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TRANSPORTATION

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INTRODUCTION

The purpose of the Transportation Plan element of the Comprehensive Plan is to provide guidance to the City of Elkhart, as well as existing and future landowners in preparing for future growth and development. As such, whether an existing roadway is proposed for upgrading or a land use change is proposed on a property, this plan provides the framework for decisions regarding the nature of roadway infrastructure improvements necessary to achieve safety, adequate access, mobility, and performance of the existing and future roadway system. The primary goal of this plan is to establish local policies, standards, and guidelines to guide major transportation investments and policy decisions. To accomplish these objectives, the Transportation Plan provides information about:

- The functional hierarchy of streets and roads related to access and capacity requirements.
- Access management policies and intersection controls.

The transportation system principles and standards included in this plan create the foundation for developing the transportation system, evaluating its effectiveness, determining future system needs, and implementing strategies to fulfill the goals and objectives identified.



Transportation Goals, Objectives & Strategies

In order to develop and maintain a safe and functional transportation network that supports and accommodates all users, the following goals were developed.



TRANSPORTATION GOAL 1: Create a more pedestrian friendly community by providing pedestrian access and a network to all parts of town including Main Street, public parks, and community facilities.



TRANSPORTATION GOAL 2: Identify and develop an enhanced trail network within the community while connecting to regional trails and provide for future linkages to other trails.



TRANSPORTATION GOAL 3: Establish a functional and brand supported community wayfinding system.



TRANSPORTATION GOAL 4: Establish a standard section for roadways, turn-arounds, and sidewalks for all new development and redevelopment areas.



TRANSPORTATION GOAL 5: Address, maintain, and update transportation safety concerns and safe routes of vehicular transportation throughout the community.



Vehicular Transportation

HIERARCHY OF STREETS AND ROADS

Existing roadway and highway systems are categorized into a functional hierarchy based on the facility ownership, type of facility, and the role of the facility served in the county and region's transportation network. Within Polk County, the roadways are grouped into six general categories:

- Interstate
- Principal Arterial
- Minor Arterial
- Collector (Urban)
- Rural Major Collector
- Rural Minor Collector
- Local

As can be seen in the map below this text, Elkhart contains two Rural Major Collector roadways that bisect the community. This includes Grant Avenue (Northeast 46th Street), which runs north and south through Elkhart, and Walnut Street (Northeast 126th Avenue) which runs east and west.

Elkhart's method of transportation relies heavily on these two roads as well as the nearby interchange off of Interstate 35. The following pages address ways in which Elkhart can become more pedestrian friendly and improve the level of walkability and bike-ability within the community.



Source: Polk County



Vehicular Transportation

The development of a robust transportation network is necessary to support the planned growth and development in Elkhart. The plan for Elkhart transportation improvements works to build upon existing regional transportation plans to ensure that automobile travel is safe and efficient. A primary area plan to reference and address is the Northeast Beltway project explained below.

NORTHEAST BELTWAY ROADWAY PROJECT

As identified in the 2030 Polk County Comprehensive Plan, the Northeast Beltway roadway improvement project is proposed to provide a high-speed connection between Interstate 80 and US Highway 69 to reduce congestion on key corridors and promote economic development opportunities in northeast Polk County. The proposed beltway is projected to address the needs listed below:

- Increasing congestion and traffic volumes on key corridors in the Northeast metro area
- The US 65/IA 5 circumferential route is not continuous
- An incident management alternative for the Northeast Mixmaster is needed
- The Northeast metro area requires economic development to balance growth and land development patterns

The proposed roadway and interchange represents a major project with a potential to impact the human or natural environment. Therefore the Federal Highway Administration has requested an Environmental Impact Statement (EIS) for the project to include a comprehensive analysis of the project's potential impacts.

Proposed alternatives for the project include:

- No Build Alternative
- Transit Alternative
- Alternatives expanding one or two of the below existing roadways to a four-lane divided road:
 - NE 46th Street
 - NE 56th Street
 - NE 126th Avenue
 - NE 142nd Avenue
 - NE 158th Avenue
 - IA 210
- New alignment alternatives (one or two of the below alignments could be selected):
 - New alignment west of NE 46th Street
 - New alignment between NE 46th and NE 56th Streets
 - New alignment north of NE 126th Avenue

GENERAL ROADWAY IMPROVEMENTS

The City of Elkhart's overall transportation system should continue to provide safe and adequate access/connectivity throughout the community. Future roadway design and improvements is recommended to follow the Iowa Statewide Urban Design and Standards Manual (SUDAS). The SUDAS roadway design manual can be found: <https://iowasudas.org/>



Pedestrian Transportation

PEDESTRIAN AND BIKE TRAILS SYSTEM

A relatively small percentage of all daily trips in the region are by bicycle or foot, however travel modes are vitally important. Facilities for these modes of travel benefit users in terms of physical fitness, enjoyment, and mobility while also decreasing traffic and air pollution.

In order to provide stronger trail and pedestrian connections, it is recommended that Elkhart reviews connection opportunities with major regional trail networks in the area. A list of the major multi-use trails within and/or connecting to Polk County communities is provided in the table below.

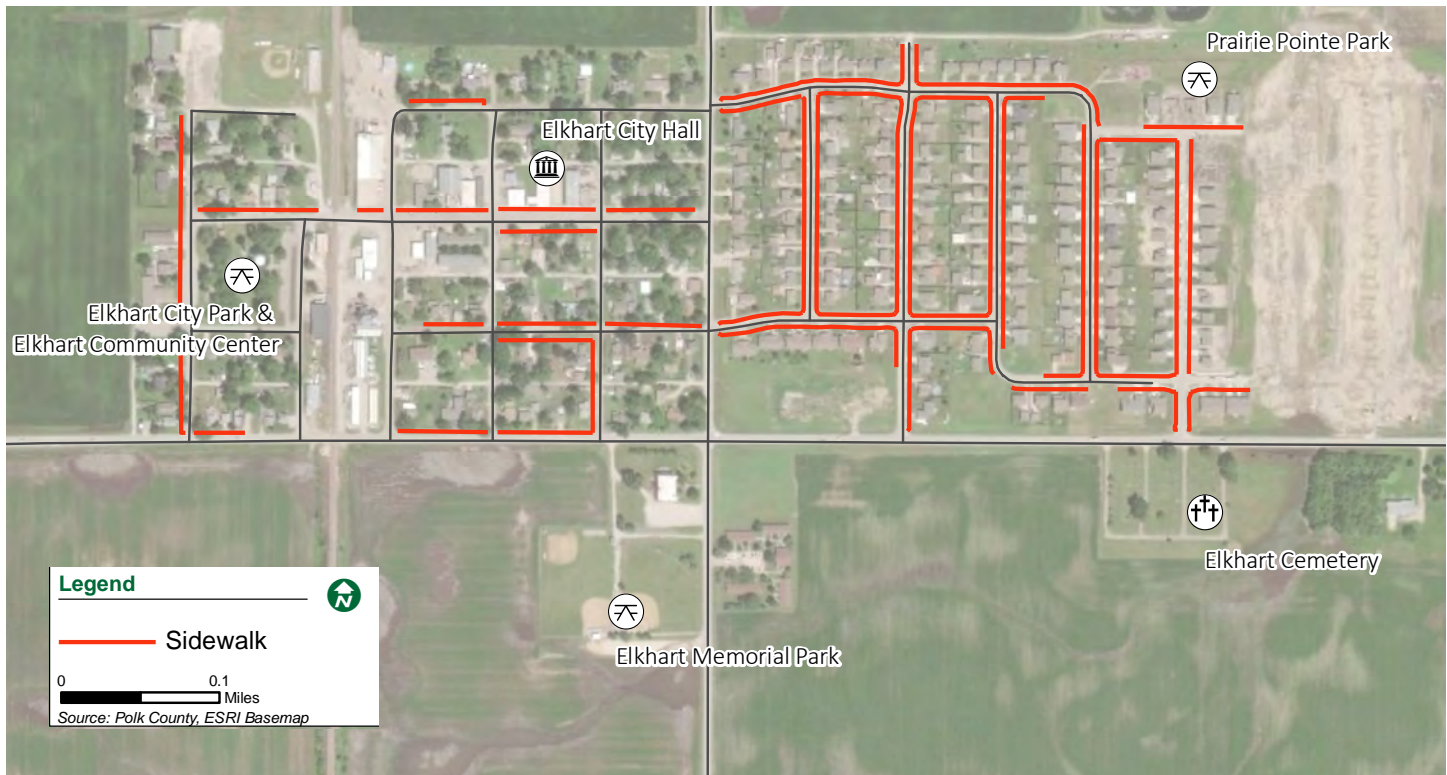
MAJOR REGIONAL TRAILS IN POLK COUNTY

TRAIL NAME	COMMUNITIES SERVED	EXISTING MILES
Jon Pat Dorrian Trail	Des Moines	2.2
Neal Smith Trail	Des Moines	4.0
Bill Riley Trail	Des Moines	1.6
Gay Lea Wilson Trail	Des Moines, Pleasant Hill, Altoona	6.0
InterUrban Trail	Des Moines	3.6
Kruidenier Trail	Des Moines	2.0
Jordan Creek Trail	West Des Moines	12.0
Four Mile Greenway Trail	Pleasant Hill, Altoona	6.5
Clive Greenbelt Trail	Clive	8.5
Windsor Heights Trail	Windsor Heights	2.0
Colby Trail	West Des Moines, Clive	2.2
Sycamore Trail	Des Moines to Johnston	6.5
Great Western Trail	Des Moines to Martensdale	16.5
Saylorville (East River Trail)	Des Moines to Big Creek S.P.	19.3
Raccoon River Valley Trail	Clive to Jefferson	56
Chichaqua Valley Trail	Bondurant to Baxter	20
Highway 330 Trail	Melbourne to Marshalltown	5.5
Summerset Trail	Carlisle to Indianola	11
Heart of Iowa Nature Trail	Slater to Maxwell	32

SOURCES: IOWA DEPARTMENT OF TRANSPORTATION WEBSITE; IOWA NATURAL HERITAGE FOUNDATION WEBSITE; POLK COUNTY CONSERVATION BOARD WEBSITE; CITY OF DES MOINES WEBSITE; CITY OF WEST DES MOINES WEBSITE; CITY OF CLIVE WEBSITE; CITY OF ALTOONA WEBSITE; CITY OF PLEASANT HILLS WEBSITE; CITY OF WINDSOR HEIGHTS WEBSITE; THE DES MOINES AREA METROPOLITAN PLANNING ORGANIZATION WEBSITE; AND 2030 POLK COUNTY COMPREHENSIVE PLAN.



Pedestrian Transportation



Source: ESRI Basemap

SIDEWALKS

The walkability of any area, including a lack of sidewalks, directly impacts several other aspects of a community. Sidewalks within communities play a key role in not only how well a community is accessible, but also a role in the safety of that community. Need is an expressive term for sidewalks in a community, they provide the interconnectedness for pedestrian circulation throughout the community along with safe paths to travel along. This is seen and necessary to connect the citizens of Elkhart with areas of their community. All starting from where they live to accessing areas such as main street, public parks, sports fields and other amenities. Without sidewalks, Elkhart lacks the interconnectedness it needs to provide its community members access to all it has to offer and limits effective and safe travel throughout Elkhart. Safety is a key point provided by sidewalks, it allows for pedestrian travel that doesn't impede traffic or place citizens in dangerous situations with vehicles. Including sidewalks in neighborhoods, commercial districts, near parks and sports fields allows for a safe segway throughout Elkhart creating effective pedestrian travel to destinations. Doing so, opens opportunities for public areas and business along with benefiting the health of the community. Sidewalks are an essential component to a healthy, safe and connected community in any area and in Elkhart can only bring benefit.

An uncontrolled pedestrian crossing occurs where a sidewalk intersects a roadway at a location with no traffic control. This type of crossing can occur at a street intersection or a mid-block location. Per the Federal Highway Administration (FHWA), studies have shown that uncontrolled pedestrian crossing locations correspond to higher pedestrian crash rates, often due to inadequate pedestrian crossing accommodations. When considering a measure to improve safety at an uncontrolled location, the FHWA has established the Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations, to provide guidance to cities in order to select the most appropriate improvement. The guidance is based on safety research and uses the roadway geometrics and traffic volumes to provide suggestions for what specific types of improvement(s) are appropriate for a given location. The intersection of Walnut Street and Grant Avenue is an uncontrolled intersection and is of interest because it provides a connection from the primary residential neighborhoods of the community and park/recreation uses.



Pedestrian Transportation



Source: Google Earth Basemap

SIDEWALK IMPROVEMENTS

When assessing the walkability and pedestrian friendly areas of Elkhart, there are some areas that thrive and others that do not. Above is a map that shows the existing sidewalk network within Elkhart. Green is the highest priority, light blue being slightly less important and dark blue being the least important to develop.

The areas without a dedicated pedestrian route have been identified and prioritized. There are also main corridors that should be addressed for safe crossing such as the intersection of Grant Ave/NE 46th St and Walnut St/NE 126th Ave. This intersection is used to get from neighborhoods to large city amenities and the lack of safe crossing makes pedestrian travel dangerous and difficult. Looking at these corridors and ones to the north of this one (marked with a yellow square and purple stars) for improved pedestrian access will not only make the community safer for pedestrian travel, but also more connected as a whole.



Multi-Modal Transportation Summary

VEHICULAR TRANSPORTATION

Primary transportation corridors to and within Elkhart include I-35, Walnut Street, Grant Avenue, and Main Street. As the community continues to grow it will be important to identify and address vehicular safety concerns, areas for roadway extensions, and proposed new roadways to meet the current and future needs of the community.

PEDESTRIAN TRANSPORTATION

Currently there is a lack of sidewalk connections in portions of the community. Although much of the newer developments are equipped with sidewalks, many of the older portions of the community are lacking trails and walkways. It is recommended that a sidewalk and trails analysis be done to determine what sidewalks are in good condition, moderate condition, poor condition, or lacking.

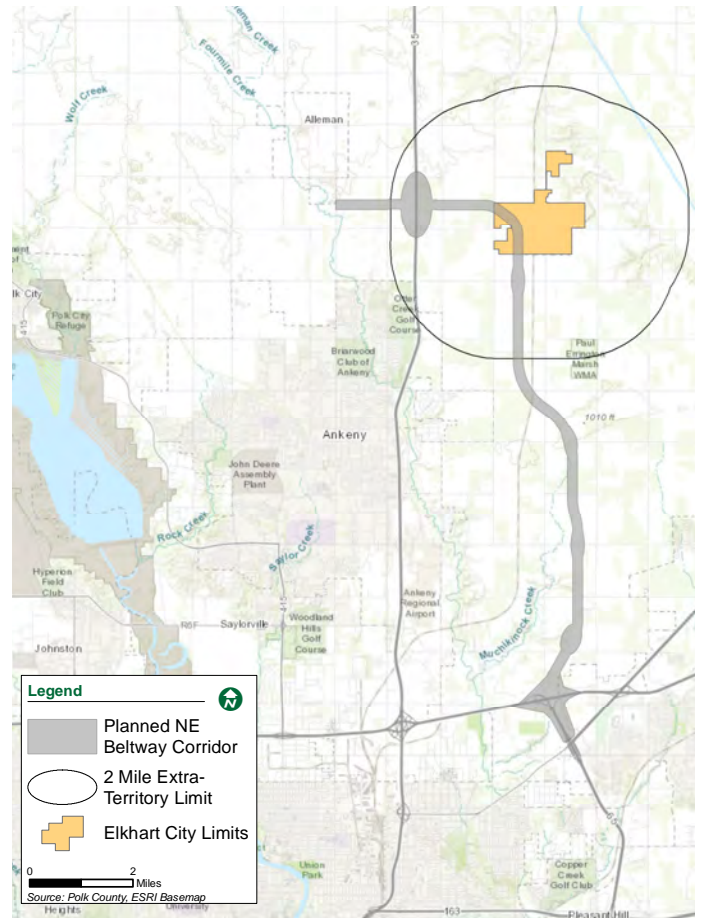
FREIGHT AND RAIL

The Union Pacific Railroad Company (UP) has an active rail line that runs north/south through the western portion of Elkhart bisecting West Walnut Street. This includes an at-grade public crossing. The line primarily serves freight trains and a quiet zone is not in effect. Typically, between 6am to 6pm the train runs 6 times, as well as 6 times between 6pm and 6am (12 times per day).

TRENDS AND CHALLENGES

Current trends and challenges to address include providing multi-modal opportunities. It will be increasingly important to provide transportation networks that increase walkability, bike-ability, and other alternative modes of transportation to support a sustainable future for the community. In terms of trails and sidewalks, providing both local and regional mobility and access is key.

PLANNED NE BELTWAY CORRIDOR:



Source: Polk County, ESRI Basemap

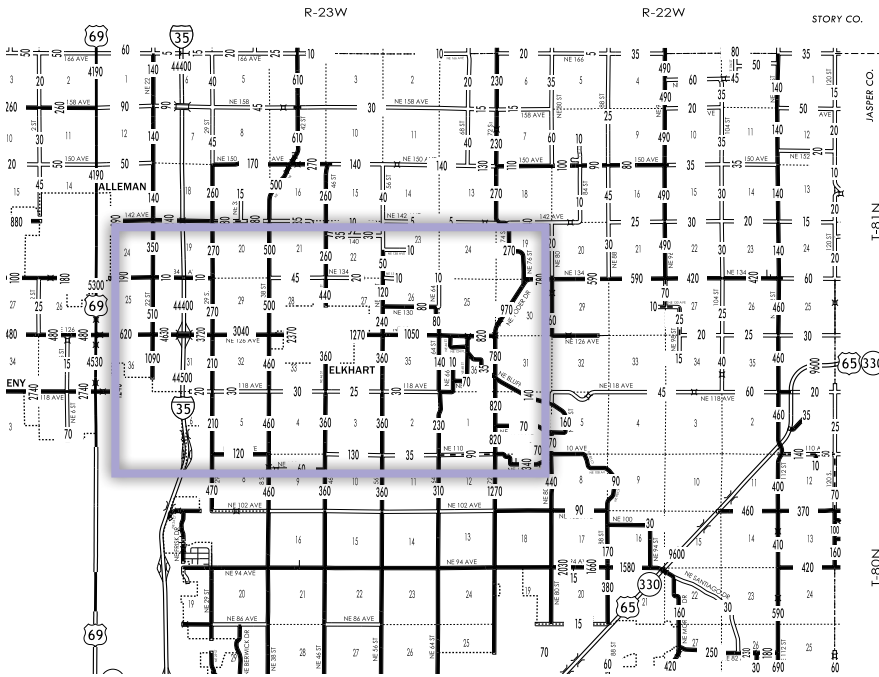
MAIN STREET IMPROVEMENTS

The Main Street reconstruction project is intended to utilize urban water quality practices to improve surface runoff within city limits and act as an educational showcase for residents. These practices will also be employed to address the flooding and ponding issue that occurs on Main Street. A permeable paver system will be used in parking stalls and driveways, which will reduce the amount of impervious surfacing downtown while providing infiltration opportunities to capture and treat pollutants from the Main Street area. The proposed project will incorporate bioretention cells at street intersections, providing a method for removing pollutants from runoff. The project also includes new sidewalks, storm sewer installation, water main installation and new street lighting.



Polk County Traffic Count Map

2016 ANNUAL AVERAGE DAILY TRAFFIC



Source: Polk County, ESRI Basemap

TRAFFIC FLOW MAP OF POLK COUNTY IOWA

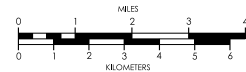


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In Cooperation With
United States
Department of Transportation

JANUARY 1, 2016



LEGEND

DIVIDED HIGHWAY
PAVED ROAD
BITUMINOUS ROAD
GRAVEL ROAD
EARTHEN ROAD
LEGAL NOT OPEN ROAD



The above map is derived from the 2016 Polk County Traffic Flow Map prepared by the Iowa DOT. This enlargement highlights the major road networks leading into the City of Elkhart. This includes I-35, F22, and NE 46th Street.

The four numbers in the center of the defined rectangle above are a numeration of the daily traffic that goes through Elkhart. Looking at the values of those numbers, we can see that the most traffic travels through Elkhart east to west. 2370 vehicles enter from the west; 1270 vehicles are counted on the east. The volume of traffic traveling north/south is much less. 440 vehicles are counted at the north limit and 360 vehicles are counted at the south.