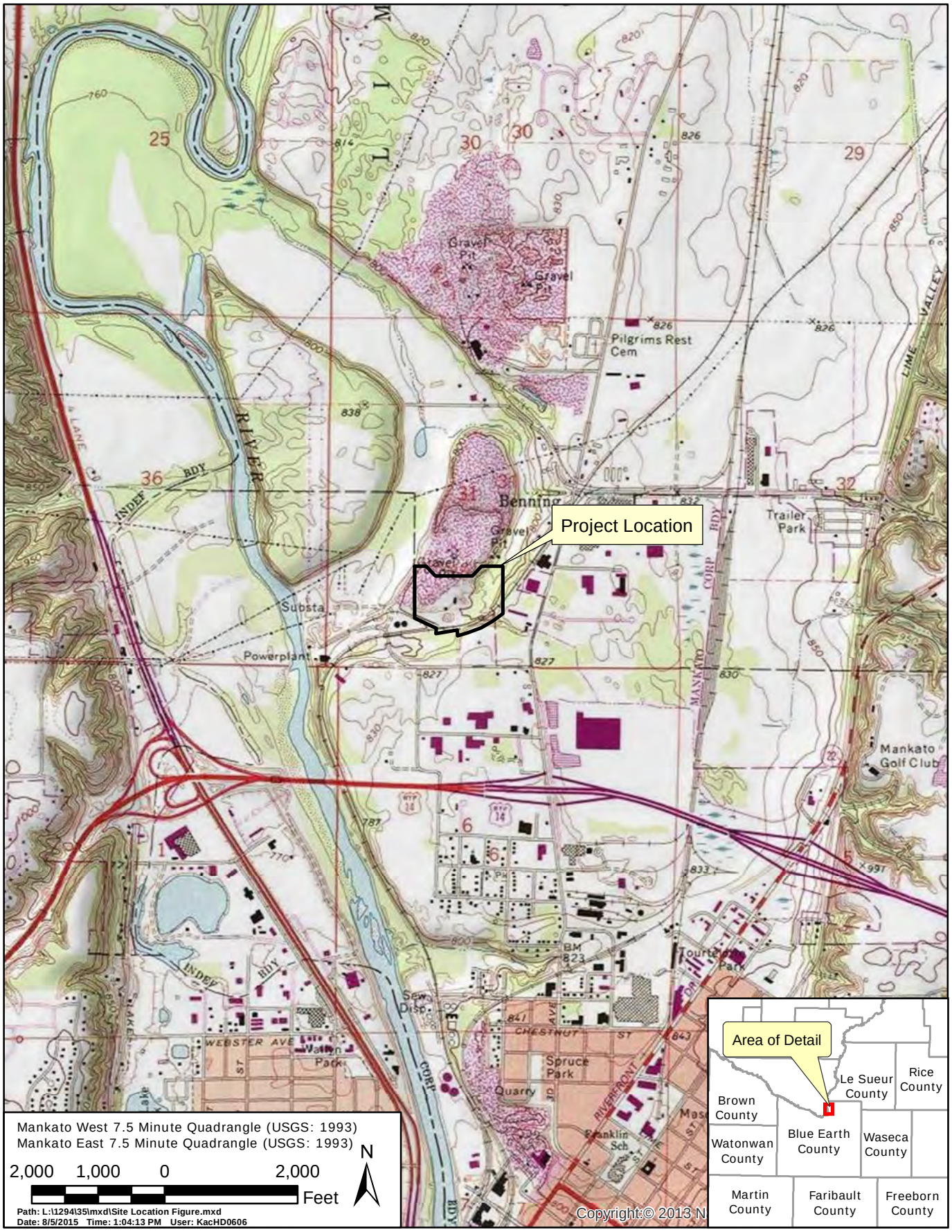
Figures



MANKATO ENERGY CENTER

Site Location Map

WENCK ASSOCIATES

Responsive partner. Exceptional outcomes.

AUG 2015

Figure 1

MANKATO ENERGY CENTER

Site Detail Map

WENCK ASSOCIATES

Responsive partner. Exceptional outcomes.

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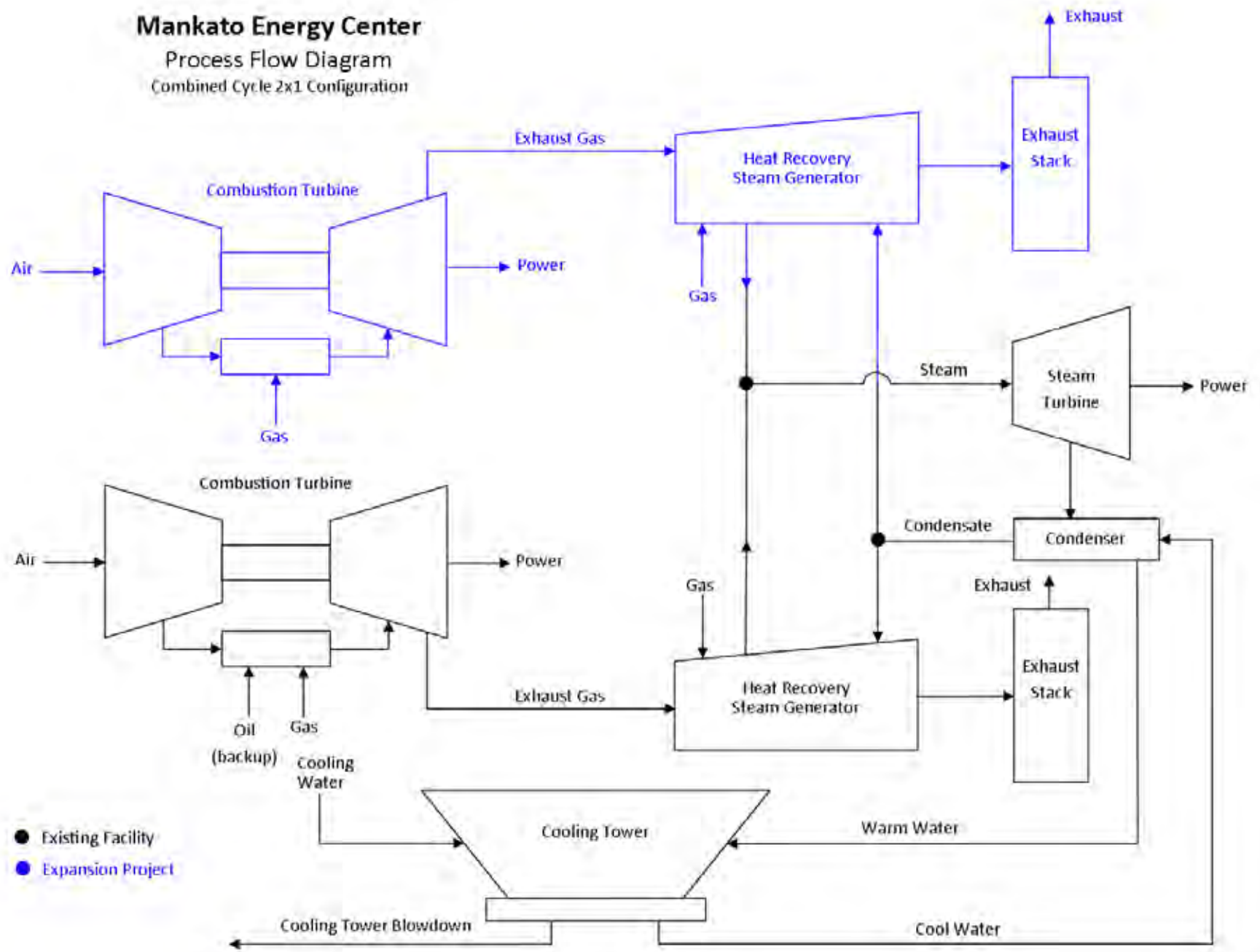
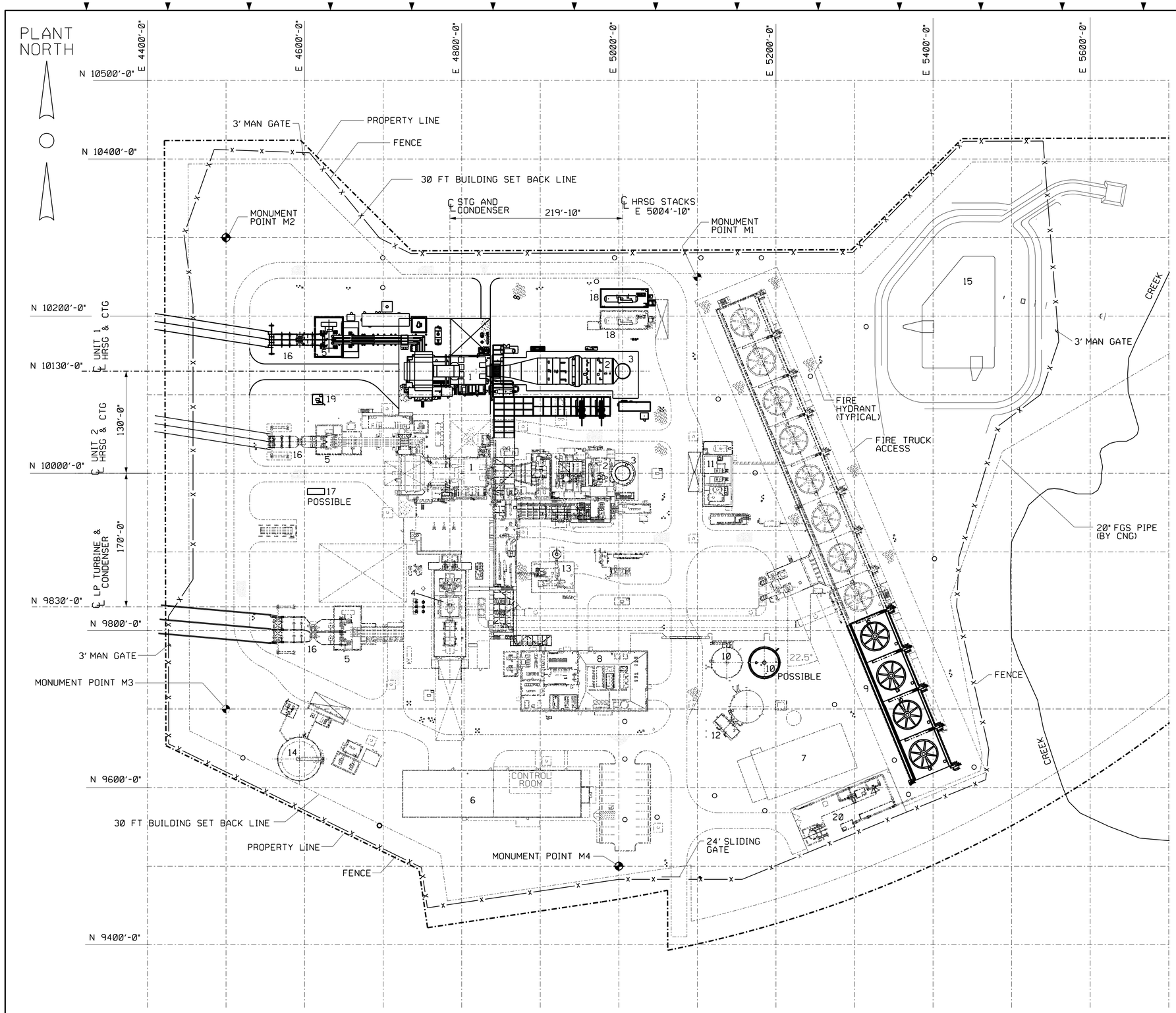
Figure 2



MANKATO ENERGY CENTER	WENCK ASSOCIATES Responsive partner. Exceptional outcomes.	AUG 2015
Process Flow Diagram		Figure 3



LEGEND

1. COMBUSTION TURBINE
2. HRSG
3. HRSG STACK
4. STEAM TURBINE
5. GENERATOR STEP-UP TRANSFORMER
6. ADMIN/MAINTENANCE/WAREHOUSE/CONTROL ROOM BLDG
7. EXISTING WAREHOUSE BLDG
8. WATER TREATMENT EQUIPMENT AREA
9. COOLING TOWER
10. DEMIN WATER STORAGE TANK (POSSIBLE SECOND TANK)
11. COOLING TOWER CHEMICAL FEED ENCLOSURE
12. FIRE PUMP SKID ENCLOSURE
13. AUXILIARY BOILER
14. FUEL OIL STORAGE TANK
15. SEDIMENT POND / STORMWATER BASIN
16. SWITCHYARD EQUIPMENT
17. BACKUP DIESEL GENERATOR (POSSIBLE)
18. ANHYDROUS AMMONIA TANK
19. OIL / WATER SUMP & PUMPS
20. FUEL GAS YARD AREA

LEGEND:

- GRAVEL
- ASPHALT
- CONCRETE
- ELECTRICAL MANHOLE
- STORM WATER CATCH BASIN

MONUMENT POINTS:	PLANT COORDINATES:	BLUE EARTH COUNTY COORDINATES:
M1	N.10250'-0", E.5100'-0"	FOR TRANSLATION BETWEEN PLANT COORDINATES & BLUE EARTH COUNTY COORDINATES SEE DRAWING MK-GEN-DE-C1-0001
M2	N.10300'-0", E.4500'-0"	
M3	N.9700'-0", E.4500'-0"	
M4	N.9500'-0", E.5000'-0"	

60 0 60 120 180

SCALE IN FEET

General Arrangement Site Plan Figure 4

REV	DATE	DESCRIPTION	DRAWN	CHECKED	REVIEWED	LEAD DESIGNER	ENGINEER/ TECH SPEC	LEAD DISC ENGINEER	PROJ ENGR MANAGER
B	05 12 15	ISSUED FOR PERMITTING	SRK		PP	SRK		PP	JS
A	05 04 15	ISSUED FOR PERMITTING	SRK		PP	SRK		PP	JS

PRELIMINARY STATUS — LDE P PHIAMBOLIS — DATE 05/04/15 — INFORMATION ONLY - NOT TO BE USED FOR CONSTRUCTION.

APPROVED STATUS — LDE — DATE / / — REPRESENTS REVIEWED AND APPROVED DESIGN. ANY PORTION MARKED "HOLD" RETAINS PRELIMINARY STATUS.

ORIGINATING PERSONNEL	PROFESSIONAL ENGINEER'S SEAL
DRAWN BY: SRK	
CHECKED BY:	
LEAD DESIGNER: SR KLINE	
ENGINEER/TECH SPECIALIST: P PHIAMBOLIS	
PROJECT ENGINEERING MANAGER: J SENTHILVEL	ORIGINALLY PREPARED UNDER THE RESPONSIBLE SUPERVISION OF PE: STATE: LIC. NO.: DATE:

WorleyParsons resources & energy

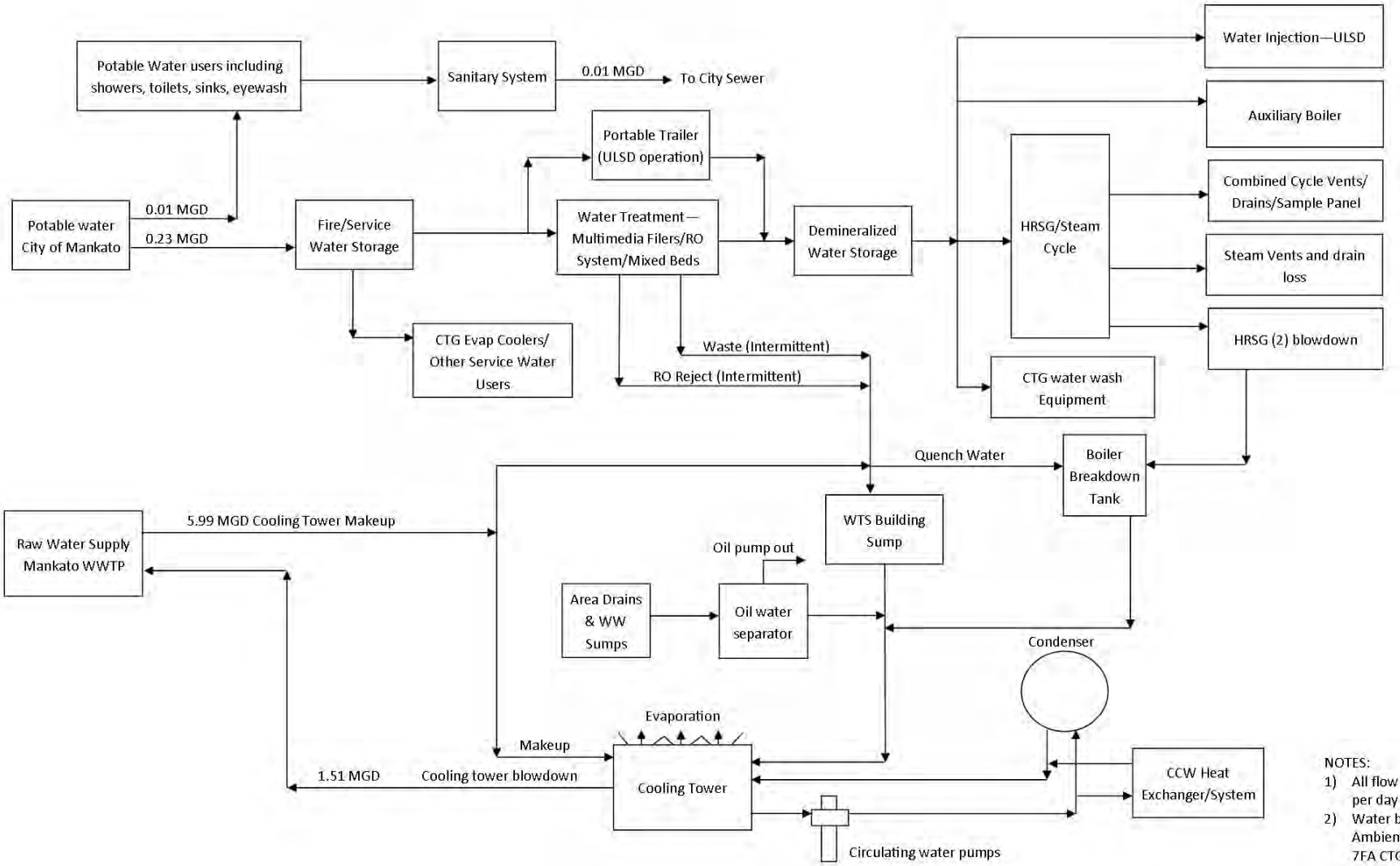
CALPINE® NYSE CPN

Mankato Energy Center
Mankato, Minnesota

GENERAL ARRANGEMENT
SITE PLAN

SCALE 1" = 60'

DWG. NO. MK-GEN-DE-G01-0002 — SHEET NO. 01 — REVISION B



NOTES:

1) All flow rates are in million gallons per day
2) Water balance basis:

Ambient Temp.	92F
7FA CTGs Online:	2
CTG Fuel:	GAS
STG Online:	Yes
Duct Burner Status:	ON
Steam Injection Status:	OFF
Evap Cooler:	ON
Cooling Tower Cycle:	4

MANKATO ENERGY CENTER

General Water Balance

WENCK ASSOCIATES

Responsive partner. Exceptional outcomes.

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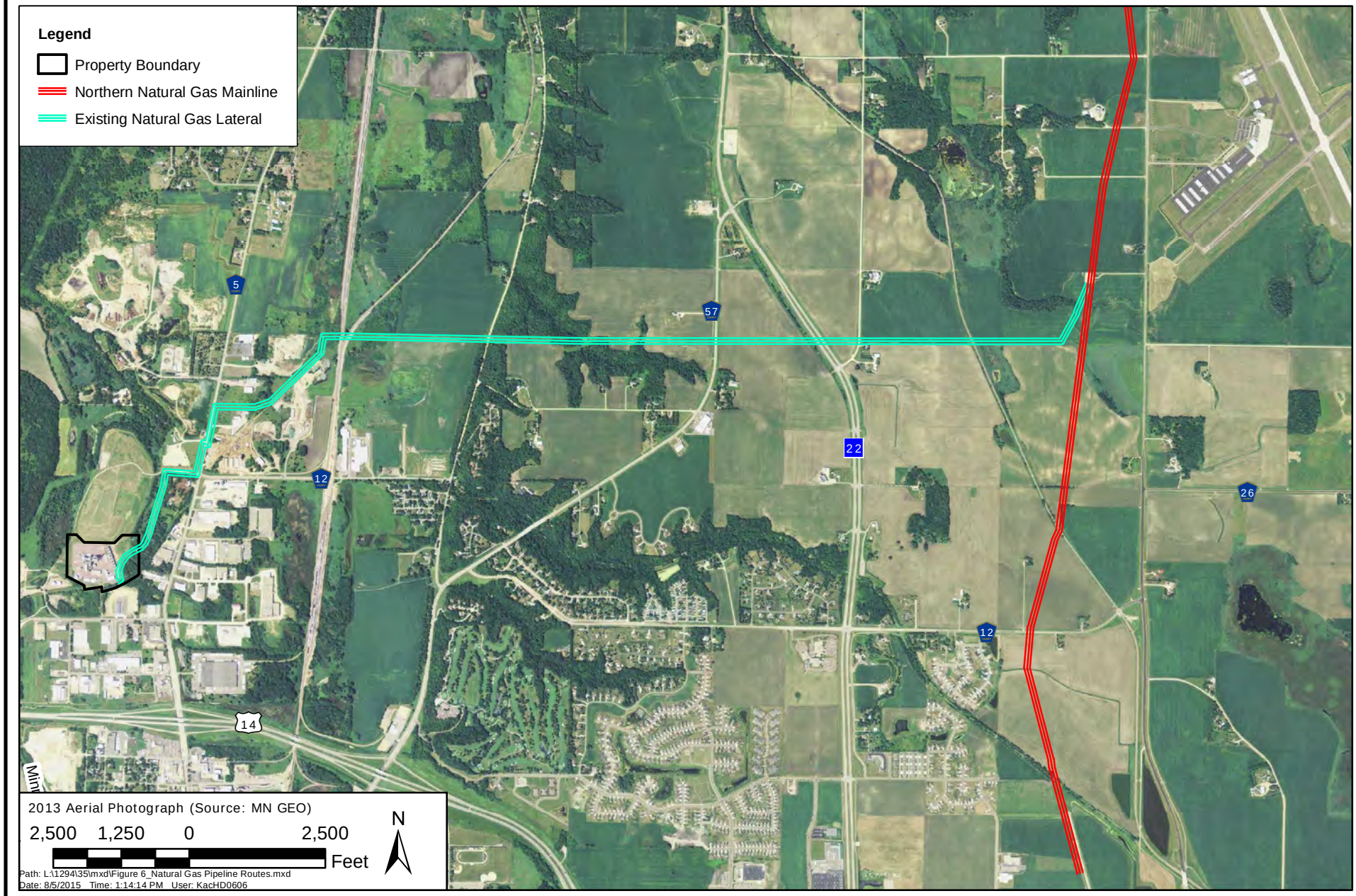
Figure 5



MANKATO ENERGY CENTER

Natural Gas Pipeline Routes

WENCK ASSOCIATES

Responsive partner. Exceptional outcomes.

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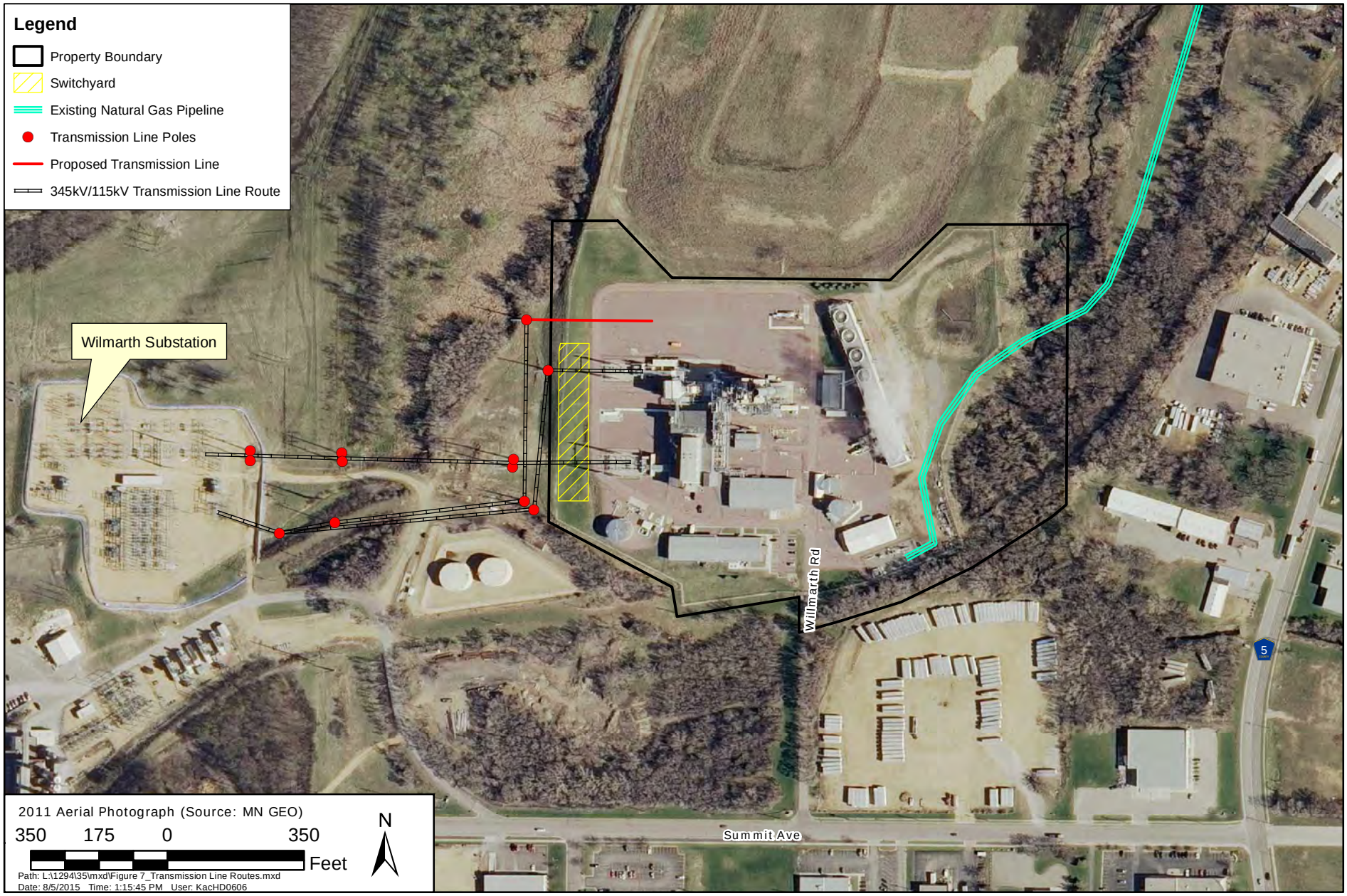
Figure 6



MANKATO ENERGY CENTER

Transmission Line Routes

WENCK ASSOCIATES

Responsive partner. Exceptional outcomes.

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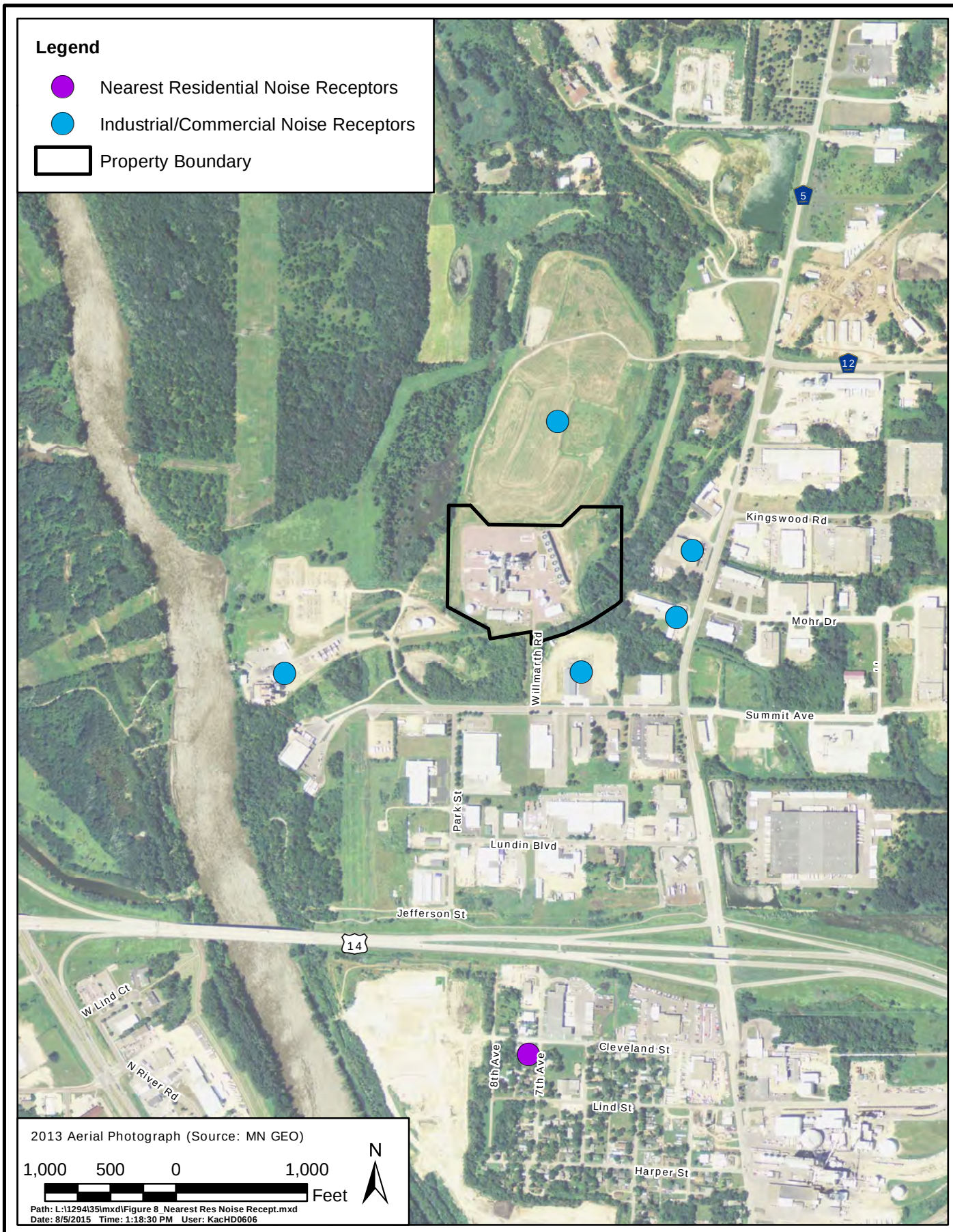
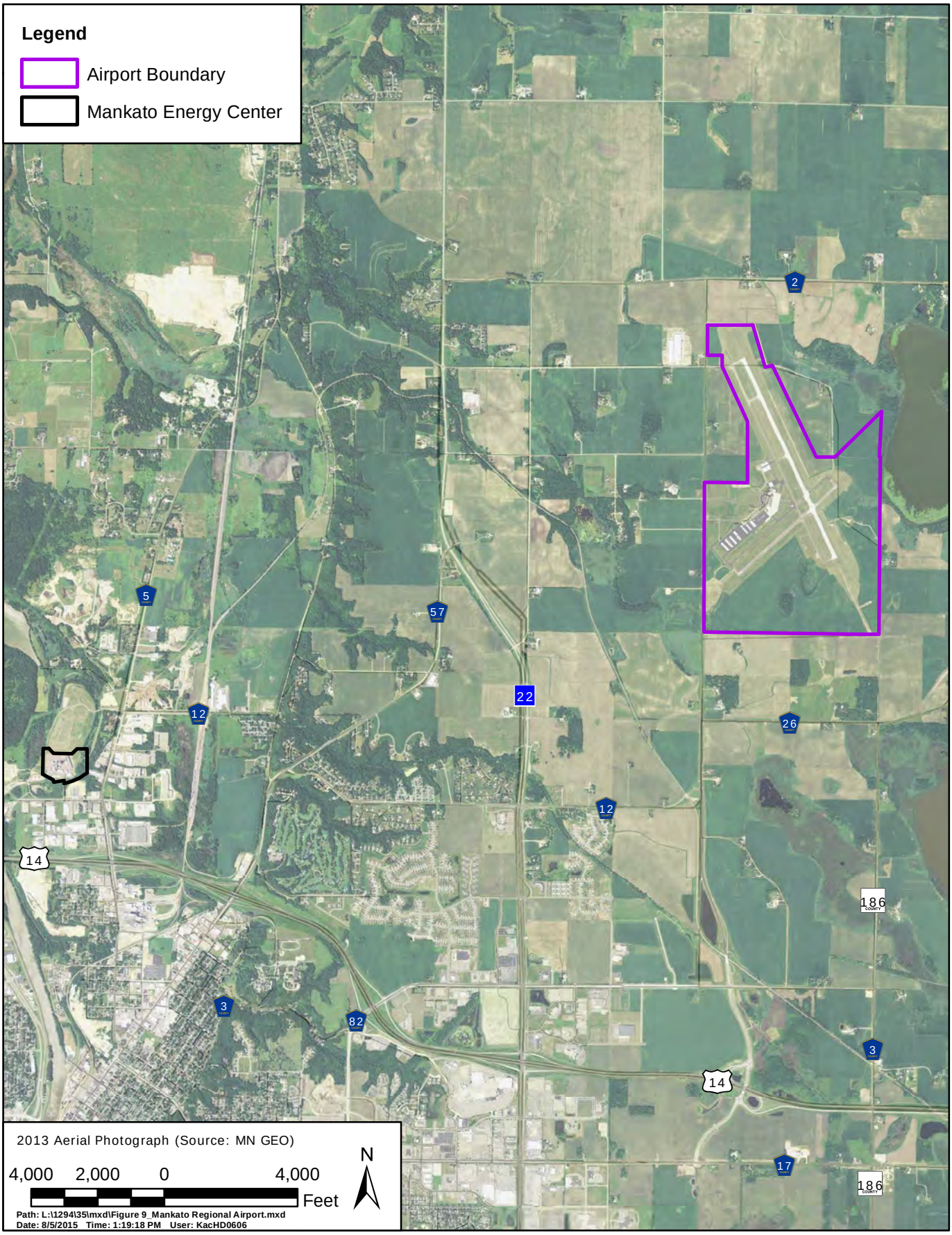
Figure 7



MANKATO ENERGY CENTER	WENCK ASSOCIATES Responsive partner. Exceptional outcomes.	AUG 2015
Nearest Residential Noise Receptors		Figure 8



MANKATO ENERGY CENTER

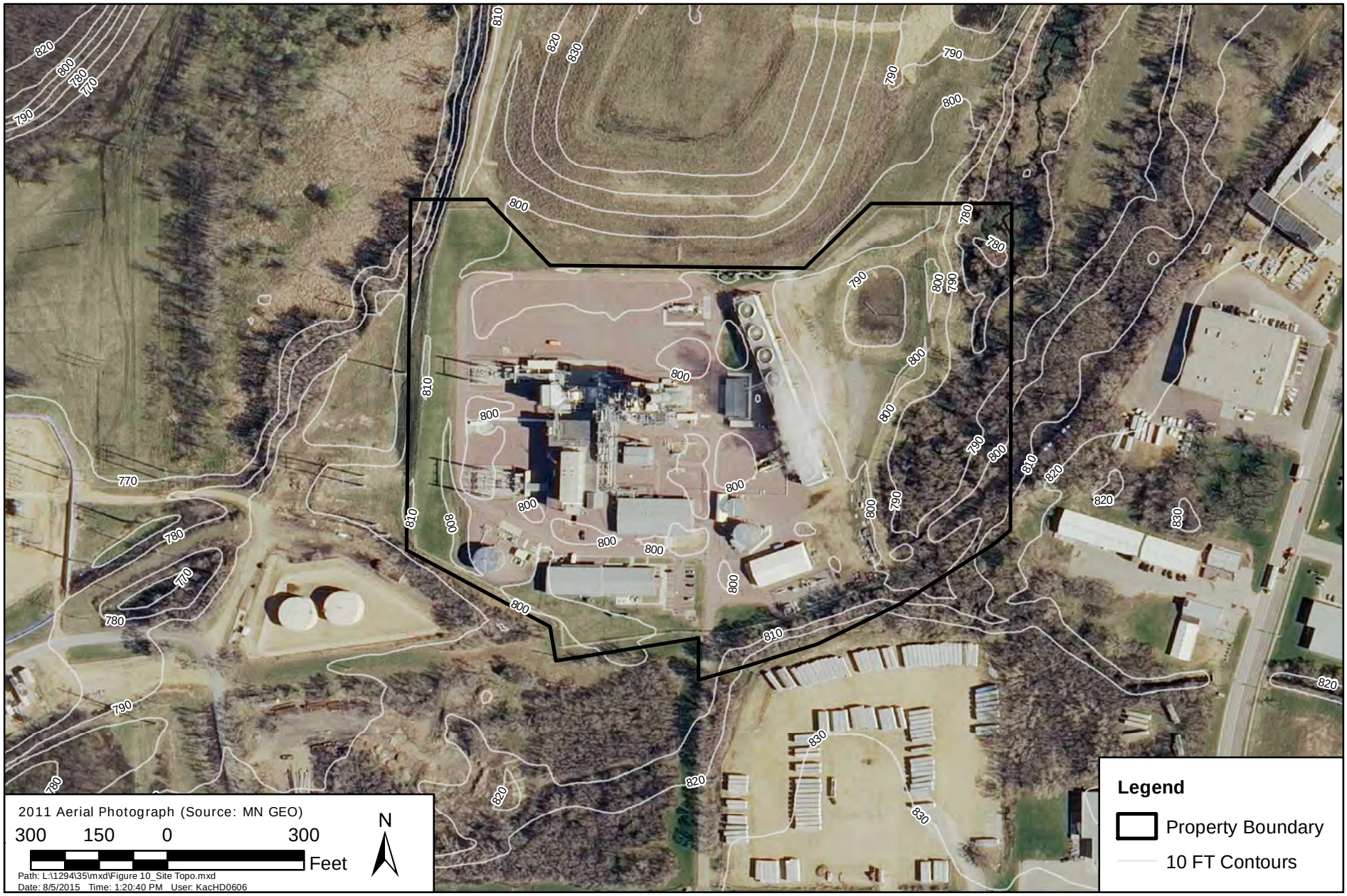
Mankato Regional Airport

WENCK ASSOCIATES

Responsive partner. Exceptional outcomes.

AUG 2015

Figure 9



MANKATO ENERGY CENTER

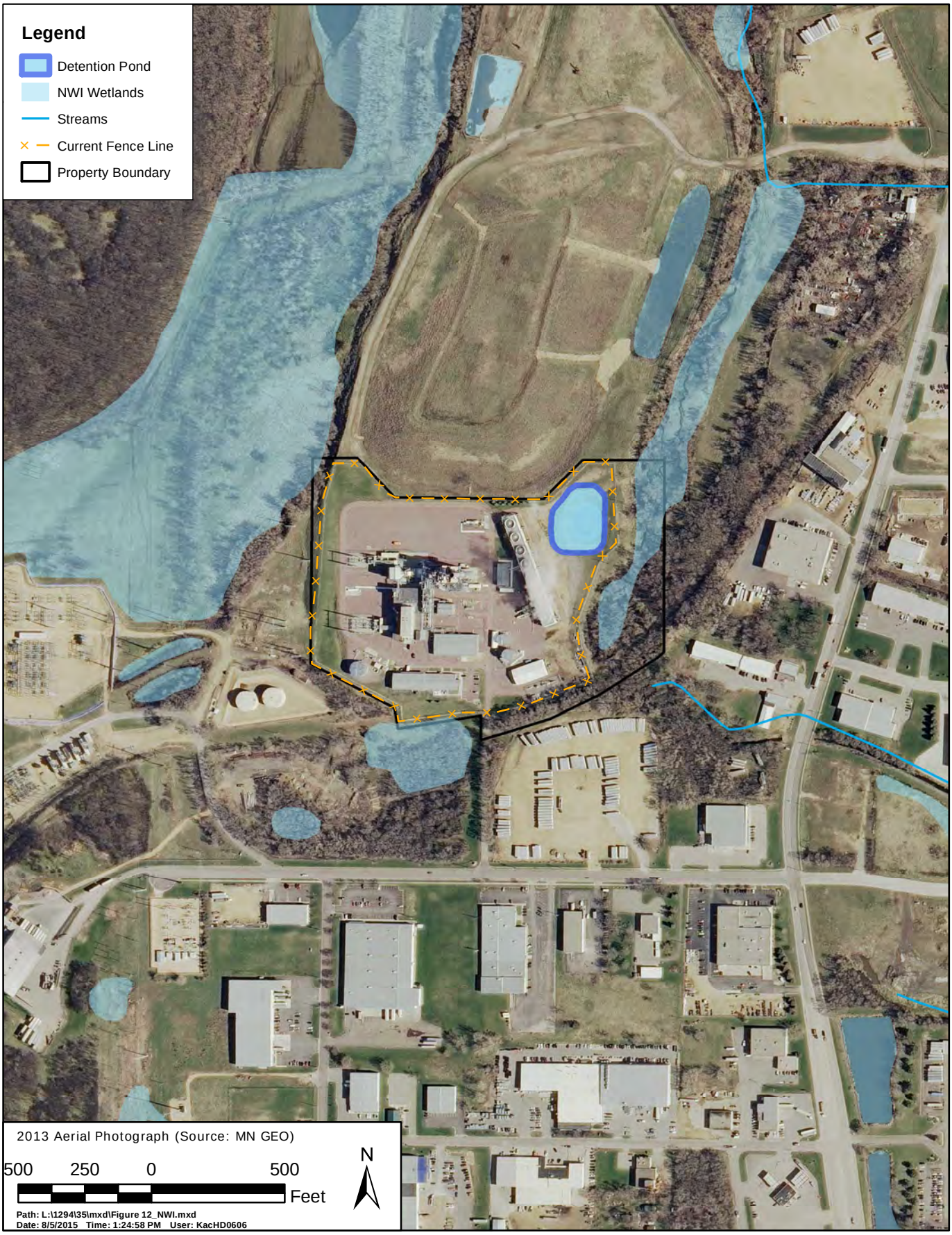
Current Site Topography

WENCK ASSOCIATES
Responsive partner. Exceptional outcomes.

AUG 2015

Figure 10

MANKATO ENERGY CENTER	WENCK ASSOCIATES Responsive partner. Exceptional outcomes.	AUG 2015
100 - Year Floodplain Areas		Figure 11



MANKATO ENERGY CENTER	WENCK ASSOCIATES Responsive partner. Exceptional outcomes.	AUG 2015
NWI Wetlands and Waterbodies		Figure 12