

2010 - Retire North Substation

2010 - Convert to 13.8kV Operation

2009 - Convert to 13.8kV operation

2011 - Convert to 13.8kV Operation

2011 - Purchase & Install new 10/12.5MVA 13.8kV Transformer in T2 Bay

2012 - Retire Adams 4.16kV Xfmr and Switchgear from T1 Bay

2012 - Convert to 13.8kV Operation

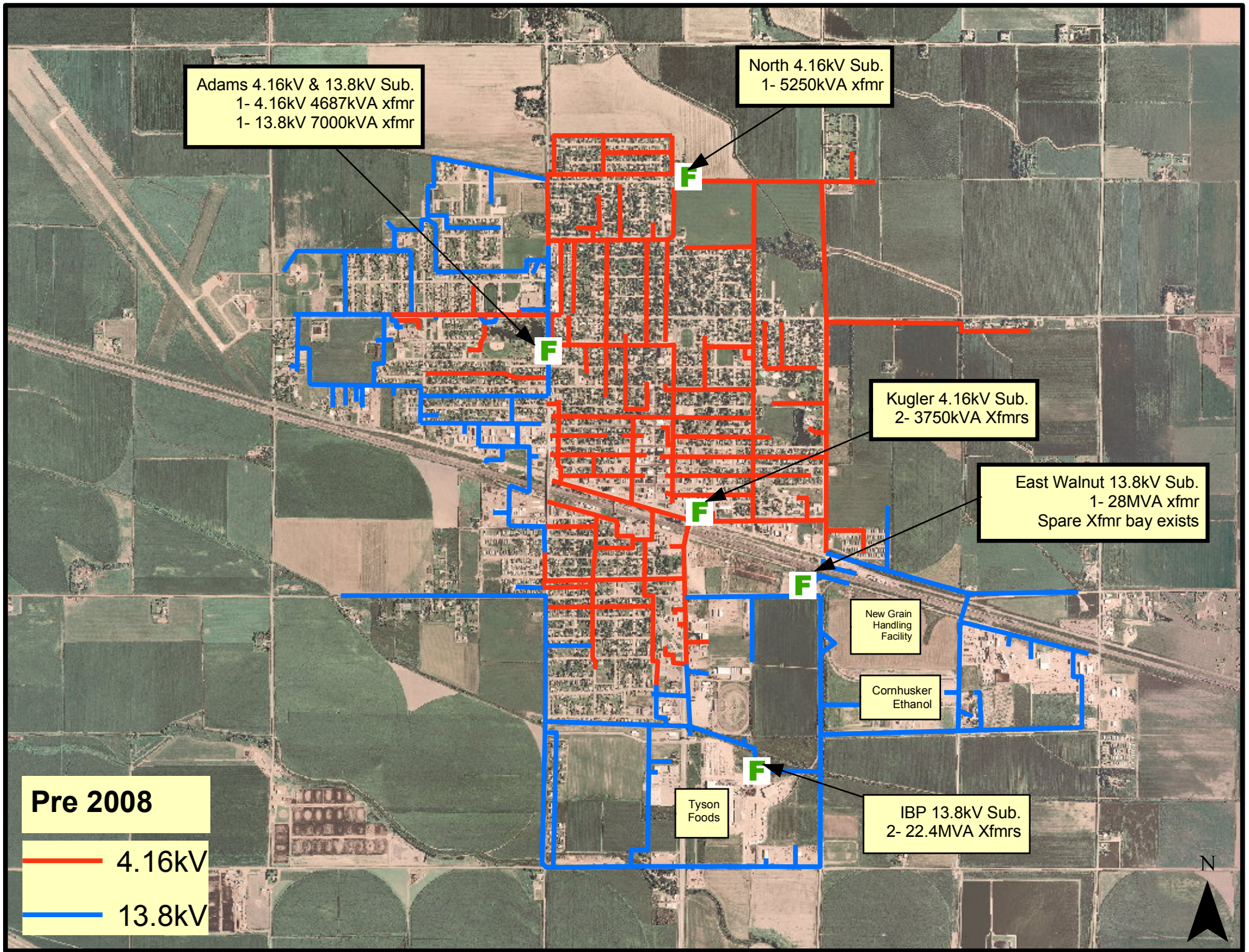
2014 - Convert to 13.8kV Operation

2015 - Convert to 13.8kV Operation

2013 - Convert to 13.8kV Operation

2015 - Convert Kugler Substation to 13.8kV operation and install existing Adams 7MVA 13.8kV transformer

2009 - North Sub 104 & 106 Feeders - Convert to 13.8kV
 2010 - North Sub 102 & 106 Feeders - Convert to 13.8kV
 2010 - Retire North 4.16kV Substation
 2011 - Adams Sub 102 Feeder - Convert to 13.8kV
 2011 - Purchase New 10/12.5MVA 13.8kV xfmr and install in Adams T2 bay
 2012 - Adams Sub 104 & 106 Feeders - Convert to 13.8kV
 2012 - Adams Sub T1 4.16kV bay - Retire Xfmr and Switchgear
 2013 - Kugler 104 Feeder - Convert to 13.8kV
 2014 - Kugler 124 Feeder - Convert to 13.8kV
 2015 - Kugler 122 Feeder - Convert to 13.8kV
 2015 - Kugler Substation - Convert to 13.8kV, replace switchgear and install existing Adams 7MVA 13.8kV transformer, Retire 4.16kV Transformers and Switchgear



Adams 4.16kV & 13.8kV Sub.
1- 4.16kV 4687kVA xfmr
1- 13.8kV 7000kVA xfmr

North 4.16kV Sub.
1- 5250kVA xfmr

Kugler 4.16kV Sub.
2- 3750kVA Xfmrs

East Walnut 13.8kV Sub.
1- 28MVA xfmr
Spare Xfmr bay exists

New Grain
Handling
Facility

Cornhusker
Ethanol

Tyson
Foods

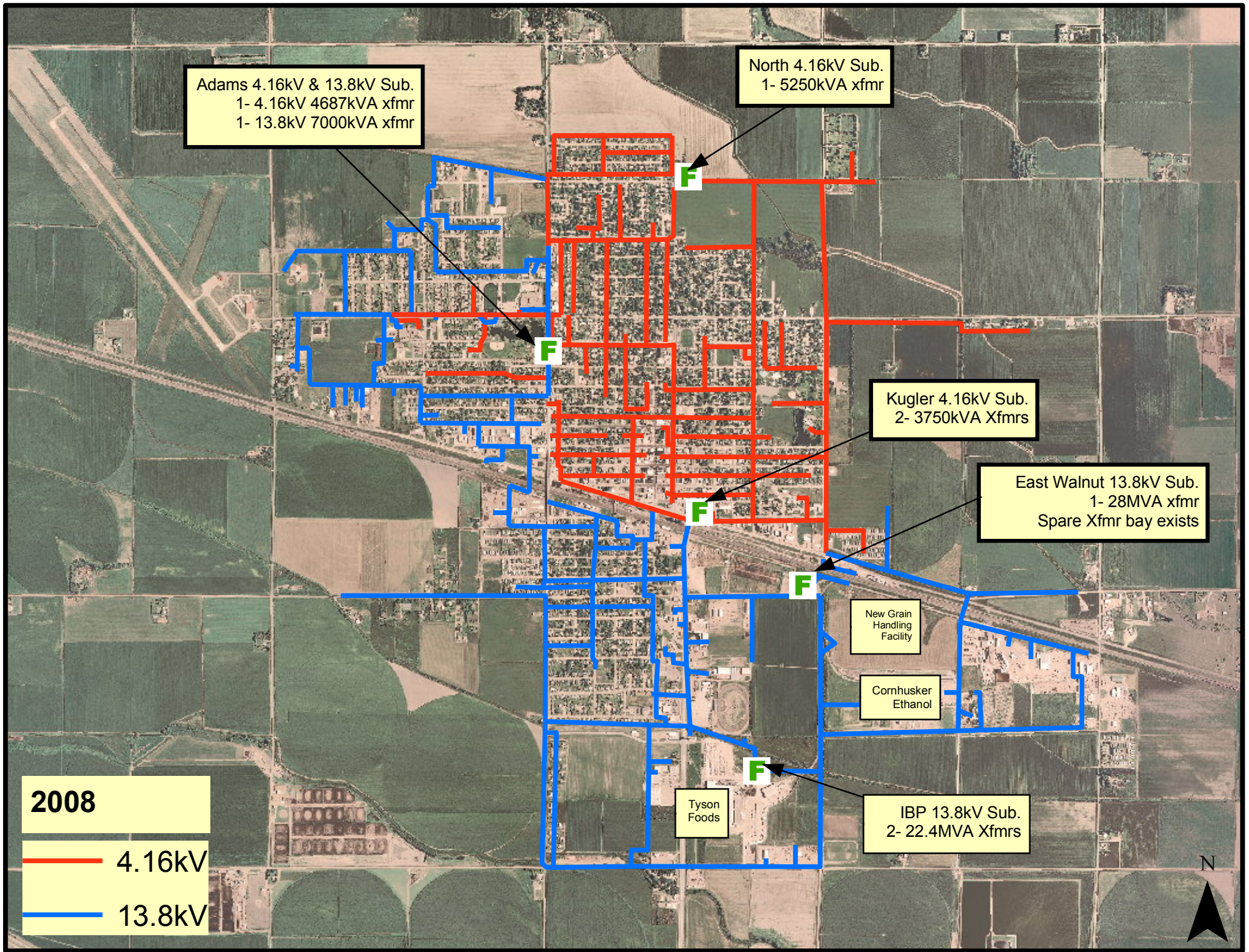
IBP 13.8kV Sub.
2- 22.4MVA Xfmrs

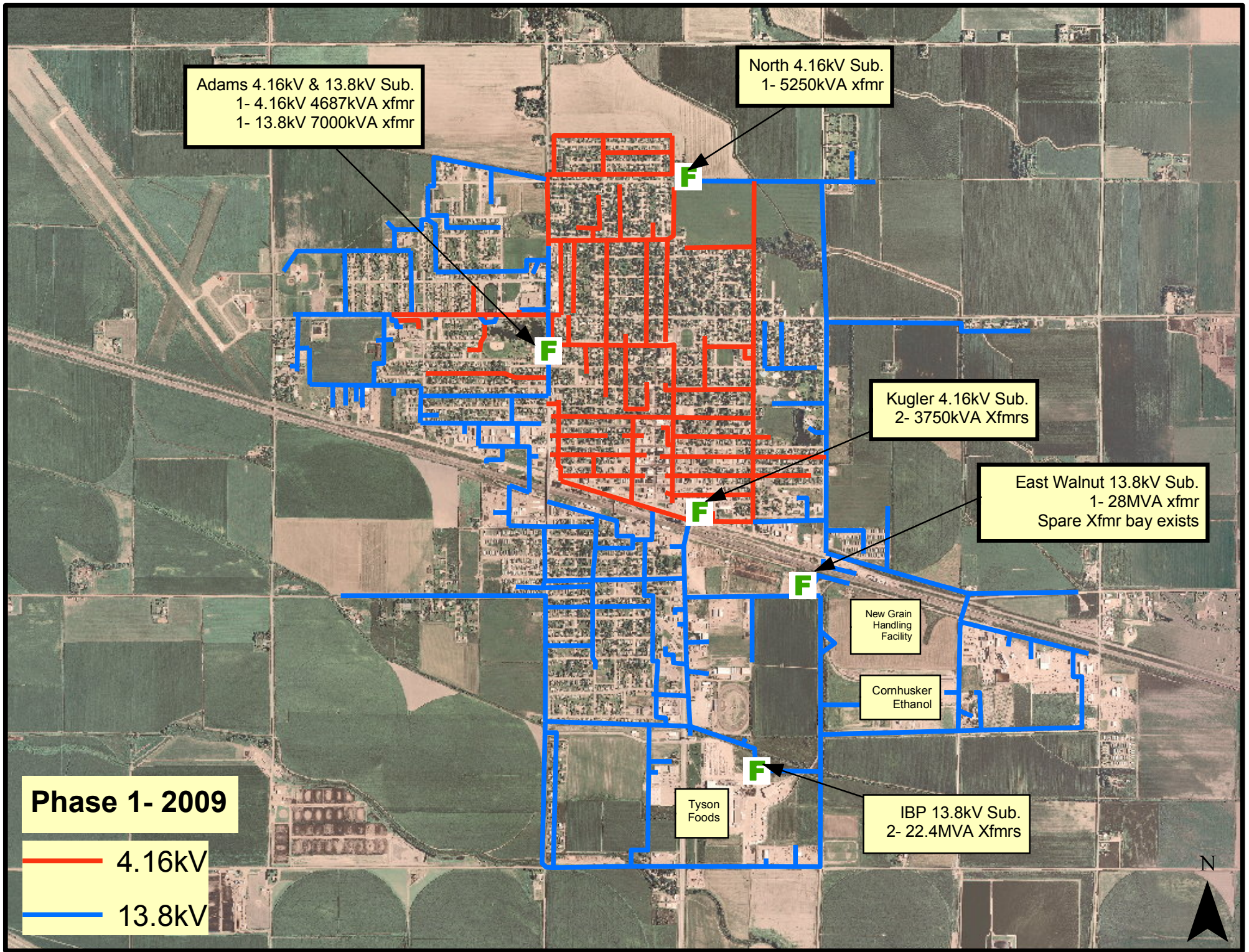
Pre 2008

— 4.16kV

— 13.8kV







Adams 4.16kV & 13.8kV Sub.
1- 4.16kV 4687kVA xfmr
1- 13.8kV 7000kVA xfmr

North 4.16kV Sub.
1- 5250kVA xfmr

Kugler 4.16kV Sub.
2- 3750kVA Xfmrs

East Walnut 13.8kV Sub.
1- 28MVA xfmr
Spare Xfmr bay exists

New Grain
Handling
Facility

Cornhusker
Ethanol

Tyson
Foods

IBP 13.8kV Sub.
2- 22.4MVA Xfmrs

Phase 1 - 2009

— 4.16kV
— 13.8kV



Lexington North Substation Feeders Voltage Upgrade to 13.8kV

North Sub Feeder Voltage Upgrade

- North Sub Feeder 104
 - Demand Loss Savings of 11kW
 - Energy Loss Savings of 41,074 kWh Annually
 - Results in \$2,300 reduction Wholesale Power costs annually.
 - Reduced maintenance costs once North sub is retired
 - Increased reliability
 - Increased capacity to serve new loads

North Sub Feeder Voltage Upgrade

- North Sub Feeder 108
 - Demand Loss Savings of 26kW
 - Energy Loss Savings of 97,084 kWh Annually
 - Results in \$5,408 reduction Wholesale Power costs annually.
 - Reduced maintenance costs once North sub is retired
 - Increased reliability
 - Increased capacity to serve new loads

North Sub Feeder Voltage Upgrade

- North Sub Feeder 102
 - Demand Loss Savings of 5kW
 - Energy Loss Savings of 18,670 kWh Annually
 - Results in \$1,040 reduction Wholesale Power costs annually.
 - Reduced maintenance costs once North sub is retired
 - Increased reliability
 - Increased capacity to serve new loads

North Sub Feeder Voltage Upgrade

- North Sub Feeder 106
 - Demand Loss Savings of 11kW
 - Energy Loss Savings of 41,074 kWh Annually
 - Results in \$2,300 reduction Wholesale Power costs annually.
 - Reduced maintenance costs once North sub is retired
 - Increased reliability
 - Increased capacity to serve new loads

PROJECT APPROVAL DOCUMENT
for
APPROVAL OF ACTIVITIES OR PROJECTS EXCEEDING \$20,000.00

Order # 4657631
LEXINGTON-NORTH ACB CONVERSION TO 13.8 KV BREAKER 104

I. Scope of Project: THIS ORDER IS FOR THE VOLTAGE CONVERSION OF THE CITY OF LEXINGTON NORTH SUBSTATION ACB 104 FEEDER FROM 4/16 KV TO 13/8 KV OPERATION. THIS SUPERIOR ORDER HAS MULTIPLE SUB ORDERS ARE IDENTIFIED WITH ESTIMATED COSTS AS FOLLOWS:

II.	SUB ORDER 4665734—PHASE 1	\$41,634.35
	SUB ORDER 4665737—PHASE 2	\$60,399.19
	SUB ORDER 4665864—PHASE 3	\$71,518.88
	SUB ORDER 4665865—PHASE 4	\$52,596.93
	SUB ORDER 4657632—ENGINEERING DESIGN	\$19,211.70

III. Project Justification : THIS WORK HAS BEEN RECOMMENDED BY THE CITY OF LEXINGTON FOR IT'S LONG RANGE DISTRIBUTION PLAN

III. Project Schedule: FEBRUARY 2009

IV. Estimated Project Costs: \$245,361.05

V. Approval/Disapproval

The undersigned representative(s) of the City of Lexington and Nebraska Public Power District **APPROVE/DISAPPROVE (circle one)** the above-described project expenditures.

City of Lexington

Nebraska Public Power District

(Name)

(Name)

(Title)

(Title)

Date: _____

Date: _____

VI. Upon the approval of the above described project by both parties, this project will be performed in accordance with the terms and provisions of the Electric System Operation Agreement executed by Nebraska Public Power District and City of Lexington.

*Send original to Lori Killion, York Operations Center