

Participant Section for Plainview

Lower Elkhorn NRD Multi-Jurisdictional Hazard Mitigation Plan

June 2009

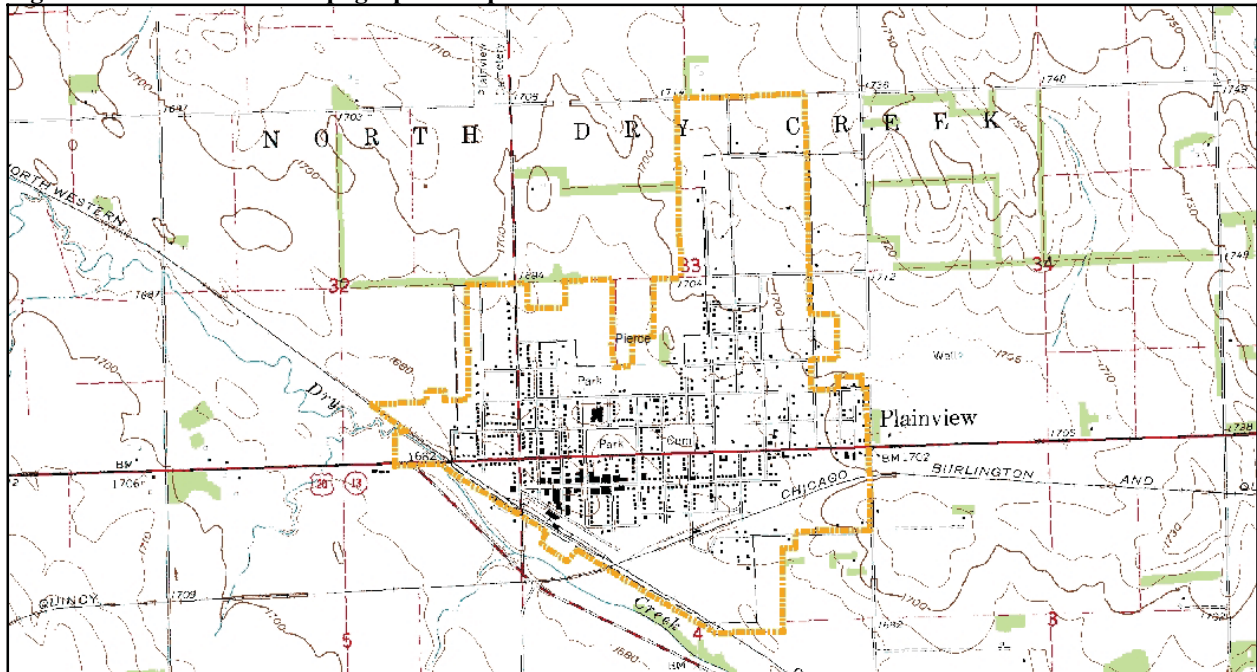
JEO project # 060D6

LOCATION/GEOGRAPHY/CLIMATE

The City of Plainview is located in the upper northwest corner of Pierce County and is 131.2 miles northwest of Lincoln. The City covers 1.08 square miles and has an elevation of 1,680 feet above sea level. Plainview lies in the topographic region of the plains. This flat-lying land above the valleys are made of sandstone or stream deposited silt, clay, sand, and gravel that is overlain by wind-deposited silt.

The average high temperature in July is 89 degrees while the average January temperature is 11 degrees. The highest recorded and lowest temperatures were 107 degrees in 1988 and -36 degrees in 1962. The average annual precipitation, which falls as rain, snow and sometimes hail, is approximately 28 inches with May having the highest average of 3.88 inches.

Figure PLN.1: Plainview Topographic Map



HISTORY AND DEVELOPMENT OF PLAINVIEW

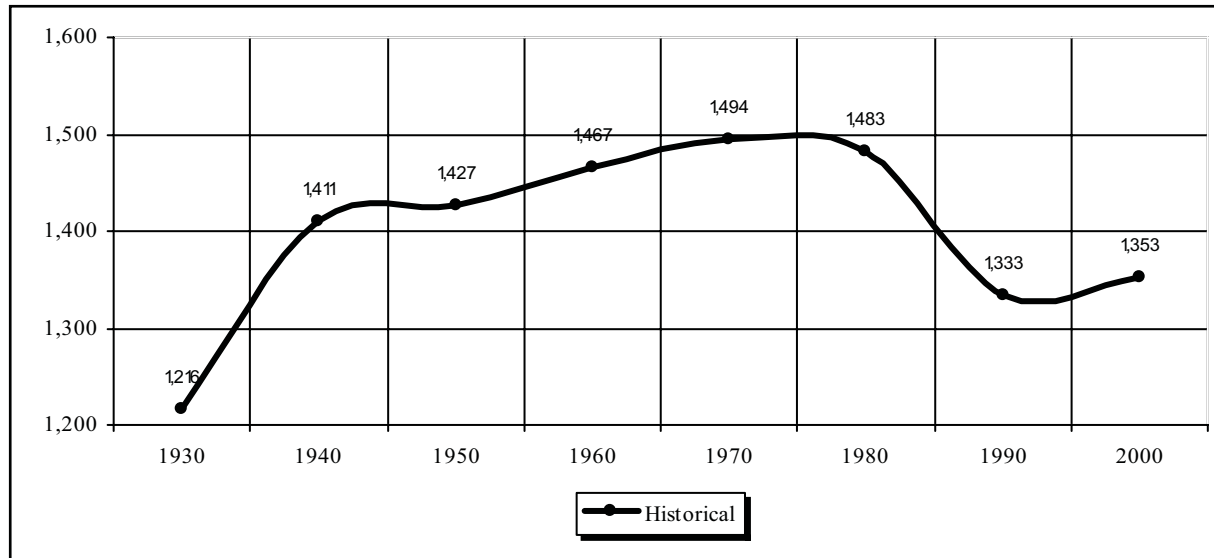
Plainview was initially settled by Danish and German immigrants from Wisconsin and Illinois. The City was incorporated on April 5, 1886, just six years after the Fremont, Elkhorn & Missouri Valley Railroad was completed between Norfolk and Plainview. The 1890 Pacific Short Line from Sioux City to O'Neill is the current line in operation and used primarily to ship grain.

This farm community's rural population has diminished with the consolidation of the family farms into a larger farm under one farmer. The City is trying to combat the overall population decline by pushing the reasons of what made the community wonderful in the first place.

PLAINVIEW DEMOGRAPHICS

Below, Figure PLN.2 displays the historical population trend for Plainview from 1930 to 2000.

Figure PLN.2: Plainview, Nebraska Population 1930-2000



FUTURE DEVELOPMENT TRENDS

The City of Plainview anticipates a ‘slight growth’ potential over the next five years. For the purposes of this plan, slight growth is considered continual development within the subdivided areas of one to five structures. See Figure PLN.3 for the areas identified by the community as likely to experience future growth.

PLANS, DOCUMENTS, AND INFORMATION USED

Throughout the planning process, a number of studies, reports, and technical information have been used to develop the plan. A listing of general sources of information used for all sections of the plan is listed in *Section 2: Planning Process*. Below is a list of specific sources used to establish Plainview’s participant section and a program status as provided by Plainview.

Table PLN.1: Sources, Reports, Regulations, and Programs

Source/Report/Regulation	Yes/No	Date Completed	Incorporated into Plan?
Comprehensive Plan	Yes	August, 2004	Yes
Zoning/Subdivision Regulations	Yes	1984	Yes
Effective Floodplain Maps	Yes	September 1, 2007	Yes
Flood Insurance Study (FIS)	No	N/A	N/A
Program	Participation?	Membership Date	Incorporated into Plan?
CRS	No	N/A	N/A
NFIP	Yes	September 1, 2007	N/A

HAZARD IDENTIFICATION

Below in Table PLN.2 is a composite of hazards identified in the community, their likelihood to occur again, and to what extent of damage may occur. The Plainview composite hazard identification table was compiled after receiving responses from the public, compiling information provided by participating citizens of Plainview and government officials, and by research of each hazard identified in the State of Nebraska Hazard Mitigation Plan. Refer to *Section 3: Risk Assessment* for a detailed discussion on the identified hazards and an explanation as to why certain hazards were eliminated from detailed discussion.

Listed below is the definition of probability of occurrence and extent of damage as used during the hazard identification process. These terms are applied consistently throughout the plan.

Probability of occurrence is defined as follows:

- **Highly Likely:** Near 100% probability in the next year.
- **Likely:** Between 10 and 100% probability in the next year, or at least one chance in 10 years.
- **Possible:** Between 1 and 10% probability in the next year, or at least one chance in next 100 years.
- **Unlikely:** Less than 1% probability in the next year, or less than one chance in the next 100 years.

Extent of damage is defined as follows:

- **Catastrophic:** More than 50% of the jurisdiction can be affected
- **Severe:** 25 to 50% of the jurisdiction can be affected
- **Limited:** 0 to 25% of the jurisdiction can be affected
- **None:** 0% of the jurisdiction can be affected

Table PLN.2: Composite Hazard Identification Table

Hazard Type	Previous Occurrence	Likely to Experience	Probability	Extent
Severe Winter Storm	Yes	Yes	Highly Likely	Severe
Tornado/High winds	Yes	Yes	Likely	Catastrophic
Severe Thunderstorm	Yes	Yes	Highly Likely	Severe
Flooding	Yes	Yes	Possible	Limited
Extreme Heat	Yes	Yes	Likely	Limited
Drought	Yes	Yes	Likely	Limited
Earthquake	No	No	Unlikely	Limited
Wildfire	No	No	Unlikely	None
Landslide	No	No	Unlikely	None
Dam Failure	No	No	Unlikely	None
Levee Failure	No	No	Unlikely	None

STRUCTURAL INVENTORY AND VALUATION

A structural inventory was completed for the corporate limits for Plainview by the “window survey” method. The value of these structure types was determined from 2008 Property Type values as provided by the Nebraska Department of Revenue Property Assessment Division.

Results from the structural inventory completed for the City of Plainview are found in Table PLN.3 below. Information displayed in this table includes number of structures, value per structure and the total value of each structure type. Refer to *Section 2: Planning Process* for a detailed discussion of how the value of each structure type was calculated. Also, Figure PLN.4 shows the structures and their types in Plainview.

Table PLN.3: Structural Inventory and Valuation Summary

Total Structures		Structure Valuation	
Structure Type	Number of Structures	Total Value	Value per Structure
Commercial/Industrial	55	\$4,709,599	\$85,629
Out Building	19	\$95,000	\$5,000
Residential	394	\$26,063,450	\$66,151
Public/Quasi Public	31	\$1,932,011	\$62,323
TOTAL STRUCTURES	499	\$32,800,060	-

CRITICAL FACILITIES

Critical facilities and infrastructure are structures and infrastructure that, if flooded or damaged, would present an immediate threat to life, public health, and safety. Critical facilities and infrastructure are vital for disaster response and providing shelter to the public. A map showing Plainview’s critical facilities and their location is found in Figure PLN.5. Refer to *Section 3: Risk Assessment* for more discussion on critical facilities in the planning area.

Warning siren locations and ranges were also determined through window survey, local officials and the local emergency manager. See Figure PLN.6 for a map showing the siren ranges and locations.

FLOODING

Flooding Specific Vulnerability Assessment

It was determined that the flooding hazard area boundaries are limited to the estimated 100-year flood boundary as shown in Figure PLN.7. The estimated 100-year flood boundary was digitally traced of the hard FEMA Flood Insurance Rate Maps (FIRM). This estimated floodplain traced from the FIRM should not be used for flood insurance purposes. The actual FIRM should be used for further investigation.

Corresponding to Table PLN.4 below, Plainview has 16 structures in the flood area within the corporate limits. These structures identified in the estimated 100-year flood boundary are susceptible to flooding. Damages which may be caused by flooding include loss of structures, destruction of infrastructure such as bridges and roads, loss of utilities (wastewater treatment) and potential for loss of life.

Potential Losses

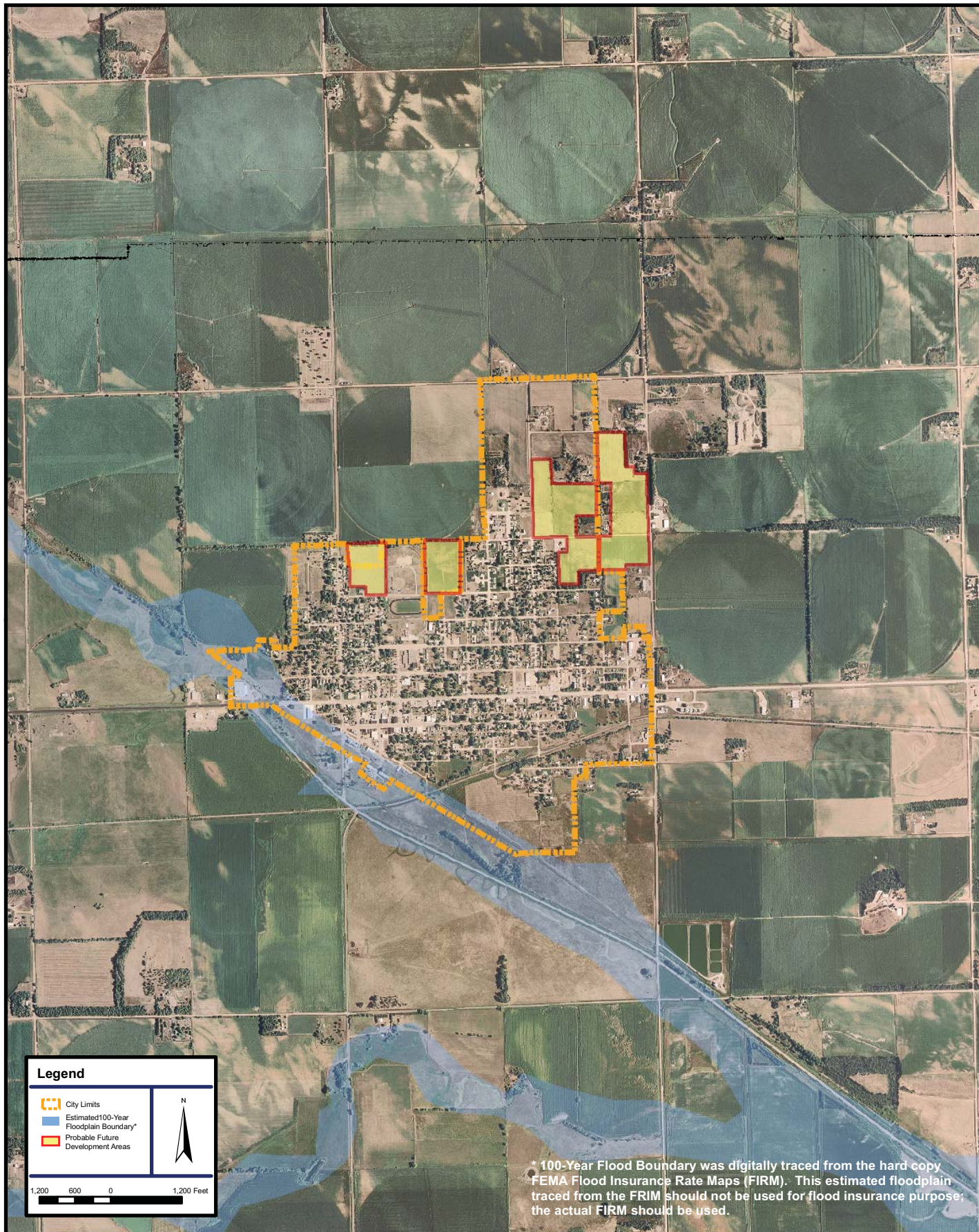
Potential losses associated with a flood event vary greatly depending upon the severity of the event. In a 100-year event, damages to structures in the estimated flood boundary could approach the total replacement value of \$420,883. This figure does not include functional down time, economic effects, or recovery and replacement costs.

For the purposes of estimating potential losses, it was estimated that all the structures in the flood zone area sustain a 20 percent building damage with a flood depth of 2 feet. This is from the Flood Building Loss Estimation Table provided by the FEMA Benefit-Cost Analysis Full Data Module. Evaluation was based on the average of one or two story buildings with basements. Using this estimated flood event, the potential building damage losses to Plainview would be \$84,117. The table below summarizes the damage to structures in the corporate limits within Plainview’s estimated 100-year flood boundary. (Refer to the *Structural Inventory and Valuation* section for how valuation was determined.)




Table 4: Structures within the 100-Year Flood Boundary


Structures in 100-year Flood Boundary		Structure Valuation		
Structure Type	Number of Structures	Average Value	Total Value	Approximate Damage Value
Commercial/Industrial	2	\$85,629	\$171,258	\$34,252
Out Building	11	\$5,000	\$55,000	\$11,000
Residential	2	\$66,151	\$132,302	\$26,460
Public/Quasi Public	1	\$62,323	\$62,323	\$12,465
TOTAL STRUCTUES	16	-	\$420,883	\$84,177

Due to the lack of resources, an estimated potential dollar loss to individual vulnerable structures was not completed for this plan. An estimate of losses for the identified structures and more detailed information such as the 1st floor elevations of structures can be completed for the next plan update.

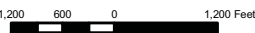


Legend

-  City Limits
-  Estimated 100-Year Floodplain Boundary*
-  Probable Future Development Areas



N



1,200 600 0 1,200 Feet

* 100-Year Flood Boundary was digitally traced from the hard copy FEMA Flood Insurance Rate Maps (FIRM). This estimated floodplain traced from the FRIM should not be used for flood insurance purpose; the actual FIRM should be used.

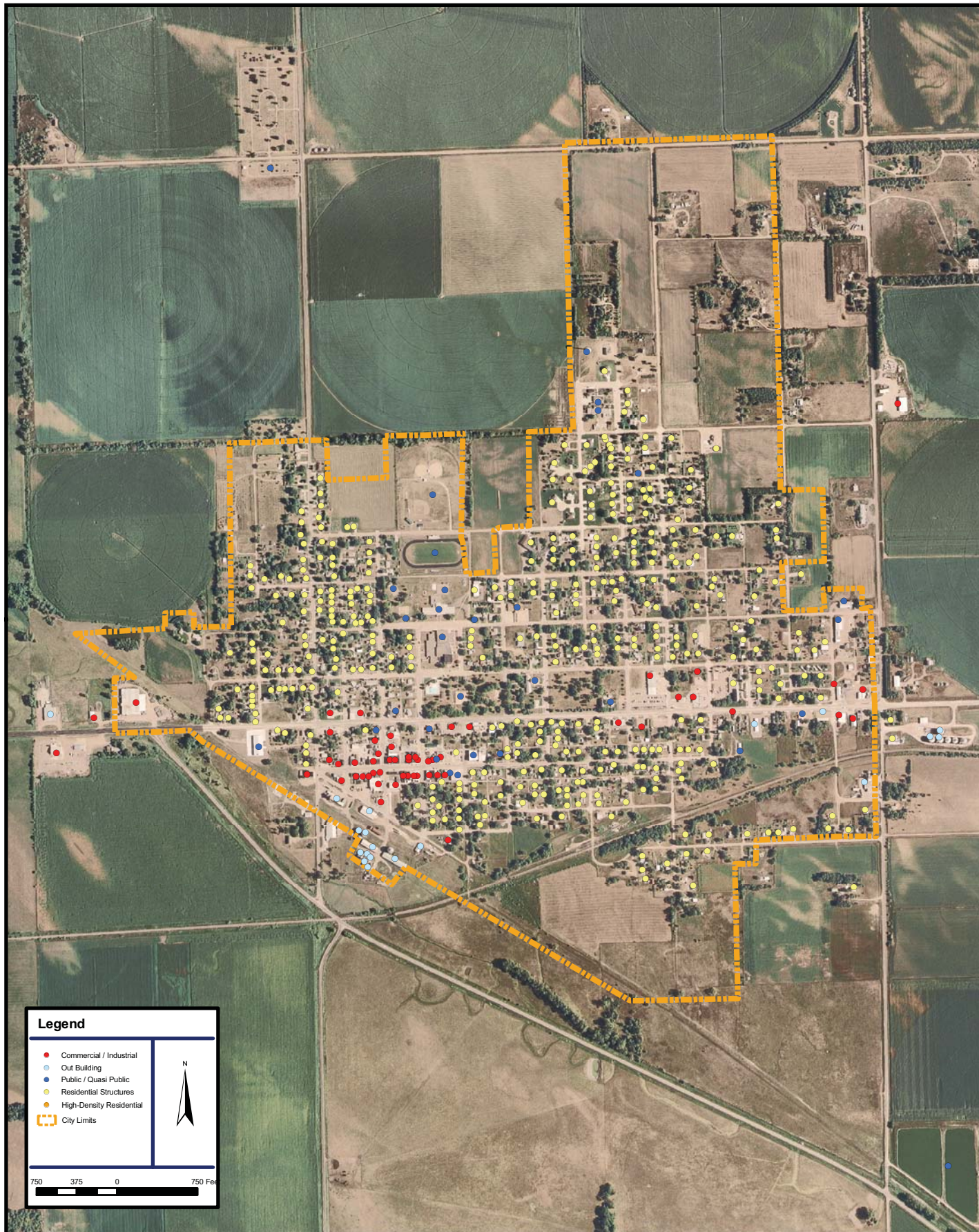
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 Source of Aerials and City Limits: NDNR
 Software Used: ESRI ArcView 9.2 sp8

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 Contact Person: Jared Nelson
 JEO Project Number: 06006

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Figure PLN.3: Future Development Map





Legend

- Commercial / Industrial
- Out Building
- Public / Quasi Public
- Residential Structures
- High-Density Residential
- City Limits

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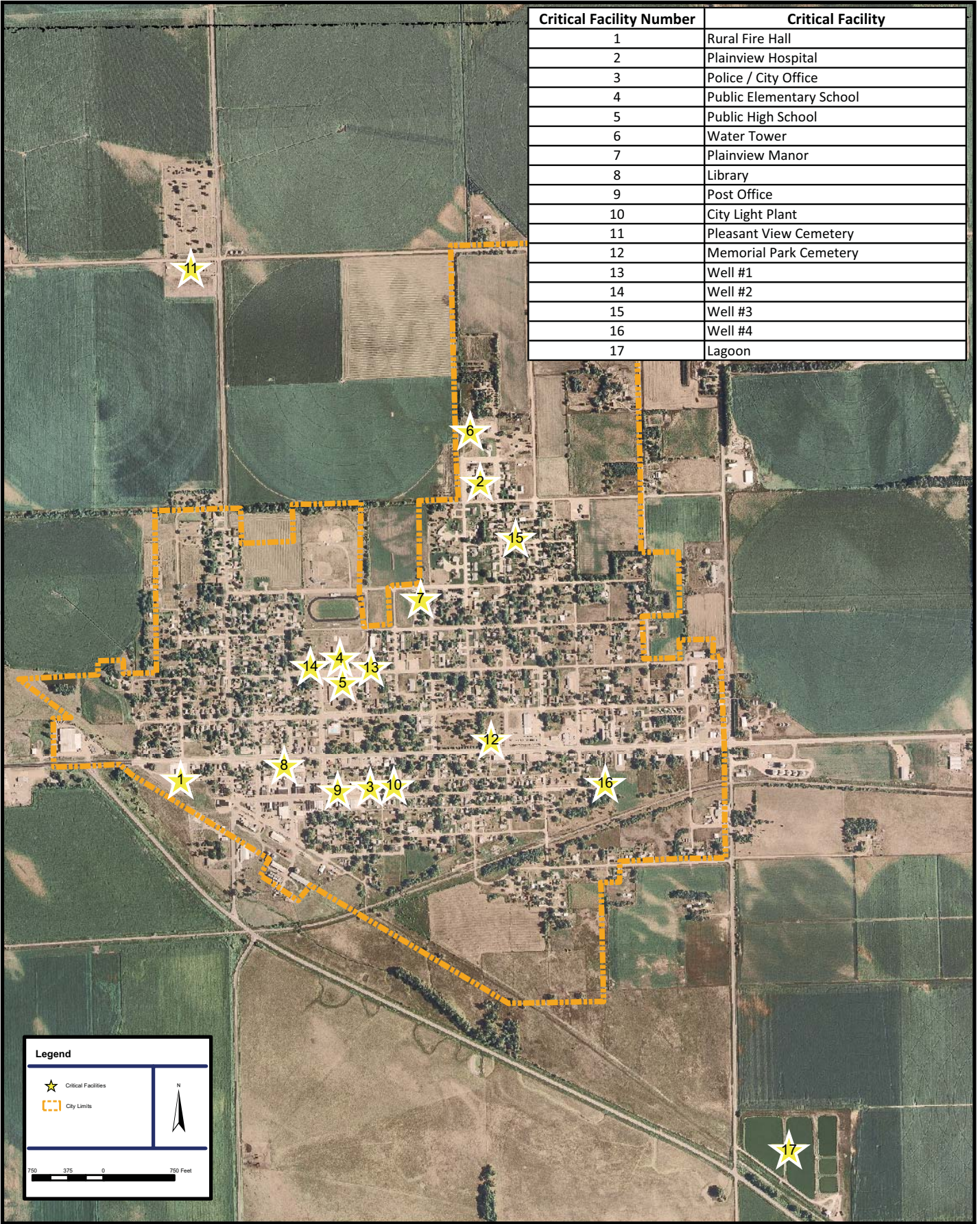
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Created By: M.Schwab, August 29, 2008
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Figure PLN.4: Structural Inventory Location Map



Critical Facility Number	Critical Facility
1	Rural Fire Hall
2	Plainview Hospital
3	Police / City Office
4	Public Elementary School
5	Public High School
6	Water Tower
7	Plainview Manor
8	Library
9	Post Office
10	City Light Plant
11	Pleasant View Cemetery
12	Memorial Park Cemetery
13	Well #1
14	Well #2
15	Well #3
16	Well #4
17	Lagoon



Legend

- ★ Critical Facilities
- City Limits

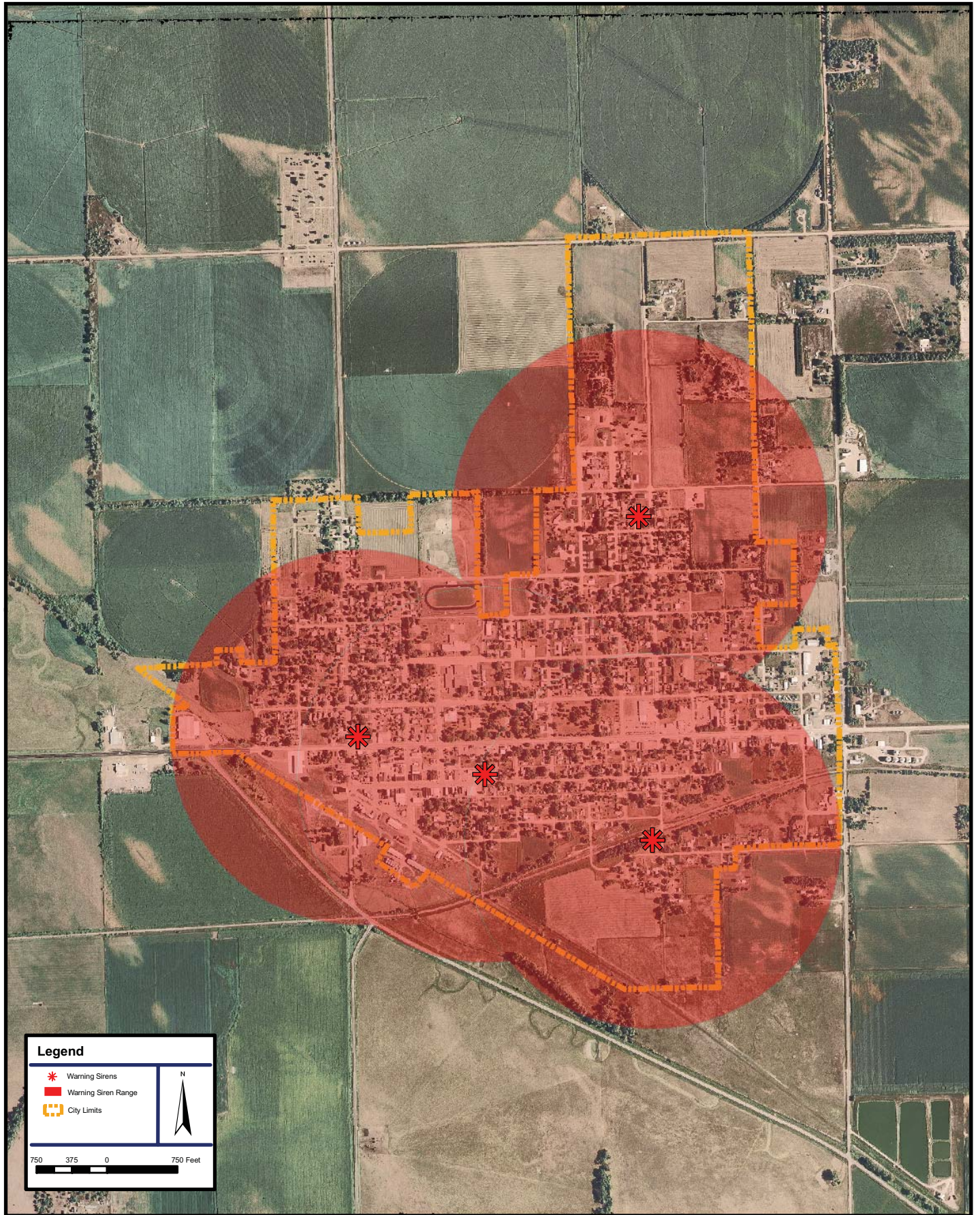
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 JEO Project Number: 06006


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 Figure PLN.5: Critical Facilities Locations**



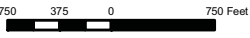


Legend

-  Warning Sirens
-  Warning Siren Range
-  City Limits



N



750 375 0 750 Feet

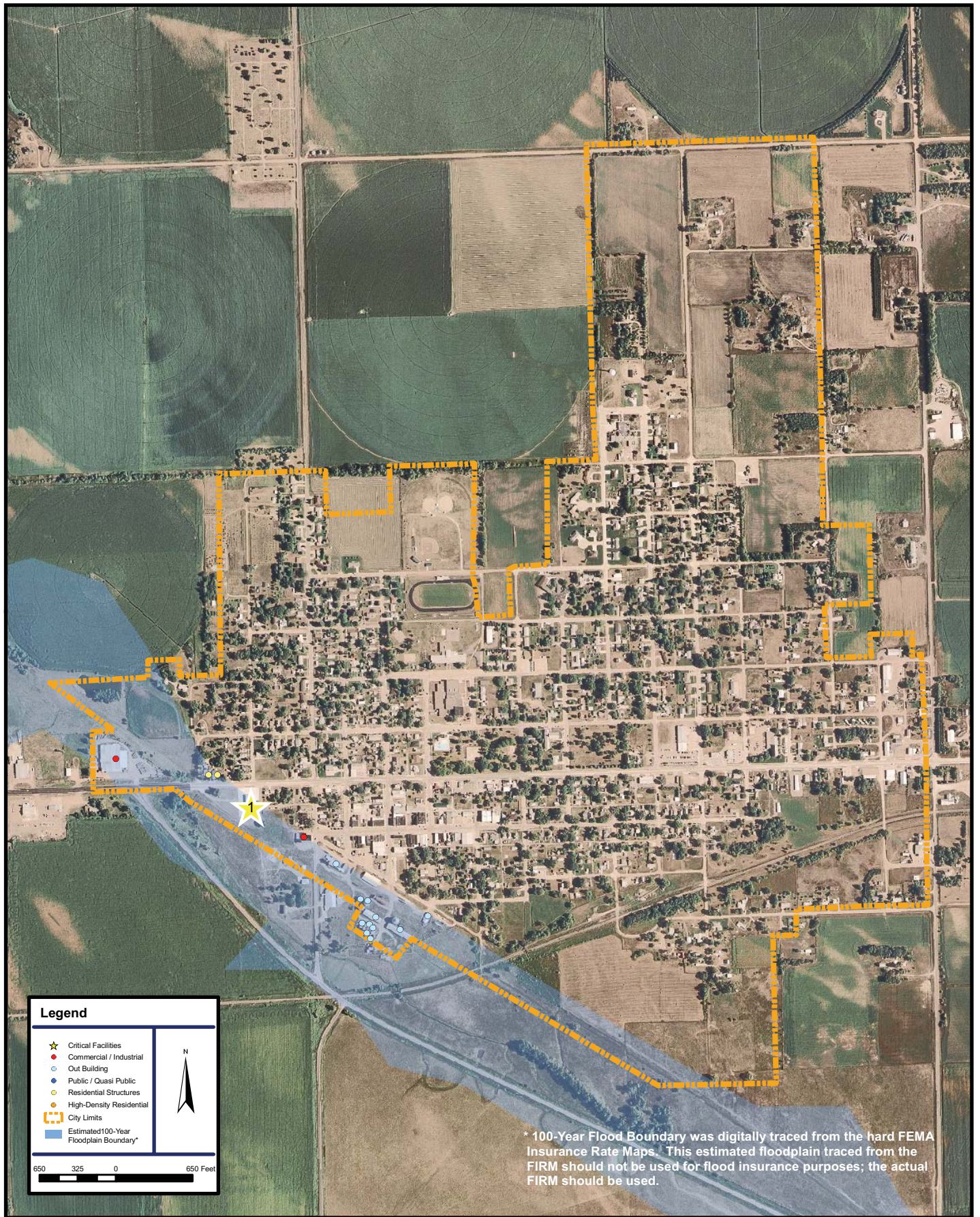
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 JEO Project Number: 09004

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Figure PLN.6: Warning Siren and Warning Siren Coverage Area





Legend

- ★ Critical Facilities
- Commercial / Industrial
- Out Building
- Public / Quasi Public
- Residential Structures
- High-Density Residential
- City Limits
- Estimated 100-Year Floodplain Boundary*



650 325 0 650 Feet

* 100-Year Flood Boundary was digitally traced from the hard FEMA Insurance Rate Maps. This estimated floodplain traced from the FIRM should not be used for flood insurance purposes; the actual FIRM should be used.

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**City of Plainview, NE
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 Figure PLN.7: Structures Located within Estimated 100-Year Flood Boundary**

