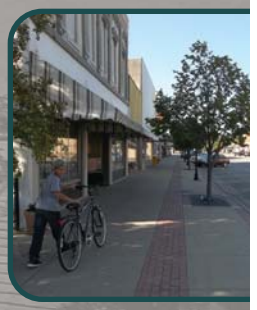
City of Sterling, KS

Core Connections

January 2014



Main Street Corridor Project

MAIN · STREET STERLING

Kansas Department of Transportation

WILSON & COMPANY

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1.0 INTRODUCTION

The City of Sterling, KS is located on the southern border of Rice County which lies in the middle of the state. It is the second largest city in the county and is situated approximately 2 miles north of the Arkansas River. Sterling was established in the late 1800s and had a population of 2,328 in 2010.

Based on Sterling's 2016 vision, the goal of the City is to create a downtown business hub, to grow culturally, support community objectives, and develop actions to sustain and improve the city. The study area generally includes the area within Sterling's city limits but also considers the city's relation and connection with other surrounding communities. Figure 1-1 shows the close connection to the City of Lyons, which is the county seat and largest city in Rice County. K-96/K-14 currently connects Sterling to other prominent cities to the southeast such as Hutchinson and Wichita. With the planned construction of the new K-96/K-14 highway, regional connectivity will be further enhanced however, proper planning will ensure the new highway creates additional opportunities and does not only serve as a bypass into the community.

The overall goal of this study is to document the current conditions of the city and to create a roadmap to lead the City's vision. This report first focuses on the existing conditions of the transportation features in Sterling. As a starting point, a review of existing plans and studies will be conducted and summarized in Chapter 2.0. Following this chapter, a historic overview and 2010 socioeconomic census data will be provided. Finally, an inventory of the existing transportation system will be presented, which identifies current mobility deficiencies and establishes the basis for determining future transportation needs. Ultimately, this foundational information and data will aid in identifying and prioritizing bicycle and pedestrian projects and updating city roadway standards to reflect a "complete streets" approach.

This evaluation will:

- identify how to best provide connectivity between Downtown Sterling and the planned K-96/K-14 interchange;
- identify key routes for connectivity between K-96/K-14, downtown, and community facilities;
- identify potential streetscape improvements;
- identify potential strategies to attract out-of-town guests, retain downtown business, and identify potential parking areas for downtown events;
- identify potential changes to the standard roadway cross-sections and right-of-way dedication standards; and
- identify opportunities to improve pedestrian safety with crossings and lighting.

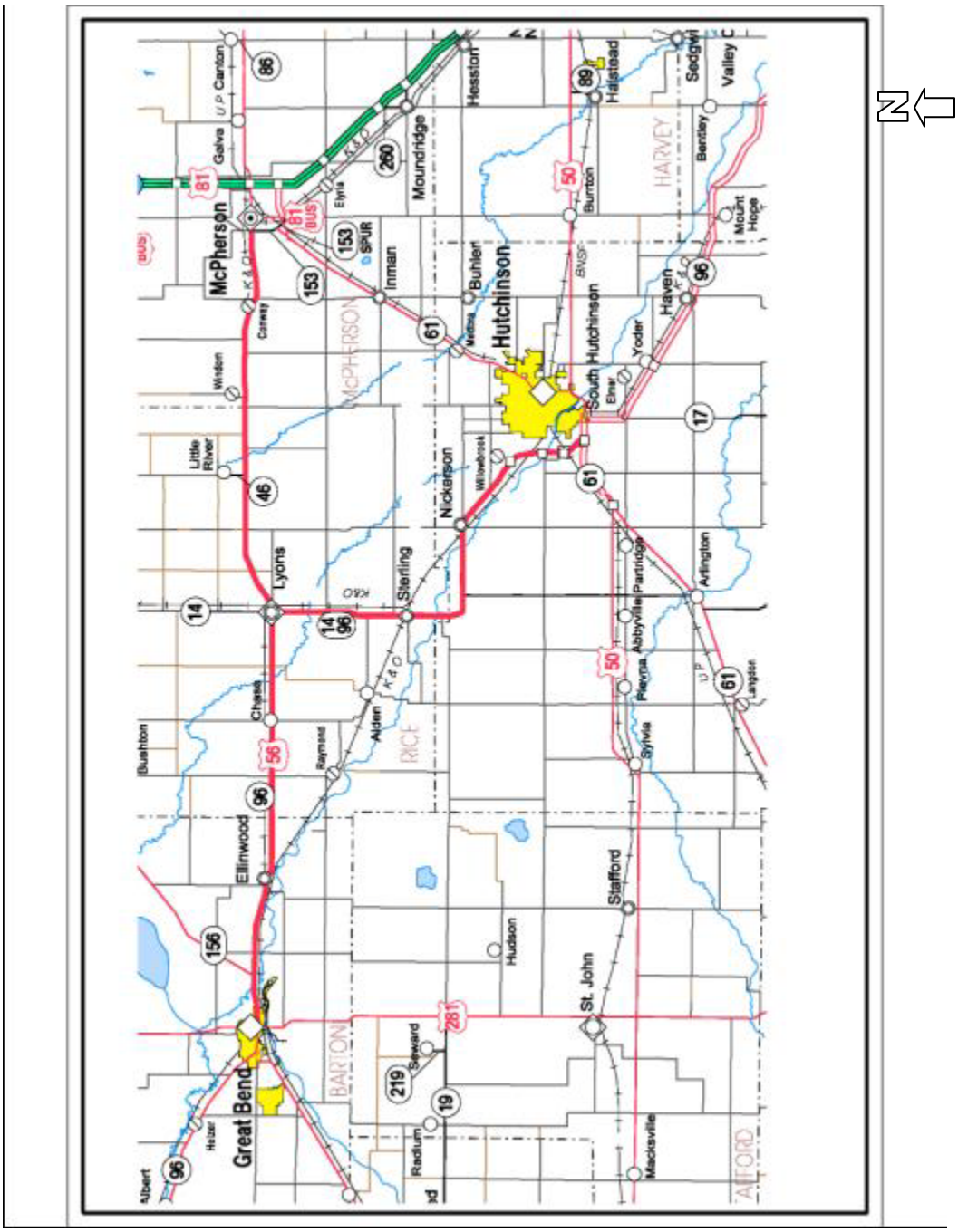
Once these strategies have been vetted with the City, the most viable strategies will be used to develop the improvement plan. There will be a range of immediate, short and long-term improvements that will be identified, categorized and documented in a report.

Following this introductory chapter, the report contains the following chapters focused on presenting detailed information regarding existing conditions in the study area:

- Chapter 2.0 Review of Existing Plans and Studies
- Chapter 3.0 Demographics
- Chapter 4.0 Existing Transportation System

- Chapter 5.0 Broadway Curb, Gutter and Sidewalk Assessment
- Chapter 6.0 Festival and Event Evaluation
- Chapter 7.0 Interchange Area Land Use and Circulation Evaluation
- Chapter 8.0 Sterling Advertising / Wayfinding Signs
- Chapter 9.0 Public Involvement
- Chapter 10.0 Summary and Key Observations

FIGURE 1-1: REGIONAL VICINITY



2.0 REVIEW OF EXISTING PLANS AND STUDIES

This section provides a review of existing plans and studies that would affect or influence the evaluations conducted for this study.

2.1 MAIN STREET STERLING

Sterling is a Main Street community with an established "Main Street" group. Although the Kansas Department of Commerce stopped the Main Street program, Main Street Sterling is still operational. Their vision states: "Sterling's 2016 Vision is to create a downtown business hub, to grow culturally, support community objectives, and develop actions to sustain and improve the city."

Business Driven
In 2016, Downtown Sterling is known as THE place to start a business. Downtown is a hub of activity as all the buildings are fully occupied with businesses that provide staples for residents and college students, specialty and gift stores, clothing outlets, businesses that serve as social gathering spaces, upper floor residential, visitor accommodations and quality restaurants.

Culturally Minded
Downtown Sterling is the cultural and entertainment center for Rice County, featuring festivals, the arts and art classes, food and live music, a farmers' market, theatre and movies. The sidewalks are alive with street vendors and people enjoying the well-kept, walk-able downtown district. Downtown Sterling warmly welcomes seasonal travelers, visiting business people, campus guests, students and their families as well as citizens of all ages.

Community Supportive
Downtown Sterling is supported by a strong Main Street program that partners with residents, local governments, local educational institutions, and many other organizations to provide the information and financial resources to sustain the downtown district and the community. Successful and financially sound businesses have created a strong economic revitalization of the district, including job creation, improved real estate values and a larger, stable tax base.

Action Oriented
Main Street Sterling has developed and implements a plan of action to sustain and improve the central business district. Ample funding and a strong volunteer base demonstrate a proactive community united and committed to working cooperatively to ensure a thriving future in Sterling, Kansas."

2.2 KDOT PLANS & STUDIES

Existing plans and studies published by the Kansas Department of Transportation (KDOT) were reviewed as part of this study. These KDOT reports include the Long Range Transportation Plan (LRTP), the State Bicycle Plan and the K-96 Location Study, as well as ongoing engineering design work currently being conducted.

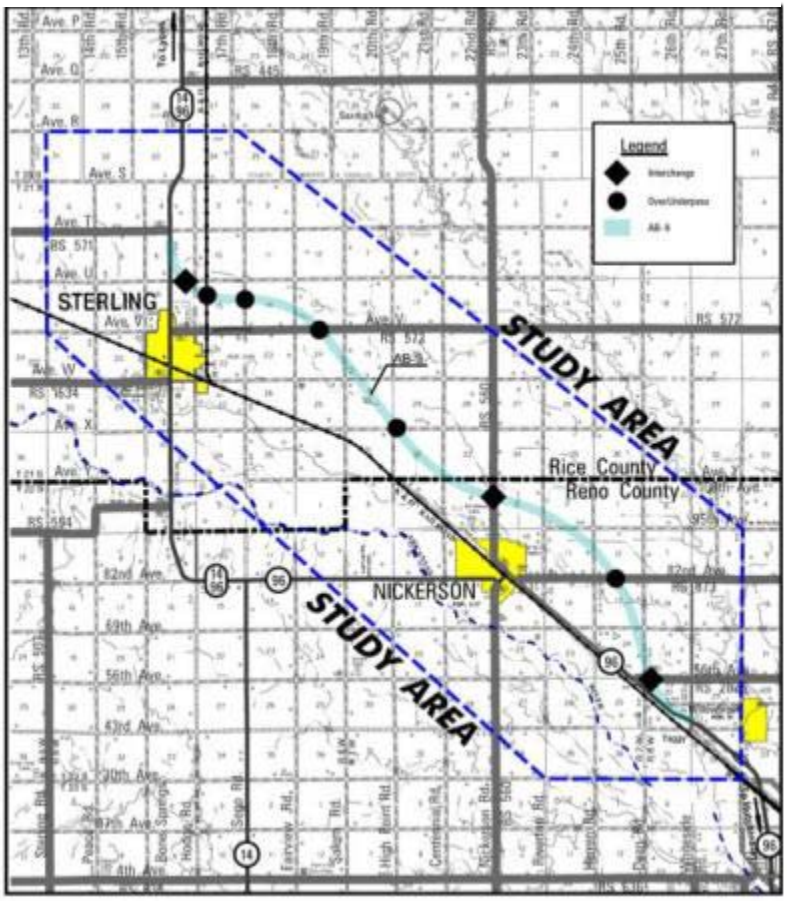
Within the LRTP, Chapter 4, Multimodal Transportation, indicates a push to integrate multimodal transportation to all areas of the state. Bicycle and pedestrian mobility are to be considered when transportation infrastructure is built, including features such as sidewalks, crosswalks, wide shoulders, marked bicycle lanes, and multi-use trails. Furthermore, leadership should be taken on projects to ensure that conditions are safe for bicyclists and

pedestrians, and education strategies should focus on safe practices for facilities shared by bicycles and motor vehicles.

As both an alternative mode of transportation and as a form of exercise and leisure, bicycle travel is becoming more prevalent in the State of Kansas. As such, the state has created a State Bicycle Plan, including a bicycle map which details where bicycles can ride safely on State-sponsored routes.

KDOT is currently developing plans for the construction of a new alignment for K-96/K-14. Figure 2-1 illustrates the anticipated alignment for the new highway corridor. Construction is anticipated to begin during the 2016-17 fiscal year. The purpose of the project is to create a safe and efficient corridor with enhanced regional mobility that will maintain or improve opportunities for economic vitality between the linked communities and the surrounding area. The need for a more efficient transportation system through the corridor arises from the fact that the existing route (including Sterling's Broadway Avenue) is circuitous and does not provide predictable travel times due to passing through developed areas. K-96/K-14 passes directly through the communities of Nickerson and Sterling, taking 400 to 500 heavy trucks each day through downtown districts, past schools and into residential areas. In Sterling, the current K-96/K-14 highway passes north/south through Sterling, including the downtown area, and along the edge of the Sterling College campus at the north end of town. In addition, the existing route crosses the K & O Railroad tracks at-grade in both communities and thus is subject to motorist delays when trains pass through each city. The existing two-lane highway connects Sterling and Nickerson to the nearby larger cities of Hutchison and Wichita to the southeast and Lyons to the north. The segment of K-96/K-14 connecting Sterling and Nickerson is a paved, rural highway. It follows a north/south alignment through Sterling and an east/west alignment into Nickerson for a total trip length of about 10.5 miles. By comparison, the proposed realignment would be a straighter diagonal route connecting the cities having the potential to cut up to three miles off of the existing K-96/K-14 route.

FIGURE 2-1: PROPOSED K-96/K-14 HIGHWAY ALIGNMENT



3.0 DEMOGRAPHICS

3.1 HISTORICAL OVERVIEW

Similar to many other central Kansas communities, Sterling has long-standing history in agriculture and transportation. Early farmers grew broom corn as a major crop and railroads have been present since 1872. To this day, the ability to grow and transport agricultural products remains a major part of the economy in the greater Sterling area.

Equally important to Sterling's history are the people who embrace education and entrepreneurism. In 1876 Landis & Hollinger built the first business in town on the corner of Broadway Avenue and Monroe Street, a general store. In the 1890s, Jonathan S. Dillon operated his general store in Sterling, which was the precursor to the J.S. Dillon Cash Food Market in Hutchinson and later the regionally significant Dillon's grocery store chain.

In 1886, Cooper Memorial College was founded. A year later it became Sterling College, a Presbyterian liberal arts school. Today the mission for this school is to "develop creative and thoughtful leaders who understand a maturing Christian faith." Today the campus has grown to over 600 students and 50 faculty members and operates on-line educational programs.

3.2 COMMUNITY DEMOGRAPHICS

It is important to understand the community demographics in order to provide insight regarding how a city is growing or reducing in population, where it is occurring and if it is a localized or statewide trend.

Approximately 23% of the Rice County population resides in the City of Sterling. As the second largest city in Rice County, it is important to note that during the last decade the population of Sterling declined by over 11%. The decade of 2000 to 2010 was the first decade that a decline in population was recorded since 1970.

As can be seen in Table 3-1,Sterling has been a growing community, with some impact being seen from the Great Recession.

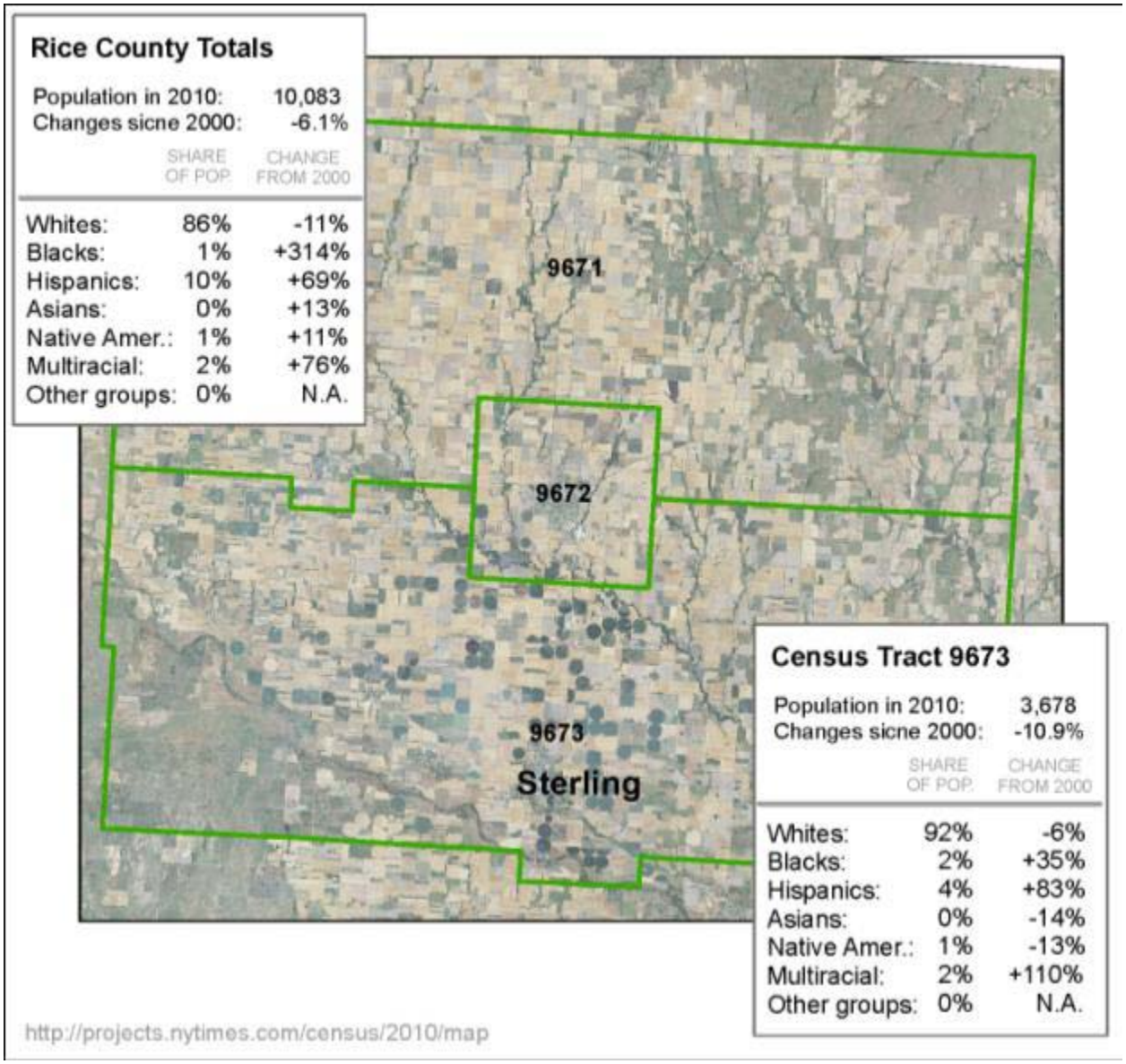
TABLE 3-1: POPULATION TREND

	1970		1980		1990		2000		2010	
	Pop	% Change	Pop	% Change	Pop	% Change	Pop	% Change	Pop	% Change
Sterling	2,312	n/a	2,312	0%	2,536	9.7%	2,642	4.2%	2,328	-11.9%
Lyons	4,355	n/a	4,152	-4.7%	3,688	-11.2%	3,732	1.2%	3,739	0.2%
Rice Co.	12,320	n/a	11,900	-3.4%	10,610	-10.8%	10,761	1.4%	10,083	-6.3%
State of Kansas	2,246,578	n/a	2,363,679	5.2%	2,477,574	4.8%	2,688,418	8.5%	2,853,118	6.1%

In 2010, 2,328 people lived in 933 housing units within the City Limits' (1.71 square miles). This equates to a population density of approximately 1,394 people and 558 housing units per square mile, which is considerably denser than the surrounding rural areas.

There are three census tracts in Rice county; one for the City of Lyons (Census Tract 9672), one for the north half of the county (Census Tract 9671), and one for the southern half of the county which includes Sterling as the most populous city within that Tract (Census Tract 9673). Figure 3-1 shows the distribution of race/ethnicity by Census Tract in Rice County. As seen in Figure 3-1, Sterling is comparable to other racial backgrounds in the region; approximately 92% of the population is white with the next largest racial group being African-American, at less than 2%. While the percentage of African–American and Hispanic populations has increased slightly over the last decade; other groups (Native American, Asian, and others) have remained stable.

FIGURE 3-1: RACE BY CENSUS TRACT



2010 Census data identifies that Census Tract 9673 has a slightly higher average salary than the average for all of Rice County. The median household income for Sterling was $41,376 (2009), an increase from the year 2000. The median household income for the State of Kansas was $47,817 (2009).

The estimated unemployment rate for Sterling was 4.4% in August of 2012, compared to 6.2% for the State of Kansas. Most people where employed in the occupation sectors of educational services, health care, and accommodation and food services. A Census 2010 data summary that stands out for Sterling is the fact that the median age in Sterling is 29.5 years of age, versus 42.9 years of age for the state of Kansas.

The mean travel time to work was reported as 16.4 minutes. In 2008, approximately 75% of people from Sterling indicated they commute to work by car and drive alone, 10% carpooled, 9% walked, and 4% biked to work. The total percentage of people indicating that they used other means of transportation to work (carpool, walk, bike or other) increased from 21% in 2000 to 24% in 2008. For the State of Kansas, it was reported that approximately 15% of people used these means of transportation to travel to work.

4.0 EXISTING TRANSPORTATION SYSTEM

The City of Sterling transportation system includes both state and local roads. The backbone of the roadway network includes three major roads: K-96/K-14/Broadway Avenue, Sterling Avenue/Cleveland Avenue and Garfield Avenue. Broadway Avenue is Sterling's north–south street and where Downtown Sterling is situated. Garfield Avenue provides access to the city from the west, and Cleveland Avenue is the east entrance to the city. The rest of the roadways in the city are local roads.

4.1 CITY OF STERLING TRANSPORTATION ELEMENTS

4.1.1 ROADWAY NETWORK

The roadway network in Sterling connects activity centers, commercial centers, and residential areas within the city. K-96/K-14/Broadway Avenue is the major north-south corridor in the city, and is classified by KDOT as an "Other Principal Arterial." It is a two-lane paved State Highway with segments where on-street parking is permitted. Through the residential area of Sterling, Cleveland Avenue to Jefferson Avenue, Broadway Avenue has a wide cross-section which allows for on-street parallel parking on both sides. Downtown Sterling is defined from Jefferson Avenue to Van Burn Street. Broadway Avenue through this segment is a two-lane road with diagonal on-street parking on both sides of the street. The urbanized section of Broadway Avenue has curb and gutter, sidewalk and in the downtown section, upgraded streetscape to enhance the downtown aesthetics and urban design. With the completion of the K-96/K-14 bypass, Broadway Avenue will be turned back to the City of Sterling for ownership and maintenance responsibilities.

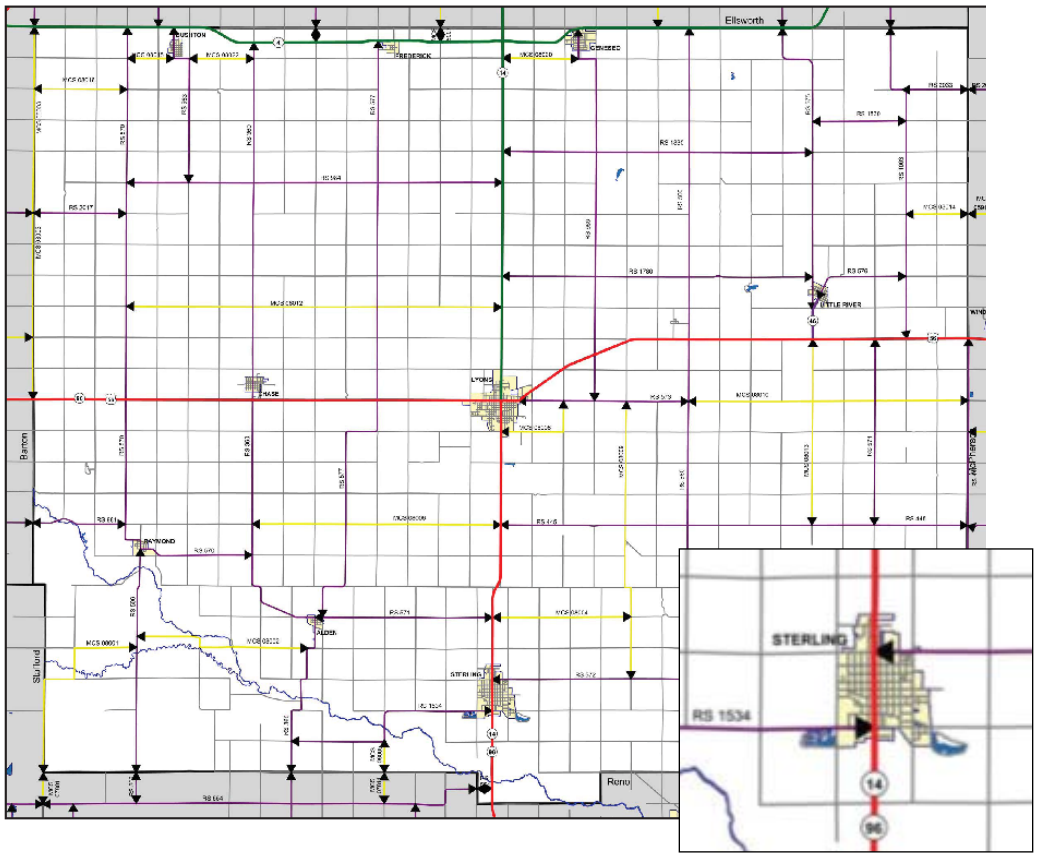
Cleveland Avenue and Garfield Avenue are both two-lane paved roads without curb and gutter, paved shoulder, or sidewalk. These roads are county roadways providing east-west gateways into the City. No on-street parking is permitted along these routes.

4.2 FUNCTIONAL CLASSIFICATIONS OF ROADS

The transportation system is made up of varying roadway types having different functions with the framework of mobility and access. The different roadway types support both urban and rural travel. Therefore, functional classification of roadways is a critical component of effective transportation planning. Functional classification designations were developed to provide a way to manage mobility and access. Providing facilities that are meant to move traffic and commerce must be in balance with other facilities where key connectivity and local access are needed.

In Sterling, the functional classification of roadways has been developed at the state-wide level, as shown in Figure 4-1. The figure illustrates that there are three major roads coming into the City, the north-south principal arterial - K-96/K-14/Broadway Avenue, the east-west collector on the north side of Sterling - Cleveland Avenue, and the east-west collector on the south side of Sterling - Garfield Avenue. The principal arterial facilitates long trip lengths and is closely integrated with interstate systems and state highways. The collectors are important for inter-county movement and provide access to arterials.

FIGURE 4-1: RICE COUNTY FUNCTIONAL CLASSIFICATION MAP (WITH ENLARGEMENT)



Source: KDOT http://www.ksdot.org/burtransplan/maps/CountyFunClass.asp

4.3 ROADWAY CROSS SECTION STANDARDS

There are no previous studies that have documented roadway cross section standards for the city of Sterling. The following will develop cross sections for the functionally classified roads. There are three KDOT identified functionally classified roads in Sterling: Broadway Avenue, Cleveland Avenue and Garfield Avenue. Along these three roads, there are generally six unique cross sections. Figure 4-2 shows the locations of the various cross sections in Sterling and Figure 4-3 depicts the six unique cross sections on those key routes.

The typical cross sections in Sterling are all two-lanes; the widths of these lanes vary 12’ to 25’. Sidewalk and green space widths (the area between the street and sidewalk) vary throughout the City. In some areas there are no sidewalks and widths vary from 4’ to 8’.

FIGURE 4-2: CROSS SECTION LOCATIONS

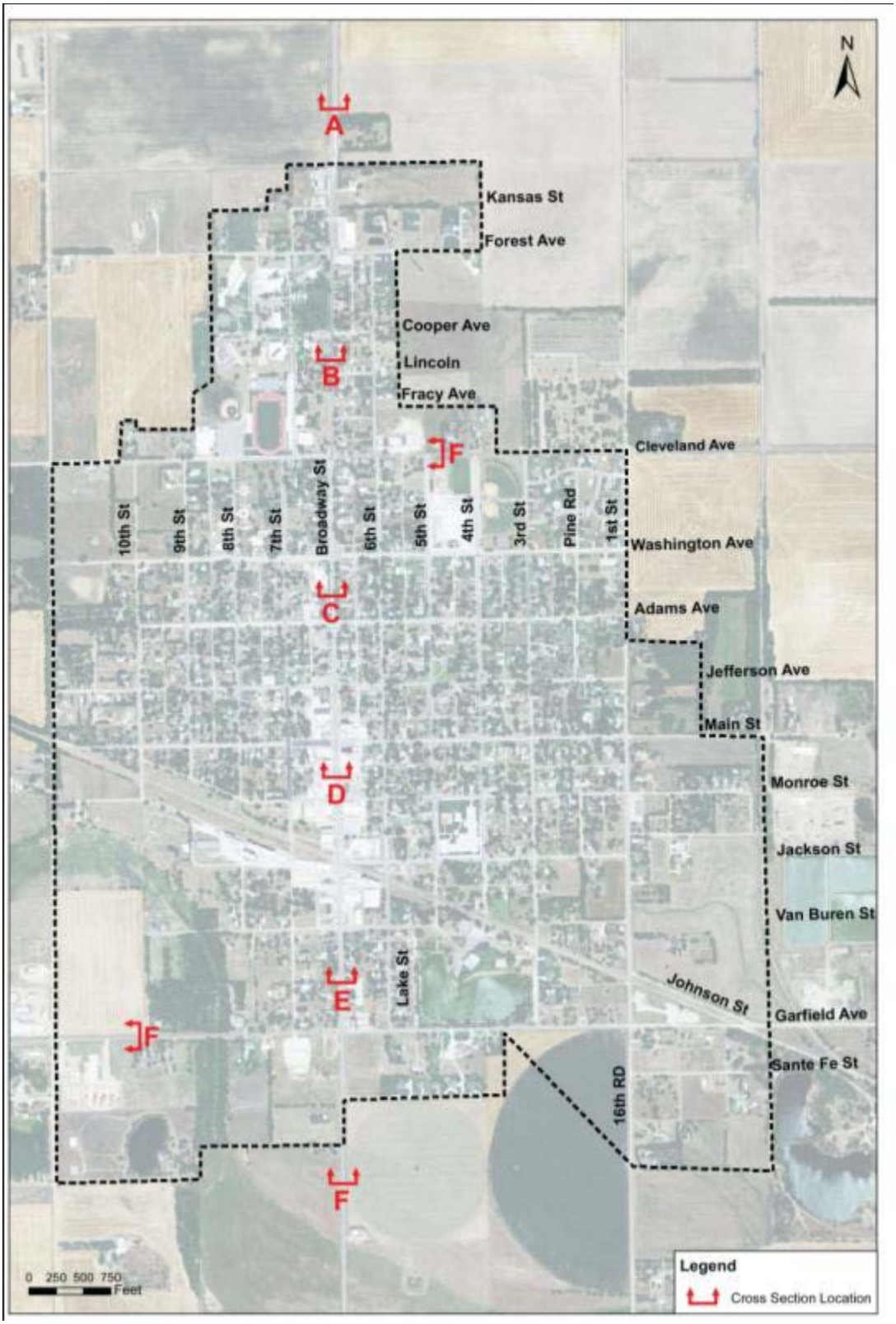
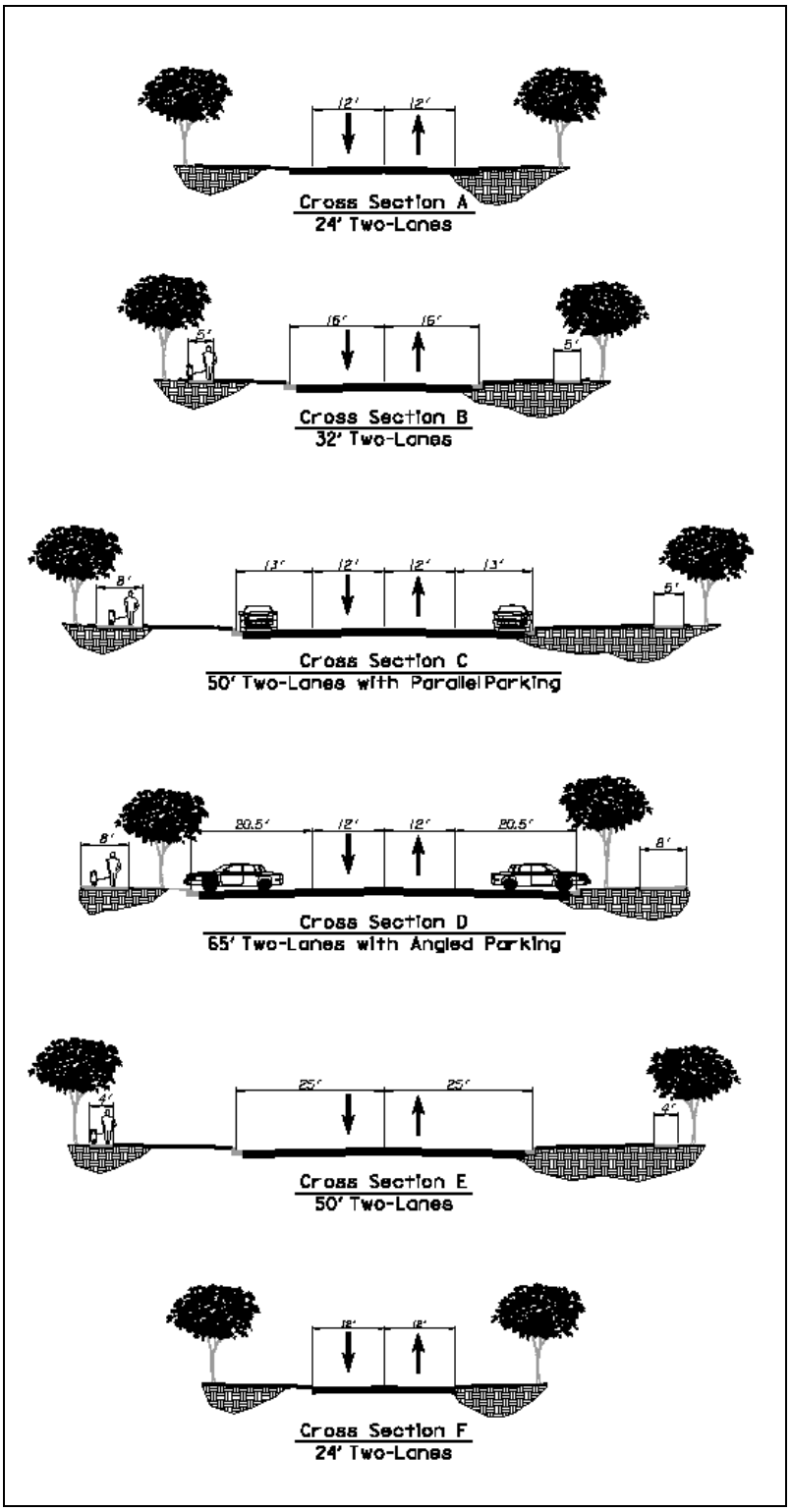


FIGURE 4-3: TYPICAL CROSS SECTIONS



Broadway Avenue, also known as K-96/K-14, is the highest traffic volume roadway in Sterling and carries both local and through traffic. The cross section for Broadway varies from north to south. At the north end of Sterling it is a rural roadway, transitions to a more urban section through the residential area of north of downtown, transitions

to a wider urban section through downtown, and then back to a rural road toward the southern end of the city. Table 4-1 illustrates the changes in cross section width, availability of on-street parking and edge of pavement treatment.

TABLE 4-1: BROADWAY AVE CROSS SECTIONS

Location along Broadway Ave	Cross Section Width	Lanes	On-Street Parking	Edge Treatment
Rural Highway (North of Forest Ave)	24’	2	No	Shoulder & Ditch
Sterling College (Forest Ave to Cleveland Ave)	32’	2	No	Curb & Gutter
Residential (Cleveland Ave to Jefferson Ave)	50’	2	Yes	Curb & Gutter
Downtown (Jefferson Ave to Van Buren Ave)	65’	2	Yes	Curb & Gutter
Residential (Van Buren Ave to Garfield Ave)	50’	2	No	Curb & Gutter
Rural Highway (South of Garfield Ave)	24’	2	No	No Shoulder & Ditch

PHOTO 1: BROADWAY AVE (RURAL HIGHWAY CROSS SECTION)

PHOTO 2: BROADWAY AVE (NORTH AREA CROSS SECTION)

Photo 1 illustrates Broadway Avenue (K-96/K-14) entering Sterling from the north. K-96/K-14 is a rural, 24’ wide, two-lane highway, with paved shoulders and ditches. Photo 2 illustrates the cross section of Broadway toward the north end of Sterling. On-street parking is prohibited in this area. There is a detached sidewalk on the west side of the street adjacent to the college; the east side of Broadway Avenue does not have sidewalk.

The middle section of Broadway Avenue, from Cleveland Avenue to Jefferson Avenue, has a cross section width of 50-feet from curb to curb. This provides two wide travel lanes, space for on-street parallel parking, and 2-foot curb and gutter. This is a residential area of Sterling. There are detached sidewalks on both sides of the street. Driveways are accessible from the street, and there are no access management measures currently used along Broadway Avenue.

PHOTO 3: BROADWAY AVENUE (DOWNTOWN CROSS SECTION)

Broadway Avenue through downtown Sterling has a typical cross section width of 65-feet (Photo 3). This width provides for 8' attached sidewalks on both sides of the street, 15-feet of angled parking on each side, and 35-feet for two lanes of traffic. Downtown Sterling is generally defined as Jefferson Avenue to Van Buren Avenue.

This section of Broadway Avenue is particularly important to Sterling as the City would like to improve and retain businesses and create a destination for visitors. The existing cross section will be examined to determine if changes need to be made to aid in these City goals.

PHOTO 4: BROADWAY AVENUE (SOUTHERN K-96 CROSS SECTION)

At the southern end of the City, the cross section changes back to a typical rural highway cross section with an approximate width of 24-feet, with two 12-foot lanes (Photo 4). This rural road has narrow gravel shoulders and roadside ditches. In the urbanized area, there are areas where there is either no sidewalk, or only sidewalk on one side of Broadway Avenue. It should be noted that on rural highways, sidewalks are not typical and usually only occur within the city limits. But depending on the community's desires, trails or wide shoulders may be beneficial for bicyclists and long distance runners on the rural highways.

PHOTO 5: GARFIELD AVENUE

Both of the functionally classified collector roads in Sterling, Cleveland Avenue and Garfield Avenue, have the same cross section as the rural highway cross section. Cleveland Avenue and Garfield Avenue (Photo 5), both have 24-feet wide cross sectional widths which consists of two 12-foot lanes. There are no sidewalks along these routes nor are there paved shoulders.

4.4 EXISTING INVENTORY

An inventory and evaluation of intersections and sidewalks within Sterling was conducted to understand the needs related to walking in the community. As part of this effort, intersections were examined to understand the potential for, or not complying with, current Americans with Disabilities Act (ADA) requirements.

Of the 129 intersections inventoried, one intersection was identified as possibly being ADA compliant, meaning there was a ramp and truncated domes, 58 intersections were identified as having ramps on all approaches but were not ADA compliant, and 71 intersections had no ramps. Sidewalk ramp slopes were not inventoried or calculated, so that aspect of ADA compliance was not measured.

Figure 4-4 Existing Sidewalk Condition provides a quick overview of the condition of the sidewalks in Sterling. The sidewalks were classified into four categories: Good, Fair, Poor and Not Inventoried.

- ***Good condition*** is when the sidewalk had no major visual flaws; each concrete panel is intact and appears that it could meet ADA requirements (although this is beyond the scope of the project).
- ***Fair*** represents old sidewalk. There may be some minor surface cracking (no cracks greater than ¼"). A fair sidewalk does not present any major hindrances but is subject to degrading into the poor category in the future.
- ***Poor*** category was reserved for problem areas and areas that would pose major safety concerns such as cracking, heaving, root growth and grass growth.
- ***Not Inventoried*** – there were some sidewalks that were not examined, primarily outside of the core, developed area of Sterling.

Of the sidewalks inventoried, the assessment identified:

- 38% of the sidewalks are in Good condition;
- 33% of the sidewalks are in Fair condition; and
- 29% of the sidewalks are in Poor condition.

4.4.1 Connectivity to Downtown Community Facilities

Connectivity between the downtown core to the surrounding activity centers and developments, through downtown and between community facilities is critical for a vibrant community. The downtown is the economic hub of the city; as such the college, high school and parks should be readily connected with the downtown area. Some of the key community activity centers/facilities include:

- **Sterling College.** The sidewalk along Broadway Avenue between Sterling College and downtown is generally in good condition, there are a couple spots that should be repaired and a few that are in fair condition and may need to be repaired in the future.
- **Sterling High School.** Broadway Avenue is the main trunk and Washington Avenue is the lateral arm that extends to the High School. The sidewalk along Washington Avenue is in good condition on the north side of the street and fair condition on the south side of the street. Additionally, sidewalk is in good condition on the block directly surrounding the High School/ Middle School.
- **Sterling Presbyterian Manor - Multifamily Housing/ Senior Housing.** West of Broadway Avenue along Washington Avenue there is Senior and Multifamily Housing. The sidewalk along Washington Avenue is in fair to good condition. There is no sidewalk north of Washington Avenue along the side streets 7th Street and 8th Street surrounding the senior housing and multifamily residents.
- **Sterling Grade School.** The elementary school is located between Monroe and Jackson Street and 4th and 5th Streets. The sidewalk adjacent to the school property is in good condition. The few blocks to walk from

the elementary school to downtown passes through a patch of sidewalk in poor condition, although the majority of the sidewalk is in fair condition.

- **Sterling Park.** Sterling Park is somewhat isolated from other community features. Although it is not a significant distance from downtown, it is isolated to pedestrians since continuous sidewalk is not available and pedestrians have to cross the railroad tracks.
- **Multifamily Housing.** There is a multifamily unit on the east side of town between 1st and 3rd Streets. The units off of Adams and Jefferson Avenue have sidewalk in fair condition surrounding the property, the units off of Washington Avenue have an internal sidewalk system, but not an external one, to connect the units to other community features. There are also significant gaps in sidewalk coverage in this portion of the city.

Overall the sidewalk condition throughout the city could be classified as fair. There are segments of sidewalk in good to great condition and other segments in need of repair. The majority of the existing sidewalk is concentrated around Broadway Avenue. Sidewalk continues outward from Broadway Avenue into the residential areas, but tapers off as the distance from Broadway increases. The condition also appears to degrade, as the distance from Broadway Avenue increases. There is essentially no sidewalk on the outer rim of the city toward the city limits.

4.4.2 Bicycle & Pedestrian Facilities

Biking and pedestrian facilities are important for a community of youth who cannot drive, adults who choose not to drive, recreational purposes, and as an alternative mode of transportation. In Sterling, there are no designated bike routes or bike lanes. The main pedestrian facilities are sidewalks. Approximately half of the city has sidewalk. There is one multiuse path circling Sterling Lake on the south edge of the city.

4.4.3 Parking Locations & Developable Sites

The City of Sterling has a great desire to improve their downtown to make it an attractive business district, a thriving center for shopping and activities, and ultimately as a destination for out-of-towners. Developable lots and parking areas in the downtown core are shown on Figure 4-2. These areas will be the focus of potential options on how to improve downtown to integrate feasibility with the City's desires. Currently the downtown area only has surface parking which is composed of diagonal parking along Broadway, a couple of surface lots, and many parking lots behind building lots.

There are three possible developable areas in downtown based on visual inspection of the area. Two of the lots are demolished or empty lots, and the third lot is an open space near the railroad tracks.

FIGURE 4-4: EXISTING SIDEWALK CONDITION

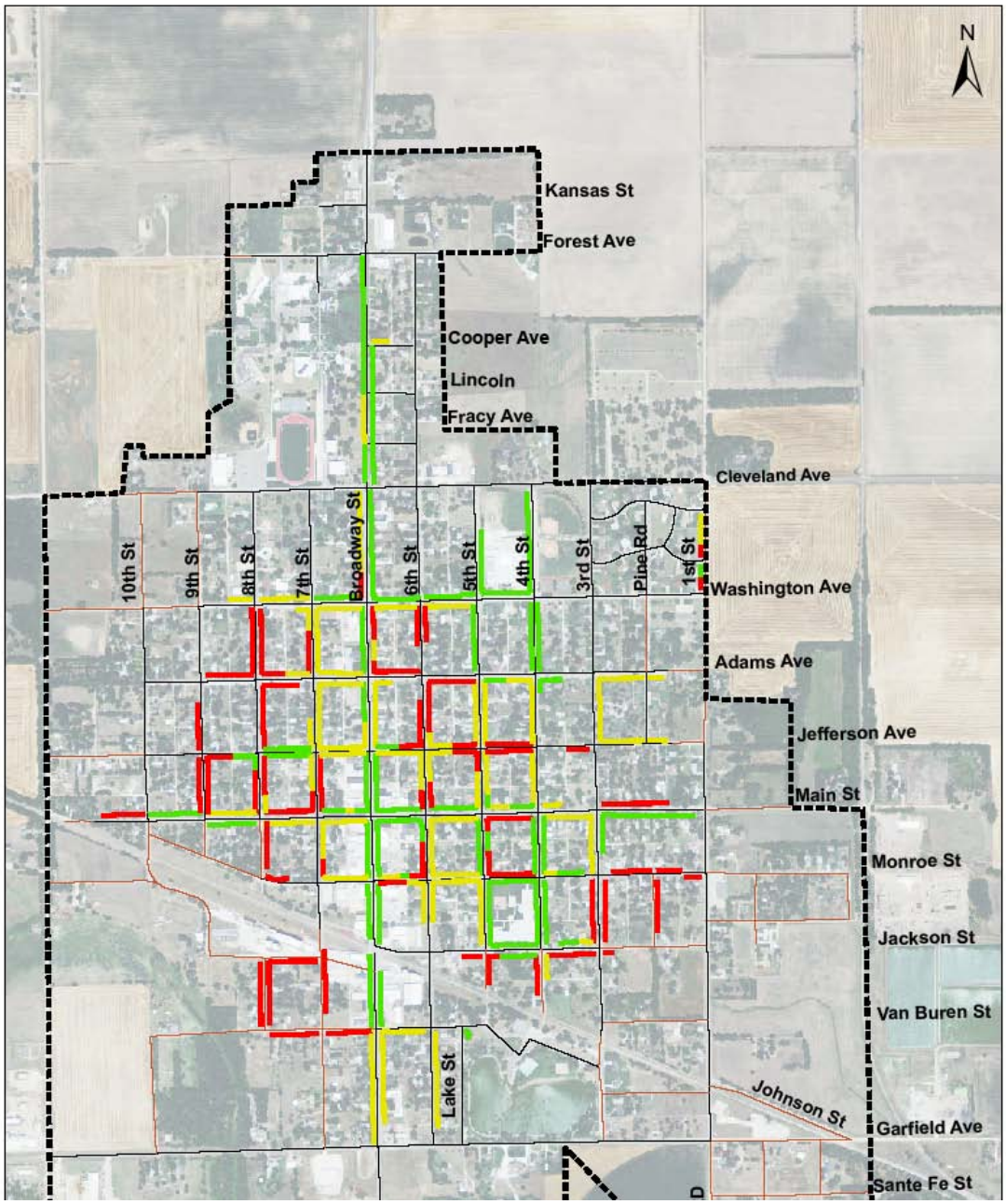


FIGURE 4-5: COMMUNITY ATTRACTIONS

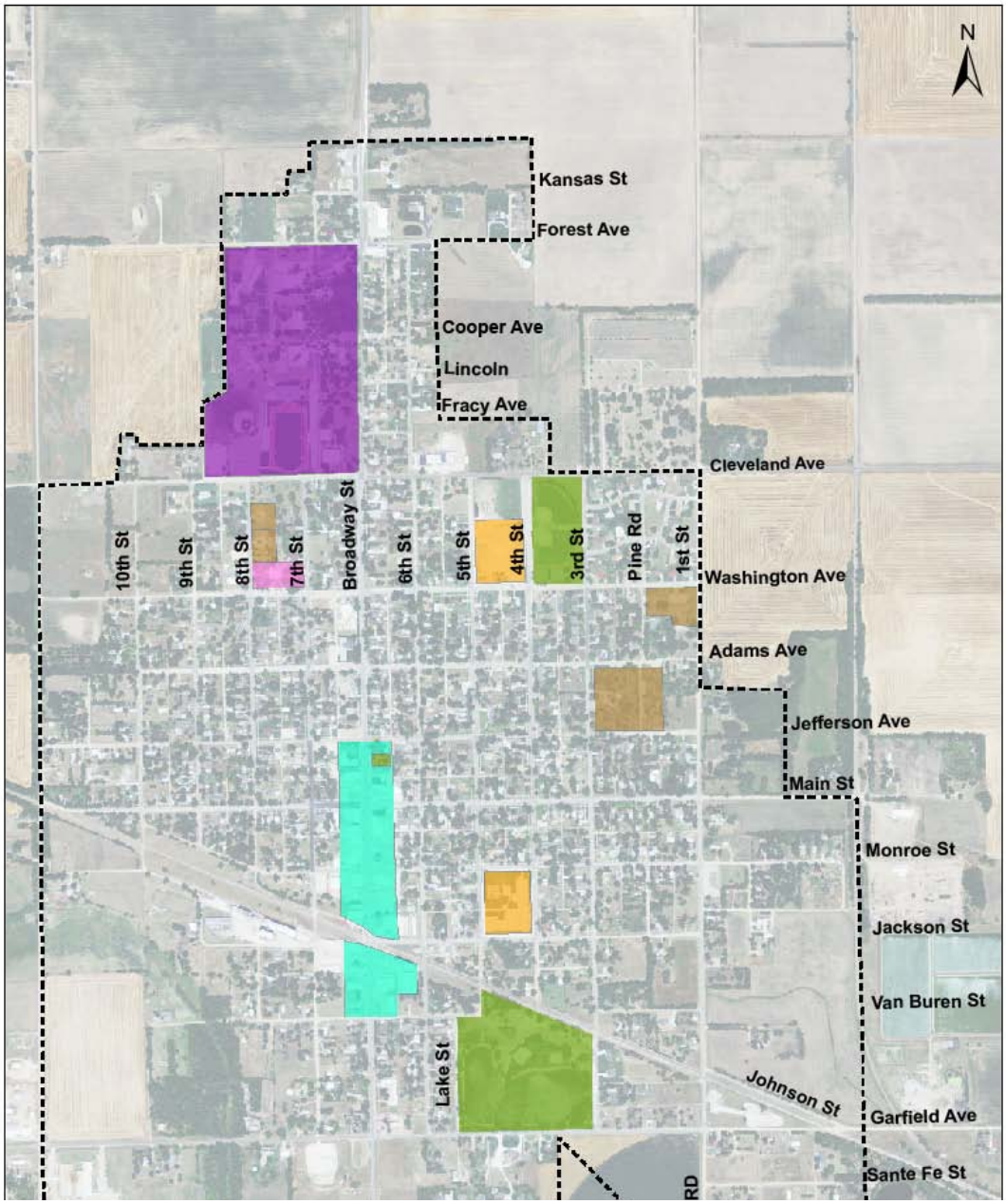


FIGURE 4-6: CONNECTION ASSESSMENT

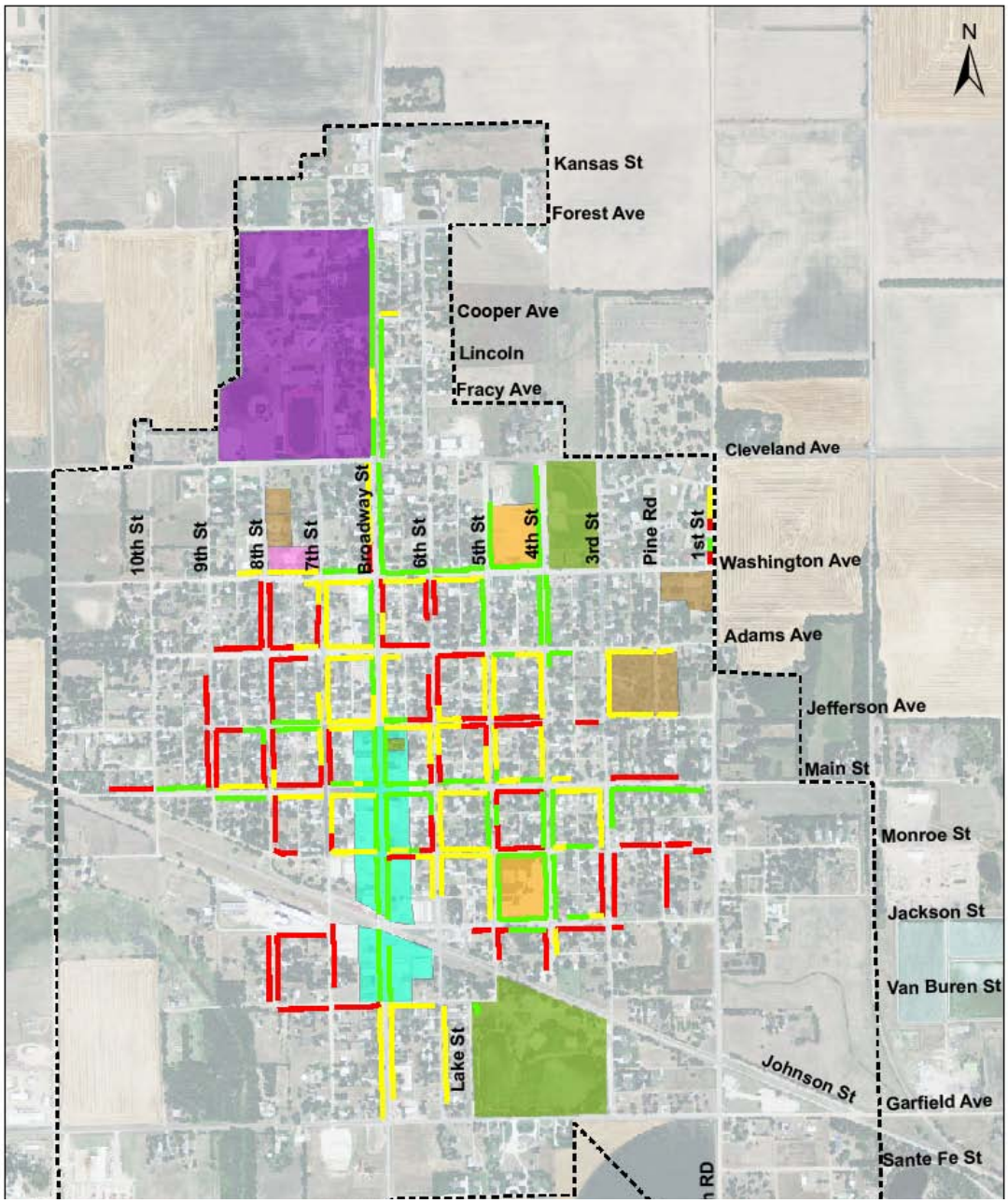
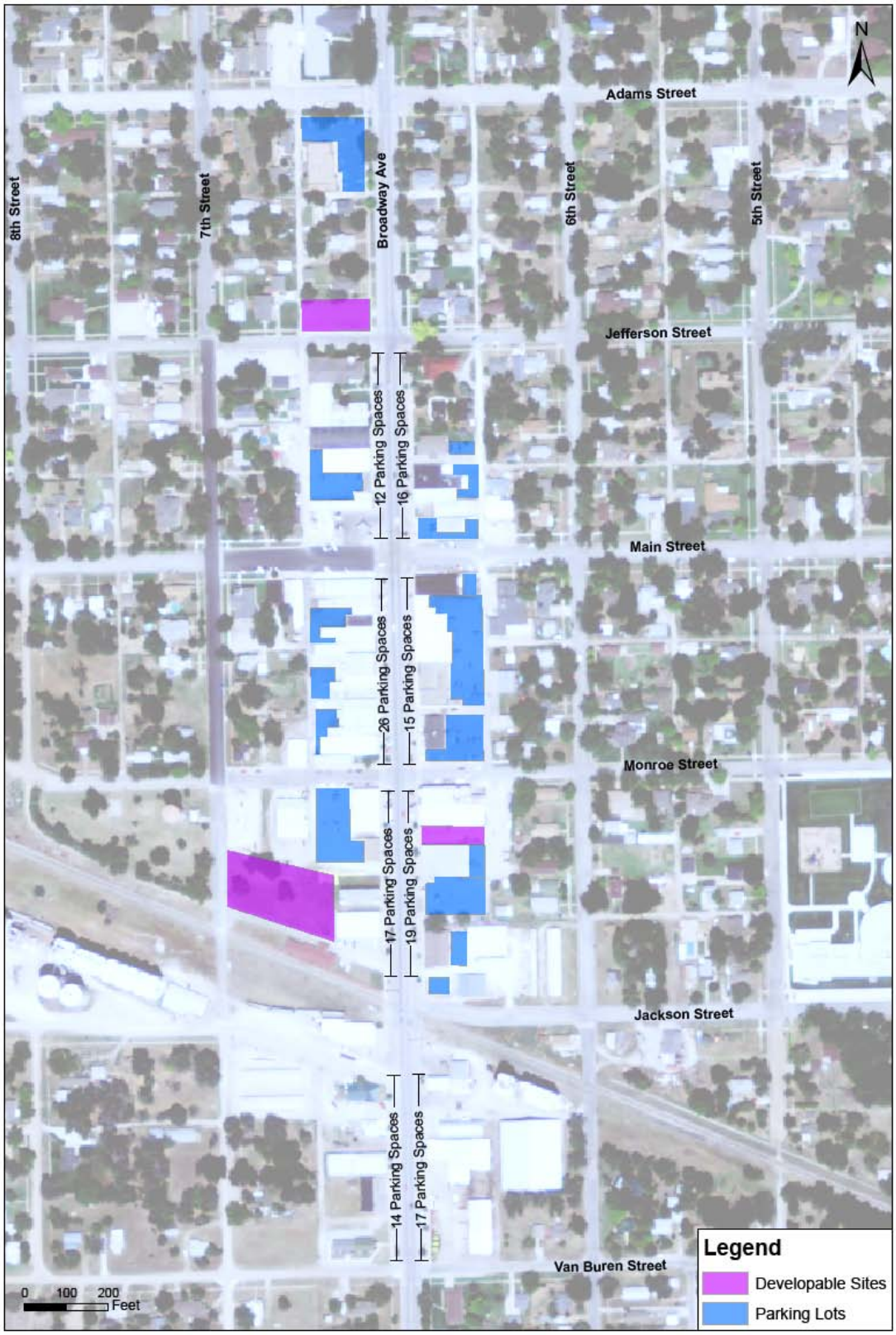


FIGURE 4-7: DEVELOPABLE SITES AND PARKING LOTS IN STERLING, KS



5.0 BROADWAY CURB, GUTTER AND SIDEWALK ASSESSMENT

An assessment of the curb, gutter and sidewalk condition was conducted specifically along Broadway to understand the quality of the infrastructure and quantity of curb and gutter that needs to be replaced. Figure 5-1 illustrates the quality of curb, gutter and sidewalk along Broadway Avenue.

FIGURE 5-1: CURB, GUTTER AND SIDEWALK ASSESSMENT

As displayed in Figure 5-1, the graphic summarizes the existing conditions of sidewalk and curb & gutter along Broadway Avenue that should be replaced. Two categories are shown “Fair” and “Poor” condition. Fair condition is when minor cracking or unevenness is present. Poor condition is used when there is major cracking or unevenness. If neither condition is shown, the facility is in good condition, neither cracking or unevenness present, and it is not recommended to be replaced at this time.

Curb & Gutter

The Curb & Gutter between Cleveland and Forrest has been reconstructed recently and is in excellent condition. Two inlets were located along the extent of Broadway Ave. and both were in good condition.

In the downtown vicinity, the curb & gutter condition only rated as poor or fair at the corners of intersections. It appears that this issue is due to vehicles driving over the radius returns while turning.

From 150’ +\- north of Jefferson Ave to Cleveland Ave there is old curb & gutter that has been overlaid with asphalt. Overall the curb that is visible is in good condition, with few areas in fair to poor condition. Most of the areas in poor condition are at driveways. See photos below.

Curb & Gutter Replacement			
	Length (Ft)	Unit Cost	Total
Tear-Out	650	$5	$3250
Poor Condition	200	$30.00	$6,000.00
Fair Condition	450	$30.00	$13,500.00
Mobilization	-	-	$1150
		Total Cost	**$23,900.00**

Sidewalk

The sidewalk on the northwest quadrant of Jefferson Avenue and Broadway Avenue is paneled together. The photos below show grass growing in-between the panels, and some panels are uneven. This stretch of sidewalk was classified as fair condition.

Sidewalk Replacement			
	Area (Sq Yds)	Unit Cost	Total
Tear-Out	1450	$5.00	$7250.00
Poor Condition	800	$30.00	$24,000.00
Fair Condition	650	$30.00	$19,500.00
Mobilization	-	-	$2550.00
		Total Cost	**$53,300.00**

In the downtown area, the decorative brick work panels (precast panels stamped and colored to look like bricks) have settled behind the curb & gutter. Overall, the condition of the brick is in fair condition. As for fixing this settling issue, it may be very difficult to correct it without destroying the panels in the process. The estimated cost for rehabilitating the stamped concrete for approximately 800' along the back of curb is $20,000.

6.0 FESTIVAL AND EVENT EVALUATION

An evaluation was conducted to examine options relating to where to hold festivals and events in downtown Sterling to understand what impacts the various location options have on travel and mobility in Sterling.

Four festival options were included in the evaluation:

- Close Broadway Avenue;
- Close Main Street;
- Hold festivals in Sterling Park; and
- Hold festivals in the alleys adjacent to Broadway Avenue.

Each of the festival options examined the impacts of the street closure, mobility, and access to the future K-96/K-14 interchange north of Sterling. Figures 6-1 through 6-4 illustrate the options examined, provide the potential street closure/traffic routing, and provide the anticipated benefits and drawbacks of each option. No single option was identified or recommended from this evaluation. This was intended to provide the City and Main Street Sterling additional understanding of potential associated impacts based on where a festival was located.

FIGURE 6-1: FESTIVAL OPTION 1 – CLOSE BROADWAY AVENUE

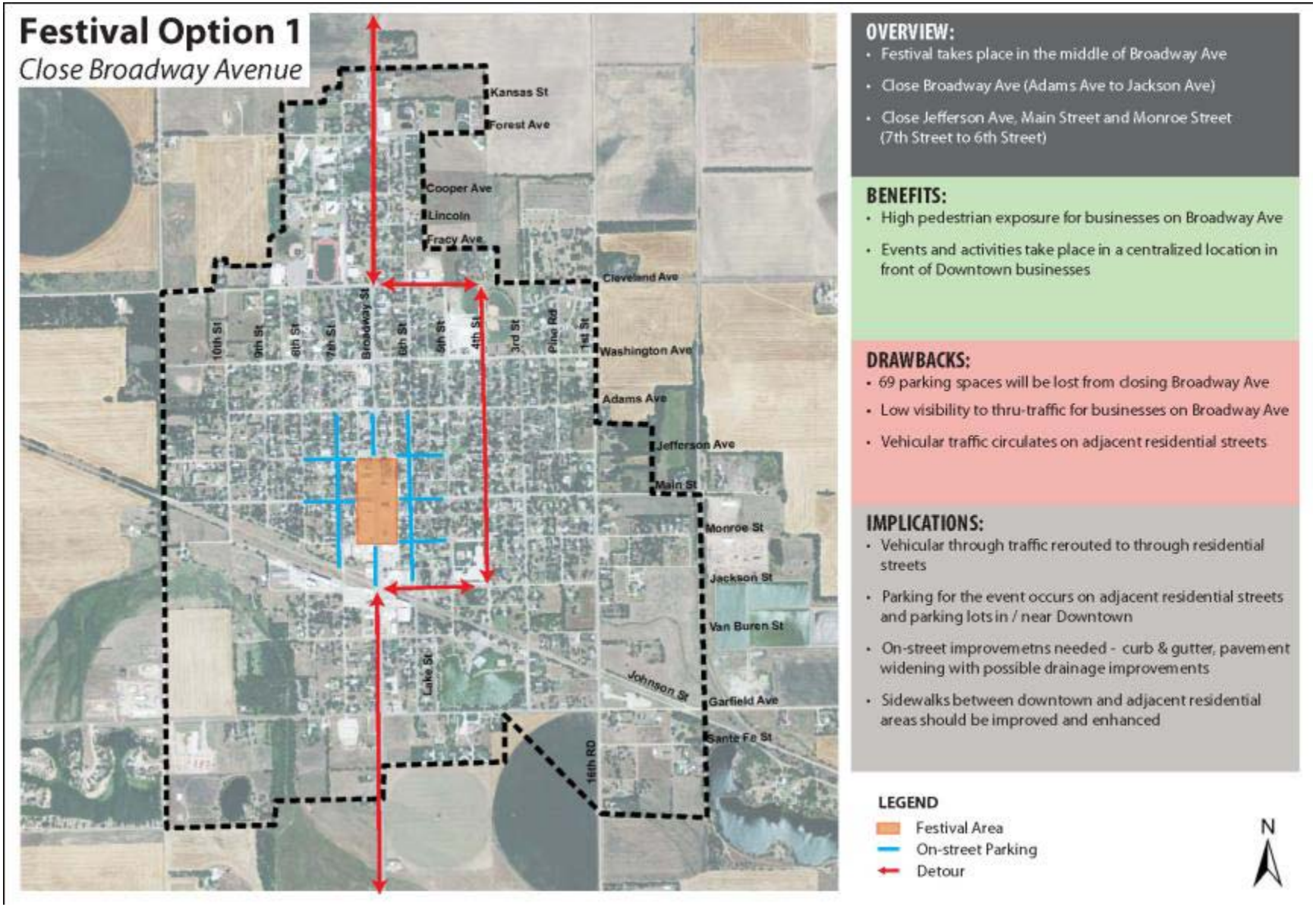


FIGURE 6-2: FESTIVAL OPTION 2 – CLOSE MAIN STREET

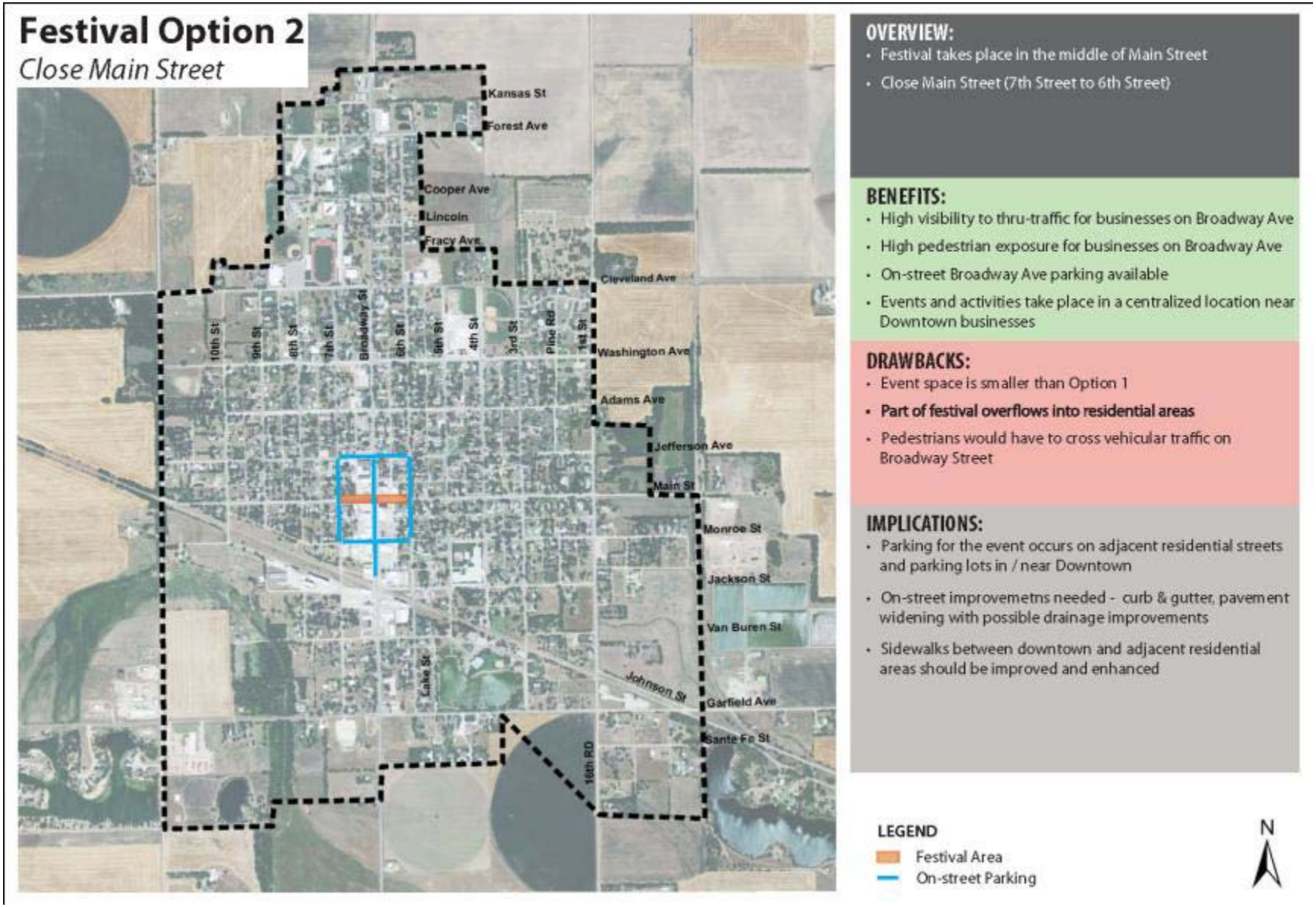


FIGURE 6-3: FESTIVAL OPTION 3 – HOLD FESTIVALS IN STERLING PARK

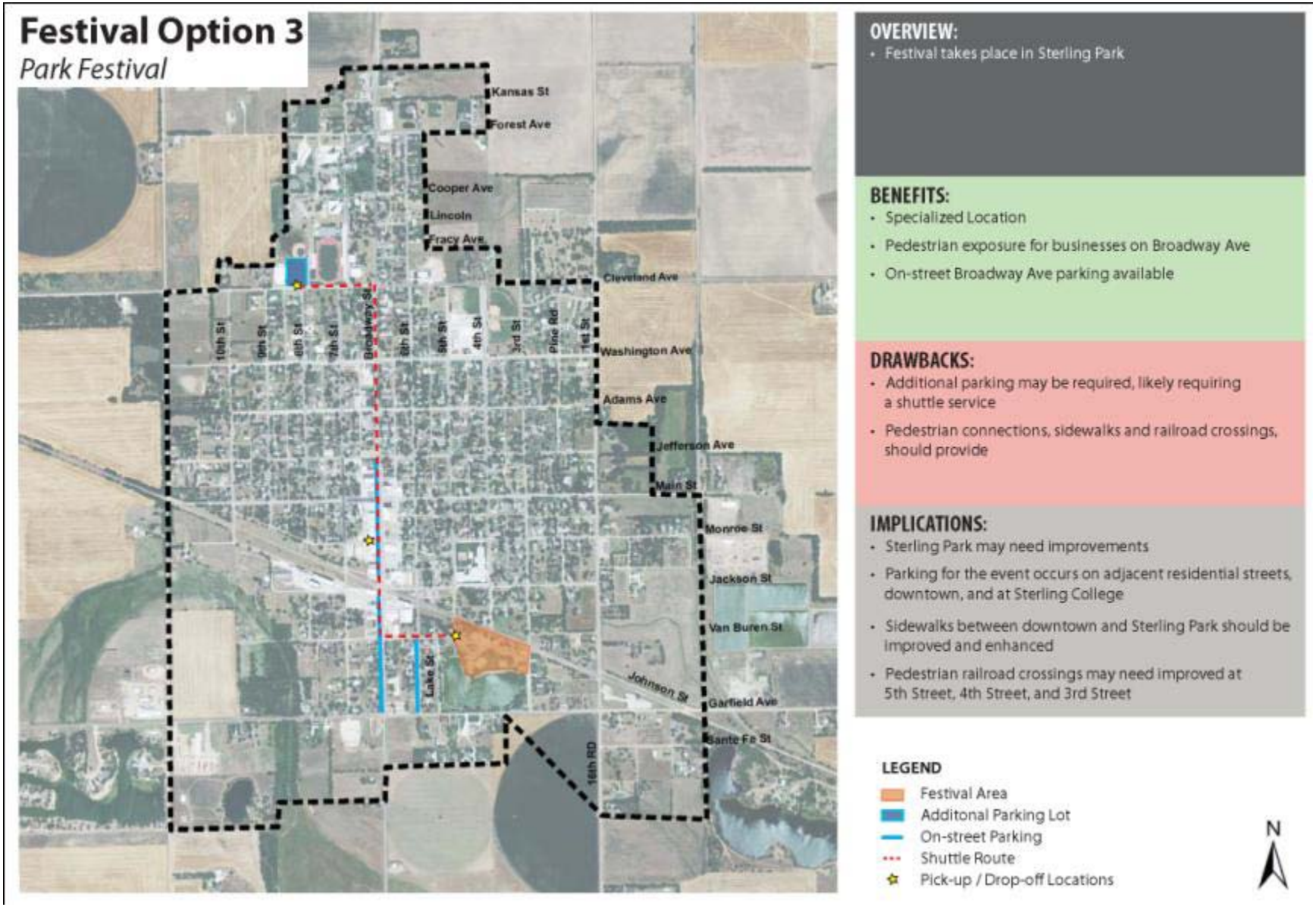
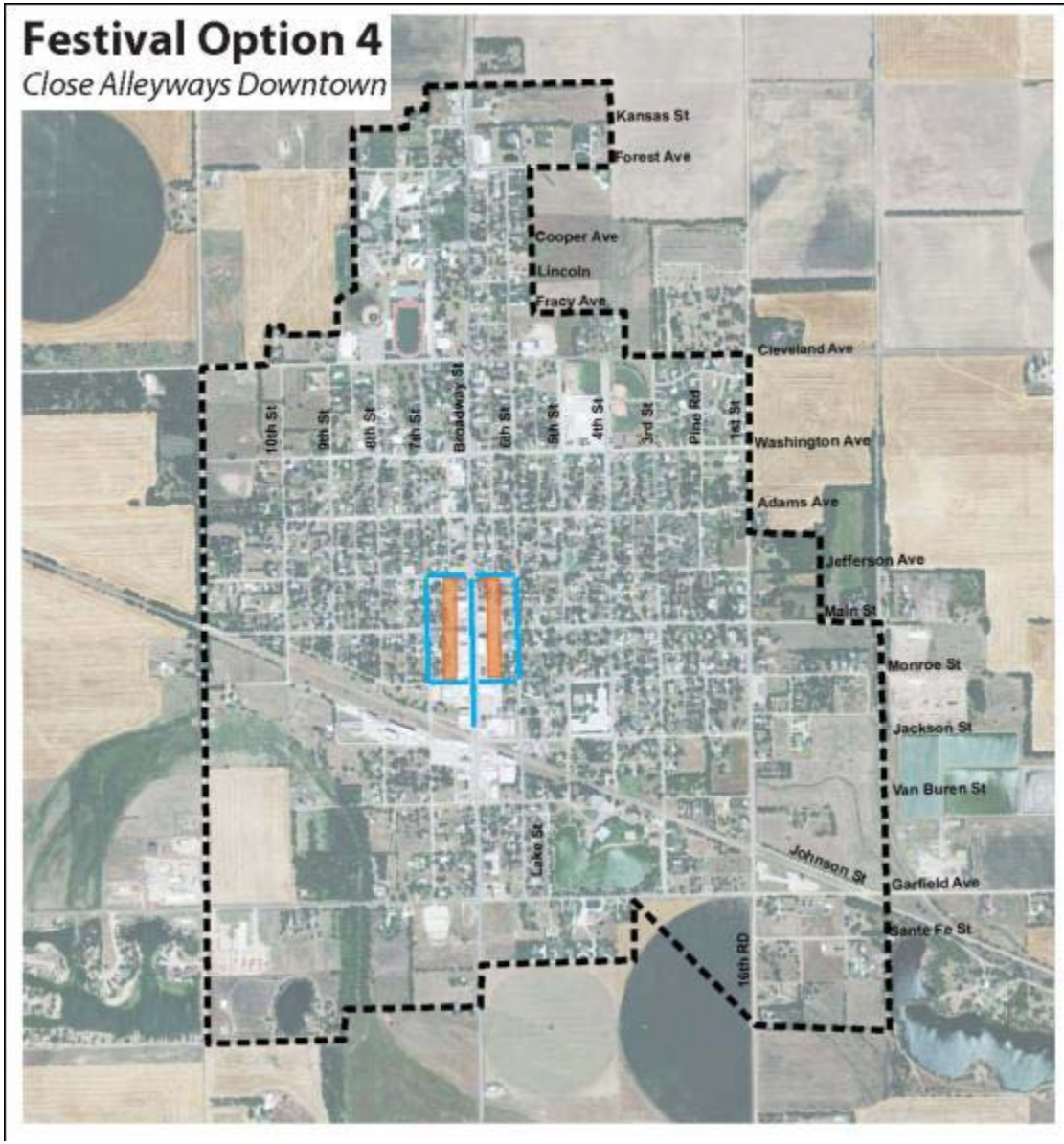


FIGURE 6-4: FESTIVAL OPTION 4 – HOLD FESTIVALS DOWNTOWN ALLEYWAYS



OVERVIEW:

- Festival takes place in the alleyway behind Broadway Businesses
- Close Main Street (7th Street to Broadway Ave & Broadway Ave to 6th Street)

BENEFITS:

- High visibility to thru-traffic for businesses on Broadway Ave
- High pedestrian exposure for businesses on Broadway Ave
- On-street Broadway Ave parking available
- Events and activities take place in a centralized location near Downtown businesses

DRAWBACKS:

- Event space is smaller than Option 1
- The alleyway requires improvements - paving and possibly streetscaping
- Additional event traffic control may be needed along Broadway Ave

IMPLICATIONS:

- Some parking for the event occurs on adjacent residential streets
- On-street improvemetns needed - curb & gutter, pavement widening with possible drainage improvements
- Sidewalks between downtown and adjacent residential areas need improved and enhanced

LEGEND

- Festival Area
- On-street Parking

N

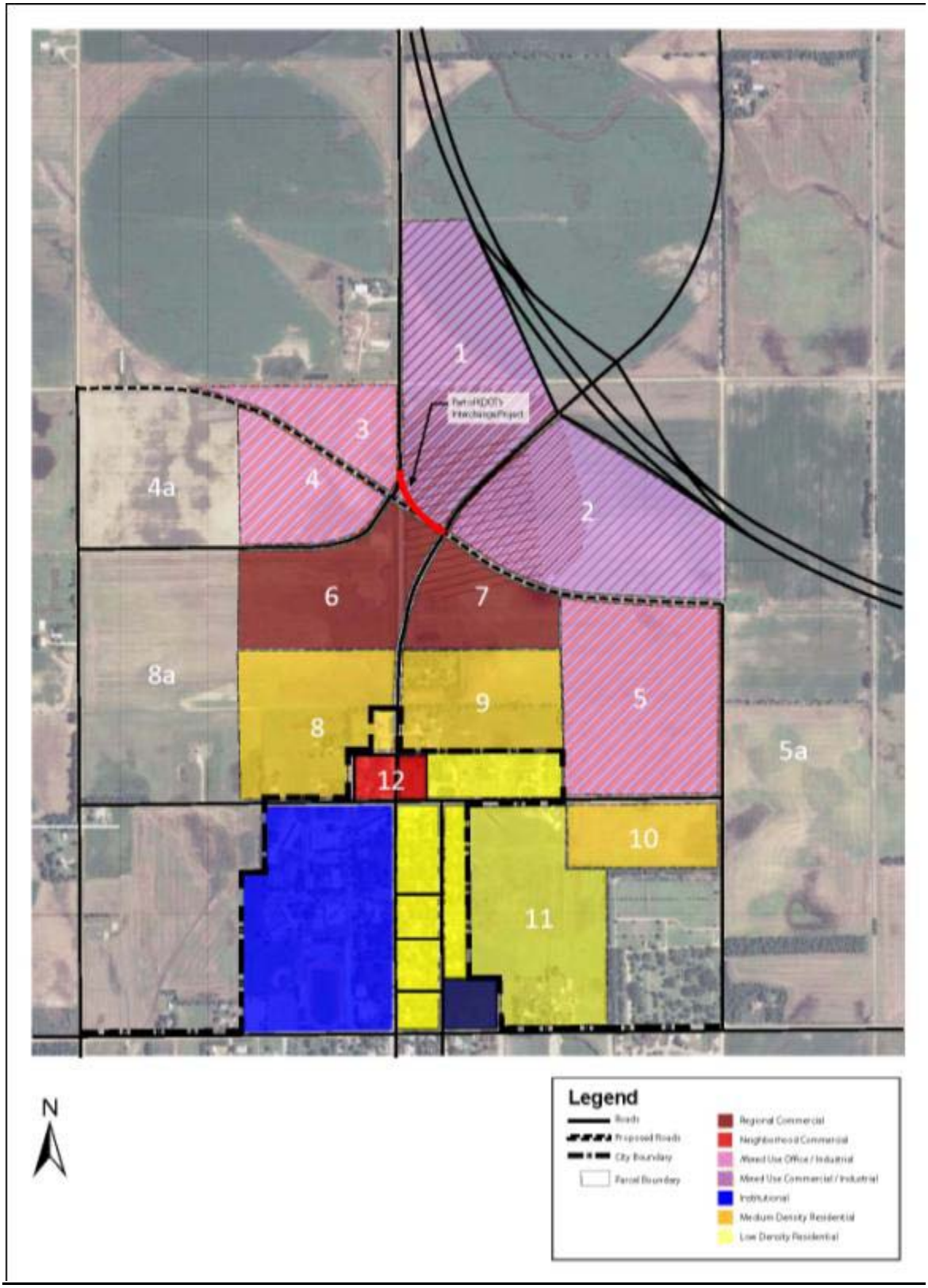
7.0 INTERCHANGE AREA LAND USE AND CIRCULATION EVALUATION

An interchange area land use and circulation evaluation was conducted to identify and understand potential opportunities and constraints relating to land uses in the vicinity of the new K-14/K-96 interchange. This land use concept promotes positive economic growth associated with significant public investment in the K-14/K-96 realignment and new interchange to the north of the City of Sterling.

This concept is not based upon community growth trends or projected population growth. Instead it is based upon filling in the area between the current city limits and proposed interchange in a logical manner. As development interest increases in the future it will be important that the community holds to several principles.

1. The City of Sterling should develop an up-to-date comprehensive plan and an annexation strategy to ensure that planning policies and development expectations are clearly identified and annexation requests are considered in a strategic manner.
2. Development pro-formas should address potential market impacts to the Sterling marketplace and financial cost / benefit of extending services prior to decisions being made regarding annexation and development requests.
3. All areas that are currently zoned agricultural (city or county) should remain zoned as such, even if annexed. Future development proposals should go through the public review and hearing process required for rezoning and site plan review to ensure that community planning policies are met.
4. Commercial development should occur at neighborhood or regional scales in the future in order to protect the economic viability / market position of Downtown Sterling. Certain uses and development patterns should be controlled via the creation of supplemental zoning categories.
5. Residential densities within the city limits need to increase, through residential redevelopment and new development efforts. Residential development densities should range between typical single-family (4 units per acre) to multi-family (10 units per acre) densities in the future.
6. The heaviest traffic generators (i.e. truck and auto) and most intensive land uses should be located closest to the interchange.
7. Addressing access management and circulation of all forms of vehicular and pedestrian movement in a proactive manner prior to development will address potential traffic conflicts between through traffic and destination traffic.

FIGURE 7-1: INTERCHANGE AREA LAND USE CONCEPT



Regional Commercial / Industrial Mixed Use Area (Parcels 1 and 2)

These parcels should be master planned to accommodate a mixture of primarily warehouse / distribution / light industrial / agri-business uses in a business park setting. Being located at the front door of the community, it is very important that this development is both functionally well thought out and aesthetically appealing.

The master plan approach would address land use mix, site development and design, and architectural quality. Some regional / highway oriented commercial uses may be allowable along the major roadways. But the focus of this area is to allow for employment opportunities associated with the uses identified above.

Regional Office / Industrial Mixed Use Area (Parcels 3, 4 and 5)

As with the regional commercial / industrial area, this area is primarily focused on future development that offers employment opportunities. A mix of office, warehousing and light industrial uses, whether developed through a master plan or parcel-by-parcel, should incorporate quality site and architectural principles, striving to accomplish a business park feel.

Most importantly, transitions between these areas and adjacent residential areas (existing or planned) need to incorporate appropriate buffering to reduce visual and operational impacts on neighborhoods. These areas, if successfully planned and developed, may expand to the west of Parcel 4 (4a) and east of Parcel 5 (5a) in the future.

Regional Commercial Area (Parcels 6 and 7)

The intent of this area is to allow for the opportunity of large-scale regional commercial retail and highway commercial services that due to development format or use conflicts would not fit in the downtown framework. Hotel, gas station, big-box retailer, and fast food uses are forms of acceptable development in this area.

Development that includes grocery providers, sit down restaurants, strip commercial centers and small scale retailers, etc., should provide appropriate market analysis and financial assessment to judge the impact of such proposed uses on existing business in the community (particularly downtown), and the costs / benefits associated with the extension and provision of community services and facilities prior to annexation / development approval.

Residential Neighborhoods (Parcels 8, 9, 10 and 11)

As noted previously, the community should seek to increase the density of residential development in the future. The intent is not to create an urban density, but to develop in a manner that is more cost efficient for the provision of services and facilities, and serves to strengthen the attraction of future commercial and employment oriented development.

Parcels 8, 9 and 10 could incorporate a variety of housing opportunities ranging from single-family development, duplex, apartment, senior or student living complexes. The target densities in these areas should be in the 6 to 10 units per acre range. This density level could easily expand outward to the 8a area in the future or could be developed at slightly lower densities of 3 to 5 units per acre.

Parcel 11 should develop as a single-family neighborhood at a typical suburban density of 3 to 5 units per acre.

Neighborhood Commercial Area (Parcel 12)

In light of the Dollar General Store, the potential for Sterling College to grow in the future, and the nature of the residential land located on the northwest corner of Broadway and Forest, there may be opportunities to redevelop

this block. A likely redevelopment scenario is that neighborhood commercial activity that appeals to students and residents in the area may occur. As such, the development and the intersection need to be pedestrian and bicycle friendly in the future.

8.0 STERLING ADVERTISING / WAYFINDING SIGNS

The new K-96/K-14 realignment provides the benefit of removing truck traffic from downtown and providing a more efficient route for long distance commuters. While this is a good thing at the state level, visibility is removed for Sterling since through traffic will bypass the city. The city wants to make sure Sterling will continue to have a presence. To do this we recommend signage on the highway and wayfinding signs in town.

8.1 ADVERTISING SIGNS

Advertising signs are one method to provide highway users with information about upcoming events and activities. Highway advertising signs are placed along the highway as billboards. These signs will allow Sterling to advertise the city and its activities, i.e. Sterling Days or Sterling's art festival. It is recommended to have two signs: one located southbound near Lyons and the other northbound near Hutchinson.

Costs from Rosetta from Stellar Outdoor Media: ?

- $330 / month
- 6 month minimum rental
- Vinyl sign:
  - 12'X32' sign @ $748.00
  - 12'X25' sign @ $585.00
  - Sign charge includes installation and production of the sign and up to three changes of the sign layout before production
  - No limitation to the number of colors in the artwork

8.2 K-96/K-14 GUIDE SIGNS

Guide signs directing traffic to Sterling will be included as part of the highway project. The figures below show typical signing in advance of an interchange and typical guide signs placed along a ramp. Note that these signs will be located along both approaches to the new Sterling interchange.

Wayfinding Signs

Wayfinding signs will help Sterling's main attractions be visible to visitors coming in off of the highway. Key Characteristics of wayfinding signs in Sterling:

- Uniform Design
- Located near Key Destinations and at Decision Locations

- Customizable - Hanging feature for festival signs

There are many considerations for the appearance of wayfinding signs. Determination of the sign template is the first step since all signs should be uniform so that they are identifiable throughout the city. MUTCD Section 2D.50 Community Wayfinding Signs provides a general ove sight of what the wayfinding signs should be:

Size: Signs are typically made in 6"increments; creating signs in the standard increment sizing will maximize sign size with cost savings. Through our preliminary assessment, 4-foot wide signs seem to be the optimum size for Sterling. A sign of this size should not be overtly large, but should be large enough to be legible for a driver.

Text size: Text size goes hand-in-hand with the sign size. MUTCD recommends 6" text size for best legibility at speeds of 30 mph or greater. Although, text 4" in height is sufficient for speeds 25 mph or less. Preliminary layouts illustrate for a 4-foot width of sign, 4" text works best. Depending on destination wording and spacing, the text size may be able to be increased with minimal increase in sign size.

Colors: The wayfinding signs can be a color other than the informational green guide signs. The city can customize the wayfinding signs to be part of their "branding" of the city. MUTCD does state that the standard colors of red, orange, yellow, purple, or the fluorescent versions thereof, fluorescent yellow-green, and fluorescent pink shall not be used as background colors for community wayfinding guide signs, in order to minimize possible confusion with critical, higher-priority regulatory and warning sign color meanings readily understood by road users.

Number of Destinations: MUTCD suggests that wayfinding signs should be limited to three destinations per sign. Four key destinations have been determined for Sterling; at this time having four destination locations on the wayfinding signs should be acceptable. Abbreviations should be kept to a minimum, and should only include commonly recognized and understood variations. Destinations should be grouped by direction and separated by a horizontal line which contrasts to the background color.

Pictograph: If a pictograph is used on the wayfinding sign, the height shall not exceed two times the height of the uppercase letters in the principal legend on the sign. For example, if the principal uppercase letters are 4 inches in height, the pictograph could have a maximum height of 8 inches.

Mounting: Preliminary determinations suggest that for a 4' sign width a two-post mount is required.

Location: MUTCD 2D.50 04 states that sign locations should be limited to conventional roads, and not installed on freeway, expressway mainlines or ramps. Community wayfinding signs should not be installed in a position where they would obscure road users' view of traffic control devices or other regulatory and warning signs.

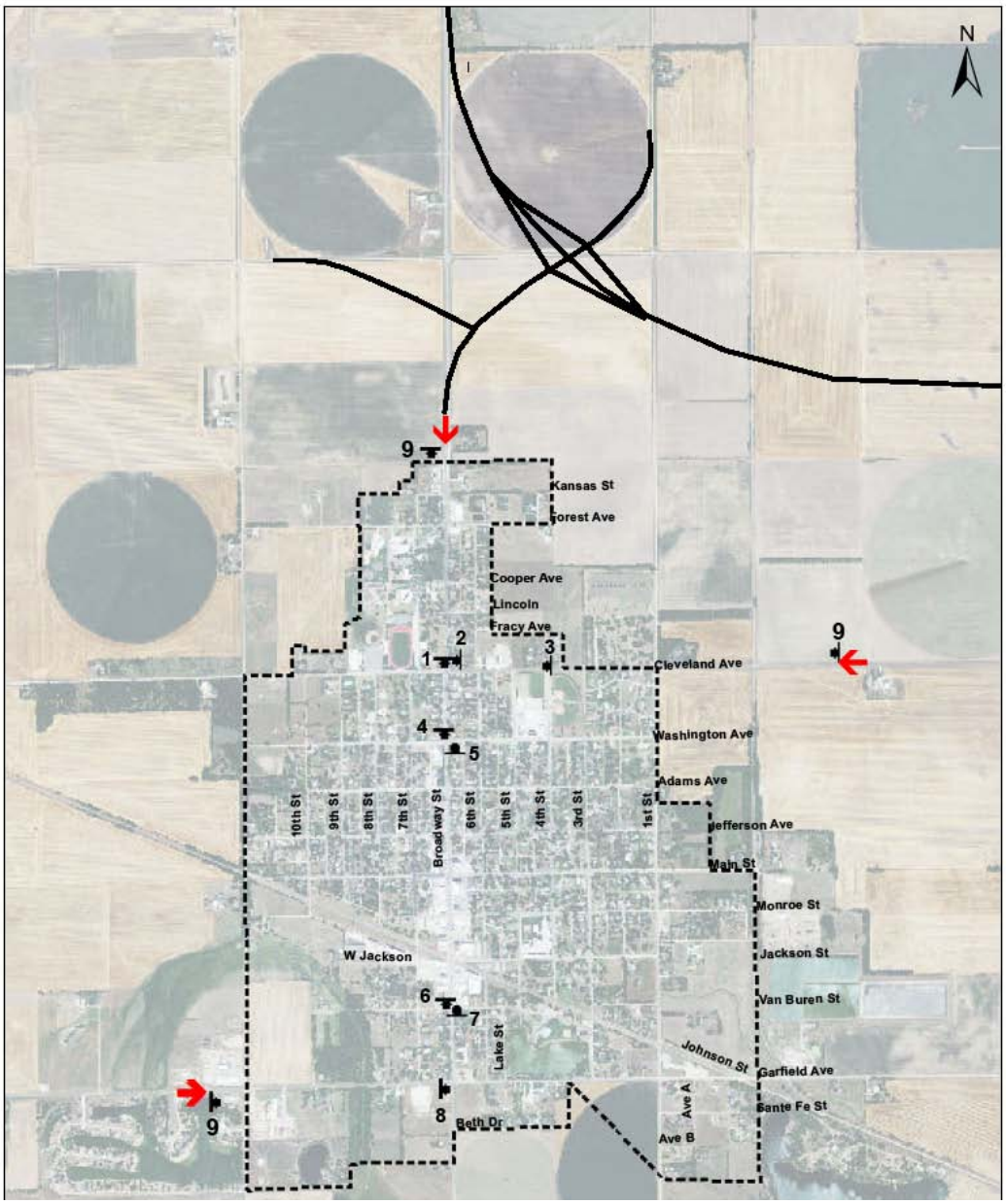
Hanging Sign Attachment: To customize the signs during special events i.e. "Sterling Days", a hanging sign can be attached at the bottom of the wayfinding sign with "S" hooks.

FIGURE 8-1: CONCEPTUAL WAYFINDING SIGN

Figure 8-1 depicts an example wayfinding sign for Sterling that directs visitors to area attractions, and allows for the city to hang event related signs for short-duration events. The sign to the left shows how a hanging event sign would look with the wayfinding sign. It would be optimum to keep the same sign width and simple one-line text to describe the event. Perhaps a more secure option to hanging the event sign, depending on the type of post used, would be to bolt the event sign to the wayfinding post, below the wayfinding sign. The wayfinding sign will need to be mounted high enough off the ground to ensure clearance requirements when the event signs are attached.

Locations of the signs are shown on Figure 8-1, the locations were chosen based on the key destinations listed and at decision locations. Decision locations are located along main roads and where individuals would need to turn to make it to the key destinations.

FIGURE 8-2: WAYFINDING SIGN LOCATIONS



9.0 PUBLIC INVOLVEMENT

During the conduct of the Main Street study, the Kansas Department of Transportation (KDOT) is conducting preliminary engineering for the future freeway (K-96/K-14) bypass to the east and new interchange with Broadway to the north of town along Broadway.

Throughout the K-96/K-14 project, KDOT and their consultant team held numerous public meetings including several meetings that coincided with the Main Street Project's timeline. Additionally, these meetings were held in the City of Sterling and the Studio 96 event space on Broadway Avenue. Provided below is a description of each of the meetings that occurred between February and November, 2013.

9.1 MAIN STREET STEERING COMMITTEE

The Main Street Sterling committee was the primary steering committee directing the work effort for this project. The group provided direction relating to the scope of work to be conducted and feedback on the evaluations. The efforts relating to this study were also directly related to the KDOT interchange public involvement activities for the K-96/K-14 bypass and interchange.

9.2 K-96/K-14 TECHNICAL ADVISORY COMMITTEE MEETING

On February 8, 2013 at 9:30 am a meeting with the K-96/K-14 Technical Advisory Committee (TAC) was held at the Studio 96 event space on Broadway Avenue in Sterling, KS. The TAC is made up of representatives from KDOT, the consultant team, Reno County, Rice County, City of Nickerson, City of Sterling, Sterling Township, West Washington Township, Grant Township, Nickerson Emergency Medical Services, Nickerson School District, and Sterling School District.

The meeting was primarily comprised of a presentation that provided an overview of the project process, history, and timeline, selected alternative, right-of-way process, K-96/K-14 'turn back' process, local roadway system and access, upcoming work and meetings, and project contact information.

TAC Meeting Discussion

9.3 PUBLIC OFFICIALS/COMMUNITY ADVISORY GROUP MEETING

On February 8, 2013 at 1:00 pm a meeting with the K-96/K-14 Community Advisory Group (CAG) and Public Officials was held at the Studio 96 event space on Broadway Avenue in Sterling, KS.

The meeting was primarily comprised of a presentation that provided an overview of the project process, history, and timeline, selected alternative, right-of-way process, K-96/K-14 'turn back' process, local roadway system and access, upcoming work and meetings, and project contact information. Also stated was the importance of informing KDOT or the consultant team of any upcoming developments or potential impacts. Additionally, KDOT expressed commitment from Secretary King to fund and build this project.

Public Officials/CAG Meeting Presentation

9.4 KITCHEN TABLE MEETINGS

In late October through early November of 2013 KDOT and the consultant team met with property owner that would likely be directly impacted by the future freeway. One-on-one "kitchen table" meetings were held October 28-November 1, 2013 with each individual property owners as well as Rice County, Reno County, the City of Nickerson and the City of Sterling.

Officials representing the City of Sterling and the Main Street Sterling organization attended a kitchen table meeting for the City of Sterling on October 29, 2013 at 11:00 am. Topics discussed included the turn back process, the future interchange, and a "gateway" feature on Broadway Avenue. A follow up meeting in coordination with the Rice County official and the Sterling representatives was held October 31, 2013 at 1:30 pm. The following sections provide a summary of the discussion among three topics affecting the City of Sterling and the Main Street Sterling organization.

Turn Back

When KDOT opens the new K-96/K-14 highway some of the existing highway will be removed from the State-system and turned over to the Local Public Authorities (Rice County, Reno County, City of Sterling, and City of Nickerson) who will be responsible for future maintenance on that stretch of roadway. KDOT will work with these

Local Public Authorities (LPAs) to mutually agree on a scope of work to address the existing roadway condition prior to the transfer.

As part of the City's planning exercise, the estimated costs for turn back repairs were calculated in a report. KDOT described that the potential repairs to be conducted include paving between curbs and typically does not include sidewalks; however, some curb bulb out repairs may be negotiated. The scope of work would be negotiated and decided between the local KDOT District Engineer and the City. The City can either decide to receive an in lieu of payment or have KDOT conduct the repairs.

Future Interchange

The interchange conversation centered on the possibility for bridge enhancements and a monument sign near the interchange exit ramps. KDOT indicated that approximately 3% of the total bridge cost can potentially be budgeted for bridge aesthetics; should the local jurisdiction choose to, they are allowed to contribute additional funds towards aesthetic enhancements to the bridge. Unlike the turn back funds, the 3% of funds allocated to aesthetic enhancements for the bridge cannot be paid directly to the City.

The City expressed interest in having a roadside monument sign indicating that this particular exit along the freeway includes a unique place, "The City of Sterling". KDOT discussed the possible location of where such signs and landscaping are allowed to be located. Also, expressed was that these signs and landscaping can only be created if a maintenance agreement is determined between the City and KDOT and if it is paid for by the City. However, the turn back funds can be used for construction and KDOT would be willing to conduct the construction using the turn back funds. Additionally, it was expressed a highway use permit is necessary but that it is easier to execute after the highway is built.

"Gateway"

The City has long range plans that include plans to potentially annex and grow the City to the north to connect to the future interchange. Since this portion of land is currently not within the City limits, any plans for roadway improvements connecting to the interchange, including sidewalks, landscaping, etc would not be paid or constructed through this project. Instead the roadway design through this area will be coordinated with the preferences of the existing jurisdiction, Rice County. In a meeting with the County official, it was expressed that the County would likely prefer low maintenance design for the roadway unless if the City were to annex or to negotiate an ongoing maintenance agreement with the County. The City expressed some concern in their ability to take these actions in a relatively short timeframe (by summer 2014).

Out of this discussion regarding the inability to design the full landscaped median roadway design the City had initially preferred, the City and KDOT discussed options to create a chicane entrance south of Avenue U. This geometric design would serve the purpose of calming traffic as it enters downtown, creating a site line along the corridor and creating a gateway to the City of Sterling.

10.0 SUMMARY & KEY OBSERVATIONS

There are several key observations that relate to the Broadway Avenue corridor, the new K-96/K-14 interchange, the future development in the vicinity of the interchange and walkability throughout the city. The following points and graphics will provide guidance as the City grows and develops, particularly as K-96 is turned back to the City and the new interchange is constructed.

- The new K-96/K-14 interchange will greatly influence the city's future development and strategies for growth.
    - Figure 10-1 depicts an illustration of the interchange area to provide guidance relating to sidewalks in the vicinity of the interchange. It is anticipated that sidewalks will not be located north of the first roadway intersecting Broadway Avenue, south of the interchange.
    - A Community Plan including a Future Land Use Plan should be developed to guide the city as land development applications and proposals are submitted. Figure 10-2 is an initial concept for a land use plan in the vicinity of the interchange.
    - The interchange area should serve as the northern gateway into the city.
    - It is anticipated that development will remain south of the interchange.
    - The development community will assist in making the improvements along Broadway Avenue, including constructing a contiguous sidewalk north of where the sidewalks terminate on the north end of Broadway Avenue.
- Maintaining key corridors of contiguous, good condition sidewalks will provide residents and visitors safe and viable ways to walk to and between key destinations and attractions within the city.
    - Broadway Avenue curb, gutter, sidewalk and pedestrian crossings/ramps should be improved to, and be maintained as, "Good" condition. Broadway Avenue is the northern gateway into downtown Sterling and should be maintained as an attractive corridor entering into Sterling.
    - Figure 10-3 depicts key pedestrian corridors that have sidewalks and should be maintained in "Good" condition as priority corridors. Although all sidewalks are important to maintain, these corridors are the most critical to provide connectivity between community activity centers and attractions. The graphic also illustrates two pedestrian rail crossings – these rail crossings are very important to maintain safe pedestrian crossings across the railroad tracks.
    - An ADA transition plan should be developed to address the community-level needs to comply with ADA requirements.
- The ability to bicycle in Sterling is an important aspect to maintain. Sterling College, the area schools, the downtown commercial district and activity centers that surround downtown are all very important to maintain as bicycle friendly. Based on the low traffic volumes in Sterling, coupled with the grid-type street network that is in place, bicyclists can safely ride on the existing street network without signed routes or striped lanes.
- Wayfinding signs can be used to help direct visitors to the community features and events. Event signing can be integrated into the wayfinding signs as hanging signs that can be installed and removed as needed without requiring permanent mounting equipment for special event signing.
- If options for accommodating festivals are evaluated, key factors to consider would include the ability to access the new K-96/K-14 interchange, the ability for visitors to park without negatively impacting surrounding neighborhoods, and the ability for visitors to safely walk in the vicinity of the event.

FIGURE 10-1: K-96/K-14 INTERCHANGE CONCEPT

FIGURE 10-2: INTERCHANGE AREA LAND USE CONCEPT

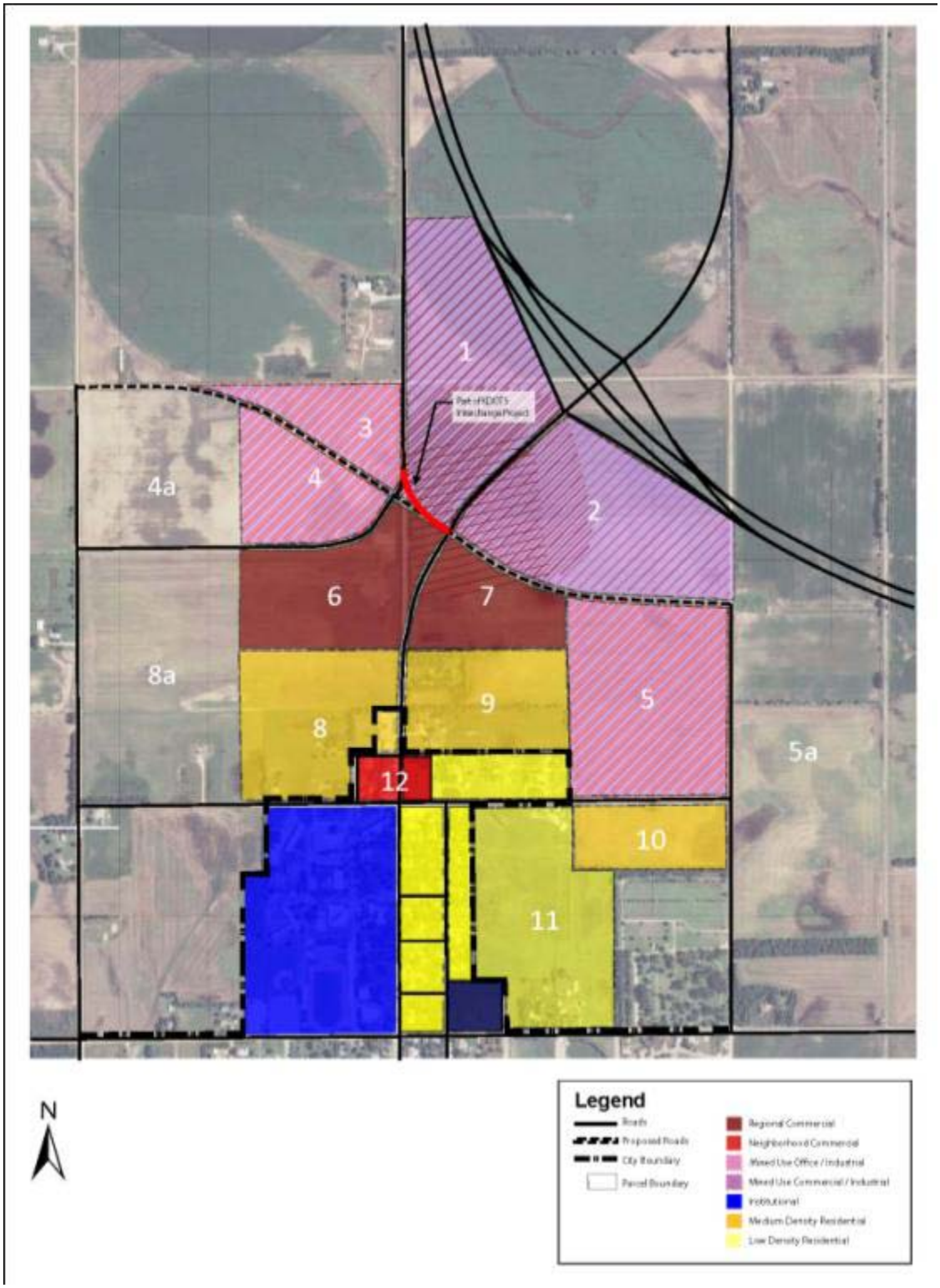


FIGURE 10-3: KEY PEDESTRIAN CORRIDORS