LONG RANGE TRANSPORTATION PLAN

CITY OF LEXINGTON, NEBRASKA

November 8th, 2005

Prepared For:
City of Lexington
406 E. Seventh Street
Lexington, Nebraska 68850

Prepared By:

HWS
Solutions Through Service

LEXINGTON LONG RANGE TRANSPORTATION PLAN

LEXINGTON, NEBRASKA

November 8, 2005

Submitted To:
City of Lexington, Nebraska

Submitted By:
HWS Consulting Group, Inc.

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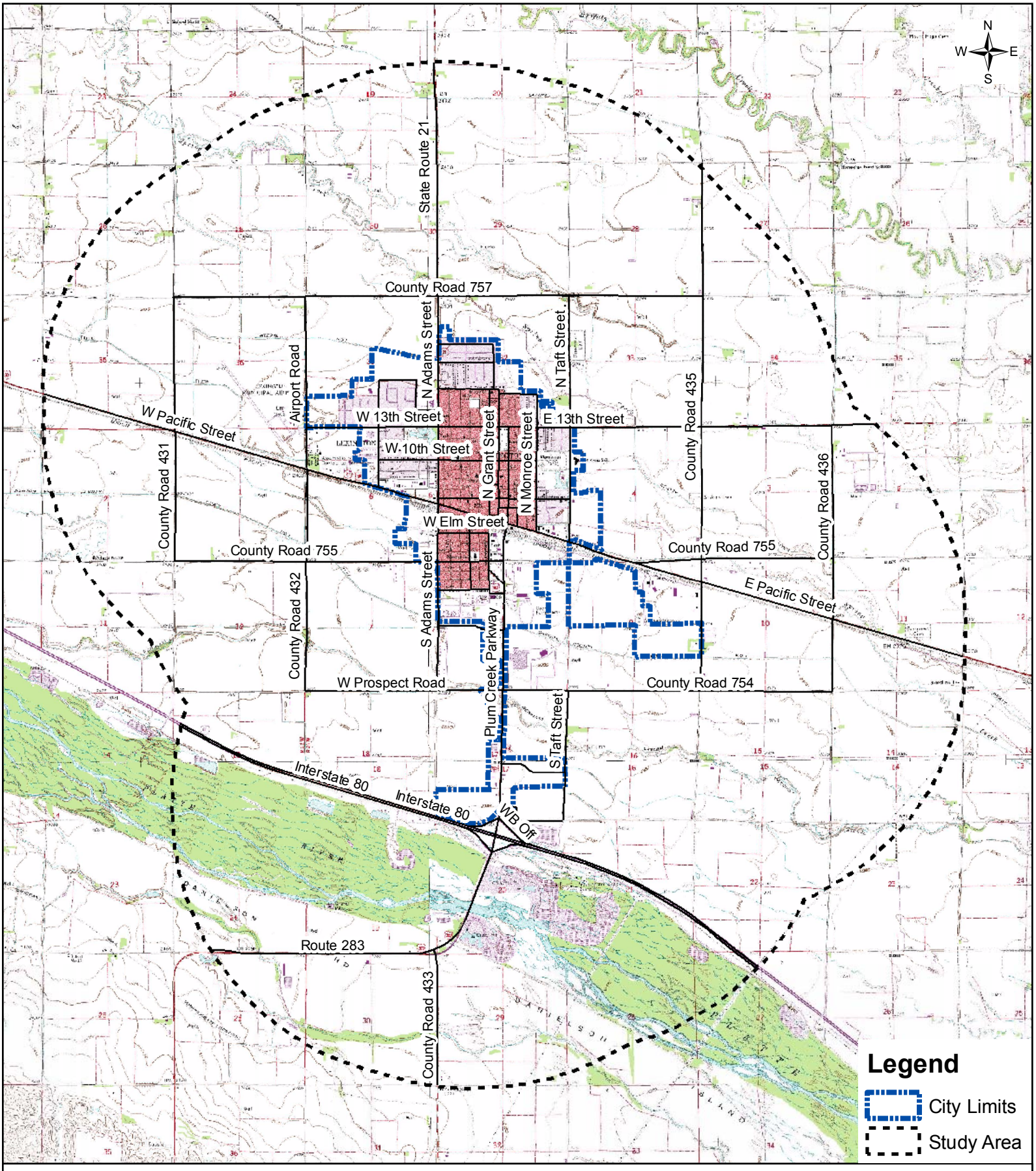
1. INTRODUCTION

This report documents the City of Lexington, Nebraska's Long Range Transportation Plan (LRTP). The LRTP study area includes the City of Lexington and the area within the city's two-mile exterritorial jurisdiction, as shown in Figure 1. The study area is 39.3 square miles and has a 2000 Census population of 10,850.

The Lexington LRTP is for the year 2030 and provides a long-range vision of the study area transportation improvements that will be needed to efficiently move goods and people. The LRTP is a tool for planning, implementing, and maintaining a transportation system. Additionally, it provides goals and objectives to ensure that the study area's transportation system development, social and natural environment preservation, and geographic and social equity are properly directed through a coordinated transportation system.

The development of Lexington's LRTP is summarized in the following steps:

- Perform Background Analysis
    - Develop base maps.
    - Collect preliminary data such as traffic counts and previous studies.
    - Prepare Geographic Information System (GIS) files.
    - Conduct a project area reconnaissance, which includes driving through the major corridors, taking photos, becoming familiar with key issues, and verifying transportation system features.
- Identify LRTP Goals and Objectives
- Public Participation
- Develop Existing Travel Demand Model
    - Develop the existing transportation network consisting of the major roadways.
    - Incorporate the existing land use plan.
    - Validate the existing model.
- Develop 2030 Travel Demand Model
    - Incorporate the future land use plan.
    - Identify capacity deficiencies.
- Develop and Evaluate Alternatives
    - Determine transportation issues within the Lexington study area.
    - Develop a list of potential alternatives that address the transportation issues.
    - Determine potential alternative impacts through planning level stick figures on aerial photography and engineering analysis.
    - Screen the list of potential alternatives to determine if they meet the community's transportation needs.
    - Carry forward alternatives to be included in the LRTP and identify them as short-term or long term.
- Obtain LRTP Approval
    - Present the draft LRTP to the City of Lexington's Planning Commission.
    - Finalize the LRTP once comments are received from the Planning Commission.



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Lexington NEBRASKA

LONG RANGE TRANSPORTATION PLAN
LEXINGTON, NEBRASKA

Study Area

Figure 1

2. LRTP GOALS AND OBJECTIVES

This section of the report identifies the goals and objectives for the Lexington LRTP.

Objectives describe specific outcomes that satisfy the intent of the goals. They may be thought of as more detailed descriptions of the goals. Preferably, objectives should be quantifiable, in order to determine if the objective has been met and what progress has been made toward achieving the goals.

Standards are statements designed to identify when an objective has been met. For example, if an objective is to reduce air pollution, the standard may be to reduce carbon monoxide concentrations to a level below the National Ambient Air Quality standard.

The following are the goals, objectives, and standards for the Lexington LRTP:

- Goal # 1: Provide an Efficient Transportation System
  - Objective: Reduce excessive travel delays.
    - Standard: Reduce the rate of growth of vehicle-hours of travel.
    - Standard: Reduce the rate of growth of vehicle-miles of travel.
    - Standard: Increase average vehicle travel speeds.
  - Objective: Define a proper mix of local, collector, and arterial streets according to land use and network continuity.
  - Objective: Preserve and maintain the street and highway system.
    - Standard: Maintain pavement, signal systems, signage, striping, and other features of the transportation infrastructure that influence traffic movement to a level that permits safe operation.

- Goal # 2: Provide Mobility and Accessibility to the Users of the Transportation System
  - Objective: Provide an acceptable level of service for all streets.
    - Standard: Provide Level of Service C or better.
  - Objective: Provide access control guidelines for functionally classified facilities.
  - Objective: Establish standards for location of local, collector, arterial, and freeway facilities.
    - Standard: Be compatible with local access standards (including collectors).
    - Standard: Be compatible with national and/or state practice.
    - Standard: Be compatible with federal standards and those of other jurisdictions.

- Goal # 3: Provide Compatible Transportation and Land Use Systems
  - Objective: Assign the correct facility type according to use and location.
  - Objective: Design roadways according to new land use using appropriate facility types.

3. PUBLIC PARTICIPATION

This section of the report summarizes the Lexington LRTP public participation process.

Transportation improvements represent a significant public investment. Large projects affect many people who live in the community, especially residents who have property near areas where improvements are constructed. Therefore, it is important to provide the public with opportunities to participate in the identification and development of alternatives. Reasonable decisions can only be made through active public participation.

LRTP meetings were held in conjunction with the City of Lexington's Planning Commission Meetings on the first Wednesday of every month. Those present at the meetings included the City Manager, City Planning Commission, and other interested members of the public. The following is a summary of the project meetings that were held followed by a brief meeting description:

- September 1, 2004 – The meeting involved a LRTP overview and preliminary identification of transportation issues.
- November 3, 2004 – The travel demand model development was discussed and a more in-depth discussion of Lexington's transportation issues occurred.
- April 6, 2005 – Potential alternatives for the transportation issues identified at the previous meetings were presented and public input was obtained. Additionally, deficiencies identified in the travel demand model were discussed.
- June 2, 2005 - The Draft LRTP Report was presented. Comments received from this meeting will be incorporated into the Final LRTP Report.

4. EXISTING TRANSPORTATION SYSTEM

This section of the report describes Lexington's existing transportation system.

4.1. HIGHWAYS AND STREETS

The study area is served by the following primary highways:

- I-80
- U.S. 30
- U.S. 283
- NE-21

In addition to the primary highways, the study area is served by the following major north-south routes:

- Erie Avenue
- Adams Street
- Grant Street
- Taft Street
- Ontario Avenue
- Washington Street
- Jackson Street

In addition to the primary highways, the study area is served by the following major east-west routes:

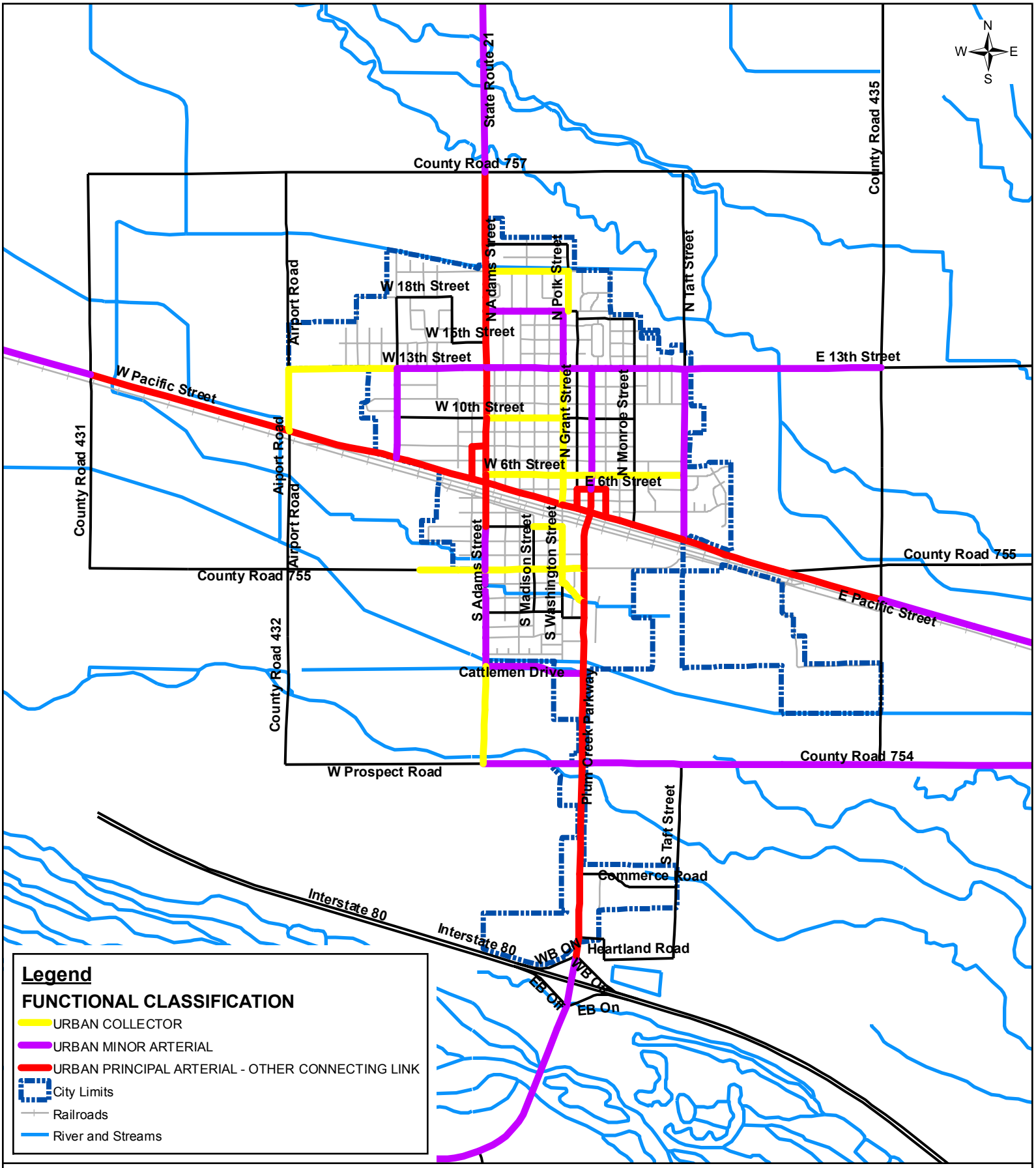
- Cattleman's Drive
- 8th Street
- 13th Street
- 20th Street
- Walnut Street
- 10th Street
- 17th Street

4.2. FUNCTIONAL CLASSIFICATION

The street network within a community is a combination of roadways of various types that serve regional, sub-regional, and local traffic. Functional classification is a system used to classify the overall character of a roadway facility. Functional classifications are listed below in their hierarchical order:

- Principal arterials typically consist of interstates, U.S., and state highways and may include other critical municipal routes. Principal and minor arterials are characterized by a high level of regional and sub-regional traffic and partial to full access control. Mobility along arterials is higher than any other roadway classification.
- Minor arterials
- Collector roads typically serve as distributors of local roadway traffic. As such, mobility is less than an arterial but access to property is greater.
- Local roads are the lowest rank of the classification hierarchy and primarily serve as land access.

Figure 2 provides an illustration of the study area roads that have a functional classification of collector or above.



LONG RANGE TRANSPORTATION PLAN

LEXINGTON, NEBRASKA

Existing Functional Classification

Figure 2

4.3. TRAFFIC VOLUMES

The Year 2000 average daily traffic (ADT) map is shown in Figure 3.

4.4. MAJOR BRIDGES

There are two major bridges in the study area. Both bridges cross U.S. 30 and the U.P.R.R. They are located at Jackson Street and Adams Street and provide access between the southern part of the city and the northern part of the city.

4.5. OTHER TRANSPORTATION SYSTEMS

Air Service

The study area is served by Jim Kelly Field for air transportation services, which is located in the northwest quadrant of the U.S. 30 and Airport Road intersection. The airport has one grass runway and one concrete runway. The grass runway is 3,200 feet long by 250 feet wide. The concrete runway is 5,489 feet long by 100 feet wide.

Railroad

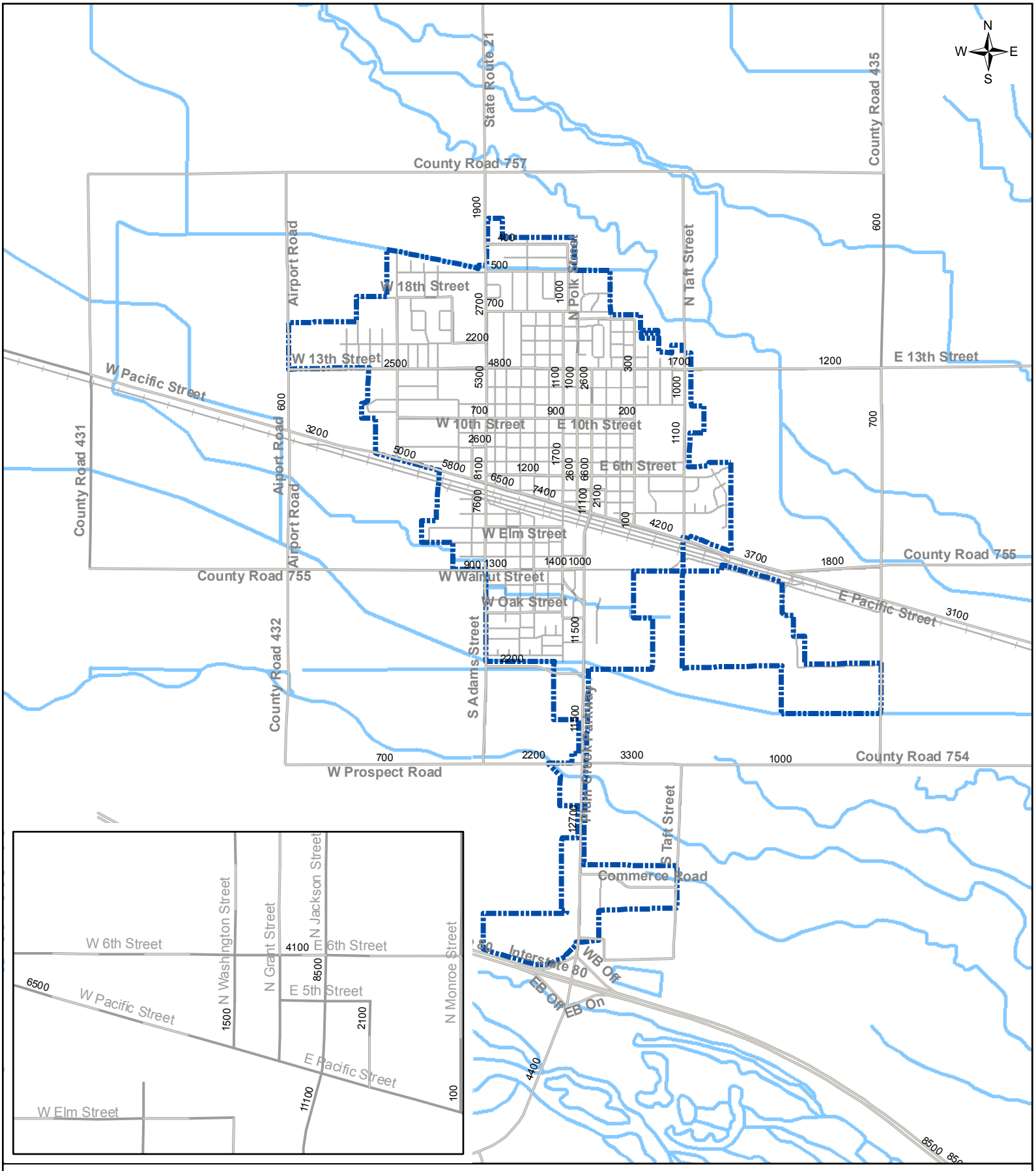
The study area is served by one major railroad. The Union Pacific *Overland Route* between Oakland, California and Chicago, Illinois passes through Lexington, bisecting the community in an east-west direction.

Bicycle and Pedestrian Facilities

Bicycle and pedestrian facilities throughout the Lexington study area consist of various systems of sidewalk facilities supplemented by various sections of paved shoulders.

Public Transportation

Lexington is served by one rural public transportation agency, the Dawson County Handi Bus.



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Lexington NEBRASKA

LONG RANGE TRANSPORTATION PLAN
LEXINGTON, NEBRASKA

2000 Average Daily Traffic

Figure 3

5. EXISTING TRAVEL DEMAND MODEL

This section of the report discusses the Year 2000 Existing Travel Demand Model (TDM) that was developed as part of the Lexington Long Range Transportation Plan.

5.1. BACKGROUND

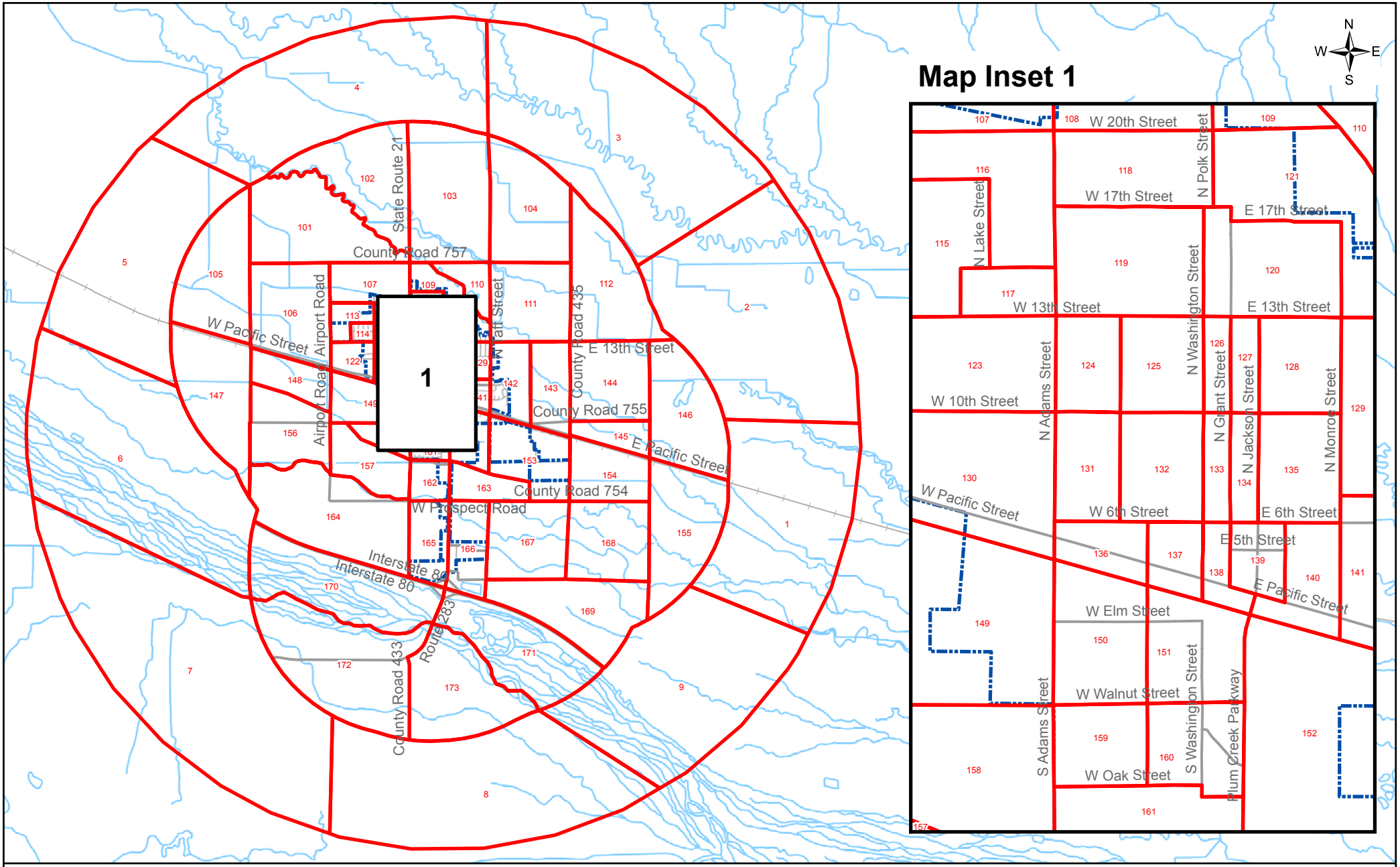
Development of a LRTP requires estimating future travel. Travel demand models are used to do this. These mathematical models are designed to calculate the number of trips, connect their origins and destinations, predict the mode of travel, and identify the roadways most likely to be used in completing a trip. Models are used to determine where future transportation problems (as indicated by congested roads) will occur. The model can test the ability of transportation system improvements to address those problems.

TransCAD was recommended by the Nebraska Department of Roads (NDOR) as the modeling package to use in the Lexington LRTP. The package is state-of-the-art travel demand forecasting software and it incorporates GIS into the transportation planning process. TransCAD was developed by Caliper Corporation in Newton, Massachusetts. The overall capabilities of the software met the analysis needs for the LRTP study. The most recent version, version 4.7, was used.

The following paragraphs summarize the development of the Existing TDM. Please refer to the "City of Lexington, Nebraska Network Validation Paper" for more detailed information regarding the model development. It can be requested from HWS Consulting Group, Inc. The conclusion of the paper is that the Lexington study area model has been validated and that the model results show a sufficient level of detail to allow for accurate regional planning and alternative testing.

5.2. TDM NETWORK

The Existing TDM network was developed using the federal functionally classified streets and a few significant local streets as well as the existing land use. It includes Traffic Analysis Zones (TAZ's). These zones were defined according to their development density, homogeneity of land use, and access to the major street network. TAZ development also involved locating the centroid of the zone, which is the point that represents the "center of gravity" of trip-making activity within the zone (not its geographic center). A map of the TAZ's is shown in Figure 4.


Map Inset 1
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1
State Route 21
County Road 757
Airport Road
W Pacific Street
N Taft Street
County Road 435
E 13th Street
County Road 755
E Pacific Street
County Road 754
W Prospect Road
Interstate 80
Route 283
County Road 433
W 20th Street
N Polk Street
W 17th Street
E 17th Street
N Lake Street
N Washington Street
W 13th Street
E 13th Street
N Adams Street
N Grant Street
N Jackson Street
N Monroe Street
W 10th Street
W 6th Street
E 6th Street
E 5th Street
W Elm Street
W Walnut Street
S Adams Street
S Washington Street
Plum Creek Parkway
W Oak Street
0 1 2 Miles
Lexington NEBRASKA
LONG RANGE TRANSPORTATION PLAN
LEXINGTON, NEBRASKA
Traffic Analysis Zones
Figure 4

5.3. TDM PROCESS

The TDM uses a four-step process to predict future traffic. The four steps are Trip Generation, Trip Distribution, Mode Split and Trip Assignment and are described below.

Trip Generation

Trip generation is the process of determining the number of trips produced by and attracted to each TAZ. This is done using mathematical equations based on known relationships between travel and the socioeconomic characteristics of trip makers. The trip generation model for the Lexington study area estimates daily trips based on socioeconomic variables of population, households, retail and non-retail employment. Trips are estimated as productions, which are trips related to household, and attractions, which are related to employment.

Trip Distribution

Trip distribution is the process of identifying the distribution of trips from each production zone to each attraction zone. The average trip length for the study area is approximately 6.0 minutes. This trip length is very reasonable for an area the size of Lexington study area.

Mode Split

Mode split is the process of allocating the person trips computed in the trip generation phase to the available modes of travel. The model allocates person trips to either automobiles or transit. A transit element was not created in the travel demand model since the Lexington study area does not have a city bus service; therefore, all personal trips were allocated to the automobile.

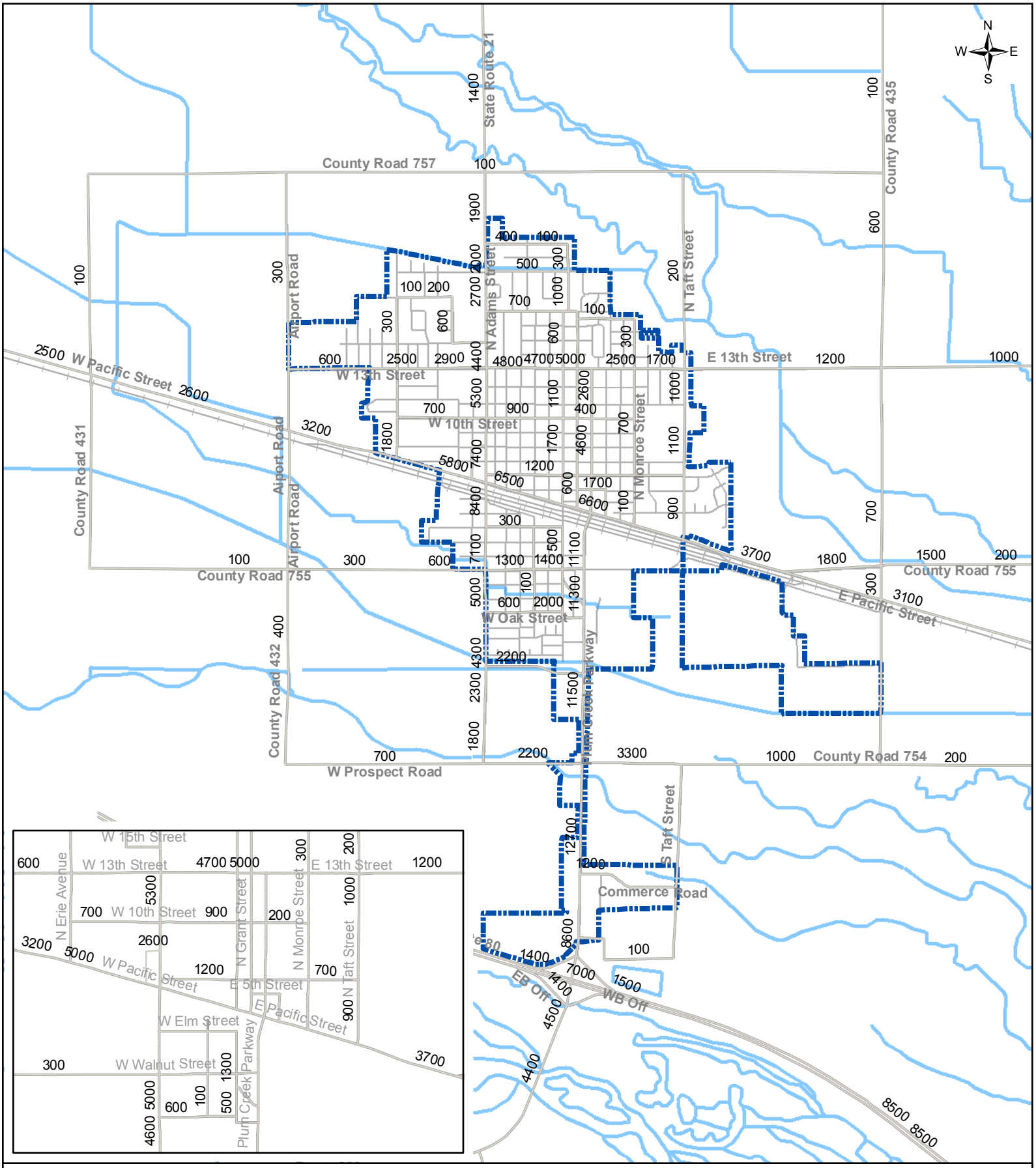
Trip Assignment

The purpose of the assignment process is to allocate trips between the TAZ's to one or more paths using the roadway network. Comparing the results of the assignment step with 2000 daily counts is the final check on the model validation process.

As stated previously, it was concluded that the model was well calibrated and was an acceptable planning tool for accurate transportation planning and alternative testing.

5.4. EXISTING TDM RESULTS

After the Existing Travel Demand Model was validated, transportation system measures of effectiveness were investigated. The Existing TDM ADT volumes are shown in Figure 5.



LONG RANGE TRANSPORTATION PLAN

LEXINGTON, NEBRASKA

Existing TDM Average Daily Traffic Volumes

Existing Network

Figure 5

An indicator of congestion is the assigned volume to capacity (V/C) ratio. Capacity is defined as the maximum hourly rate at which persons or vehicles can reasonably be expected to traverse a point or uniform section of a lane or roadway during a given time period under prevailing roadway, traffic, and control conditions. V/C ratio is the assigned volume divided by the capacity. The congestion of a roadway increases as the V/C ratio approaches 1.

To define how persons and vehicles interact under certain roadway conditions, a qualitative measure of driving conditions, called level of service (LOS), is used to describe operational characteristics at given amounts of traffic volume. The six levels of service are defined below.

- **Level of Service A** - Describes primarily free-flow operations at average travel speeds, usually about 90 percent of the free flow speed for the arterial roadway. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Stopped delay at signalized intersections is minimal.

- **Level of Service B** – Represents reasonably unimpeded operations at average travel speeds, usually about 70 percent of the free-flow speed for the arterial roadway. The ability to maneuver within the traffic stream is only slightly restricted and stopped delays are not bothersome. Drivers are not generally subjected to appreciable tension.

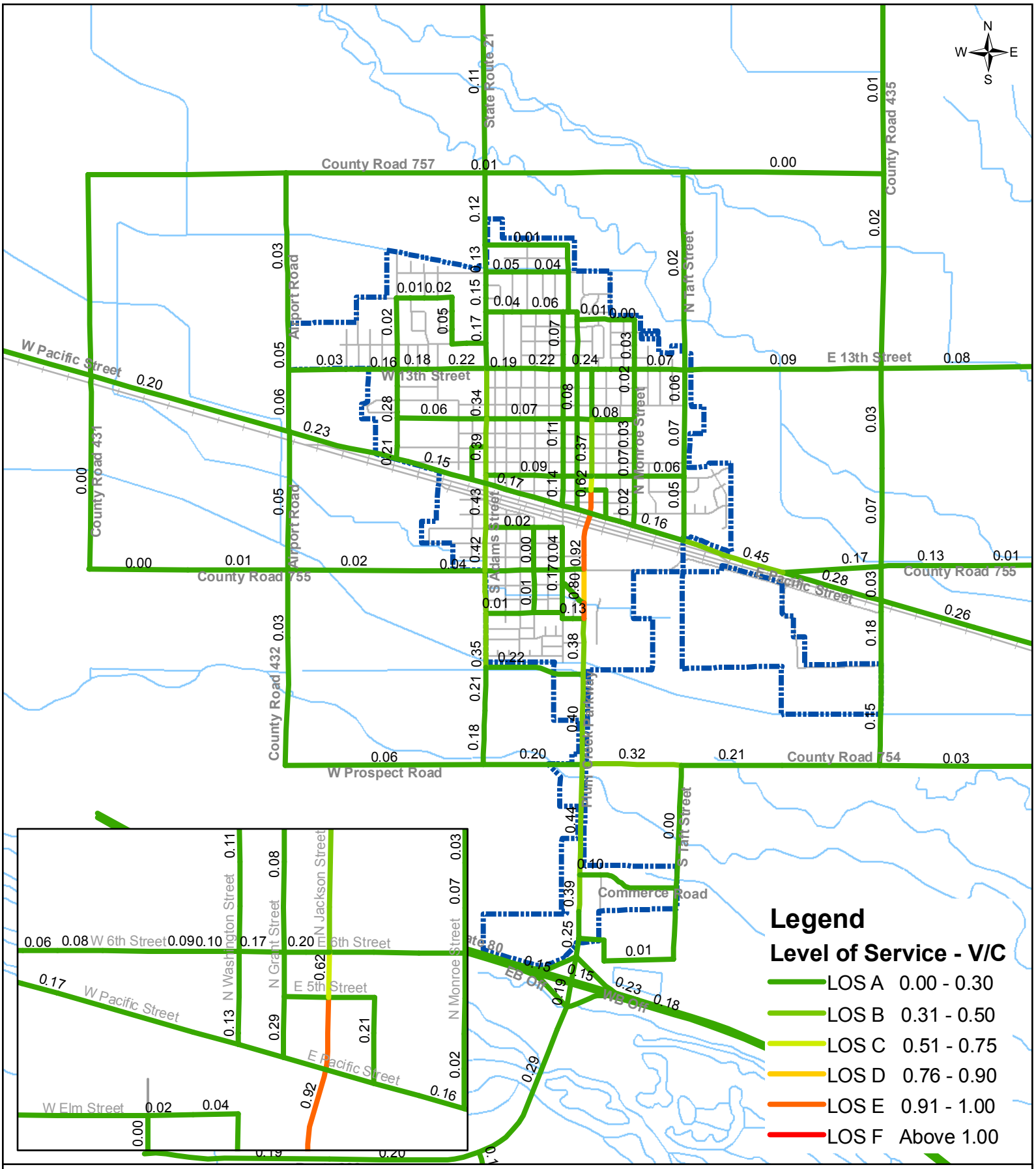
- **Level of Service C** – Represents stable operations; however, ability to maneuver and change lanes in mid-block locations may be more restricted than at LOS B, and longer queues, adverse signal coordination, or both may contribute to lower average travel speeds of about 50 percent of average free flow speed for the arterial roadway. Motorists will experience appreciable tension while driving.

- **Level of Service D** – Borders on a range in which small increases in flow may cause substantial increases in delay and decrease arterial speed. LOS D may be due to adverse signal progression, inappropriate signal timing, high volumes, or some combination of these factors. Average travel speeds are about 40 percent of free flow speed.

- **Level of Service E** – Is characterized by significant delays and average travel speeds are one-third the free-flow speed or less. Such operations are caused by some combination of adverse progression, high signal density, high volumes, extensive delays at critical intersections and inappropriate signal timing.

- **Level of Service F** – Characterizes arterial flow at extremely low speeds below one-third to one-fourth of the free flow speed. Intersection congestion is likely at critical signalized locations, with high delays and extensive queuing. Adverse progression is frequently a contributor to this condition.

The Existing TDM LOS and V/C ratios are shown in Figure 6.



LONG RANGE TRANSPORTATION PLAN
LEXINGTON, NEBRASKA

Existing LOS and V/C ratios

Existing Network

Figure 6

6. 2030 TRAVEL DEMAND MODEL

6.1. BACKGROUND

Once the Year 2000 Existing Travel Demand Model (TDM) was validated and a future land use plan was developed, both elements were combined to forecast future traffic volumes. The study team used the 2030 planning horizon in order to provide a minimum 25 year time period between the date of the study and the analysis period for the improvements.

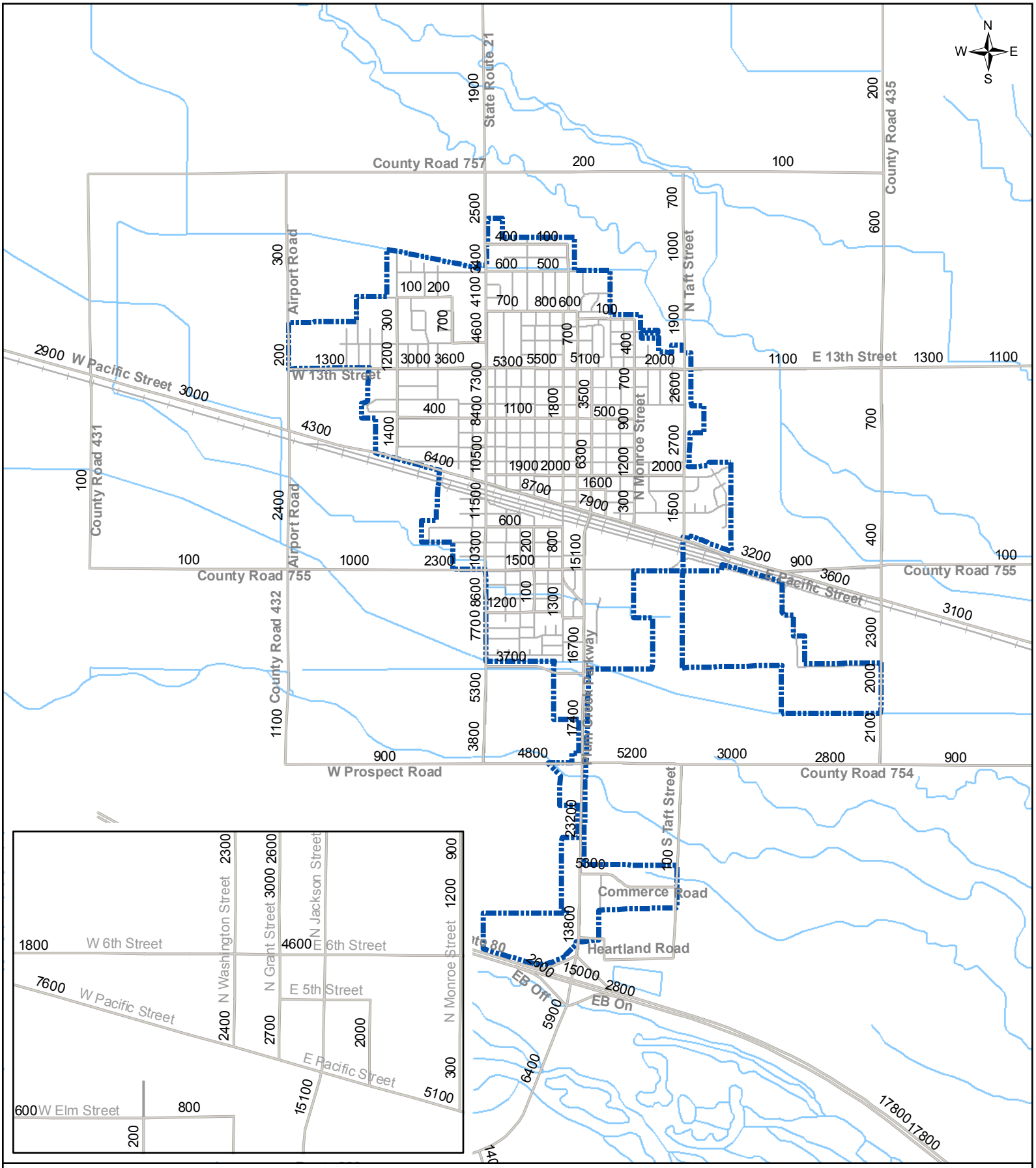
A post processing technique described in publication NCHRP-255 was used to adjust the 2030 forecasted volumes. This methodology compares the calibrated travel demand model output with actual traffic counts. The differences between the modeled traffic volumes and the actual traffic volumes are then used to adjust future traffic projections. Traffic projections are affected by a number of factors including:

- The available capacity of the roadway network.
- Type and location of land use in the surrounding area.
- The directness (or lack thereof) of available routes between various zones.
- The characteristics (i.e. design speed) of the roadways between zones.

6.2. EXISTING PLUS COMMITTED NETWORK

The 2030 Existing Plus Committed TDM network consists of the existing roadway network and any transportation improvements that will be completed in the next 25 years that have already been committed through prior planning efforts and capital improvement programs in the study area. No committed projects were incorporated into Lexington's 2030 Existing Plus Committed TDM.

Figure 7 shows the forecasted average daily traffic volumes and Figure 8 illustrates the LOS and V/C ratios for the 2030 Existing Plus Committed TDM.



0 0.5 1 Miles

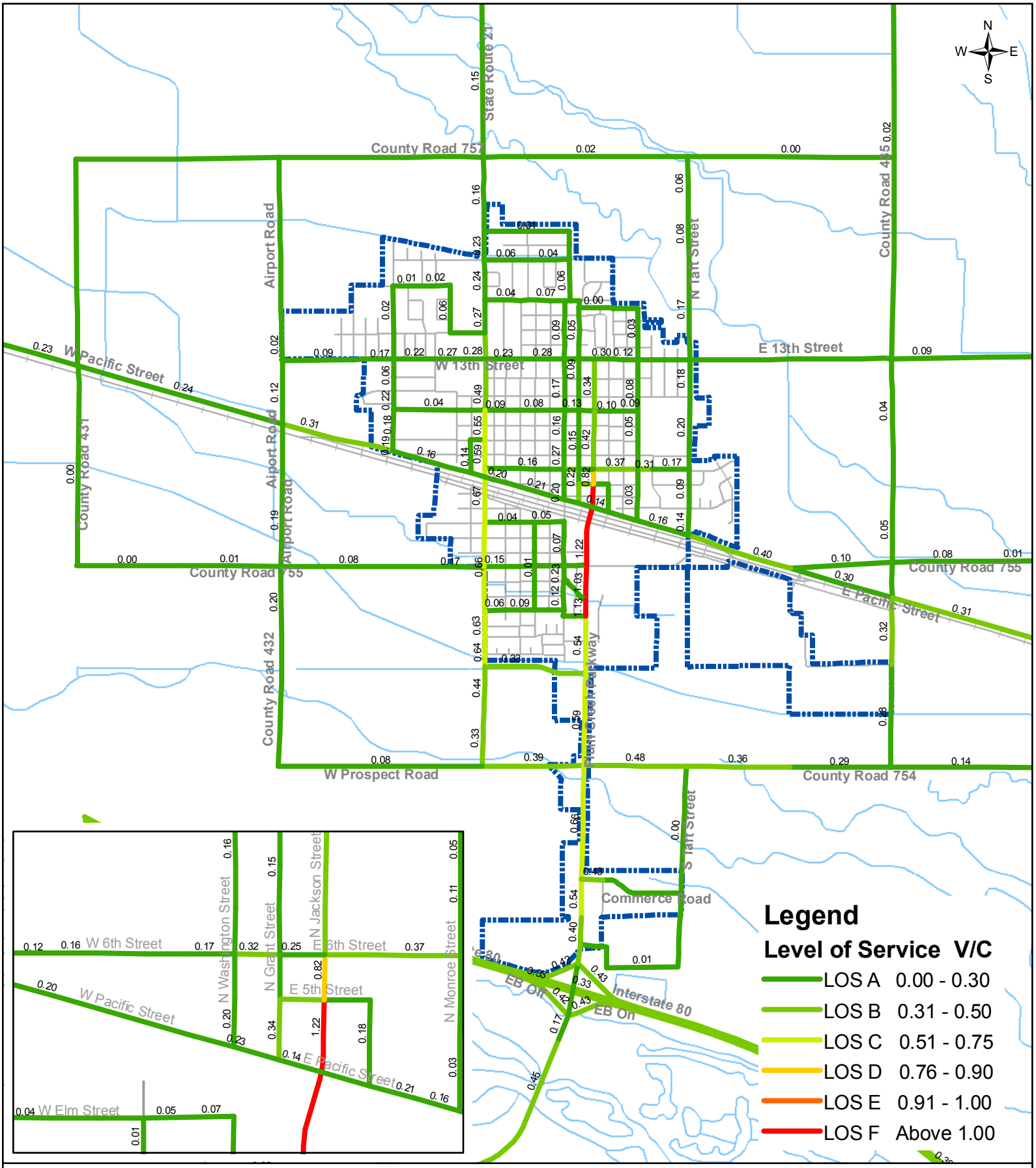
Lexington NEBRASKA

LONG RANGE TRANSPORTATION PLAN
LEXINGTON, NEBRASKA

2030 Forecasted Average Daily Traffic

Existing and Committed Network

Figure 7



LONG RANGE TRANSPORTATION PLAN
LEXINGTON, NEBRASKA

2030 LOS and V/C ratios

Existing and Committed Network

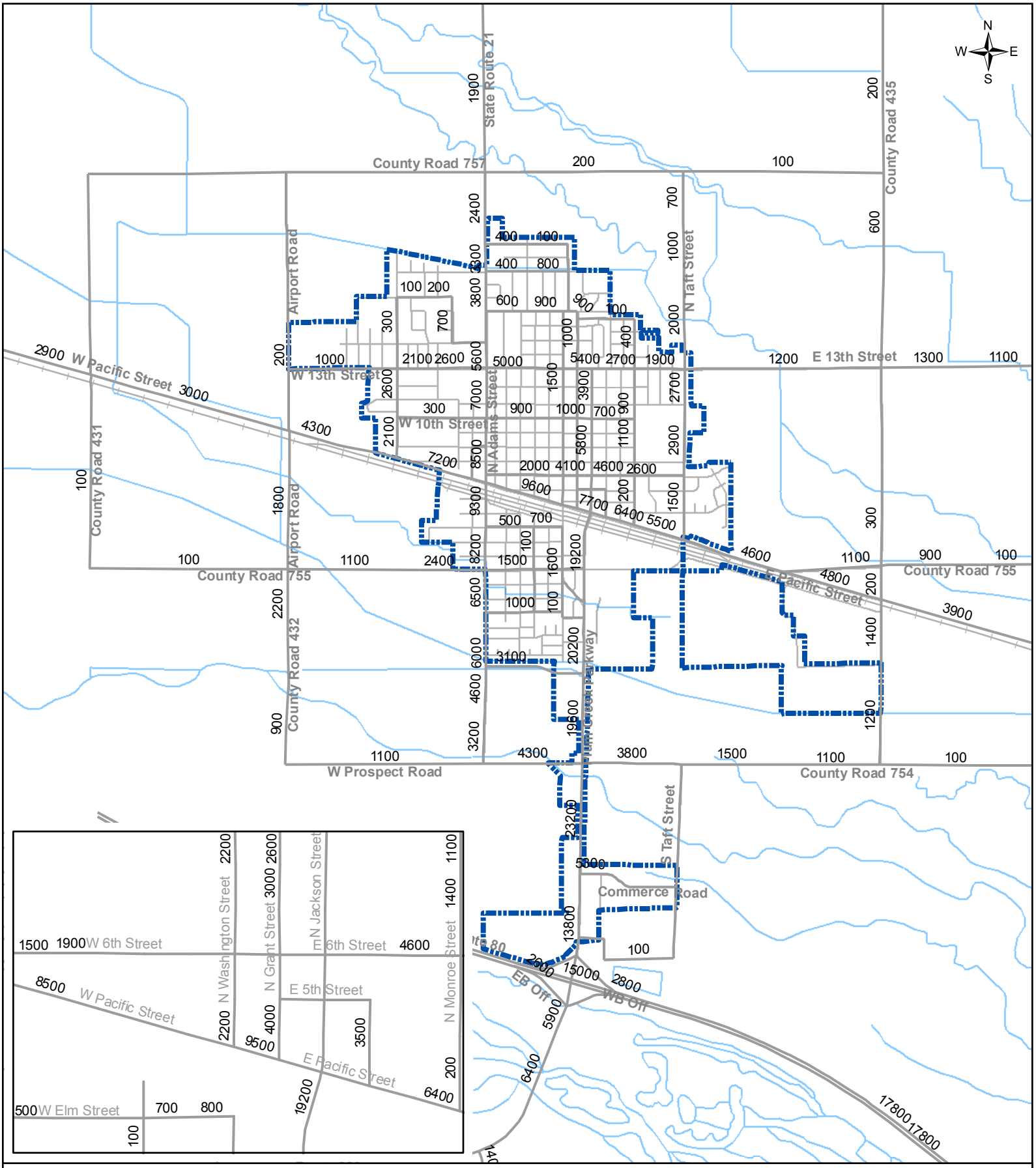
Figure 8

6.3. 2030 APPROVED NETWORK

As shown in Figure 8, there was one roadway deficiency identified (below LOS C). The two-lane roadway segment along Jackson Street/Plum Creek Parkway from Ash Street to 5th Street is LOS F and the segment from 5th Street to 6th Street is LOS D. To address this roadway deficiency, widening Jackson Street from Ash Street to 6th Street to four lanes was tested in the TDM. This TDM with the Jackson Street widening from Ash Street to 6th Street is the 2030 Approved Network. Figures that illustrate the results of the 2030 Approved Network TDM are as follows:

- Figure 9 – Average Daily Traffic Volumes
- Figure 10 – Change in Traffic Volumes
- Figure 11 – LOS and V/C Ratios

The 2030 Approved Network results indicate that more traffic will be traveling on the roadway segment; however, the LOS will increase to above LOS C due to the roadway widening.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State Route 21
County Road 757
County Road 435
Airport Road
N Taft Street
E 13th Street
W 13th Street
W 10th Street
N Adams Street
W Pacific Street
E Pacific Street
County Road 431
County Road 755
County Road 432
W Prospect Road
County Road 754
Turn Around Parkway
S Taft Street
Commerce Road
EB Off
WB Off
W 6th Street
E 6th Street
N Washington Street
N Grant Street
N Jackson Street
N Monroe Street
E 5th Street
W Elm Street
E Pacific Street
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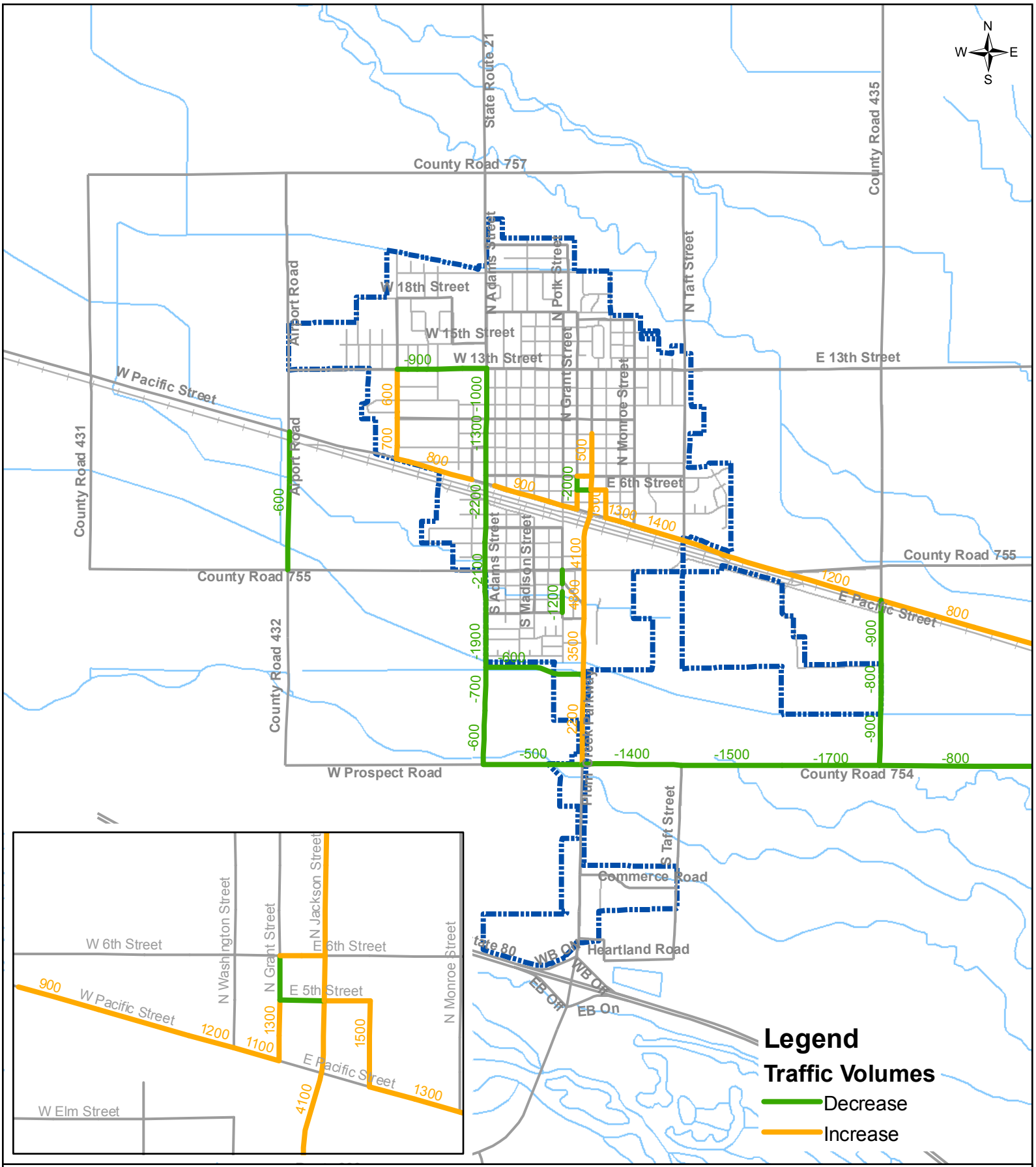
Miles
LONG RANGE TRANSPORTATION PLAN
LEXINGTON, NEBRASKA
2030 Forecasted Average Daily Traffic
Approved Network
Figure 9
Lexington NEBRASKA



0 0.5 1 Miles

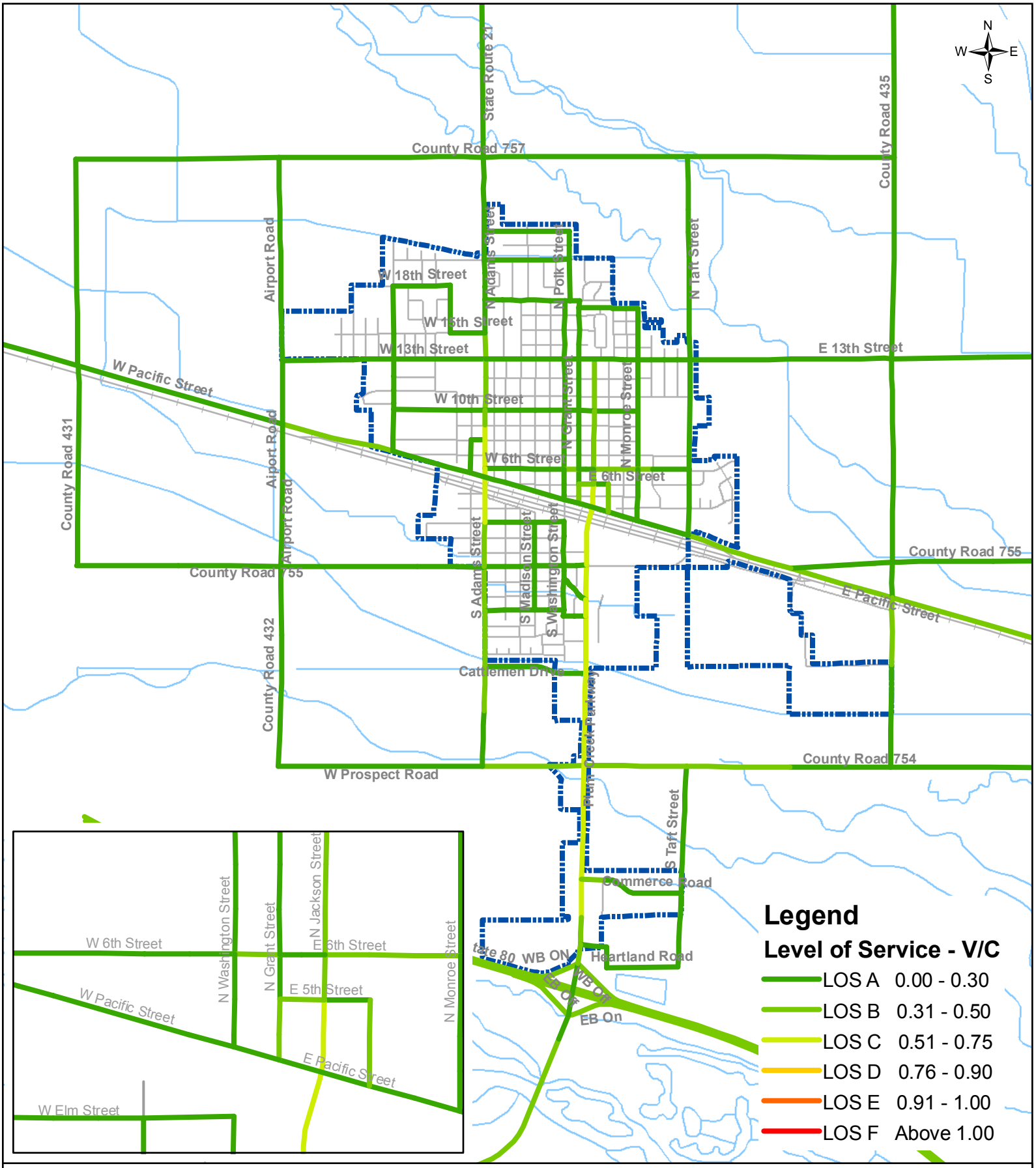
Lexington NEBRASKA

LONG RANGE TRANSPORTATION PLAN
LEXINGTON, NEBRASKA

2030 Change in Traffic Volumes

Approved Network

Figure 10



0 0.5 1 Miles

Lexington NEBRASKA

LONG RANGE TRANSPORTATION PLAN
LEXINGTON, NEBRASKA

2030 LOS and V/C ratios

Approved Network

Figure 11

7. TRANSPORTATION ISSUES AND ALTERNATIVES

This section of the Lexington LRTP discusses the transportation issues that were identified at the City of Lexington's Planning Commission meetings and their associated alternatives. The following summarizes the development and the evaluation of the transportation alternatives:

- Determine transportation issues within the Lexington study area.
- Develop a list of potential alternatives that address the transportation issues.
- Determine potential alternative impacts through planning level stick figures on aerial photography and engineering analysis.
- Screen the list of potential alternatives to determine if they meet the community's transportation needs.
- Carry forward alternatives to be included in the LRTP and identify them as short-term or long term.

7.1. TRANSPORTATION ISSUES

The City of Lexington's identified transportation issues are described below.

Jackson Street from 5th Street to 13th Street

The segment of Jackson Street from 5th Street to 13th Street is two lanes with parking either on both sides or on one side (only on the east side from 11th Street to 13th Street). The roadway narrows heading north. Issues identified along this roadway segment are the traffic volumes, truck traffic, and the appropriate traffic control at the Jackson Street and 6th Street intersection.

Airport Road and Union Pacific Railroad At-grade Crossing

The city would like to investigate grade separation at the Airport Road and Union Pacific Railroad at-grade crossing.

Road 435 and Union Pacific Railroad At-grade Crossing

The City of Lexington would like to explore grade separation at or near the Road 435 and Union Pacific Railroad at-grade crossing. It was suggested that the crossing be designed to be truck and farm machinery friendly.

10th Street and Adams Street Intersection

The city would like to improve the pedestrian safety at the 10th Street and Adams Street intersection.

10th Street and Taylor Street Intersection

The city would like to improve pedestrian safety at the intersection of 10th Street and Taylor Street near Bryon Elementary School.

Walnut Street from Adams Street to Plum Creek Parkway

The concern along Walnut Street, an arterial, from Adams Street to Plum Creek Parkway is the high traffic volume and the vehicular speeds in the Morton Elementary school zone.

13th Street from Park Street to Adams Street

The segment of 13th Street from Park Street to Adams Street is located south of the high school. The city's concern is the high amount of traffic during the high school's drop off and pick up times.

Some vehicles picking up students will park on the south side of 13th Street, requiring pedestrians to cross 13th Street. The city would like to improve pedestrian safety in this location.

13th Street at Washington Street and Grant Street
The intersections of 13th Street and Washington Street and 13th Street and Grant Street are congested during middle school drop off and pick up times. It is difficult to find gaps in the 13th Street traffic. The City of Lexington would like to investigate options to improve the traffic operations.

13th Street from Airport Road to Liberty Drive
The segment of 13th Street from Airport Road to Liberty Drive is south of the new sports complex. The City of Lexington would like to improve pedestrian safety along this roadway segment.

8th Street from Adams Street to Jackson Street
Before the Adams Street viaduct was built, 6th Street was an east-west arterial from Adams Street to Jackson Street. After the recent construction of the Adams Street viaduct, 6th Street is closed at Adams Street; therefore, the city would like to investigate upgrading 8th Street's functional classification from Adams Street to Jackson Street. This issue may include updating other street functional classifications as desired by the city.

Cattleman's Drive
Cattleman's Drive has no shoulder area and carries a significant amount of pedestrians and bicycles. The city would like to look into options that would improve safety along this roadway segment.

Adams Street from 15th Street to County Road 757
There are a lot of walkers and runners along the section of Adams Street from 15th Street to County Road 757, especially during the warmer months. There is a perceived speeding problem in certain areas along the segment. The city would like to look into options that would improve safety along this roadway segment.

Plum Creek Parkway from Frontier to Cattleman's Drive
The City of Lexington would like to improve pedestrian safety along this roadway segment from the Tyson Plant to the Super Wal-Mart, which is used by Tyson Plant employees.

Peak Hour Traffic Analysis
The overall perception at the April 2005 Planning Commission Meeting was that the 2030 Existing Plus Committed TDM would indicate worse roadway segment levels of service. It was noted that these results are daily planning level results and represent what the individual roadways experience over the course of a day. It was decided that two individual intersections would be analyzed during the AM and PM peak hours. The selected intersections were 13th Street and Grant Street and 13th Street and Jackson Street. Table 1 summarizes the results of the peak hour traffic analysis.

Table 1. Peak Hour Traffic Analysis

Intersection	Approach	AM Peak Hour		PM Peak Hour	
		Delay (s)	LOS	Delay (s)	LOS
13th Street and Grant Street	EB	0.3	N/A[1]	0.2	N/A[1]
	WB	1.7	N/A[1]	1.3	N/A[1]
	NB	22.8	C	25.9	D
	SB	27.5	D	20.3	C
13th Street and Jackson Street	EB	0.0	N/A[1]	0.0	N/A[1]
	WB	2.4	N/A[1]	2.6	N/A[1]
	NB	16.0	C	17.2	C

Notes:
1. The main street approach delay is not defined.

The results of the peak hour analysis indicate that the 13th Street and Grant Street intersection southbound approach during the AM peak hour and northbound approach during the PM peak hour are at unacceptable levels (LOS D). This is due to vehicles on Grant Street being unable to find gaps in the 13th Street traffic. The Peak Hour Signal Warrant was checked and not met for the two intersections. A traffic engineering study should be performed at these locations to determine improvement alternatives.

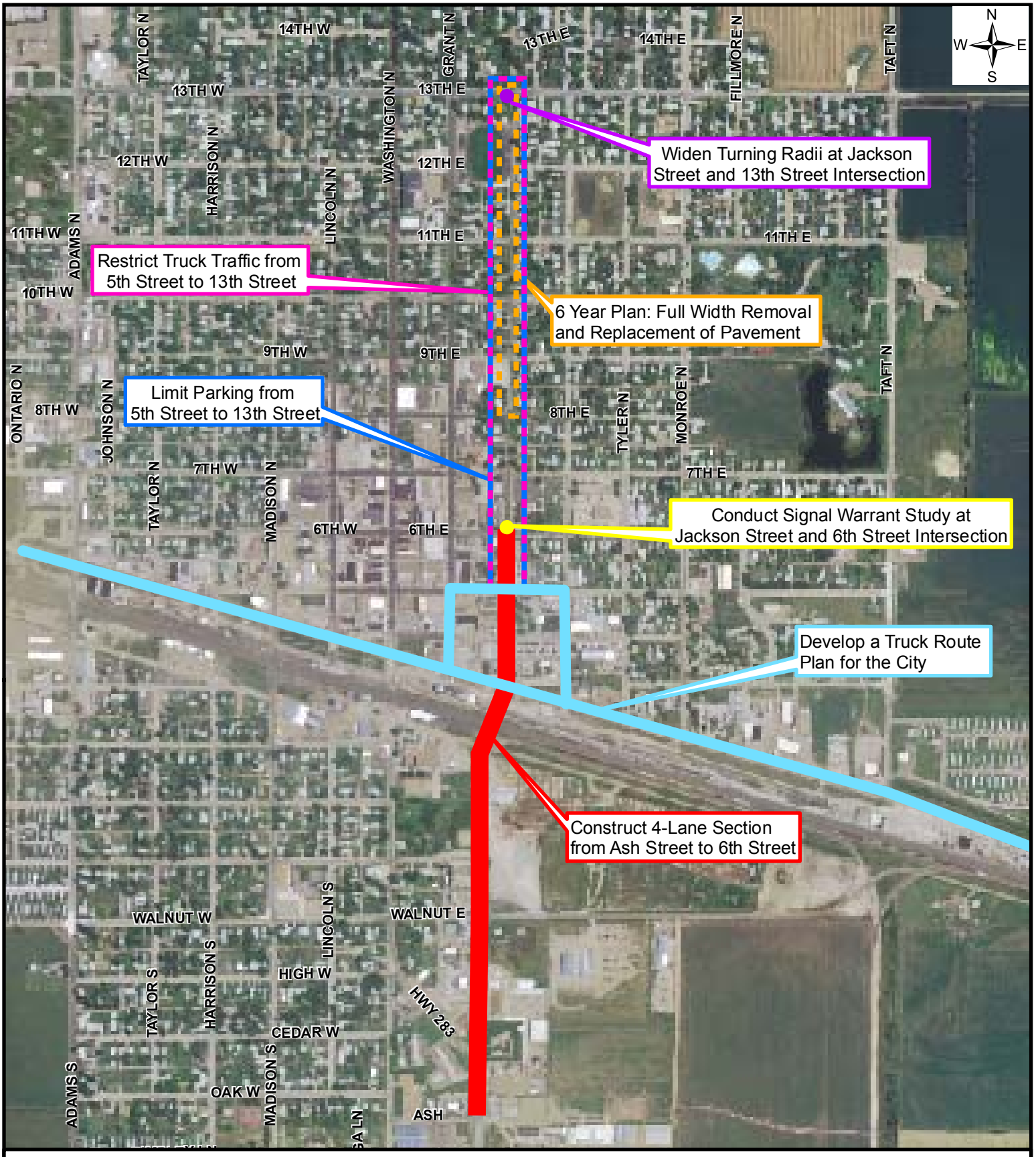
7.2. POTENTIAL ALTERNATIVES

After the City of Lexington's transportation issues were identified, potential alternatives were developed. Note that these alternatives are potential alternatives that may or may not be carried forward to be included in the LRTP. The alternatives to be carried forward in the LRTP are described in the next section of this report. The potential alternatives are summarized in Table 2 below.

Table 2. Transportation Issues and Potential Alternatives

Issue	Potential Alternative	Notes
Jackson Street		
Traffic volumes	Construct four-lane section from Ash Street to 6th Street	See Figure 12.
Truck traffic from 5th Street to 13th Street	Limit parking	See Figure 12.
	Widen turning radii at Jackson Street/13th Street	See Figure 12.
	Restrict truck traffic along Jackson Street	See Figure 12.
	Develop a truck route plan for the city	
Jackson Street/6th Street traffic control	Conduct a traffic signal warrant study	See Figure 12.
	Conduct a traffic study to determine if a roundabout is appropriate at this location	
Airport Road and UPRR at-grade crossing	Construct an overpass	
	Construct an underpass	
Road 435 and UPRR at-grade crossing	Construct an overpass	See Figure 13.
	Construct an overpass in the vicinity of the Road 435 and UPRR at-grade crossing	See Figure 13.
10th Street and Adams Street pedestrian safety	Investigate traffic calming measures	
	Develop a Safe Routes to School document	
	Conduct a pedestrian signal study	
10th Street and Taylor Street pedestrian safety	Investigate traffic calming measures	
	Develop a Safe Routes to School document	
Walnut Street pedestrian safety near Morton Elementary School	Investigate traffic calming measures	
	Develop a Safe Routes to School document	
13th Street from Park Street to Adams Street pedestrian safety near the high school	Improve a north side drop off area	See Figure 14.
	Install/update crosswalks	
	Conduct a detailed study to develop new traffic circulation patterns	

Issue	Potential Alternative	Notes
13th Street at Washington Street and Grant Street traffic congestion	Conduct a detailed study to develop new traffic circulation patterns	
	Conduct a traffic study to determine if a change in traffic control is warranted at one of the intersections	See Figure 15.
	Conduct a traffic study to determine if a roundabout is appropriate at this location	
13th Street from Airport Road to Liberty Drive pedestrian safety	Conduct a traffic study to determine the appropriate location of crosswalks	See Figure 16.
8th Street from Adams Street to Jackson Street national functional classification upgrade (includes other functional classification changes desired by the city)	Reclassify the functional classification, including other functional classification changes desired by the city • Resolution approval by City Council • Send resolution and map to NDOR Project Development and Planning Department • NDOR sends to FHWA for approval	See Figure 17.
Cattleman's Drive from Adams Street to Plum Creek Parkway pedestrian and bicycle safety	Construct paved shoulders	See Figure 18.
	Construct sidewalks on one or both sides of the roadway	See Figure 18.
	Construct multi-use trails	See Figure 18.
Adams Street from 15th Street to CR 757		
Pedestrian and bicycle safety	Construct paved shoulders	See Figure 19.
	Construct sidewalks on one or both sides of the roadway	See Figure 19.
	Construct multi-use trails	See Figure 19.
Speeding	Coordinate with NDOR to conduct a speed study	
Plum Creek Parkway from Frontier to Cattleman's Drive pedestrian safety	Construct sidewalk on one or both sides of the roadway	See Figure 20.



LONG RANGE TRANSPORTATION PLAN

LEXINGTON, NEBRASKA

Issue: Jackson Street

Lexington NEBRASKA

Figure 12

Lexington NEBRASKA

0 0.25 0.5 Miles

LONG RANGE TRANSPORTATION PLAN

LEXINGTON, NEBRASKA

Issue: Road 435 and Union Pacific Railroad At-grade Crossing

Figure 13

Lexington NEBRASKA

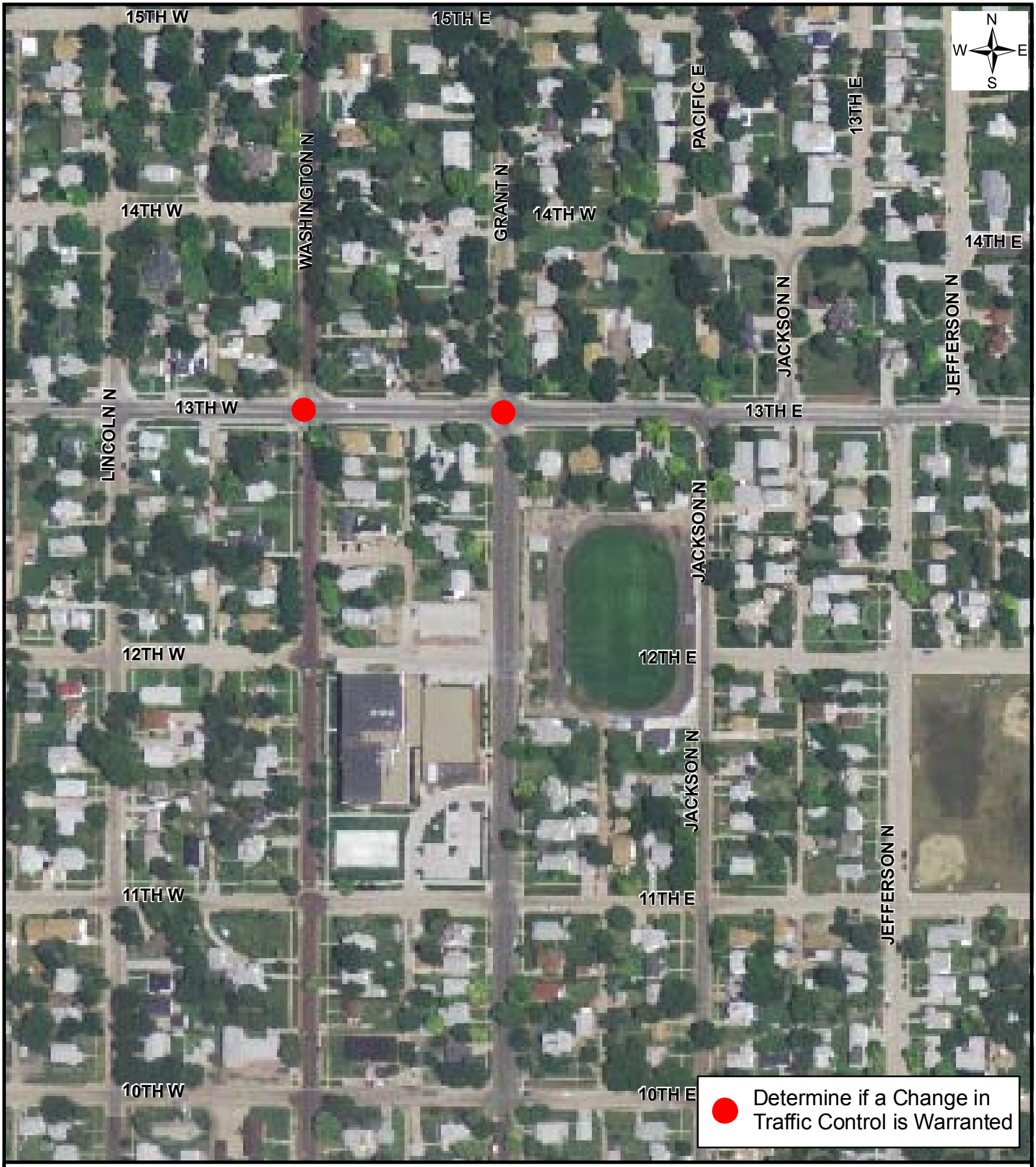
0 250 500 Feet

LONG RANGE TRANSPORTATION PLAN

LEXINGTON, NEBRASKA

Issue: 13th Street from Park Street to Adams Street

Figure 14



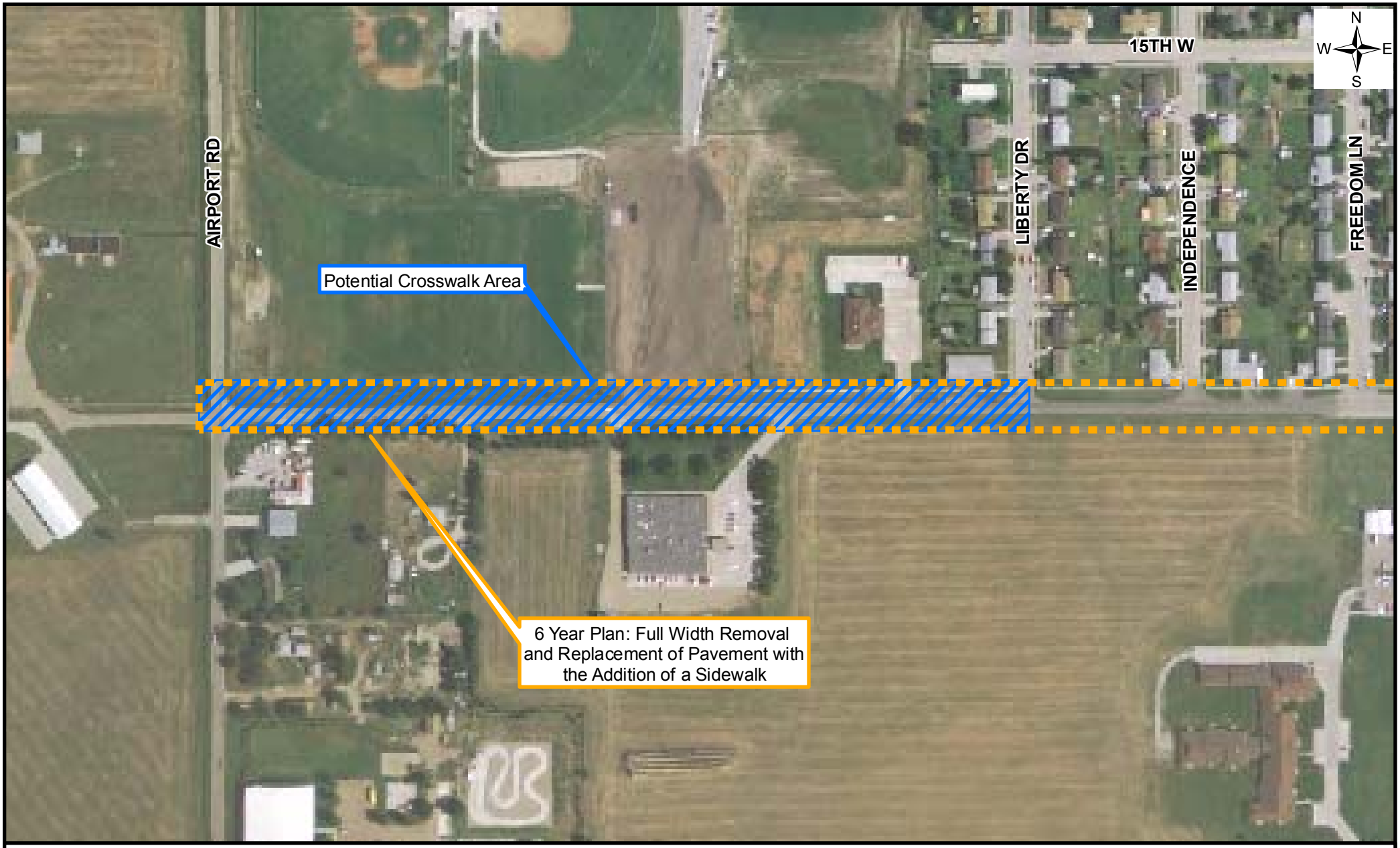
0 125 250 500 Feet

Lexington NEBRASKA

LONG RANGE TRANSPORTATION PLAN
LEXINGTON, NEBRASKA

Issue: 13th Street at Washington Street and Grant Street

Figure 15



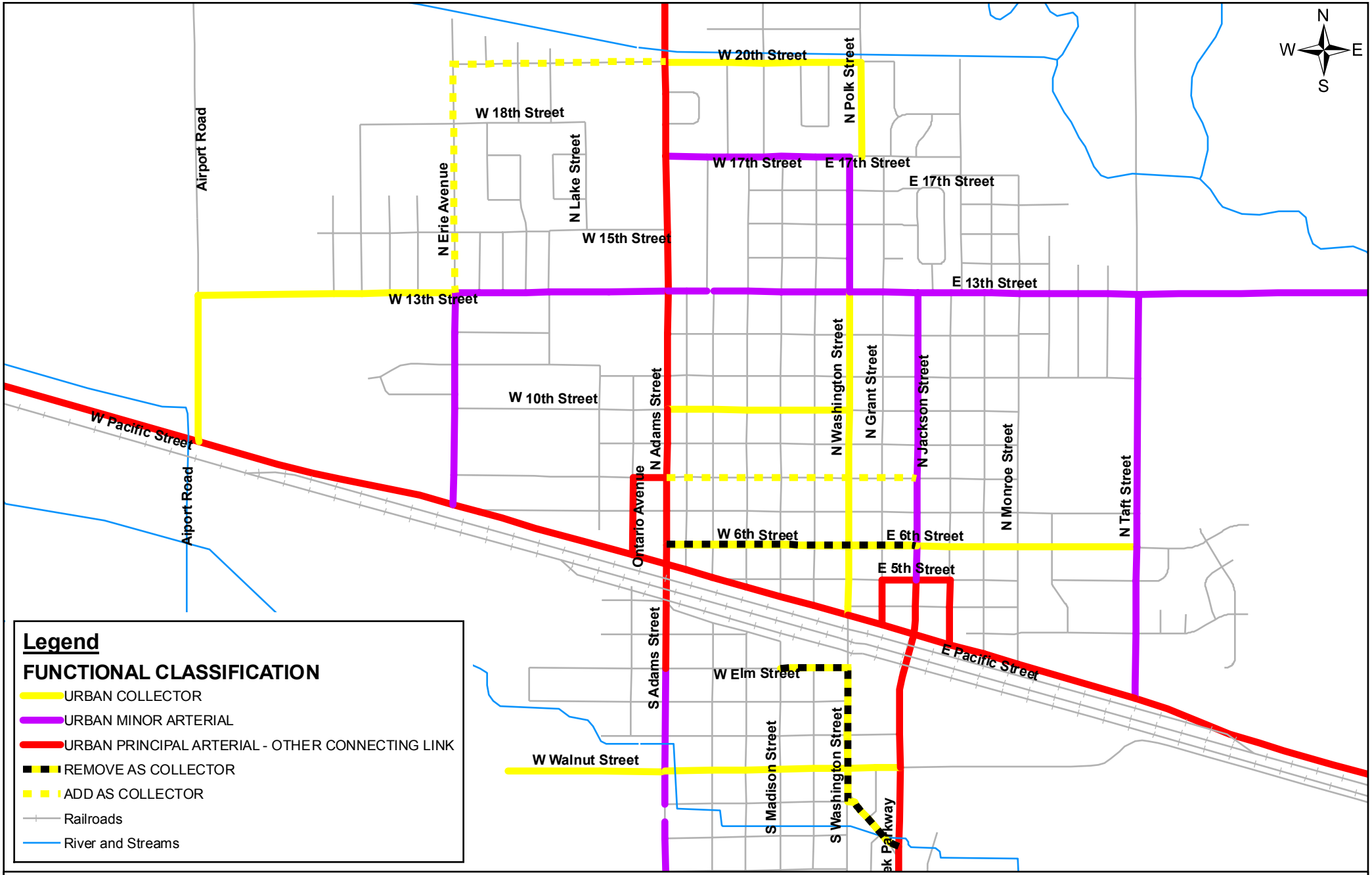
0 125 250 500 Feet

Lexington NEBRASKA

LONG RANGE TRANSPORTATION PLAN
LEXINGTON, NEBRASKA

Issue: 13th Street from Airport Road to Liberty Drive

Figure 16



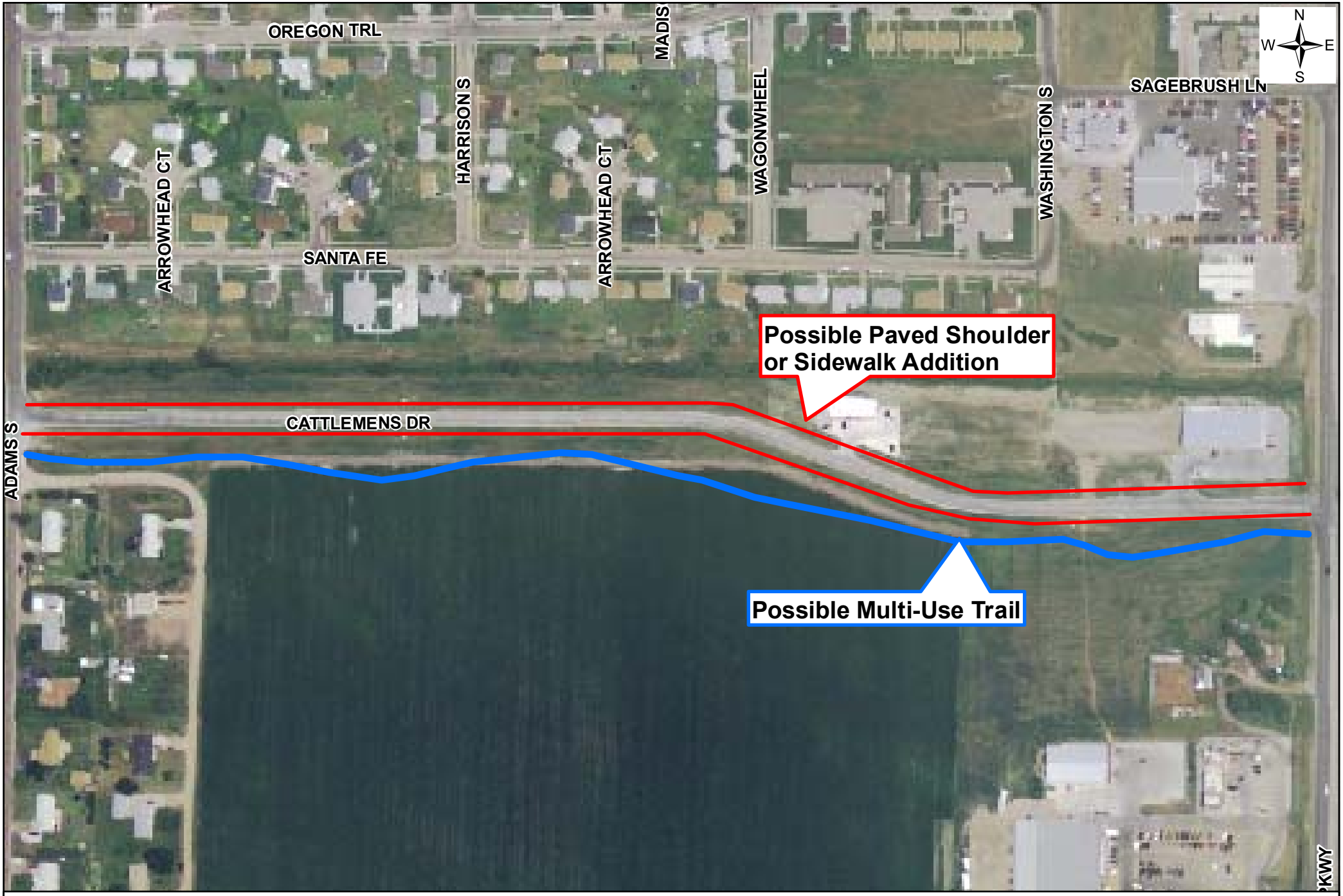
Lexington NEBRASKA

LONG RANGE TRANSPORTATION PLAN

LEXINGTON, NEBRASKA

Issue: National Functional Classification Proposed Updates

Figure 17



Lexington NEBRASKA

LONG RANGE TRANSPORTATION PLAN
LEXINGTON, NEBRASKA

Issue: Cattleman's Drive from Adams Street to Plum Creek Parkway

Figure 18

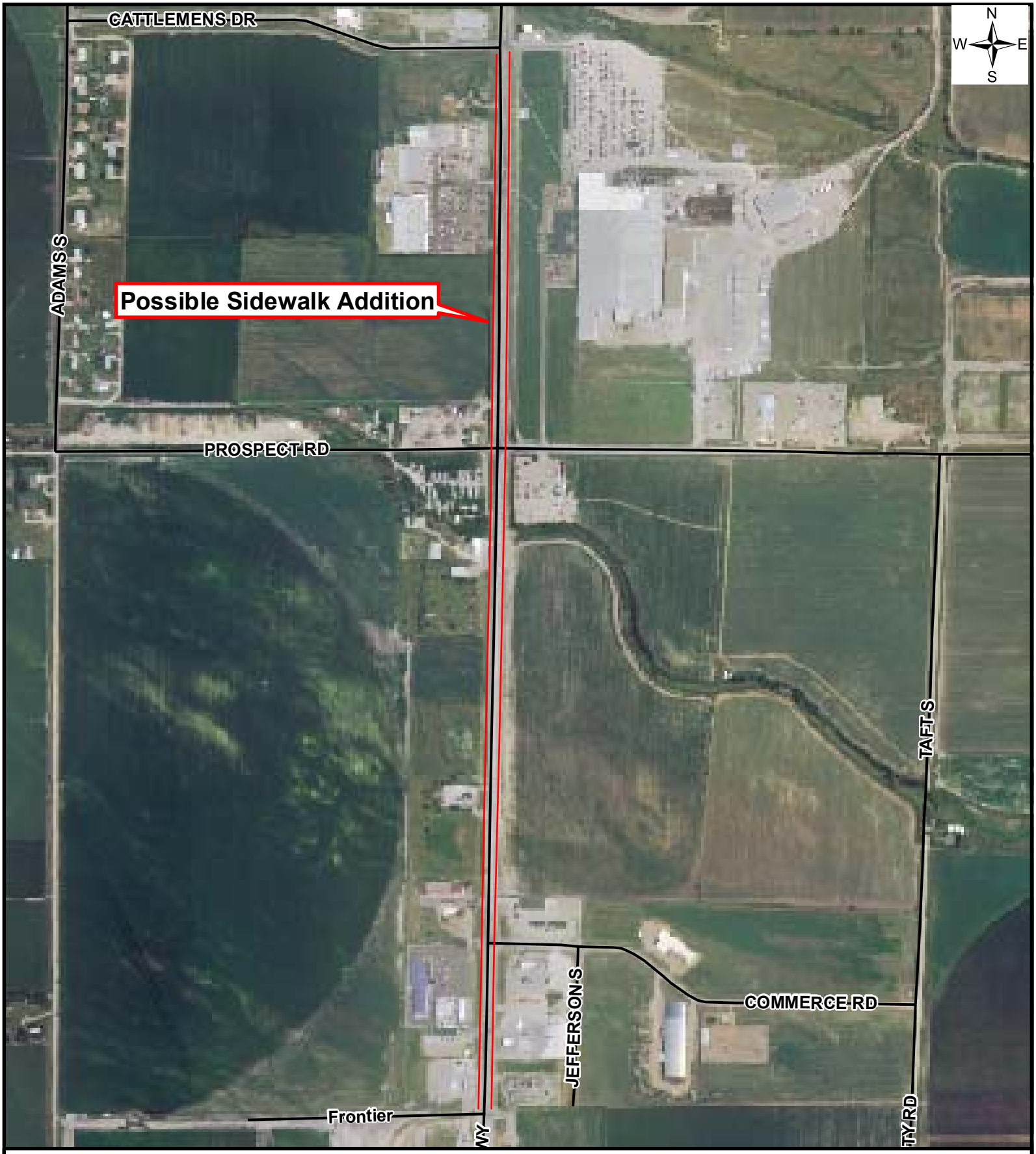
0 250 500 1,000 Feet

Lexington NEBRASKA

LONG RANGE TRANSPORTATION PLAN
LEXINGTON, NEBRASKA

Issue: Adams Street from 15th Street to County Road 757

Figure 19



0 500 1,000 2,000 Feet

Lexington NEBRASKA

LONG RANGE TRANSPORTATION PLAN
LEXINGTON, NEBRASKA

Issue: Plum Creek Parkway from Cattleman's Drive to Frontier

Figure 20

7.3. SELECTED ALTERNATIVES

After receiving public input on the potential alternatives described above, alternatives were selected to be carried forward in the LRTP. The selected alternatives were identified to be included into either the short term plan (1-10 years) or the long term plan (11-25 years). The various plans are described below.

Short Term Plan Alternatives

The following projects are the Lexington LRTP Short Term Plan Alternatives:

- Limit parking along Jackson Street from 5th Street to 13th Street.
- Restrict truck traffic along Jackson Street from 5th Street to 13th Street.
- Develop a truck route for the city.
- Conduct a traffic signal warrant study at the Jackson Street and 6th Street intersection.
- Investigate traffic calming measures at the 10th Street and Adams Street intersection, 10th Street and Taylor Street intersection, and along Walnut Street near Morton Elementary School.
- Develop a Safe Routes to School document for the city.
- Improve a north side drop off location at the Lexington high school.
- Install and/or update crosswalks near the Lexington high school.
- Conduct a detailed study to develop new traffic circulation patterns around the Lexington high school.
- Conduct a traffic study to determine the appropriate location of crosswalks along 13th Street from Airport Road to Liberty Drive.
- Update desired roadway national functional classifications.
- Coordinate with NDOR to conduct a speed study along Adams Street from 15th Street to County Road 757.

Long Term Plan Alternatives

The following projects are the Lexington LRTP Long Term Plan Alternatives:

- Construct a four-lane section along Jackson Street from Ash Street to 6th Street.
- Widen the turning radii at the Jackson Street and 13th Street intersection.
- Construct an overpass near the Road 435 and Union Pacific Railroad at-grade crossing.
- Conduct a detailed study to develop new middle school circulation patterns to ease congestion at the 13th Street and Grant Street and 13th Street and Washington Street intersections.
- Conduct a traffic study to determine if a change in traffic control is warranted at the 13th Street and Grant Street intersection or the 13th Street and Washington Street intersection.
- Construct paved shoulders, sidewalks on one or both sides of the roadway, or multi-use trails along Cattleman's Drive from Adams Street to Plum Creek Parkway.
- Construct paved shoulders, sidewalks on one or both sides of the roadway, or multi-use trails along Adams Street from 15th Street to County Road 757.
- Construct sidewalks on one or both sides of Plum Creek Parkway from Frontier to Cattleman's Drive.