown

Missouri Dept. of Conservation, Missouri DNR, Esri,

Y

H

6

16

Substation Site

- Existing
- Proposed

Transmission Centerline

- Existing Line / Proposed Rebuild
- Proposed New Construction
- Proposed ITC Joint Use
- Proposed Ameren Joint Use

Stanley Consultants co.

1:48,000

0 1.75 3.5 Miles

NEP MO-IA Transmission Line

Williamstown Sub to Lewistown Switch Station

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Missouri Department of Conservation

Natural Heritage Review Report

February 22, 2023

Science Branch
P. O. Box 180
Jefferson City, MO 65102
Prepared by: Hannah Roos
NaturalHeritageReview@mdc.mo.gov
(573) 522 - 4115 ext. 3182

Megan Dusing
Stanley Consultants
DusingMegan@stanleygroup.com

NHR ERT ID:	12178	NHR ERT Level:	3
Project type:	Utility – Above Ground Comm		
Location/Scope:	Lewis, Clark Co. MO; Lee Co. IA		
County:	Lewis, Clark Co. MO; Lee Co. IA		
Query reference:	NEP Missouri to Iowa Transmission Line		
Query received:	2/3/2023		

This NATURAL HERITAGE REVIEW is not a site clearance letter. Rather, it identifies public lands and records of sensitive resources located close to and/or potentially affected by the proposed project. If project plans or location change, this report may no longer be valid. Because land use conditions change and animals move, the existence of an occurrence record does not mean the species/habitat is still present. Therefore, reports include information about records near but not necessarily on the project site. Lack of an occurrence record does not mean that a sensitive species or natural community is not present on or near the project area. On-site verification is the responsibility of the project. These records serve as one reference and additional information (e.g. wetland or soils maps, on-site inspections or surveys) should be considered. Look for additional information about the biological and habitat needs of records listed to avoid or minimize impacts. More information is at Natural Areas | Missouri Department of Conservation (mo.gov) and Missouri Fish and Wildlife Information System (MOFWIS).

Level 3: Records of federal-listed (also state-listed) species or critical habitats near the project site:

Natural Heritage records indicate Indiana and Northern Long-eared bats occur within 1 mile of the project area.

- **Indiana Bats and Northern Long-eared Bats: If this project has the potential to alter habitat (e.g. tree removal, projects in karst habitat) or cause direct mortality of bats, please coordinate directly with U.S. Fish and Wildlife Service (Ecological Services, 101 Park Deville Drive, Suite A, Columbia, Missouri 65203-0007; Phone 573-234-2132 Ext. 100 for Ecological Services) for further coordination under the Endangered Species Act.**

  Indiana and Northern Long-eared bats should be assumed present wherever habitat exists. Indiana Bats *(Myotis sodalis*, federal and state-listed endangered) and Northern Long-eared Bats (*Myotis septentrionalis,* federal-listed threatened) hibernate during winter months in caves and mines. During the summer months, they roost and raise young under the bark of trees in riparian forests and upland forests near perennial streams. During project activities, avoid degrading stream quality and where possible leave snags standing and preserve mature forest canopy. Do not enter caves known to harbor Indiana Bats and/or Northern Long-eared Bats, especially from September to April.

FEDERAL LIST species/habitats are protected under the Federal Endangered Species Act. Contact U.S. Fish & Wildlife Service (101 Park Deville Drive Suite A, Columbia, Missouri 65203-0007; 573-234-2132) for Endangered Species Act coordination and concurrence information).

Level 2: Records of state-listed (not federal-listed) endangered species AND / OR state-ranked (not state-listed endangered) species and natural communities of conservation concern. The Department tracks these species and natural communities due to population declines and/or apparent vulnerability.

Natural Heritage records identify no state-listed endangered species within the project area.

Natural Heritage records indicate the following state-ranked species near the project area:

Scientific Name	Common Name	State Rank	Proximity (miles)	Primary Habitat
Setophaga cerulea	Cerulean Warbler	S2S3	<1	Forest bottomland, Forest upland
Chelone obliqua	Rose Turtlehead	S2	<1	Forest bottomland, Wetland matrix
Myotis lucifugus	Little Brown Myotis	S2	<1	Forest matrix, Cave, Habitat generalist
Bombus fervidus	Yellow Bumblebee	S1	<2	Grassland matrix
Monarda punctata var. villicaulis	Horsemint	S3	<1	Grassland matrix
Oenothera clelandii	Evening Primrose	S2	<1	Grassland matrix
Perognathus flavescens	Plains Pocket Mouse	S1	<5	Grassland matrix
Cyperus schweinitzii	Schweinitz's Flatsedge	S3	<1	Grassland matrix, Moist edge/mudflat, Roadside/railroad
Poliocitellus franklinii	Franklin's Ground Squirrel	S2S3	<2	Grassland matrix, Roadside/railroad
Taxidea taxus	American Badger	S3	<1	Grassland matrix, Savanna pasture/orchard, Row/close grown crops
Mustela nivalis	Least Weasel	S3	<1	Grassland matrix, Savanna/Shrub/Woodland matrix, Marsh, Wet prairie/meadow
Pantherophis vulpinus	Eastern Foxsnake	S1	<2	Grassland matrix, Wet prairie/meadow
Speyeria idalia	Regal Fritillary	S3	<2	Grassland native prairie
Carex lacustris	Lake-bank Sedge	S2	<3	Grassland native prairie, Marsh
Mustela frenata	Long-tailed Weasel	S3	<3	Habitat generalist, Savanna/Shrub/Woodland matrix, Forest matrix, Grassland matrix
Porzana carolina	Sora	S2	<2	Marsh, Moist edge/mudflat
Ambystoma tigrinum	Eastern Tiger Salamander	S3	<1	Savanna/Shrub/Woodland matrix, Grassland matrix, Wetland matrix
Dryopteris cristata	Crested Fern	S1	<2	Spring/spring branch, Forest bottomland
Lysimachia thyrsiflora	Tufted Loosestrife	S1	<2	Swamp, Wet prairie/meadow, Fen/seep, Marsh

Clonophis kirtlandii	Kirtland's Snake	S1	<1	Wet prairie/meadow
Carex comosa	Bristly Sedge	S2	<1	Wetland matrix, Forest bottomland
Trillium nivale	Snow Trillium	S3	<1	Woodland

State Rank Definitions:

- S1: Critically imperiled in the state because of extreme rarity of or because of some factor(s) making it especially vulnerable to extirpation from the state. Typically, 5 or fewer occurrences or very few remaining individuals (<1,000).
- S2: Imperiled in the state because of rarity or because of some factor(s) making it very vulnerable to extirpation from the state (6 to 20 occurrences or few remaining individuals).
- S3: Vulnerable in the state either because rare and uncommon, or found only in a restricted range (even if abundant at some locations), or because of other factors making it vulnerable to extirpation. Typically 21 to 100 occurrences or between 3,000 and 10,000 individuals.
- S4: Uncommon but not rare, and usually widespread in the nation or state. Possible cause of long-term concern. Usually more than 100 occurrences and more than 10,000 individuals.
- S#S#: Range Rank: A numeric range rank (e.g., S2S3) is used to indicate the range of uncertainty about the exact status.
- ?: Denotes inexact or uncertain numeric rank.

There are no regulatory requirements associated with this status, however we encourage voluntary stewardship to minimize the risk of further decline that could lead to listing.

STATE ENDANGERED species are protected under the Wildlife Code of Missouri (3CSR10-4.111).
See the 2022 Missouri Species and Communities of Conservation Concern Checklist for a complete list.

General recommendations related to this project or site, or based on information about the historic range of species (unrelated to any specific Natural Heritage records):

- **Contact Area Manager:** This project is within Deer Ridge and Neeper Conservation Areas. Please contact area manager, Ryan Kelly (573-754-6171 Ext.1802) to coordinate project activities at these areas.

- **Utility Lines:** Cross-country lines affect both plants and wildlife, as do activities necessary to their construction, maintenance and repair. Stream and drainage crossings are primary concerns, and every effort should be made to avoid erosion, silt introduction, petroleum or chemical pollution, and disruption or realignment of stream banks and beds. All wetlands should be avoided to the extent possible. Where wetlands cannot be avoided, project managers should minimize impacts and develop a mitigation plan to replace lost aquatic functions. See Best Management Practices for Construction and Development Projects Affecting Missouri Rivers and Streams (mo.gov) for best management recommendations for in-stream work.
  - During construction ground disturbance should be minimized. In areas where ground disturbance is necessary, best management practices for erosion control should be implemented to minimize negative impacts.
  - Revegetation is an important part of managing utility corridors, and it can have significant resource impacts – for better or worse. Revegetation of disturbed areas is recommended to minimize erosion, as is restoration with native plant species compatible with the local landscape and wildlife needs. Native shrubs (e.g. buttonbush, dogwood, willow) are a good option to stabilize streambanks, slow water velocities, and provide some wildlife habitat.

Annuals like Rye Grass may be combined with native perennials for quicker green-up. Avoid aggressive exotic perennials such as crown vetch and sericea lespedeza.

- Maintenance of ground cover in utility corridors can have significant implications for sensitive resources. Native plant species typically require low maintenance over the long term and provide more benefits to native wildlife. Utility corridors can provide wildlife travel corridors, food sources and types of low-growing plant diversity sometimes rare in adjoining land. Mowing and maintenance schedules should consider nesting seasons, and diversity in plant composition. If herbicides will be used to control vegetation in the corridor after construction has been completed, best management practices should be implemented to avoid impacts to non-target plant species and to avoid impacts to all aquatic species.

➢ **Conservation Opportunity Areas:** A portion of this project is within Deer Ridge Conservation Opportunity Area. COAs are key landscapes that represent the greatest opportunities for sustainable conservation of the Missouri's diverse flora and fauna and the natural communities they depend upon, including: grasslands (including prairie and savanna), glades, forests and woodlands, wetlands, caves and karst, and rivers and streams. COAs have been identified based on several factors, including the diversity and rarity of species and natural communities present, and the comparative likelihood/importance of projects to maintain them in the area over time. COAs have no regulatory role, but do reflect interest as a planning tool from multiple government agencies, non-governmental organizations and citizen groups to facilitate conservation in the area. Maintenance of high quality natural terrestrial and aquatic communities will help provide important habitat for the COA's biodiversity. Funding might be available to manage for important habitats within the COA. Please visit Missouri Comprehensive Conservation Strategy - MDC Tiered Approach to Natural Community and Habitat Management (arcgis.com) or contact Missouri Department of Conservation for more information.

➢ **Bald Eagles:** Bald Eagles (*Haliaeetus leucocephalus*) nest near streams or water bodies in the project area. Nests are large and fairly easy to identify. While no longer listed as endangered, eagles continue to be protected by the federal government under the Bald and Golden Eagle Protection Act. Work managers should be alert for nesting areas within 1500 meters of project activities, and follow federal guidelines at: Do I need an eagle take permit? | U.S. Fish & Wildlife Service (fws.gov) if eagle nests are seen.

➢ Invasive exotic species are a significant issue for fish, wildlife and agriculture in Missouri. Seeds, eggs, larvae, and aquatic plant material may be moved to new sites on boats or construction equipment, so inspect and clean equipment thoroughly before moving between project sites.

- Remove any mud, soil, trash, plants (or plant material) or animals from equipment before leaving any water body or work area.
- Drain water from boats and machinery that has operated in water, checking motor cavities, live-well, bilge and transom wells, tracks, buckets, and any other water reservoirs.
- When possible, wash and rinse equipment thoroughly with hard spray or HOT water (≥140° F, typically available at do-it-yourself carwash sites), and dry in the hot sun before using again.

These recommendations are ones project managers might prudently consider based on a general understanding of species needs and landscape conditions. Natural Heritage records largely reflect sites visited by specialists in the last 30 years. Many privately owned tracts have not been surveyed and could host remnants of species once but no longer common.

Stanley Consultants INC.
2658 Crosspark Road
Suite 100
Coralville, IA 52241
319.259.6658
stanleyconsultants.com

February 6, 2023

Eric Niemeyer
USDA - NRCS
Columbia, MO

SUBJECT: Northeast Missouri Electric Power Cooperative – Missouri to Iowa Transmission Line Environmental Assessment

Dear Eric:

Northeast Missouri Electric Power Cooperative (NEP/Applicant) is in the process of performing an environmental assessment pursuant to the National Environmental Policy Act (NEPA) for the United States Department of Agriculture (USDA), Rural Development to assess the environmental impacts of a transmission line rebuild and construction project (Project). NEP has proposed to rebuild approximately 52 miles of transmission line to support a larger capacity, construct six miles of new transmission line, and conduct improvements at an existing substation to support higher voltages and additional transmission lines. This project stretches from Lewis County, Missouri, to Lee County, Iowa, and intends to obtain funding through the Rural Utility Services (RUS) Federal Grant Program.

The purpose of the Project is to provide the following benefits to the NEP transmission system:

- Provide additional transmission capacity in the Iowa portion of NEP's power system.
- Improve reliability in the area surrounding the project in both Iowa and Missouri portions of the system.
- Provide economic power to existing power by adequately meeting projected load from within the NEP system.

Approval of the proposed Project will result in the rebuild/ construction and operation of overhead electric transmission lines and distribution facilities. The majority of Project corridor would be rebuilt on existing utility easements, owned by NEP and others, to accommodate a new double-circuit line, with a small portion (approximately six miles) requiring easement acquisition and development of a new Right-of-Way and transmission line installation. Additionally, the Winchester Substation will be expanded.

The topography throughout the Project corridor varies, but generally consists of rills, ravines, intermittent and ephemeral creeks, and perennial streams and rivers in major valleys. Land uses within the project area, at lower elevations, is agricultural and residential development. Land use at higher elevations is predominately undeveloped deciduous forests with some residential development.

Project construction is expected take place over the course of several years as development of the route will be broken into sections. As stated, most of the Project is within existing utility right-of-way (ROW). Grading of the new utility easement will be minimized to the extent feasible and will focus on maintaining original contours. When possible, wetlands and other Waters of the United States (WOTUS) will be avoided and there will be minimal impacts when avoidance is not feasible.

The project involves several segments of transmission line and the Winchester Substation improvements. The attached figure, "NEP_MO-IA_Transmission_MapSeries.pdf," provides the geographical location of each section below:

- **Franklin Tap to Franklin Substation, 1.77 miles of double circuit 69 kV line rebuild**: this portion of the project will consist of rebuilding the existing Franklin Tap with single metal pole structures following the existing right-of-way.
- **Franklin Sub to Winchester Substation, 25.27 miles of 161 kV (operated at 69 kV) new line construction as single circuit new line and double circuit with existing ITC/Ameren 161 kV transmission line**: this portion of the project will tie the existing Winchester Substation with the existing Franklin Substation. The new NEP line will be a single circuit line (5.54 miles) to connect with an existing ITC/Ameren 161 kV transmission line and create a double circuit with the existing ITC (Iowa, 12.24 miles) and Ameren (Missouri, 7.49 miles) 161 kV following the existing ITC/Ameren right-of-way using single metal pole structures.
- **Winchester 69 kV to 12.47 kV Substation Improvements**: this portion of the project will involve upgrading the Winchester Substation to accommodate the new Franklin Sub to Winchester Sub transmission line and the rebuild Winchester Tap (below).
- **Winchester Tap to Winchester Substation, 9.20 miles of 161 kV (operated at 69 kV) line rebuild**: this portion of the project will consist of rebuilding the existing Winchester Tap with single metal pole structures following the existing right-of-way.
- **Winchester Tap to Williamstown Tap, 10.42 miles of 161 kV (operated at 69 kV) line rebuild**: this portion of the project will consist of rebuilding the existing Winchester Tap to Williamstown Tap with single metal pole structures following the existing right-of-way.
- **Williamstown Tap to Lewistown Switch Station: 10.43 miles of 161 kV (operated at 69 kV) line rebuild**: this portion of the project will consist of rebuilding the existing Williamstown Tap to Lewistown Switch Station with single metal pole structures following the existing right-of-way.

The above transmissions line will generally use 60 to 80 foot tall single-pole steel structures with spacing of generally 250 – 400 feet apart. Structures will be direct embedded 10 – 20 feet deep in drilled holes approximately 3 – 4 feet in diameter. Holes will be back filled with rock and any spoils removed and surrounding disturbance restored to original condition. At certain locations on the route, down-guys and anchors will be used to support the line. Anchors will have helical fins and will be installed by rotating the helical fins into the ground. In addition to direct embed steel poles, engineered laminated wood structures will also be utilized and directed buried in a similar manner to direct embed steel poles. Self-supporting steel structures may be used on the project. These structures will require a drilled pier concrete foundation, the size of which is anticipated to be 3-5 feet in diameter and 10-15 feet deep. Installed pole will generally have a height of 60 – 75 feet and will be supporting electrical transmission conductor.

Upgrades to the Winchester Substation will consist of expanding the footprint of the existing substation and adding equipment necessary to accommodate the new and rebuilt transmission circuits. The expanded area around the existing substation will be graded to level, a copper grounding grid will be installed below the soil surface, and approximately 6 inches of crushed rock will be added across the site. Also, within the site,

various structure foundations will be installed to a depth of between five and ten feet. The site will be enclosed by a chain-link fence with posts installed directly in the ground.

Upon Completion of construction, operations at the substation sites are expected to generate 4 – 10 trips per year for maintenance and inspection. The transmission corridor will be visited at least once a year and vegetation management will be provided through manual upkeep. The planned operational life of the installed facilities is approximately 50 years.

We are requesting information on the possible effects of the proposal on important farmland and any recommendations you have to minimize or avoid these effects. We also seek your assessment of the compatibility of the proposal with state and local government or any private programs and policies to protect important farmland. The NRCS form AD-1006 is enclosed as well as the soils report for the Project corridor. To ensure compliance with the Farmland Protection Policy Act and to support the NEPA process, RUS requests that the USDA Natural Resources Conservation Service review the enclosed project-specific information and complete Parts II, IV, and V on the enclosed NRCS-CPA-106.

We request your review of this Project and ask that you provide information on any concerns, resources, or potential impacts that you believe the forthcoming Environmental Assessment should address. We would appreciate any recommendations you may have to mitigate or avoid environmental impacts. Also, please share any information regarding additional review requirements that your agency may have. We would appreciate a response within **30 days** of your receipt of this request.

Please submit your comments on this Project to me at DusingMegan@stanleygroup.com. You may also mail responses to me at 2658 Crosspark Road Suite 100, Coralville, Iowa, 52241. Should you have any questions or would like additional information, please do not hesitate to contact me at the email address listed above or at (319) 259-6600.

Sincerely,

Megan Dusing

Megan Dusing, PWS
Project Manager
Stanley Consultants, Inc.
Enclosures: Form NRCS-CPA-106, Project Figures, Soils Report

Form NRCS-CPA-106

U.S. DEPARTMENT OF AGRICULTURE
Natural Resources Conservation Service

NRCS-CPA-106
(Rev. 1-91)

FARMLAND CONVERSION IMPACT RATING FOR CORRIDOR TYPE PROJECTS

PART I *(To be completed by Federal Agency)*	3. Date of Land Evaluation Request **2/2/23**	4. Sheet 1 of **1**
1. Name of Project **NEP Missouri to Iowa Enviro Assessment**	5. Federal Agency Involved **Rural Utility Services**	
2. Type of Project **Overhead Transmission Line/Substation**	6. County and State **Lee Co Iowa; Lewis Co & Clark Co, Missouri**	

PART II *(To be completed by NRCS)*	1. Date Request Received by NRCS	2. Person Completing Form
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form). YES ☐ NO ☐		4. Acres Irrigated / Average Farm Size
5. Major Crop(s)	6. Farmable Land in Government Jurisdiction Acres: %	7. Amount of Farmland As Defined in FPPA Acres: %
8. Name Of Land Evaluation System Used	9. Name of Local Site Assessment System	10. Date Land Evaluation Returned by NRCS

PART III *(To be completed by Federal Agency)*	Alternative Corridor For Segment ____ Corridor A	Corridor B	Corridor C	Corridor D
A. Total Acres To Be Converted Directly	7			
B. Total Acres To Be Converted Indirectly, Or To Receive Services	0			
C. Total Acres In Corridor	2776			
PART IV *(To be completed by NRCS) Land Evaluation Information*				
A. Total Acres Prime And Unique Farmland				
B. Total Acres Statewide And Local Important Farmland				
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted				
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value				
PART V *(To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)*				
PART VI *(To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))* — Maximum Points				
1. Area in Nonurban Use — 15	15			
2. Perimeter in Nonurban Use — 10	10			
3. Percent Of Corridor Being Farmed — 20	20			
4. Protection Provided By State And Local Government — 20	0			
5. Size of Present Farm Unit Compared To Average — 10	5			
6. Creation Of Nonfarmable Farmland — 25	0			
7. Availablility Of Farm Support Services — 5	5			
8. On-Farm Investments — 20	5			
9. Effects Of Conversion On Farm Support Services — 25	0			
10. Compatibility With Existing Agricultural Use — 10	0			
TOTAL CORRIDOR ASSESSMENT POINTS — 160	60	0	0	0
PART VII *(To be completed by Federal Agency)*				
Relative Value Of Farmland (From Part V) — 100	0	0	0	0
Total Corridor Assessment (From Part VI above or a local site assessment) — 160	60	0	0	0
TOTAL POINTS *(Total of above 2 lines)* — 260	60	0	0	0

1. Corridor Selected:	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used?
A	**7**	**2/1/23**	YES ☐ NO ☑

5. Reason For Selection:

The route was selected following discussion and coordination with property owners and use of existing utility easements. Selection based on least amount of impact to farmland.

Signature of Person Completing this Part: *Megan Dusing* DATE **2/2/23**

NOTE: Complete a form for each segment with more than one Alternate Corridor

Clear Form

USDA

United States Department of Agriculture

May 5, 2023

Megan Dusing, PWS, Principal Environmental Scientist
STANLEYCONSULTANTS,
2658 Crosspark Road,
Coralville, Iowa 52241

Dear Megan Dusing

Attached is a Farmland Conversion Impact Rating (form AD-1006) for the proposed Winchester Electric Substation Expansion in Clark County, Missouri. After you complete the form, please return one copy for our records.

Please note that if the Total Points (Parts V & VI) in Part VII exceeds 160, alternative sites should be considered. Two alternatives are required if the score is between 160-220, and three alternatives are required if the score is over 220.

Review of the remainder of the project: Areas where the electric distribution facilities or lines are constructed within road and highway rights of ways are determined "previously converted" to non-agricultural uses. Areas where the poles and guy wires are installed in cultivated fields and pastures will have only a minor impact on the conversion of important farmlands.

If you have any questions, please call me at (573) 769-2235 Ext. # 133.

Sincerely,

Scott Larsen
Area Resource Soil Scientist

Attachment

cc: Brandy Franklin, DC, NRCS, Kahoka, MO

Natural Resources Conservation Service
6465 Highway 168, Suite C, Palmyra, Missouri 63461
PH: (573) 769-2235 FAX: (855) 849-1536

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*	Date Of Land Evaluation Request 4/12/23
Name Of Project NEP Missouri to Iowa Enviro Assessment	Federal Agency Involved Rural Utility Services
Proposed Land Use Winchester Electric Substation Expansion	County And State Clark County Missouri
PART II *(To be completed by NRCS)*	Date Request Received By NRCS 4/12/23

Does the site contain prime, unique, statewide or local important farmland? *(If no, the FPPA does not apply -- do not complete additional parts of this form).* Yes ☑ No ☐		Acres Irrigated NA	Average Farm Size 468 ac.
Major Crop(s) Corn and soybean	Farmable Land In Govt. Jurisdiction Acres: 322,992 ac. % 99	Amount Of Farmland As Defined in FPPA Acres: 239,998 ac. % 73	
Name Of Land Evaluation System Used LESA	Name Of Local Site Assessment System NA	Date Land Evaluation Returned By NRCS 5/5/23	

PART III *(To be completed by Federal Agency)*	Alternative Site Rating Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	0.4			
B. Total Acres To Be Converted Indirectly	0.0			
C. Total Acres In Site	0.4	0.0	0.0	0.0
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	0.0			
B. Total Acres Statewide And Local Important Farmland	0.4			
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted	0.0			
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value	65.9			
PART V *(To be completed by NRCS)* Land Evaluation Criterion Relative Value Of Farmland To Be Converted *(Scale of 0 to 100 Points)*	81		0	0

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(These criteria are explained in 7 CFR 658.5(b)*	Maximum Points				
1. Area In Nonurban Use		15			
2. Perimeter In Nonurban Use		10			
3. Percent Of Site Being Farmed		0			
4. Protection Provided By State And Local Government		0			
5. Distance From Urban Builtup Area		15			
6. Distance To Urban Support Services		10			
7. Size Of Present Farm Unit Compared To Average		5			
8. Creation Of Nonfarmable Farmland		0			
9. Availability Of Farm Support Services		5			
10. On-Farm Investments		0			
11. Effects Of Conversion On Farm Support Services		0			
12. Compatibility With Existing Agricultural Use		0			
TOTAL SITE ASSESSMENT POINTS	160	60	0	0	0
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland *(From Part V)*	100	81		0	0
Total Site Assessment *(From Part VI above or a local site assessment)*	160	60	0	0	0
TOTAL POINTS *(Total of above 2 lines)*	260	141	0	0	0

Site Selected: Winchester Substation	Date Of Selection 11/1/83	Was A Local Site Assessment Used? Yes ☐ No ☒

Reason For Selection: Expansion of existing substation.

(See Instructions on reverse side)

This form was electronically produced by National Production Services Staff

Clear Form

Form AD-1006 (10-83)

Project Figures

N

Franklin Switch
69 kV
1.77 Miles
Franklin Sub
161 kV
5.54 Miles
161 kV
12.24 Miles
Winchester Switch
Kahoka Switch
69 kV
9.20 Miles
Winchester Sub
161 kV
7.49 Miles
69 kV
10.42 Miles
Williamstown Sub
69 kV
10.43 Miles
Lewistown Switch

Bentonsport
Bonaparte
Primrose
West Point
Franklin
Lee
Farmington
Donnellson
Sterling
Shimek State Forest - Lick Creek Unit
Charlie Heath Memorial Conservation Area
Clark Conservation Area
Anson
Nauvoo
Montrose
Chambersburg
MISSOURI
IOWA
Peaksville
Fox Valley Lake Conservation Area
Revere
Luray
Medill
Kahoka
Clark
Mooar
Sandusky
Keokuk
Wyaconda
Vayland
Warsaw
Great Riv Nat'l Wildlife Ref
Antioch
Gregory Landing
St Patrick
Derrahs
Deer Ridge
Deer Ridge Conservation Area
Fenway
Meyer
Benjamin
Canton
Monticello
La Belle
Lewistown
Earthstar Geographics, Iowa DNR, Missouri Dep
Garmin, Sa

J40 · 103 · 2 · 81 · V · K · 27 · 218 · 61 · J72 · W62 · C · 136 · 32 · 16 · D · A · E · BB · 6 · 12 · X28

Stanley Consultants co.

Substation Site
- Existing
- Proposed

Transmission Centerline
- Existing Line / Proposed Rebuild
- Proposed New Construction
- Proposed ITC Joint Use
- Proposed Ameren Joint Use

1:192,000
0 3.5 7 14 Miles

NEP MO-IA Transmission Line
Overview Map

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N

Franklin Switch

250th Ave

69 kV
1.77 Miles

Pitman Creek

Pitman Creek

Pitman Creek

Otte Rd

Otte Rd

Otte Rd

Otte R

161 kV
5.54 Miles

Franklin Sub

Esri Community Maps Contributors, Iowa DNR, © O
SafeGraph, GeoTechnologies, Inc, METI/NASA, USG

Substation Site
- Existing
- Proposed

Transmission Centerline
- Existing Line / Proposed Rebuild
- Proposed New Construction
- Proposed ITC Joint Use
- Proposed Ameren Joint Use

Stanley Consultants co.

1:8,400

0 0.3 0.6 Miles

NEP MO-IA Transmission Line

Franklin Switch Station to Franklin Sub

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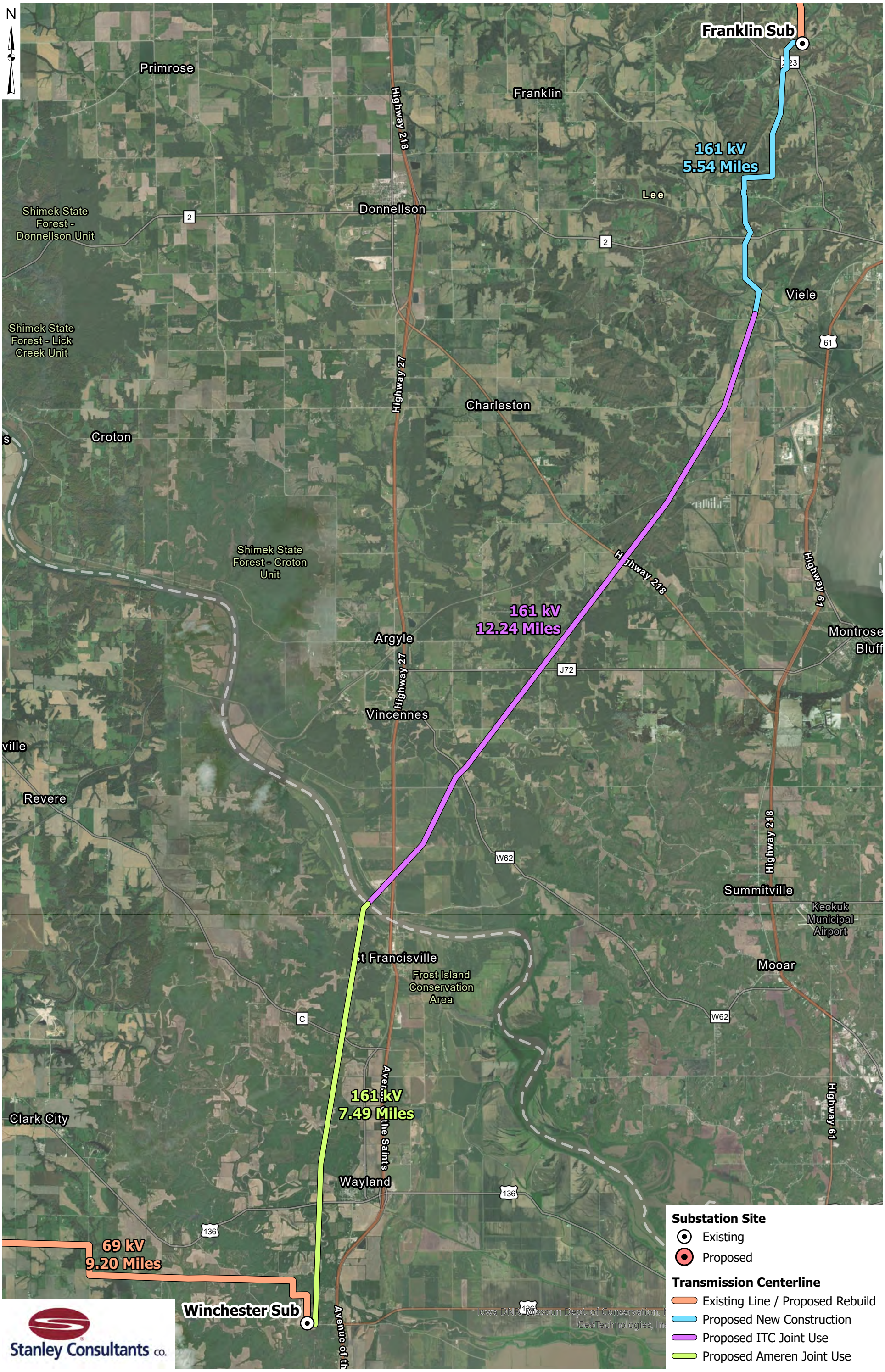
N
Franklin Sub
Primrose
Franklin
Highway 218
161 kV
5.54 Miles
Lee
Shimek State Forest - Donnellson Unit
Donnellson
2
Viele
61
Shimek State Forest - Lick Creek Unit
Highway 27
Charleston
Croton
Shimek State Forest - Croton Unit
Highway 61
161 kV
12.24 Miles
Argyle
Montrose
Bluff
J72
Vincennes
Revere
W62
Summitville
Keokuk Municipal Airport
Mooar
Frost Island Conservation Area
C
161 kV
7.49 Miles
Clark City
Wayland
136
69 kV
9.20 Miles
Winchester Sub
Substation Site
Existing
Proposed
Transmission Centerline
Existing Line / Proposed Rebuild
Proposed New Construction
Proposed ITC Joint Use
Proposed Ameren Joint Use
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Miles
NEP MO-IA Transmission Line
Franklin Sub to Winchester Sub
Stanley Consultants co.
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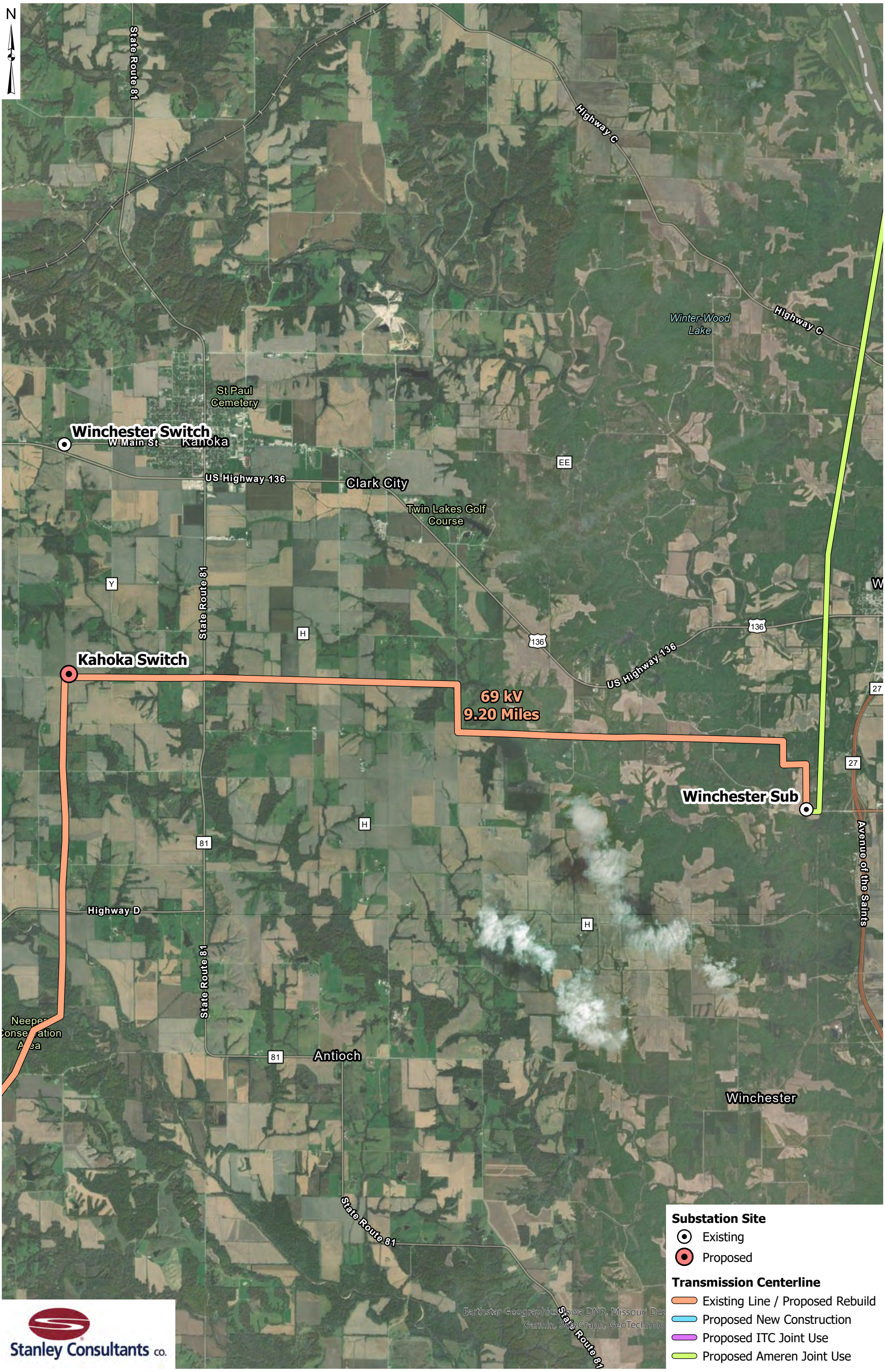
N
State Route 81
Highway C
Winter-Wood Lake
Highway C
St Paul Cemetery
Winchester Switch
W Main St
Kahoka
US Highway 136
Clark City
EE
Twin Lakes Golf Course
Y
State Route 81
H
136
136
US Highway 136
Kahoka Switch
69 kV
9.20 Miles
27
27
Winchester Sub
81
H
Avenue of the Saints
Highway D
H
State Route 81
Neeper Conservation Area
81
Antioch
Winchester
State Route 81
State Route 81
Substation Site
Existing
Proposed
Transmission Centerline
Existing Line / Proposed Rebuild
Proposed New Construction
Proposed ITC Joint Use
Proposed Ameren Joint Use
Stanley Consultants co.
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2
4
Miles
NEP MO-IA Transmission Line
Winchester Sub to Kahoka Switch Station
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N

Kahoka Switch

69 kV
9.20 Miles

69 kV
10.42 Miles

Williamstown Sub

69 kV
10.43 Miles

Y
HH
H
81
M
FF
State Route 81
Highway D
Neeper
Neeper Conservation Area
Antioch
Williamstown
State Hwy E
Highway A

Missouri Dept. of Conservation, Missouri DNR, Esri,

Stanley Consultants co.

Substation Site
- Existing
- Proposed

Transmission Centerline
- Existing Line / Proposed Rebuild
- Proposed New Construction
- Proposed ITC Joint Use
- Proposed Ameren Joint Use

1:48,000
0 1.75 3.5 Miles

NEP MO-IA Transmission Line
Kahoka Switch Station to Williamstown Sub

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N

69 kV
10.42 Miles

Williamstown Sub

Williamstown

State Hwy E

State Highway A

Deer Ridge
Conservation
Area

Deer
Ridge
Community

69 kV
10.43 Miles

State Highway A

State Highway A

Luttrell
Farms
Lake

Lewistown Switch

Lewistown

Missouri Dept. of Conservation, Missouri DNR, Esri,

Y

H

6

16

Substation Site

- Existing
- Proposed

Transmission Centerline

- Existing Line / Proposed Rebuild
- Proposed New Construction
- Proposed ITC Joint Use
- Proposed Ameren Joint Use

Stanley Consultants co.

1:48,000

0 1.75 3.5 Miles

NEP MO-IA Transmission Line

Williamstown Sub to Lewistown Switch Station

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Soils Report

Stanley Consultants INC.
2658 Crosspark Road
Suite 100
Coralville, IA 52241
319.259.6658
stanleyconsultants.com

January 30, 2023

Jim Kelley
Project Manager
Eastern Branch
Regulatory Division
Rock Island District Corps of Engineers
P.O. Box 2004
Rock Island, IL 61204-2004

SUBJECT: Northeast Missouri Electric Power Cooperative – Missouri to Iowa Transmission Line Environmental Assessment

Dear Jim:

Northeast Missouri Electric Power Cooperative (NEP/Applicant) is in the process of performing an environmental assessment pursuant to the National Environmental Policy Act (NEPA) for the United States Department of Agriculture (USDA), Rural Development to assess the environmental impacts of a transmission line rebuild and construction project (Project). NEP has proposed to rebuild approximately 52 miles of transmission line to support a larger capacity, construct six miles of new transmission line, and conduct improvements at an existing substation to support higher voltages and additional transmission lines. This project stretches from Lewis County, Missouri, to Lee County, Iowa, and intends to obtain funding through the Rural Utility Services (RUS) Federal Grant Program.

The purpose of the Project is to provide the following benefits to the NEP transmission system:

- Provide additional transmission capacity in the Iowa portion of NEP's power system.
- Improve reliability in the area surrounding the project in both Iowa and Missouri portions of the system.
- Provide economic power to existing power by adequately meeting projected load from within the NEP system.

Approval of the proposed Project will result in the rebuild/ construction and operation of overhead electric transmission lines and distribution facilities. The majority of Project corridor would be rebuilt on existing utility easements, owned by NEP and others, to accommodate a new double-circuit line, with a small portion (approximately six miles) requiring easement acquisition and development of a new Right-of-Way and transmission line installation. Additionally, the Winchester Substation will be expanded.

The topography throughout the Project corridor varies, but generally consists of rills, ravines, intermittent and ephemeral creeks, and perennial streams and rivers in major valleys. Land uses within the project area, at lower elevations, is agricultural and residential development. Land use at higher elevations is predominately undeveloped deciduous forests with some residential development.

Project construction is expected take place over the course of several years as development of the route will be broken into sections. As stated, most of the Project is within existing utility right-of-way (ROW). Grading of the new utility easement will be minimized to the extent feasible and will focus on maintaining original contours. When possible, wetlands and other Waters of the United States (WOTUS) will be avoided and there will be minimal impacts when avoidance is not feasible.

The project involves several segments of transmission line and the Winchester Substation improvements. The attached figure, "NEP_MO-IA_Transmission_MapSeries.pdf," provides the geographical location of each section below:

- **Franklin Tap to Franklin Substation, 1.77 miles of double circuit 69 kV line rebuild**: this portion of the project will consist of rebuilding the existing Franklin Tap with single metal pole structures following the existing right-of-way.
- **Franklin Sub to Winchester Substation, 25.27 miles of 161 kV (operated at 69 kV) new line construction as single circuit new line and double circuit with existing ITC/Ameren 161 kV transmission line**: this portion of the project will tie the existing Winchester Substation with the existing Franklin Substation. The new NEP line will be a single circuit line (5.54 miles) to connect with an existing ITC/Ameren 161 kV transmission line and create a double circuit with the existing ITC (Iowa, 12.24 miles) and Ameren (Missouri, 7.49 miles) 161 kV following the existing ITC/Ameren right-of-way using single metal pole structures.
- **Winchester 69 kV to 12.47 kV Substation Improvements**: this portion of the project will involve upgrading the Winchester Substation to accommodate the new Franklin Sub to Winchester Sub transmission line and the rebuild Winchester Tap (below).
- **Winchester Tap to Winchester Substation, 9.20 miles of 161 kV (operated at 69 kV) line rebuild**: this portion of the project will consist of rebuilding the existing Winchester Tap with single metal pole structures following the existing right-of-way.
- **Winchester Tap to Williamstown Tap, 10.42 miles of 161 kV (operated at 69 kV) line rebuild**: this portion of the project will consist of rebuilding the existing Winchester Tap to Williamstown Tap with single metal pole structures following the existing right-of-way.
- **Williamstown Tap to Lewistown Switch Station: 10.43 miles of 161 kV (operated at 69 kV) line rebuild**: this portion of the project will consist of rebuilding the existing Williamstown Tap to Lewistown Switch Station with single metal pole structures following the existing right-of-way.

The above transmissions line will generally use 60 to 80 foot tall single-pole steel structures with spacing of generally 250 – 400 feet apart. Structures will be direct embedded 10 – 20 feet deep in drilled holes approximately 3 – 4 feet in diameter. Holes will be back filled with rock and any spoils removed and surrounding disturbance restored to original condition. At certain locations on the route, down-guys and anchors will be used to support the line. Anchors will have helical fins and will be installed by rotating the helical fins into the ground. In addition to direct embed steel poles, engineered laminated wood structures will also be utilized and directed buried in a similar manner to direct embed steel poles. Self-supporting steel structures may be used on the project. These structures will require a drilled pier concrete foundation, the size of which is anticipated to be 3-5 feet in diameter and 10-15 feet deep. Installed pole will generally have a height of 60 – 75 feet and will be supporting electrical transmission conductor.

Upgrades to the Winchester Substation will consist of expanding the footprint of the existing substation and adding equipment necessary to accommodate the new and rebuilt transmission circuits. The expanded area

around the existing substation will be graded to level, a copper grounding grid will be installed below the soil surface, and approximately 6 inches of crushed rock will be added across the site. Also, within the site, various structure foundations will be installed to a depth of between five and ten feet. The site will be enclosed by a chain-link fence with posts installed directly in the ground.

Upon Completion of construction, operations at the substation sites are expected to generate 4 – 10 trips per year for maintenance and inspection. The transmission corridor will be visited at least once a year and vegetation management will be provided through manual upkeep. The planned operational life of the installed facilities is approximately 50 years.

In anticipation of permit requirements pursuant to Section 404 of the Clean Water Act, Applicant's consultant will prepare a preliminary wetland determination of the Project corridor using available desktop information. This documentation will be submitted to the USACE Rock Island District for review and concurrence.

We request your review of this Project and ask that you provide information on any concerns, resources, or potential impacts that you believe the forthcoming Environmental Assessment should address. We would appreciate any recommendations you may have to mitigate or avoid environmental impacts. Also, please share any information regarding additional review requirements that your agency may have. We would appreciate a response within **30 days** of your receipt of this request.

Please submit your comments on this Project to me at DusingMegan@stanleygroup.com. You may also mail responses to me at 2658 Crosspark Road Suite 100, Coralville, Iowa, 52241. Should you have any questions or would like additional information, please do not hesitate to contact me at the email address listed above or at (319) 259-6600.

Sincerely,

Megan Dusing

Megan Dusing, PWS
Project Manager
Stanley Consultants, Inc.
Enclosures: Project Figures and Overview Maps

Project Figures

N

Franklin Switch
69 kV
1.77 Miles
Franklin Sub
161 kV
5.54 Miles
161 kV
12.24 Miles
Winchester Switch
Kahoka Switch
69 kV
9.20 Miles
Winchester Sub
161 kV
7.49 Miles
69 kV
10.42 Miles
Williamstown Sub
69 kV
10.43 Miles
Lewistown Switch

Bentonsport
Bonaparte
Primrose
West Point
Franklin
Lee
Farmington
Donnellson
Sterling
Shimek State Forest - Lick Creek Unit
Charlie Heath Memorial Conservation Area
Clark Conservation Area
Anson
Nauvoo
Montrose
Chambersburg
MISSOURI
IOWA
Peaksville
Fox Valley Lake Conservation Area
Revere
Luray
Medill
Kahoka
Clark
Mooar
Sandusky
Keokuk
Wyaconda
Vayland
Warsaw
Great Riv Nat'l Wildlife Ref
Antioch
Gregory Landing
St Patrick
Derrahs
Deer Ridge
Deer Ridge Conservation Area
Fenway
Meyer
Benjamin
Canton
Monticello
La Belle
Lewistown
Earthstar Geographics, Iowa DNR, Missouri Dep
Garmin, Sa

J40 · 103 · 2 · 81 · V · K · 27 · 218 · 61 · J72 · W62 · C · 136 · 32 · 16 · D · A · E · BB · 6 · 12 · X28

Stanley Consultants co.

Substation Site
- Existing
- Proposed

Transmission Centerline
- Existing Line / Proposed Rebuild
- Proposed New Construction
- Proposed ITC Joint Use
- Proposed Ameren Joint Use

1:192,000
0 3.5 7 14 Miles

NEP MO-IA Transmission Line
Overview Map

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N

Franklin Switch

250th Ave

69 kV
1.77 Miles

Pitman Creek

Pitman Creek

Pitman Creek

Otte Rd

Otte Rd

Otte Rd

Otte R

161 kV
5.54 Miles

Franklin Sub

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SafeGraph, GeoTechnologies, Inc, METI/NASA, USG

Substation Site
- Existing
- Proposed

Transmission Centerline
- Existing Line / Proposed Rebuild
- Proposed New Construction
- Proposed ITC Joint Use
- Proposed Ameren Joint Use

Stanley Consultants co.

1:8,400

0 0.3 0.6 Miles

NEP MO-IA Transmission Line

Franklin Switch Station to Franklin Sub

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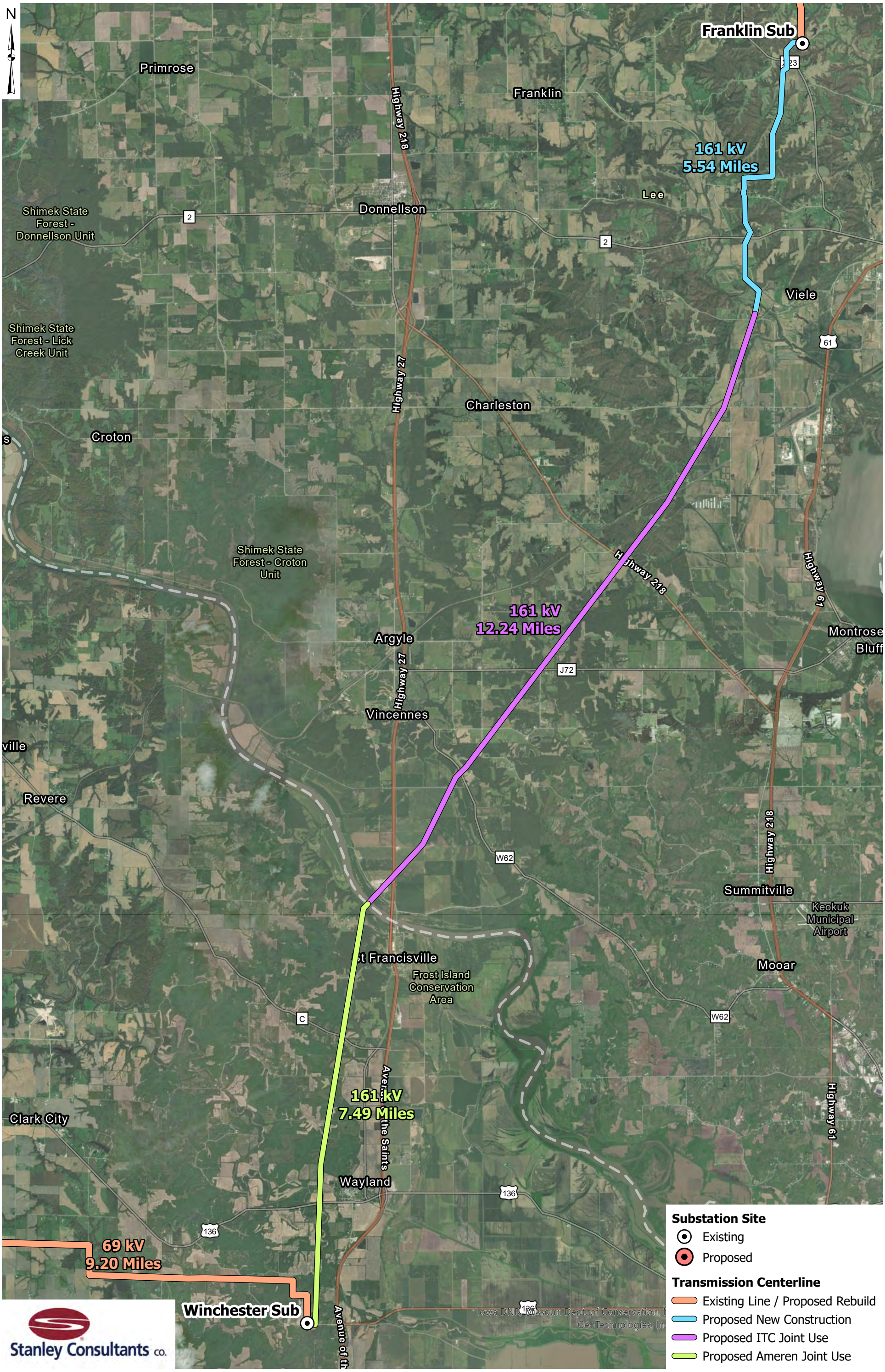
N
Franklin Sub
Primrose
Franklin
Highway 218
161 kV
5.54 Miles
Lee
Shimek State Forest - Donnellson Unit
Donnellson
2
Viele
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Proposed Ameren Joint Use
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Miles
NEP MO-IA Transmission Line
Franklin Sub to Winchester Sub
Stanley Consultants co.
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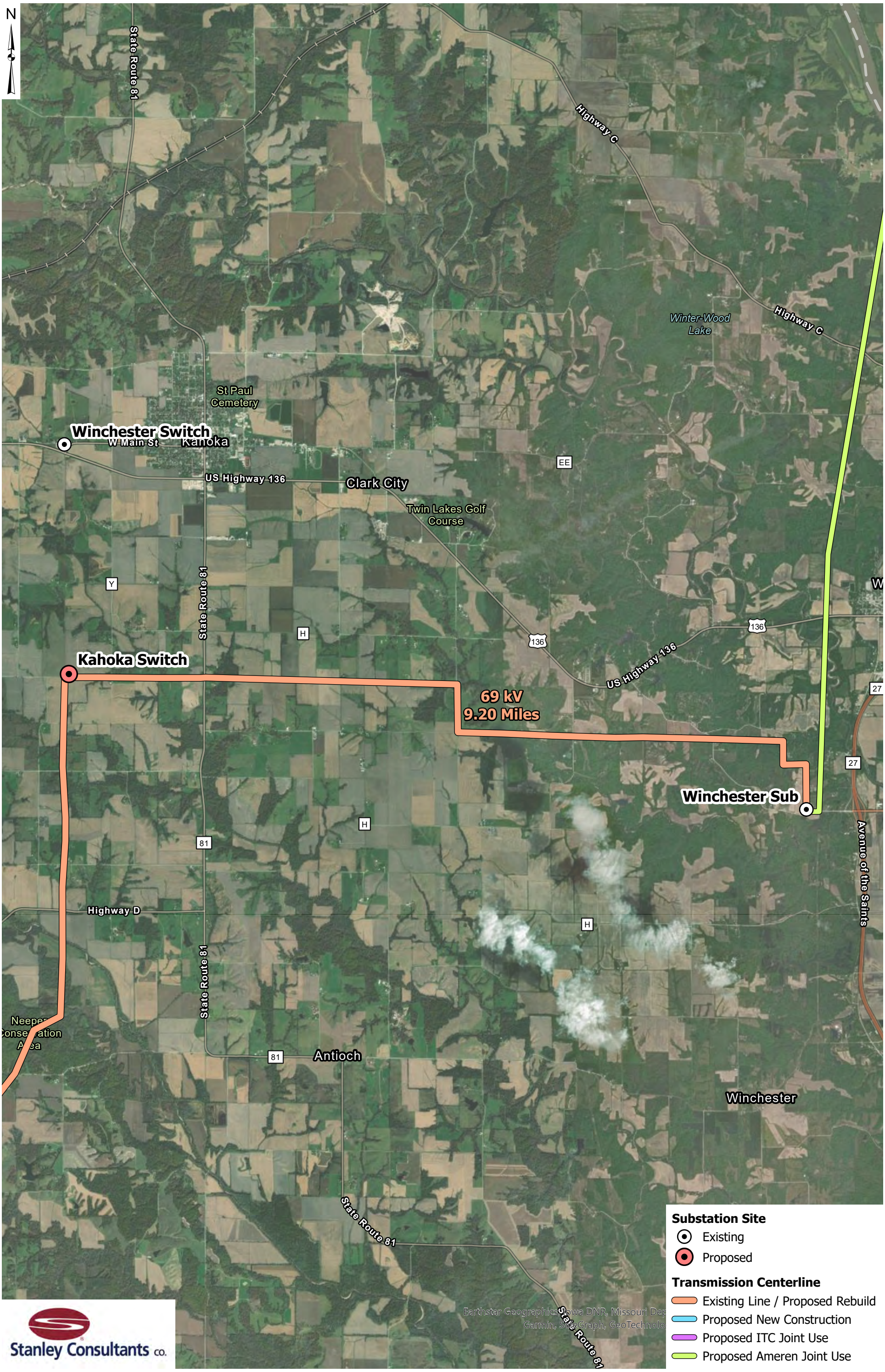
N
State Route 81
Highway C
Winter-Wood Lake
Highway C
St Paul Cemetery
Winchester Switch
W Main St
Kahoka
US Highway 136
Clark City
EE
Twin Lakes Golf Course
Y
State Route 81
H
136
136
US Highway 136
Kahoka Switch
69 kV
9.20 Miles
27
27
Winchester Sub
81
H
Avenue of the Saints
Highway D
H
State Route 81
Neeper Conservation Area
81
Antioch
Winchester
State Route 81
State Route 81
Substation Site
Existing
Proposed
Transmission Centerline
Existing Line / Proposed Rebuild
Proposed New Construction
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Proposed Ameren Joint Use
Stanley Consultants co.
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Miles
NEP MO-IA Transmission Line
Winchester Sub to Kahoka Switch Station
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N

Kahoka Switch

69 kV
9.20 Miles

69 kV
10.42 Miles

Williamstown Sub

69 kV
10.43 Miles

Y
HH
H
81
M
FF
State Route 81
Highway D
Neeper
Neeper Conservation Area
Antioch
Williamstown
State Hwy E
Highway A

Missouri Dept. of Conservation, Missouri DNR, Esri,

Stanley Consultants co.

Substation Site
- Existing
- Proposed

Transmission Centerline
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- Proposed ITC Joint Use
- Proposed Ameren Joint Use

1:48,000
0 1.75 3.5 Miles

NEP MO-IA Transmission Line
Kahoka Switch Station to Williamstown Sub

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N

69 kV
10.42 Miles

Williamstown Sub

Williamstown

State Hwy E

State Highway A

Deer Ridge
Conservation
Area

Deer
Ridge
Community

69 kV
10.43 Miles

State Highway A

State Highway A

Luttrell
Farms
Lake

Lewistown Switch

Lewistown

Missouri Dept. of Conservation, Missouri DNR, Esri,

Y

H

6

16

Substation Site

- Existing
- Proposed

Transmission Centerline

- Existing Line / Proposed Rebuild
- Proposed New Construction
- Proposed ITC Joint Use
- Proposed Ameren Joint Use

Stanley Consultants co.

1:48,000

0 1.75 3.5 Miles

NEP MO-IA Transmission Line

Williamstown Sub to Lewistown Switch Station

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January 19, 2023

Kraig McPeek
Field Office Supervisor
US Fish and Wildlife Service
Illinois & Iowa ES Field Office
1511 47th Avenue
Moline, IL 61265

SUBJECT: Northeast Missouri Electric Power Cooperative – Missouri to Iowa Transmission Line Environmental Assessment

Dear Kraig:

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The purpose of the Project is to provide the following benefits to the NEP transmission system:

- Provide additional transmission capacity in the Iowa portion of NEP's power system.
- Improve reliability in the area surrounding the project in both Iowa and Missouri portions of the system.
- Provide economic power to existing power by adequately meeting projected load from within the NEP system.

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Project construction is expected take place over the course of several years as development of the route will be broken into sections. As stated, most of the Project is within existing utility right-of-way (ROW). Grading of the new utility easement will be minimized to the extent feasible and will focus on maintaining original contours. When possible, wetlands and other Waters of the United States (WOTUS) will be avoided and there will be minimal impacts when avoidance is not feasible.

The project involves several segments of transmission line and the Winchester Substation improvements. The attached figure, "NEP_MO-IA_Transmission_MapSeries.pdf," provides the geographical location of each section below:

- **Franklin Tap to Franklin Substation, 1.77 miles of double circuit 69 kV line rebuild**: this portion of the project will consist of rebuilding the existing Franklin Tap with single metal pole structures following the existing right-of-way.
- **Franklin Sub to Winchester Substation, 25.27 miles of 161 kV (operated at 69 kV) new line construction as single circuit new line and double circuit with existing ITC/Ameren 161 kV transmission line**: this portion of the project will tie the existing Winchester Substation with the existing Franklin Substation. The new NEP line will be a single circuit line (5.54 miles) to connect with an existing ITC/Ameren 161 kV transmission line and create a double circuit with the existing ITC (Iowa, 12.24 miles) and Ameren (Missouri, 7.49 miles) 161 kV following the existing ITC/Ameren right-of-way using single metal pole structures.
- **Winchester 69 kV to 12.47 kV Substation Improvements**: this portion of the project will involve upgrading the Winchester Substation to accommodate the new Franklin Sub to Winchester Sub transmission line and the rebuild Winchester Tap (below).
- **Winchester Tap to Winchester Substation, 9.20 miles of 161 kV (operated at 69 kV) line rebuild**: this portion of the project will consist of rebuilding the existing Winchester Tap with single metal pole structures following the existing right-of-way.
- **Winchester Tap to Williamstown Tap, 10.42 miles of 161 kV (operated at 69 kV) line rebuild**: this portion of the project will consist of rebuilding the existing Winchester Tap to Williamstown Tap with single metal pole structures following the existing right-of-way.
- **Williamstown Tap to Lewistown Switch Station: 10.43 miles of 161 kV (operated at 69 kV) line rebuild**: this portion of the project will consist of rebuilding the existing Williamstown Tap to Lewistown Switch Station with single metal pole structures following the existing right-of-way.

The above transmissions line will generally use 60 to 80 foot tall single-pole steel structures with spacing of generally 250 – 400 feet apart. Structures will be direct embedded 10 – 20 feet deep in drilled holes approximately 3 – 4 feet in diameter. Holes will be back filled with rock and any spoils removed and surrounding disturbance restored to original condition. At certain locations on the route, down-guys and anchors will be used to support the line. Anchors will have helical fins and will be installed by rotating the helical fins into the ground. In addition to direct embed steel poles, engineered laminated wood structures will also be utilized and directed buried in a similar manner to direct embed steel poles. Self-supporting steel structures may be used on the project. These structures will require a drilled pier concrete foundation, the size of which is anticipated to be 3-5 feet in diameter and 10-15 feet deep. Installed pole will generally have a height of 60 – 75 feet and will be supporting electrical transmission conductor.

Upgrades to the Winchester Substation will consist of expanding the footprint of the existing substation and adding equipment necessary to accommodate the new and rebuilt transmission circuits. The expanded area around the existing substation will be graded to level, a copper grounding grid will be installed below the soil surface, and approximately 6 inches of crushed rock will be added across the site. Also, within the site, various structure foundations will be installed to a depth of between five and ten feet. The site will be enclosed by a chain-link fence with posts installed directly in the ground.

Upon Completion of construction, operations at the substation sites are expected to generate 4 – 10 trips per year for maintenance and inspection. The transmission corridor will be visited at least once a year and vegetation management will be provided through manual upkeep. The planned operational life of the installed facilities is approximately 50 years.

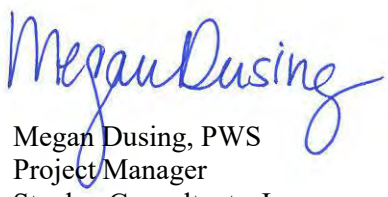
To initiate the process, Rural Development has asked that information regarding Federally listed species, critical habitat, and migratory birds be obtained from your office. Rural Development, as the lead Federal agency, is responsible for compliance with Section 7(a)(2) of the Endangered Species Act and will provide determinations of effect as appropriate during the consultation process. Please note that other applicable regulatory agencies will be contacted for their review of this project. The proposal should not represent a "major construction activity" as defined in 50 CFR 402.02. We request a list of any Federally listed or proposed threatened or endangered species and designated or proposed critical habitat that may be present in the Project corridor. In addition, please advise of present concerns you

may have related to possible effects of the proposed Project on such species or critical habitat, as well as any other wildlife concerns.

We request your review of this Project and ask that you provide information on any concerns, resources, or potential impacts that you believe the forthcoming Environmental Assessment should address. We would appreciate any recommendations you may have to mitigate or avoid environmental impacts. Also, please share any information regarding additional review requirements that your agency may have. We would appreciate a response within **30 days** of your receipt of this request.

Please submit your comments on this Project to me at DusingMegan@stanleygroup.com. You may also mail responses to me at 2658 Crosspark Road Suite 100, Coralville, Iowa, 52241. Should you have any questions or would like additional information, please do not hesitate to contact me at the email address listed above or at (319) 259-6600.

Sincerely,



Megan Dusing, PWS
Project Manager
Stanley Consultants, Inc.

Enclosures: Project Figures and Overview Map

Project Figures

N

Franklin Switch
69 kV
1.77 Miles
Franklin Sub
161 kV
5.54 Miles
161 kV
12.24 Miles
Winchester Switch
Kahoka Switch
69 kV
9.20 Miles
Winchester Sub
161 kV
7.49 Miles
69 kV
10.42 Miles
Williamstown Sub
69 kV
10.43 Miles
Lewistown Switch

Bentonsport
Bonaparte
Primrose
West Point
Franklin
Lee
Farmington
Donnellson
Sterling
Shimek State Forest - Lick Creek Unit
Charlie Heath Memorial Conservation Area
Clark Conservation Area
Anson
Nauvoo
Montrose
Chambersburg
MISSOURI
IOWA
Peaksville
Fox Valley Lake Conservation Area
Revere
Luray
Medill
Kahoka
Clark
Mooar
Sandusky
Keokuk
Wyaconda
Vayland
Warsaw
Great Riv Nat'l Wildlife Ref
Antioch
Gregory Landing
St Patrick
Derrahs
Deer Ridge
Deer Ridge Conservation Area
Fenway
Meyer
Benjamin
Canton
Monticello
La Belle
Lewistown
Earthstar Geographics, Iowa DNR, Missouri Dep
Garmin, Sa

J40 · 103 · 2 · 81 · V · K · 27 · 218 · 61 · J72 · W62 · C · 136 · 32 · 16 · D · A · E · BB · 6 · 12 · X28

Stanley Consultants co.

Substation Site
- Existing
- Proposed

Transmission Centerline
- Existing Line / Proposed Rebuild
- Proposed New Construction
- Proposed ITC Joint Use
- Proposed Ameren Joint Use

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0 3.5 7 14 Miles

NEP MO-IA Transmission Line
Overview Map

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N

Franklin Switch

250th Ave

69 kV
1.77 Miles

Pitman Creek

Pitman Creek

Pitman Creek

Otte Rd

Otte Rd

Otte Rd

Otte R

161 kV
5.54 Miles

Franklin Sub

Esri Community Maps Contributors, Iowa DNR, © O
SafeGraph, GeoTechnologies, Inc, METI/NASA, USG

Substation Site
- Existing
- Proposed

Transmission Centerline
- Existing Line / Proposed Rebuild
- Proposed New Construction
- Proposed ITC Joint Use
- Proposed Ameren Joint Use

Stanley Consultants co.

1:8,400

0 0.3 0.6 Miles

NEP MO-IA Transmission Line

Franklin Switch Station to Franklin Sub

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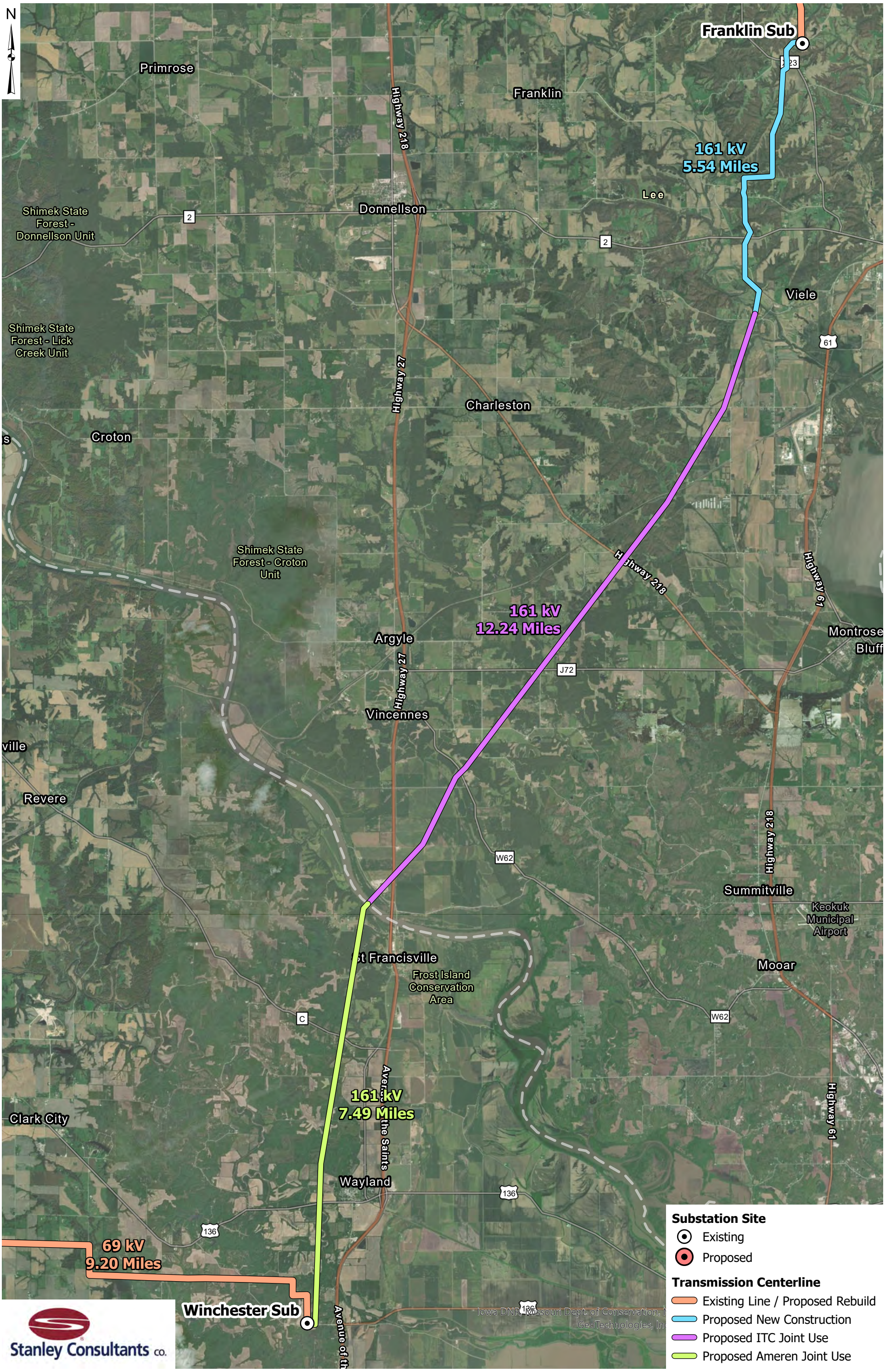
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Shimek State Forest - Lick Creek Unit
Highway 27
Charleston
Croton
Shimek State Forest - Croton Unit
Highway 61
161 kV
12.24 Miles
Argyle
Montrose
Bluff
J72
Vincennes
Revere
W62
Summitville
Keokuk Municipal Airport
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Frost Island Conservation Area
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161 kV
7.49 Miles
Clark City
Wayland
136
69 kV
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Winchester Sub
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Existing Line / Proposed Rebuild
Proposed New Construction
Proposed ITC Joint Use
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NEP MO-IA Transmission Line
Franklin Sub to Winchester Sub
Stanley Consultants co.
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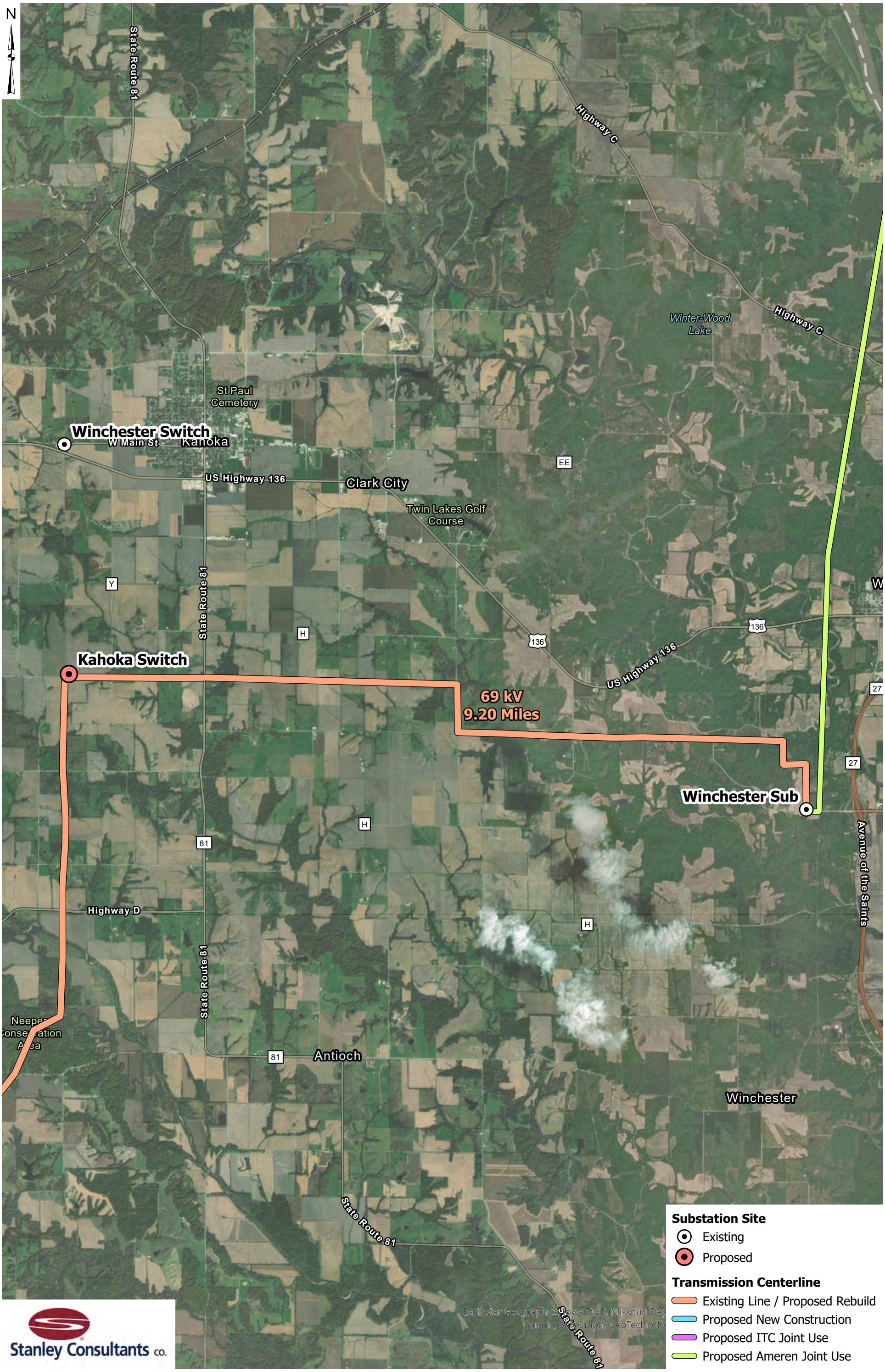
N
State Route 81
Highway C
Winter-Wood Lake
Highway C
St Paul Cemetery
Winchester Switch
W Main St
Kahoka
US Highway 136
Clark City
EE
Twin Lakes Golf Course
Y
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136
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US Highway 136
Kahoka Switch
69 kV
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Existing Line / Proposed Rebuild
Proposed New Construction
Proposed ITC Joint Use
Proposed Ameren Joint Use
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NEP MO-IA Transmission Line
Winchester Sub to Kahoka Switch Station
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N

Kahoka Switch

69 kV
9.20 Miles

69 kV
10.42 Miles

Williamstown Sub

69 kV
10.43 Miles

Y
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FF
State Route 81
Highway D
Neeper
Neeper Conservation Area
Antioch
Williamstown
State Hwy E
Highway A

Missouri Dept. of Conservation, Missouri DNR, Esri,

Stanley Consultants co.

Substation Site
- Existing
- Proposed

Transmission Centerline
- Existing Line / Proposed Rebuild
- Proposed New Construction
- Proposed ITC Joint Use
- Proposed Ameren Joint Use

1:48,000
0 1.75 3.5 Miles

NEP MO-IA Transmission Line
Kahoka Switch Station to Williamstown Sub

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N

69 kV
10.42 Miles

Williamstown Sub

Williamstown

State Hwy E

State Highway A

Deer Ridge
Conservation
Area

Deer
Ridge
Community

69 kV
10.43 Miles

State Highway A

State Highway A

Luttrell
Farms
Lake

Lewistown Switch

Lewistown

Missouri Dept. of Conservation, Missouri DNR, Esri,

Y

H

6

16

Substation Site

- Existing
- Proposed

Transmission Centerline

- Existing Line / Proposed Rebuild
- Proposed New Construction
- Proposed ITC Joint Use
- Proposed Ameren Joint Use

Stanley Consultants co.

1:48,000

0 1.75 3.5 Miles

NEP MO-IA Transmission Line

Williamstown Sub to Lewistown Switch Station

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Stanley Consultants INC.
2658 Crosspark Road
Suite 100
Coralville, IA 52241
319.259.6658
stanleyconsultants.com

October 23, 2024

NO OBJECTION
U.S. Fish and Wildlife Service
Illinois-Iowa ES Field Office
Supervisor:
Date:

Kraig McPeek
Field Office Supervisor
U.S. Fish and Wildlife Service
1511 47th Avenue
Moline, IL 61265

SUBJECT: Project Code: 2023-0048528; NEP MO to IA Transmission Line, New Construction

Dear Kraig:

Project Description

Northeast Missouri Electric Power Cooperative (NEP/Applicant) is in the process of performing an environmental assessment pursuant to the National Environmental Policy Act (NEPA) for the United States Department of Agriculture (USDA), Rural Development to assess the environmental impacts of a transmission line rebuild and construction project (Project). NEP has proposed to rebuild approximately 52 miles of existing transmission line to support a larger capacity, construct 5.54 miles of new transmission line, and conduct improvements at an existing substation to support higher voltages and additional transmission lines. This project stretches from Lewis County, Missouri, to Lee County, Iowa, and intends to obtain funding through the Rural Utility Services (RUS) Federal Grant Program.

Project Impact

As stated, approximately 5.54 miles of new transmission line is proposed for construction. This portion of the proposed route is located in Lee County, Iowa, roughly five miles west-northwest of the city of Fort Madison (see attached Overview Map). The topography throughout the proposed project corridor varies, but the landscape in this portion of the project consists generally of rills, ravines, low-lying intermittent and ephemeral creeks, perennial streams, and large swaths of forest. Land uses within the project area, at lower elevations, is agricultural and residential development. Land use at higher elevations is predominately undeveloped deciduous forests with some residential development. The Mississippi River is located approximately four miles to the southeast.

As shown on the attached Tree Clearing Area figure, within a 0.5-mile radius of the project there are more than 2,000 acres of landcover types that have the potential to serve as bat habitat. Assuming tree removal is limited to 50 feet on of either side of the transmission line centerline and the entirety of the access road, construction activities will result in the removal of 32.47 acres (1.55% of the 0.5-mile radius) of those land covers.

Construction specifications will dictate that tree removal is to occur outside the maternity roost season (October 1st to March 31st) and methods of tree removal will be minimally invasive. This will be achieved by limiting the method of tree clearing to hand cutting, brush hogging, and removal of stumps using a stump grinder. Additionally, debris created by the removal process will be hauled away with as little ground disturbance as possible.

Regulatory Review and Concurrence

The U.S. Fish & Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) tool was used to identify a list of species and critical habitat that "may be present" within the project area. Three bat species were listed: the Gray Bat (*Myotis grisescens*), the Indiana Bat (*Myotis sodalis*), and the Northern Long-eared bat (*Myotis*

septentrionalis). At the time of this letter, the Tricolored bat (*Perimyotis subflavus*) is proposed endangered. There were no areas of critical habitat listed as occurring within the project corridor.

It is the opinion of Stanley Consultants and NEP that the proposed project is "not likely to adversely affect" the above listed species. This determination is based on the availability of other suitable habitat in the immediate area and the limitations that will be placed on tree clearing (outside the maternity roosting season and the use of minimally invasive techniques). It is with submittal of this letter that we are requesting concurrence with this determination.

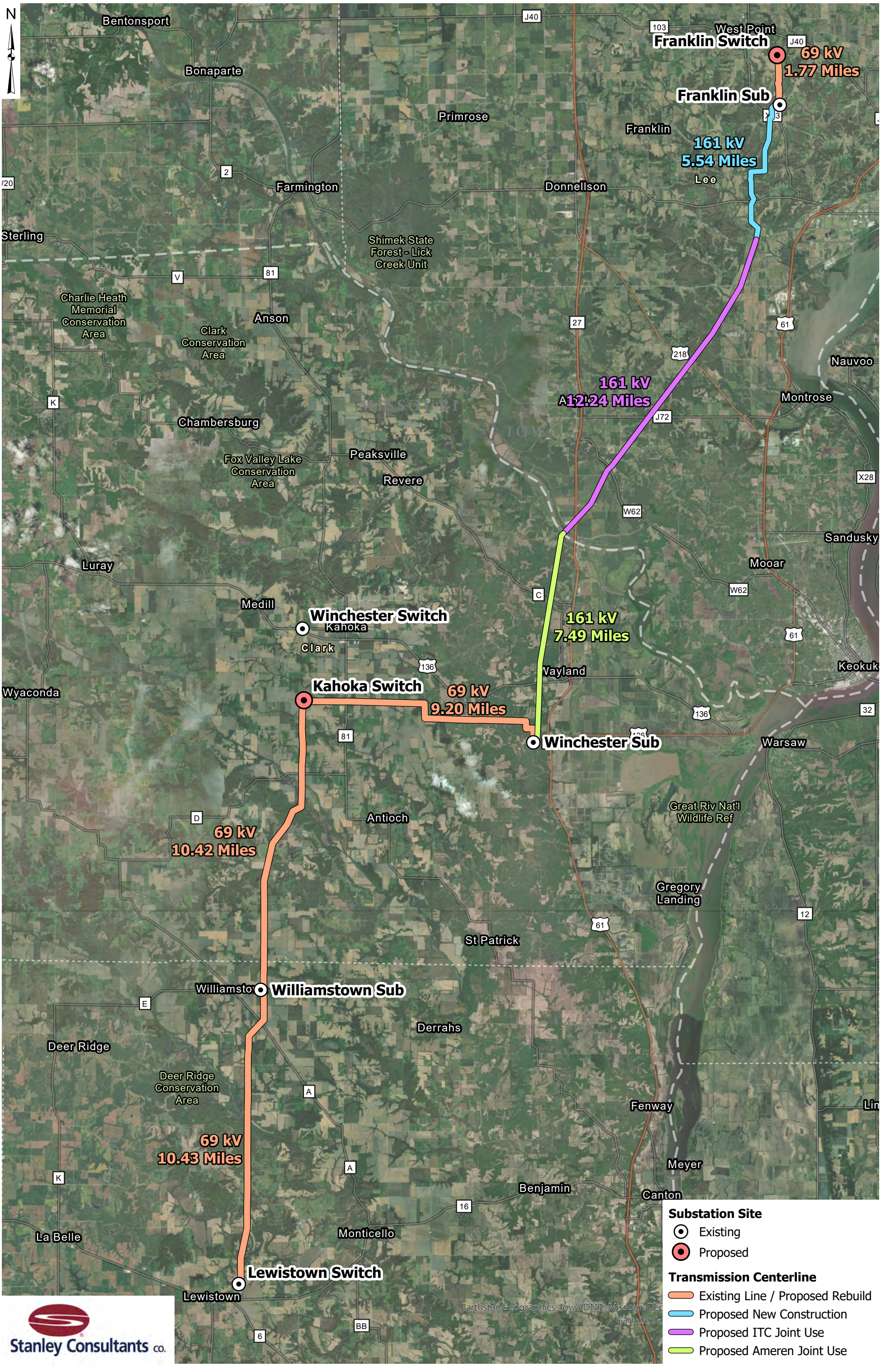
Thank you for your time. Should you have any questions or need additional information, please contact me at 319.259.6600 or DusingMegan@stanleygroup.com.

Sincerely,

Megan Dusing

Stanley Consultants, Inc.

Megan Dusing, PWS
Principal Environmental Scientist


N
Bentonsport
Bonaparte
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Franklin
West Point
Franklin Switch
69 kV
1.77 Miles
Franklin Sub
161 kV
5.54 Miles
Lee
Farmington
Donnellson
Sterling
Shimek State Forest - Lick Creek Unit
Charlie Heath Memorial Conservation Area
Anson
Clark Conservation Area
Nauvoo
161 kV
12.24 Miles
Montrose
MISSOURI
IOWA
Chambersburg
Fox Valley Lake Conservation Area
Peaksville
Revere
Luray
Sandusky
Mooar
Medill
Winchester Switch
Kahoka
Clark
161 kV
7.49 Miles
Vayland
Keokuk
Wyaconda
Kahoka Switch
69 kV
9.20 Miles
Winchester Sub
Warsaw
Great Riv Nat'l Wildlife Ref
Antioch
69 kV
10.42 Miles
Gregory Landing
St Patrick
Williamstown Sub
Derrahs
Deer Ridge
Deer Ridge Conservation Area
Fenway
69 kV
10.43 Miles
Meyer
Benjamin
Canton
La Belle
Monticello
Lewistown Switch
Lewistown
Earthstar Geographics, Iowa DNR, Missouri Dep
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Substation Site
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Existing Line / Proposed Rebuild
Proposed New Construction
Proposed ITC Joint Use
Proposed Ameren Joint Use
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NEP MO-IA Transmission Line
Overview Map
Stanley Consultants co.
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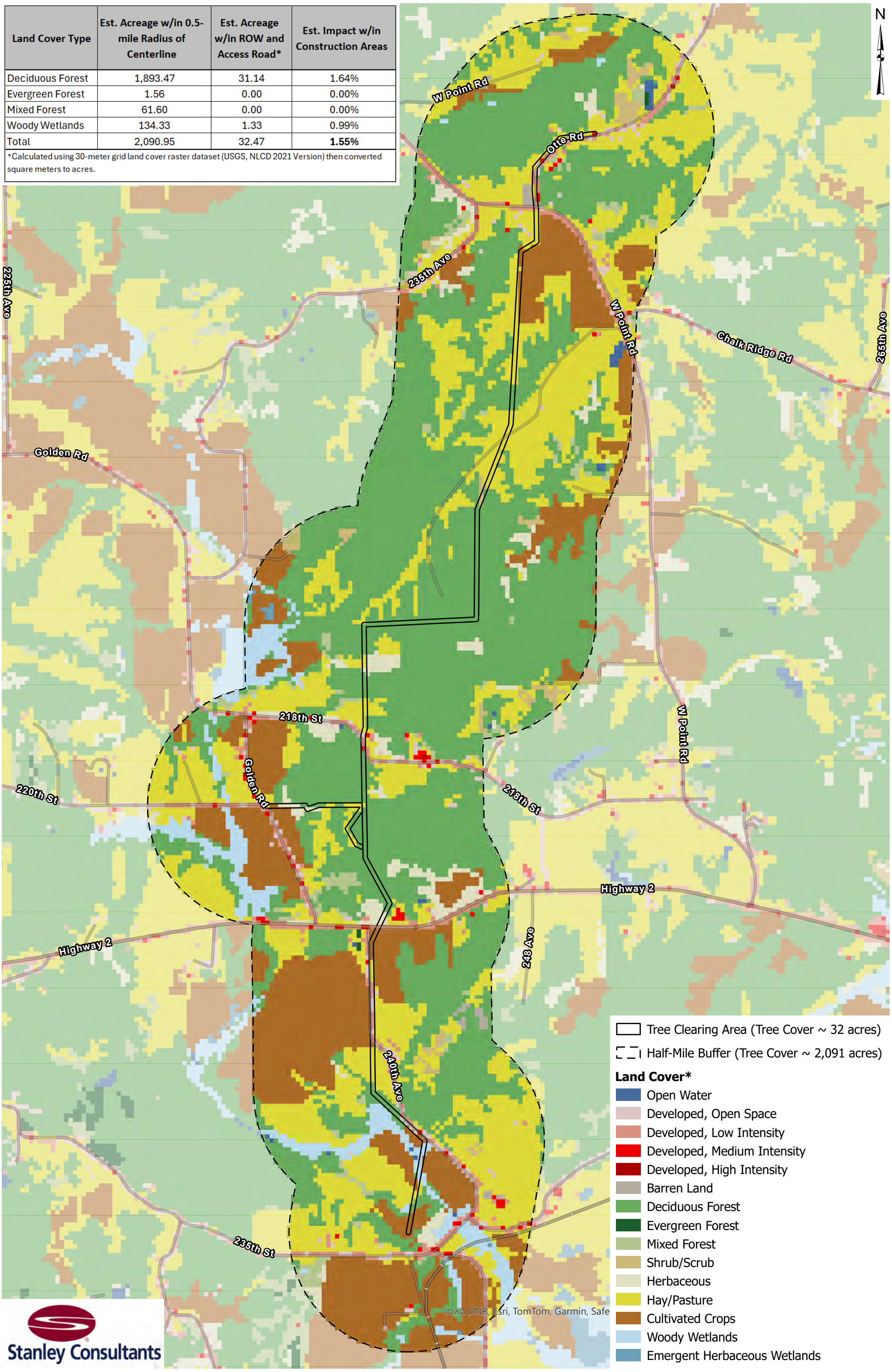
Land Cover Type	Est. Acreage w/in 0.5-mile Radius of Centerline	Est. Acreage w/in ROW and Access Road*	Est. Impact w/in Construction Areas
Deciduous Forest	1,893.47	31.14	1.64%
Evergreen Forest	1.56	0.00	0.00%
Mixed Forest	61.60	0.00	0.00%
Woody Wetlands	134.33	1.33	0.99%
Total	2,090.95	32.47	**1.55%**

*Calculated using 30-meter grid land cover raster dataset (USGS, NLCD 2021 Version) then converted square meters to acres.



Stanley Consultants

*Data source: USGS, 2021 National Land Cover Dataset
Alignment provided by Allgeier, Martin, and Associates Inc. on 11 September 2024.

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0 0.5 1 1.5 2 Miles

Half-Mile Buffer of Tree Clearing Area

NEP MO-IA Transmission Line
October 2024

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Missouri Ecological Services Field Office
101 Park Deville Drive
Suite A
Columbia, MO 65203-0057
Phone: (573) 234-2132 Fax: (573) 234-2181

In Reply Refer To: 02/21/2025 21:54:21 UTC
Project Code: 2023-0048528
Project Name: NEP MO70 Missouri to Iowa EA

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Threatened and Endangered Species

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and may be affected by your proposed project. The species list fulfills the requirement for obtaining a Technical Assistance Letter from the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).
New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. **Note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days.** The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

Consultation Technical Assistance

Refer to the Midwest Region S7 Technical Assistance website for step-by-step instructions for making species determinations and for specific guidance on the following types of projects:

projects in developed areas, HUD, pipelines, buried utilities, telecommunications, and requests for a Conditional Letter of Map Revision (CLOMR) from FEMA.

Federally Listed Bat Species

Indiana bats, gray bats, and northern long-eared bats occur throughout Missouri and the information below may help in determining if your project may affect these species.

Gray bats - Gray bats roost in caves or mines year-round and use water features and forested riparian corridors for foraging and travel. If your project will impact caves, mines, associated riparian areas, or will involve tree removal around these features – particularly within stream corridors, riparian areas, or associated upland woodlots –gray bats could be affected.
Indiana and northern long-eared bats - These species hibernate in caves or mines only during the winter. In Missouri the hibernation season is considered to be November 1 to March 31. During the active season in Missouri (April 1 to October 31) they roost in forest and woodland habitats. Suitable summer habitat for Indiana bats and northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags ≥5 inches diameter at breast height (dbh) for Indiana bat, and ≥3 inches dbh for northern long-eared bat, that have exfoliating bark, cracks, crevices, and/or hollows), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Tree species often include, but are not limited to, shellbark or shagbark hickory, white oak, cottonwood, and maple. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) of other forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat and evaluated for use by bats. If your project will impact caves or mines or will involve clearing forest or woodland habitat containing suitable roosting habitat, Indiana bats or northern long-eared bats could be affected.
Examples of unsuitable habitat include:

- Individual trees that are greater than 1,000 feet from forested or wooded areas;
- Trees found in highly-developed urban areas (e.g., street trees, downtown areas);
- A pure stand of less than 3-inch dbh trees that are not mixed with larger trees; and
- A stand of eastern red cedar shrubby vegetation with no potential roost trees.

Using the IPaC Official Species List to Make No Effect and May Affect Determinations for Listed Species

1. If IPaC returns a result of “There are no listed species found within the vicinity of the project,” then project proponents can conclude the proposed activities will have **no effect** on any federally listed species under Service jurisdiction. Concurrence from the Service is not required for **No Effect** determinations. No further consultation or coordination is required. Attach this letter to the dated IPaC species list report for your records. An example "No Effect" document also can be found on the S7 Technical Assistance website.

2. If IPaC returns one or more federally listed, proposed, or candidate species as potentially present in the action area of the proposed project – other than bats (see #3 below) – then project proponents can conclude the proposed activities **may affect** those species. For assistance in determining if suitable habitat for listed, candidate, or proposed species occurs within your project area or if species may be affected by project activities, you can obtain Life History Information for Listed and Candidate Species through the Species website.
3. If IPac returns a result that one or more federally listed bat species (Indiana bat, northern long-eared bat, or gray bat) are potentially present in the action area of the proposed project, project proponents can conclude the proposed activities **may affect** these bat species **IF** one or more of the following activities are proposed:
    a. Clearing or disturbing suitable roosting habitat, as defined above, at any time of year;
    b. Any activity in or near the entrance to a cave or mine;
    c. Mining, deep excavation, or underground work within 0.25 miles of a cave or mine;
    d. Construction of one or more wind turbines; or
    e. Demolition or reconstruction of human-made structures that are known to be used by bats based on observations of roosting bats, bats emerging at dusk, or guano deposits or stains.

If none of the above activities are proposed, project proponents can conclude the proposed activities will have **no effect** on listed bat species. Concurrence from the Service is not required for **No Effect** determinations. No further consultation or coordination is required. Attach this letter to the dated IPaC species list report for your records. An example "No Effect" document also can be found on the S7 Technical Assistance website.
If any of the above activities are proposed in areas where one or more bat species may be present, project proponents can conclude the proposed activities **may affect** one or more bat species. We recommend coordinating with the Service as early as possible during project planning. If your project will involve removal of over 5 acres of suitable forest or woodland habitat, we recommend you complete a Summer Habitat Assessment prior to contacting our office to expedite the consultation process. The Summer Habitat Assessment Form is available in Appendix A of the most recent version of the Range-wide Indiana Bat Summer Survey Guidelines.

Other Trust Resources and Activities

Bald and Golden Eagles - Although the bald eagle has been removed from the endangered species list, this species and the golden eagle are protected by the Bald and Golden Eagle Act and the Migratory Bird Treaty Act. Should bald or golden eagles occur within or near the project area please contact our office for further coordination. For communication and wind energy projects, please refer to additional guidelines below.

Migratory Birds - The Migratory Bird Treaty Act (MBTA) prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when specifically authorized by the Service. The Service has the responsibility under the MBTA

to proactively prevent the mortality of migratory birds whenever possible and we encourage implementation of recommendations that minimize potential impacts to migratory birds. Such measures include clearing forested habitat outside the nesting season (generally March 1 to August 31) or conducting nest surveys prior to clearing to avoid injury to eggs or nestlings.

Communication Towers - Construction of new communications towers (including radio, television, cellular, and microwave) creates a potentially significant impact on migratory birds, especially some 350 species of night-migrating birds. However, the Service has developed voluntary guidelines for minimizing impacts.

Transmission Lines - Migratory birds, especially large species with long wingspans, heavy bodies, and poor maneuverability can also collide with power lines. In addition, mortality can occur when birds, particularly hawks, eagles, kites, falcons, and owls, attempt to perch on uninsulated or unguarded power poles. To minimize these risks, please refer to guidelines developed by the Avian Power Line Interaction Committee and the Service. Implementation of these measures is especially important along sections of lines adjacent to wetlands or other areas that support large numbers of raptors and migratory birds.

Wind Energy - To minimize impacts to migratory birds and bats, wind energy projects should follow the Service's Wind Energy Guidelines. In addition, please refer to the Service's Eagle Conservation Plan Guidance, which provides guidance for conserving bald and golden eagles in the course of siting, constructing, and operating wind energy facilities.

Next Steps

Should you determine that project activities **may affect** any federally listed species or trust resources described herein, please contact our office for further coordination. Letters with requests for consultation or correspondence about your project should include the Consultation Tracking Number in the header. Electronic submission is preferred.

If you have not already done so, please contact the Missouri Department of Conservation (Policy Coordination, P. O. Box 180, Jefferson City, MO 65102) for information concerning Missouri Natural Communities and Species of Conservation Concern.
We appreciate your concern for threatened and endangered species. Please feel free to contact our office with questions or for additional information.

John Weber

Note: IPaC has provided all available attachments because this project is in multiple field office jurisdictions.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles

- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Missouri Ecological Services Field Office
101 Park Deville Drive
Suite A
Columbia, MO 65203-0057
(573) 234-2132

This project's location is within the jurisdiction of multiple offices. However, only one species list document will be provided for all offices. The species and critical habitats in this document reflect the aggregation of those that fall in each of the affiliated office's jurisdiction. Other offices affiliated with the project:

Illinois-Iowa Ecological Services Field Office
Illinois & Iowa Ecological Services Field Office
1511 47th Ave
Moline, IL 61265-7022
(309) 757-5800

PROJECT SUMMARY

Project Code: 2023-0048528
Project Name: NEP MO70 Missouri to Iowa EA
Project Type: Transmission Line - New Constr - Above Ground
Project Description: NEP has proposed to rebuild approximately 52 miles of transmission line to support a larger capacity, construct six miles of new transmission line, and conduct improvements at an existing substation to support higher voltages and additional transmission lines. This project stretches from Lewis County, Missouri, to Lee County, Iowa, and intends to obtain funding through the Rural Utility Services (RUS) Federal Grant Program. The proposed start date for construction is May 2024

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@40.396960449999995,-91.59320261412515,14z

Counties: Iowa and Missouri

ENDANGERED SPECIES ACT SPECIES

There is a total of 10 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Gray Bat *Myotis grisescens* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6329	Endangered
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949 General project design guidelines: https://ipac.ecosphere.fws.gov/project/RZKA3KQC7FCUNJUUXXRHEMQYTM/documents/generated/7280.pdf	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045 General project design guidelines: https://ipac.ecosphere.fws.gov/project/RZKA3KQC7FCUNJUUXXRHEMQYTM/documents/generated/7280.pdf	Endangered
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

CLAMS

NAME	STATUS
Higgins Eye (pearlymussel) *Lampsilis higginsii* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5428	Endangered
Sheepnose Mussel *Plethobasus cyphyus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6903	Endangered
Spectaclecase (mussel) *Cumberlandia monodonta* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7867	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

NAME	STATUS
Western Regal Fritillary *Argynnis idalia occidentalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/12017	Proposed Threatened

FLOWERING PLANTS

NAME	STATUS
Eastern Prairie Fringed Orchid *Platanthera leucophaea* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/601	Threatened

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

BALD & GOLDEN EAGLES

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

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1. The Bald and Golden Eagle Protection Act of 1940.
2. The Migratory Birds Treaty Act of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are Bald Eagles and/or Golden Eagles in your project area.

Measures for Proactively Minimizing Eagle Impacts

For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the National Bald Eagle Management Guidelines. You may employ the timing and activity-specific distance recommendations in this document when designing your project/ activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to Bald Eagle Nesting and Sensitivity to Human Activity.

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

If disturbance or take of eagles cannot be avoided, an incidental take permit may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the Do I Need A Permit Tool. For assistance making this determination for golden eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

Ensure Your Eagle List is Accurate and Complete
If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Oct 15 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

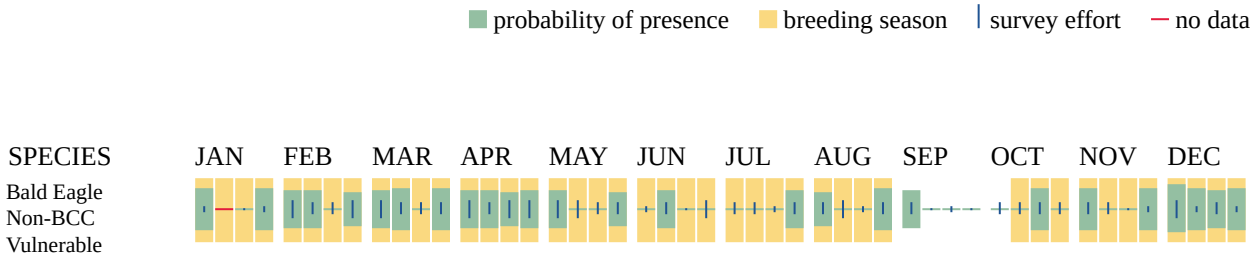
Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (▪)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

MIGRATORY BIRDS

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service). The incidental take of migratory birds is the injury or death of birds that results from, but is not the purpose, of an activity. The Service interprets the MBTA to prohibit incidental take.

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1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Oct 15 to Aug 31
Black-billed Cuckoo *Coccyzus erythropthalmus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10
Bobolink *Dolichonyx oryzivorus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9454	Breeds May 20 to Jul 31
Chimney Swift *Chaetura pelagica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9406	Breeds Mar 15 to Aug 25
Eastern Whip-poor-will *Antrostomus vociferus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10678	Breeds May 1 to Aug 20
Grasshopper Sparrow *Ammodramus savannarum perpallidus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8329	Breeds Jun 1 to Aug 20
Henslow's Sparrow *Centronyx henslowii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3941	Breeds May 1 to Aug 31
Kentucky Warbler *Geothlypis formosa* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9443	Breeds Apr 20 to Aug 20
Lesser Yellowlegs *Tringa flavipes* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere

NAME	BREEDING SEASON
Pectoral Sandpiper *Calidris melanotos* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9561	Breeds elsewhere
Prothonotary Warbler *Protonotaria citrea* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9439	Breeds Apr 1 to Jul 31
Red-headed Woodpecker *Melanerpes erythrocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9398	Breeds May 10 to Sep 10
Rusty Blackbird *Euphagus carolinus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9478	Breeds elsewhere
Semipalmated Sandpiper *Calidris pusilla* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9603	Breeds elsewhere
Short-billed Dowitcher *Limnodromus griseus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9480	Breeds elsewhere
Wood Thrush *Hylocichla mustelina* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9431	Breeds May 10 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

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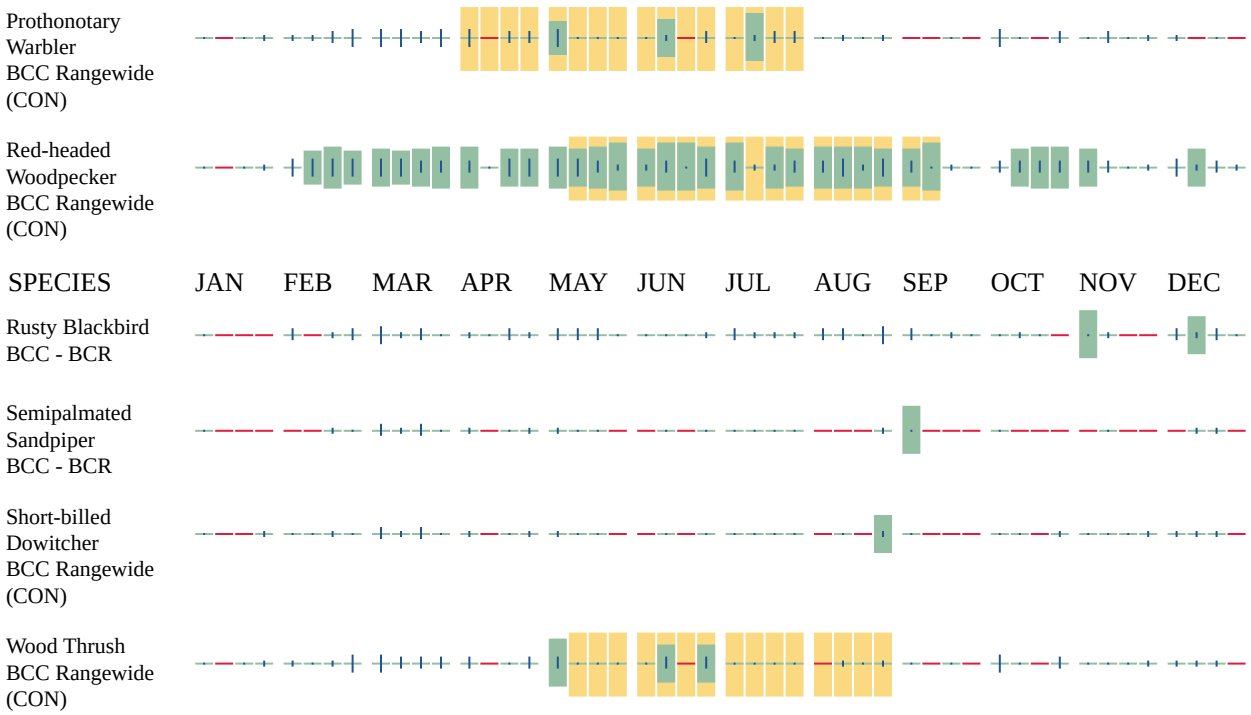

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

RIVERINE

- R5UBH

- R2USC
- R2UBF
- R4SBC
- R4SBA
- R2UBGx
- R2UBFx
- R4SBCx
- R2UBH
- R2UBG

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1Ch
- PFO1Ax
- PFO1C
- PFO1A
- PSS1C

FRESHWATER EMERGENT WETLAND

- PEM1A
- PEM1Cx
- PEM1Ch
- PEM1C
- PEM1F

FRESHWATER POND

- PUBGh
- PUBFx
- PUBFh

IPAC USER CONTACT INFORMATION

Agency: Stanley Consultants
Name: Megan Dusing
Address: 2658 Crosspark Road Ste. 100
City: Coralville
State: IA
Zip: 52241
Email dusingmegan@stanleygroup.com
Phone: 3192596600

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Rural Utilities Service