

Purpose and Need for Action





1.0 Purpose and Need for Action

1.1 Purpose of Project

The purpose of the proposed project is to improve traffic capacity, safety, reduce traffic congestion, provide for an anticipated increase in transportation demand, and to establish a roadway system continuity from the IL 136/Frog Pond Road intersection east of the city of Fulton to IL 40 in the city of Rock Falls (**Exhibit 1-1**).

The project study area is approximately 24 miles (38.4 km) long and ten (10) miles wide. The project study area was created to allow for consideration of the broadest range of alternatives. This section of U.S. 30 has independent utility because of its connection with IL 136 to the west and IL 40 to the east. Vehicles traveling northwest from the Rock Falls area and vehicles traveling southeast from the Fulton and Clinton areas utilize this corridor. IL 136 terminates at U.S. 30 at the west termini of this project study area; where the traffic is primarily served by U.S. 30. The traffic traveling west from the intersection at IL 136 and U.S. 30 is split with 45 percent turning onto IL 136 and 55 percent continuing on U.S. 30. At the east end of the project study area, IL 40 and U.S. 30 intersect in the city of Rock Falls just north of I-88 at a signalized intersection. From this intersection, local truck and through traffic can travel west via U.S. 30. This traffic information has proved that this section of U.S. 30 has independent utility and therefore this project is usable and is a reasonable expenditure even if no additional transportation improvements in the area are made.

The U.S. 30 project has been identified as a High Priority project in the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

1.1.1 Existing Roadway Description

The existing roadway within the limits of this study area exhibits variable rural and urban typical sections. U.S. 30 is a National Highway System (NHS) Route and is designated as a Major Arterial and Class II Truck Route. Several signalized intersections and two (2) four-way stops exist along U.S. 30 in the project study area.

U.S. 30 from IL 136 east of Fulton to the city of Morrison

The roadway consists primarily of two 12-foot lanes with variable width paved shoulder, additional aggregate shoulder, and open graded ditches from the intersection of U.S. 30 with IL 136 east of Fulton to the western limits of the city of Morrison. Within this section, U.S. 30 intersects with two (2) other State highways, IL 136 and IL 78 North. IL 136 intersects just east of Fulton and IL 78 North joins U.S. 30 west of Morrison and utilizes the U.S. 30 roadway with dual route markings into town.

U.S. 30 in the city of Morrison

The roadway varies from two (2) to four (4) lanes (including right-turn lanes) with a narrow cross section due to the building constraints of the downtown. The roadway then transitions to a newly



constructed three-lane section between Jackson Street and Sawyer Road on the east side of Morrison. This three-lane section was constructed in 2008. Within the city limits, U.S. 30 has a speed limit between 30 and 45 mph. There are four (4) signalized intersections in the city of Morrison. Three (3) of these signals are located at adjacent intersections of U.S. 30 in the middle of the city: Genesee Street, IL 78 South (Cherry Street), and Madison Street. The fourth signalized intersection is located at the intersection of U.S. 30 and Jackson Street toward the east end of the city.

U.S. 30 from the city of Morrison to Prophetstown Road

East of the three-lane section, which ends at French Creek, the roadway transitions back to a two-lane rural cross section for approximately seven (7) miles to the intersection of U.S. 30 and Emerson Road where it transitions to include a left turn lane for eastbound traffic onto Emerson Road. From Emerson Road, U.S. 30 continues southeast as a two-lane section to south of Mathew Road where it transitions to a four-lane section with left turn lanes that are separated from the through traffic lanes at the four-way stop intersection of Moline Road and the I-88 connector. Here, U.S. 30 turns east and transitions back from a four-lane to a two-lane rural section to Prophetstown Road. Another four-way stop is within the two-lane section at the intersection of Como Road.

Prophetstown Road to the city of Rock Falls

West of Prophetstown Road heading east on U.S. 30, the rural two-lane section transitions from two-lanes to a five-lane urban section that carries two (2) lanes in each direction along with a bi-directional lane through the city of Rock Falls. This section of U.S. 30 was constructed with a four-lane section in 1964 and reconstructed to a five-lane section in 2002.

Several signalized intersections and two (2) four-way stops exist along U.S. 30 in the project study area. There are four (4) signalized intersections in the city of Morrison and two (2) in the city of Rock Falls. All four (4) of the signalized intersections in Morrison have one (1) through lane in each direction with additional turn lanes on the east and west legs of U.S. 30. As previously mentioned, the signalized intersections in Morrison are at Genesee Street, IL 78 South (Cherry Street), Madison Street, and Jackson Street. The four-way stops are at the Moline Road/I-88 connector to U.S. 30 and at the Como Road intersection. Within the five-lane section in Rock Falls, both the 12th Avenue and IL 40 intersections are also signalized.

1.1.2 History of Project

U.S. 30 was America's first coast to coast highway. It was originally constructed in Illinois between 1919 and 1921 as a 16-foot to 18-foot wide highway. Between 1939 and 1940, a ten-mile section of U.S. 30 in Whiteside County was relocated south of Sterling and Rock Falls, with the original route becoming part of IL 2. A 3.5-mile section, built between 1956 and 1957, linked the Gateway Bridge across the Mississippi River to the original roadway two (2) miles east of the city of Fulton. In 2000, the U.S. Department of Transportation announced that the Lincoln Highway route in Illinois, which includes U.S. 30 in Whiteside County, had been selected to be a part of the Lincoln Highway National Scenic Byway. This designation was because of the wide



variety of history, heritage, and tourist attractions across this portion of Illinois which provides for a destination for travelers and as an alternative “scenic” route for crossing the State.

The need to upgrade U.S. 30 in Whiteside County to an expressway was identified decades ago. A 1967 study, *Illinois Highway Needs and Fiscal Study*, conducted by IDOT, identified the need for improving and upgrading U.S. 30. A 1973 Corridor Environmental Study evaluated several alternative corridors for a four-lane, fully access controlled freeway from the east banks of the Mississippi River near Fulton to FA Route 403 (now I-88) near the village of Como.

The continuing need for improvement to the Whiteside County transportation system along U.S. 30 from Fulton to Rock Falls was confirmed through a Corridor Study that was completed in August 2006. According to the 2006 Corridor Study, the purpose of the corridor study was to determine a transportation system improvement that would enhance east-west mobility while accommodating future travel demands within the study area. This corridor study reviewed existing and planned land uses, existing and projected traffic volumes, and the network transportation system as a whole. The study acknowledged that “there is a need for a more detailed analysis to assess the potential benefits and affects of alignment alternatives within the preferred corridor alternatives.”

Following the 2006 Corridor Study, an Environmental Impact Statement (EIS) was initiated by the Federal Highway Administration (FHWA) and the Illinois Department of Transportation (IDOT) in order to determine the transportation system improvement best suited for this region and to assess the potential impacts to the human and natural environment.

1.2 Need for Proposed Action

This proposed project is needed to address existing capacity deficiencies and traffic congestion, increasing transportation demand, lack of roadway continuity, and the overall safety of the roadway within the U.S. 30 project study area in Whiteside County.

1.2.1 Existing Traffic Conditions & Capacity Deficiencies

The existing traffic conditions and capacity deficiencies along U.S. 30 from IL 136 to IL 40 in Whiteside County reflect the insufficiency of the roadway to provide for the variety of vehicle and pedestrian types that utilize U.S. 30 within the project study area. The various types include: farm equipment, large trucks, school buses, pedestrians, and bicyclists. In addition, businesses, farms, and residences within the project study area currently have unrestricted access to the roadway for automobiles, trucks, and farm equipment. The following section outlines the existing and projected traffic volumes and capacity levels that reflect these deficiencies.

Existing Traffic Volumes and Level of Service

Existing Average Daily Traffic (ADT) counts along U.S. 30 range from 4,400 to 15,600 vehicles per day. Traffic volumes of 7,200 vehicles per day were found at the west end of the project study area and increased to 11,500 vehicles per day in the city of Morrison, decreased to 4,400 vehicles per day east of Emerson Road and increased again to 15,600 vehicles per day on the east end of the project study area. **Table 1-1** shows the ADT volumes for all the sections within



the study area under the No-Build Scenario as counted in 2009 and the projected years 2018, 2028, and 2038. **Exhibit 1-2** illustrates the ADT volumes for the existing year (2009) and for the year 2038. **Table 1-1** also shows that a substantial portion of the traffic volume is heavy trucks. **Exhibit 1-3** illustrates the existing truck ADT volumes.

Table 1-1: Existing and Projected ADT Volumes						
Section Location	# of Lanes	ADT Volumes				
		Existing 2009	Construction Year 2018	10 Year 2028	Design Year 2038	Existing Truck %
IL 136 to Millard Rd.	2	7,200	7,900	8,700	9,600	16
Millard Rd. to IL 78 North	2	6,800	7,400	8,200	9,100	18
IL 78 North to Heaton Rd.	2	8,300	9,100	10,000	11,100	15
Heaton Rd. to IL 78 South (Cherry St.)	2	11,500	12,600	13,900	15,300	12
IL 78 South (Cherry St.) to Jackson St.	2	10,200	11,200	12,300	13,600	13
Jackson St. to Sawyer Rd.	3	10,000	10,900	12,100	13,300	13
Sawyer Rd. to Lyndon Rd.	2	8,200	9,000	9,900	10,900	15
Lyndon Rd. to Round Grove Rd.	2	7,600	8,300	9,200	10,100	18
Round Grove Rd. to Emerson Rd.	2	7,600	8,300	9,200	10,100	19
Emerson Rd. to Mathew Rd.	2	4,400	4,800	5,300	5,900	27
Mathew Rd. to Moline Rd.	4	6,200	6,800	7,500	8,300	30
Moline Rd. to Como Rd.	2	6,600	7,200	8,000	8,800	13
Como Rd. to Riverdale Rd.	2	6,800	7,400	8,200	9,100	13
Riverdale Rd. to Prophetstown Rd.	2	7,000	7,700	8,500	9,300	11
Prophetstown Rd. to IL 40*	5	15,600	17,000	18,800	20,800	7

Source: Illinois Department of Transportation

*Existing five-lane section

Traffic capacity and the associated traffic congestion are defined in terms of levels of service (LOS). As defined in the Transportation Research Board Highway Capacity Manual (2000), LOS is expressed by a scale ranging from “A” to “F”. “A” represents the best traffic condition with no backups or obstacles to traffic flow. “F” represents a total breakdown in traffic operations accompanied by extensive delays and traffic volumes that approach capacity. Definitions for LOS categories are included in **Table 1-2**.



Table 1-2: Level of Service Descriptions		
Level of Service	Flow Condition Illustration	Description
A		Completely free-flow conditions. The operation of vehicles is virtually unaffected by the presence of other vehicles, and operations are constrained only by the geometric features of the highway and by driver preferences.
B		Indicative of free flow, although the presence of other vehicles begins to be noticeable. Average travel speeds are the same as in LOS A, but drivers have less freedom to maneuver.
C		Range in which the influence of traffic density on operations becomes marked. The ability to maneuver within the traffic stream is now clearly affected by the presence of other vehicles.
D		Range in which ability to maneuver is severely restricted because of traffic congestion. Travel speed begins to be reduced by increasing volumes.
E		Operation at or near capacity and is quite unstable. Vehicles are operating with the minimum spacing at which uniform flow can be maintained.
F		Breakdown condition where maneuverability and speeds may drop to zero.

Level of service is based on definitions set forth in the Transportation Research Board Highway Capacity Manual, 2000.

According to the FHWA publication, “Flexibility in Highway Design,” the relationship between highway type and location and the LOS appropriate for design should take into consideration specific traffic and environmental conditions. A guide for selecting a design LOS within the “Flexibility in Highway Design” publication suggests a LOS B for a rural arterial facility and LOS C for a suburban arterial facility. U.S. 30 primarily functions as a rural facility but has sections within the cities of Morrison and Rock Falls that function as a suburban facility, therefore, the minimum LOS for the design year for this project is either LOS B or C depending on location. Traffic volume, percentage of truck traffic, speed, and frequency of access points were all key issues in determining LOS for this project.

Projected Traffic Volumes and LOS

Traffic is predicted to increase by an average of one (1) percent per year, or approximately 27 percent along U.S. 30 within the project study area by the year 2038, in the No-Build Scenario. As shown in **Table 1-3** and **Exhibit 1-4**, both existing and projected LOS are below the



suggested design LOS for many of the sections within the project study area. The substantial proportion of heavy truck traffic and frequent access points are key issues adding to this lower LOS. Demands exceed the suggested design LOS in sections west of Moline Road. Increased traffic will result in deteriorating levels of service for most of U.S. 30 between its intersection with IL 136 and its intersection with Prophetstown Road by the year 2038.

Table 1-3: Level of Service (LOS) for the No-Build Scenario				
Section Location	2009 (Existing)	2018 (Construction Year)	2028 (10 Year Volume)	2038 (Design Year)
IL 136 to Millard Rd.*	C	C	D	D
Millard Rd. to IL 78 North*	C	C	D	D
IL 78 North to Heaton Rd.**	E	E	E	E
Heaton Rd. to IL 78 South (Cherry St.)**	E	E	E	E
IL 78 South (Cherry St.) to Jackson St.**	E	E	E	E
Jackson St. to Sawyer Rd.**	E	E	E	E
Sawyer Rd. to Lyndon Rd.*	C	D	D	D
Lyndon Rd. to Round Grove Rd.*	C	C	C	C
Round Grove Rd. to Emerson Rd.*	D	D	D	D
Emerson Rd. to Mathew Rd.*	C	C	C	C
Mathew Rd. to Moline Rd.*	C	C	C	C
Moline Rd. to Como Rd.*	B	C	C	C
Como Rd. to Riverdale Rd.*	B	C	C	C
Riverdale Rd. to Prophetstown Rd.*	C	C	C	C
Prophetstown Rd. to IL 40**	B	B	B	B

Source: Illinois Department of Transportation
 * Suggested Design LOS B for a rural arterial facility
 ** Suggested Design LOS C for a suburban arterial facility

1.2.2 Roadway Deficiencies

Geometric deficiencies are present along the current alignment of U.S. 30. The two (2) primary types of geometric deficiencies on the existing U.S. 30 within the project study area are cross-section deficiencies and alignment deficiencies.

Three (3) primary cross-section deficiencies on U.S. 30 include substandard: shoulder widths (narrow shoulders), taper lengths (turn lane tapers are shorter than standard length), and turn lanes (lengths are shorter than standard lengths). Several other cross-section deficiencies along the corridor include lateral obstructions, insufficient turning radii, lack of shoulders (curb section contiguous with the traveled lane), and inadequate lane widths in the urban sections within the city of Morrison.



The partially paved primarily aggregate or earth shoulders vary in width throughout the project study area. Many of the turn lane and taper length deficiencies are within the limits of Morrison's Central Business District (CBD). These deficiencies are due to the lack of spacing between intersections and the roadway and structures on adjacent properties.

There are two (2) alignment deficiency types: side-road intersecting angle and a horizontal curve sight distance. In order to have the greatest overall level of sight distance and subsequent safety at an intersection, it is ideal for the two (2) roadways to intersect at a perpendicular angle. The preferred angle of an intersection is 90 degrees. A desirable angle of an intersection is between 75 and 90 degrees and in very restricted conditions the angle of an intersection can be as low as 60 degrees. Four

(4) side-roads within the study area were found to have a sub-standard angle of intersection with U.S. 30 as shown in **Table 1-4**. The four (4) side-roads with substandard intersecting angles are Millard Road, Liberty Street and Harmony Street (both of which intersect U.S. 30 at the same location), and Agnew Road. A separate project has been designed to correct the Liberty Street and Harmony Street intersections. The intersections at Millard Road and Agnew Road will need to be addressed with a proposed improvement. The remaining four (4) intersections identified in **Table 1-4**, Union Street, Olive Street, Emerson Road, and Prophetstown Road, have an angle of intersection below that desired by the Illinois Department of Transportation (IDOT) and will be further studied for geometric improvements to improve safety.

Intersecting Side Road	Intersecting Angle (degrees)
Millard Road	50
Liberty Street	54
Harmony Street	48
Union Street	60
Olive Street	60
Emerson Road	65
Agnew Road	56
Prophetstown Road	60

A horizontal curve sight distance deficiency was identified on U.S. 30 on the west side of Morrison near Garden Plain Road. At this location, those traveling in the westbound direction have limited sight distance from a combination of a retaining wall on the right side of the roadway and the roadway curving to the right.

There are intersection sight distance deficiencies in the city of Morrison that are caused by the close proximity (zero set-back) of commercial businesses in the downtown area.

1.2.3 Accommodate Freight

The section of U.S. 30 within the city of Morrison has a high number of intersecting city streets and numerous businesses and residences directly accessing a confined roadway area through the city. The geometric deficiencies at intersections, limited sight distance due to business and residential proximities, and the required reduction of speed for traffic, create both time and safety concerns for truck traffic.



The project study area includes large truck-dependent facilities such as the Wal-Mart Distribution Center, the Prairie Hill Landfill, and other industrial developments which make it necessary to accommodate its current and future transportation demands. The following is a discussion of the Prairie Hill Landfill that is located within the project study area and the Archer Daniels Midland (ADM) plant expansion just west of the project study area.

Prairie Hill Landfill (Morrison, IL) - This landfill facility, operated by Waste Management Services, located east of Morrison has doubled the volume of trucking since 2009 from approximately 45 to 50 trucks to approximately 90 to 100 trucks per day that travel U.S. 30 to this location from the Chicago area. This change has caused truck volume increases on U.S. 30 of one (1) to three (3) percent.

ADM Plant Expansion (Clinton, IA) – This corn processing plant underwent a major expansion to its existing facility adjacent to the U.S. 30 corridor in Clinton, Iowa. This expansion was completed in 2010 and created approximately 120 new jobs. The additional employment and use of trucks to service this facility illustrates a growth in the area that will affect traffic volumes.

1.2.4 System Linkage

1.2.4.1 Local Transportation Network

The lack of roadway continuity, as shown in **Table 1-1/Number of Lanes**, throughout the project study area causes safety concerns as related to driver expectations. Varying cross-section elements, shoulder widths, intersection stop conditions, side-road intersecting angles, truck volumes accessing the roadway at frequent commercial and private entrances, changing geometric features and speed limits, the frequency of intersecting side-roads, and various other features within the project study area are causes for concerns. These elements cause delays in transition sections into and out of higher volume areas leading to poor operation of the roadway. In addition, the intermittent disbursement of signalized, two-way stop and four-way stop controlled intersections throughout the project limits adds to lack of continuity and more importantly the concern for safety as it relates to driver expectation.

Major intersecting side-roads along the subject section of U.S. 30 include:

IL 136 carries approximately 45 percent of the traffic from east of its intersection with U.S. 30. In 2010, IDOT completed a safety project at this intersection to correct the insufficient turn lane length which was causing traffic to back up in the through lanes while waiting to turn. This was affecting the continuity of flow by restricting maneuverability and subsequently reducing travel speeds creating both LOS and safety issues.

IL 78 South of U.S. 30 has an existing ADT volume of 5,200 with nine (9) percent truck volume in town. South of Morrison the ADT volume drops to 2,150 with nine (9) percent trucks.



IL 78 North of U.S. 30 has an ADT of 1,400 with 13 percent trucks. When considering the traffic utilizing IL 78 through travel, the traffic volumes of IL 78 North and IL 78 South indicates that approximately 70 trucks per day must navigate on the State highway through the city of Morrison. This requires two (2) 90 degree turns at geometrically deficient intersections in the residential area, as well as traversing an at-grade railroad crossing, and another turn at both southbound and northbound intersections of U.S. 30 and IL 78.

Emerson Road carries approximately 3,250 ADT from U.S. 30 acting as a main route to and from the city of Sterling. This county highway has a less than desirable angle of intersection at 65 degrees and further changes the continuity of flow for U.S. 30 traffic.

I-88 has a four-lane connector to U.S. 30. This connector meets at a four-way stop intersection at Moline Road. At this intersection, Moline Road, U.S. 30, and the I-88 connector, are all four-lane legs with left-turn lanes in each direction. Here, U.S. 30 turns 90 degrees and acts as a primary access to the west side of the city of Rock Falls. Between this intersection and Rock Falls, the roadway transitions from four-lanes to two-lanes and then back to four (4) again before reaching the city of Rock Falls. West of this intersection the four-lanes quickly transition down to a two-lane rural cross section on Moline Road.

The present need is to provide roadway continuity along U.S. 30 within the project study area in order to decrease congestion and travel time for the residents, farmers, commuters, and businesses; but more importantly, to provide an improvement to the safety of the overall local roadways.

1.2.5 Safety

Traffic volumes are projected to increase by an average of one (1) percent per year through the design year 2038 along U.S. 30. It is anticipated that without improvements both the rate and severity of crashes will continue to increase as traffic levels climb.

1.2.5.1 Crash Information

A total of 356 crashes were reported along the U.S. 30 route within the project study area during the years 2007 to 2009. A total of 89 rear end crashes occurred during the three (3) year study period representing 25 percent of the total crashes. Fixed object crashes were the second highest type, with 60 occurrences representing 16.9 percent of the total crashes. **Table 1-5** provides an overview of the types and corresponding number of crashes along U.S. 30 during the three (3) year study period. **Exhibits 1-5A** through **1-5C** illustrate the locations of these crashes for the years 2007 to 2009.



Table 1-5: Crashes 2007 to 2009					
Type of Crash	2007	2008	2009	Total # of Crashes	% of Total Number of Crashes
Rear End	27	39	23	89	25.0%
Fixed Object	30	19	11	60	16.9%
Turning	22	21	8	51	14.3%
Angle	11	25	13	49	13.8%
Animal	18	20	10	48	13.5%
Sideswipe Opposite Direction	6	4	1	11	3.0%
Head On	1	5	4	10	2.8%
Other Object	2	6	2	10	2.8%
Sideswipe Same Direction	3	3	3	9	2.5%
Overturned	1	3	3	7	2.0%
Other Non-Collision	4	2	1	7	2.0%
Pedestrian	1	3	1	5	1.4%
TOTAL	126	150	80	356	100%

Source: Illinois Department of Transportation

5% Selected Sections

There is one (1) 5% Selected Section within the project study area. 5% selected sections are defined under the SAFETEA-LU Act as the top 5% of public roadways with the most severe safety needs in the State. According to the “IDOT Five Percent Report Summary Document on the FHWA Safety Improvement Program” (August 2007), the purpose of identifying the top 5% of the highway locations exhibiting the State’s most pressing safety needs is to gain an understanding of the nature and extent of the safety problem and identify solutions. The 5% Selected Section is located at the intersection of U.S. 30 with IL 136/Frog Pond Road (at the western limit of the project study area). This location had a total of nine (9) crashes over the three-year period, with 14 injuries and one (1) fatality. In 2010, IDOT completed a safety project at this intersection and corrected the east-bound turn lane deficiencies, which now allows for better movement through this intersection. The location of this intersection and the severity of the crashes involved between 2007 and 2009 can be found on **Exhibits 1-6A** through **1-6C**.

Crash Severity

Crash Severity refers to the severity of the injuries resulting from a crash. The severity for each crash is assigned a letter K, A, B, C or O. This designation is consistent with the KABCO severity scale (National Safety Council, 1990) typically used by the investigating police officer on the scene to classify injury severity for occupants with five (5) categories as shown in **Table 1-6**.



Table 1-6: Crash Severity Description	
Injury Type	Description
K	Crash in which a fatality occurs.
A	Crash involving one or more disabling injury. This is the most severe injury classification where there has not been a fatality.
B	Indicates a crash involving one or more people with evident injuries.
C	Indicates crash with possible injuries.
O	No Injury

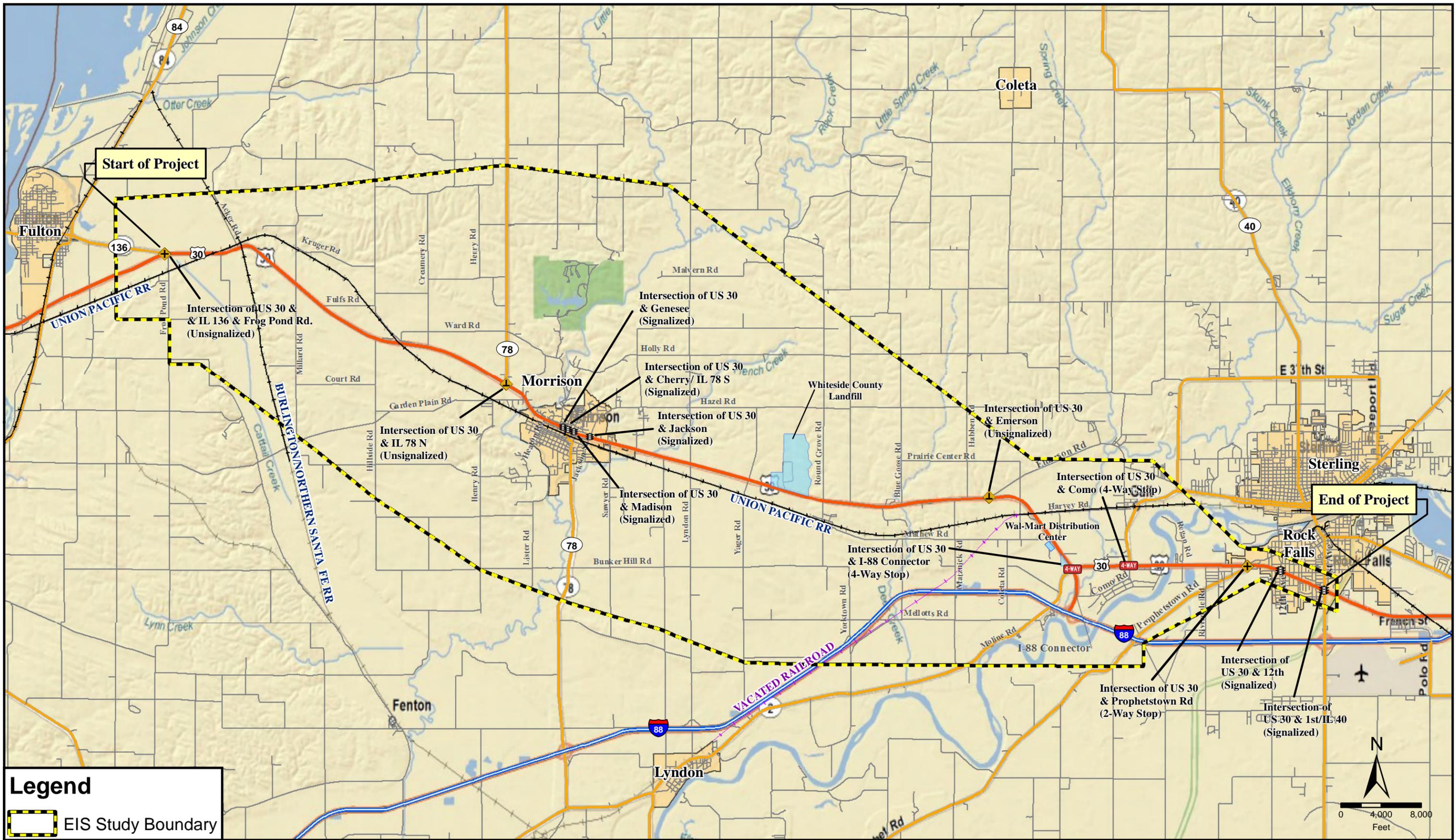
Source: National Safety Council, 1990.

Of the 356 crashes analyzed during the 2007 to 2009 study period, 99 crashes (27.8%) resulted in injuries or fatalities. A total of 147 injuries and eight (8) fatalities were reported as a result of these crashes. A total of 70 crashes with reported injuries were “B” and “C” severity crashes, resulting in a total of 97 injuries. A total of 22 (6.2%) “A” severity crashes occurred during the study period, resulting in 43 injuries. Seven (7) “K” severity crashes occurred during this period, resulting in eight (8) fatalities and seven (7) injuries. The other 257 non-injury crashes involved property damage only. **Exhibits 1-6A** through **1-6C** illustrate the crash types as related to the severity for the years 2007 to 2009.

The predominant crash types that caused “K” & “A” injuries and/or fatalities within this project study area were angle. The angle accidents accounted for two (2) of the fatalities and 19 of the type “A” injuries (36.2%). The 36.2 percent of type “A” injuries consisted of: angle (22%), head on (12.1%), fixed object (10.3%), rear end (6.9%), and pedestrian (5.2%). Crashes also causing type “A” injuries included the two (2) labeled as other non-collision, two (2) from sideswipe in opposite direction, one (1) injury from an overturned vehicle, and one (1) injury from sideswipe crash in same direction.

This project study area includes more than 70 intersecting side roads. Congestion, substandard design, and fixed objects within the clear zone at these intersections are the principal factors contributing to the crashes within the project study area. This is demonstrated by the dominant crash types identified in **Table 1-5** which are rear end, turning, animal, angle, and fixed object.

Among the intersections within the project study area along U.S. 30, six (6) are signalized, two (2) have a four-way stop condition, and the remainders have either a two-way stop condition for the cross road or are a three-legged intersection with a one-way stop condition on the intersecting side road. Of the 356 crashes reported within the project limits during the study period, 273 (76.7%) occurred at or near an intersection, which is alarmingly high due to the fact the State and national averages track this percentage to be approximately 25 percent. Twenty-four of the “K” & “A” crashes (82.7%) were at an intersection and these crashes account for seven (7) (88%) of the fatalities and 39 (78%) of the type “A” crash injuries. Three (3) of the crashes were at the 5% Selected Section intersection. These three (3) crashes accounted for one (1) fatality and six (6) (12%) of the 50 type “A” crash injuries.



Legend

EIS Study Boundary

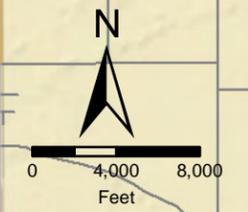


Exhibit 1-1
Location Map
U.S. 30 Environmental Impact Statement
Whiteside County, Illinois

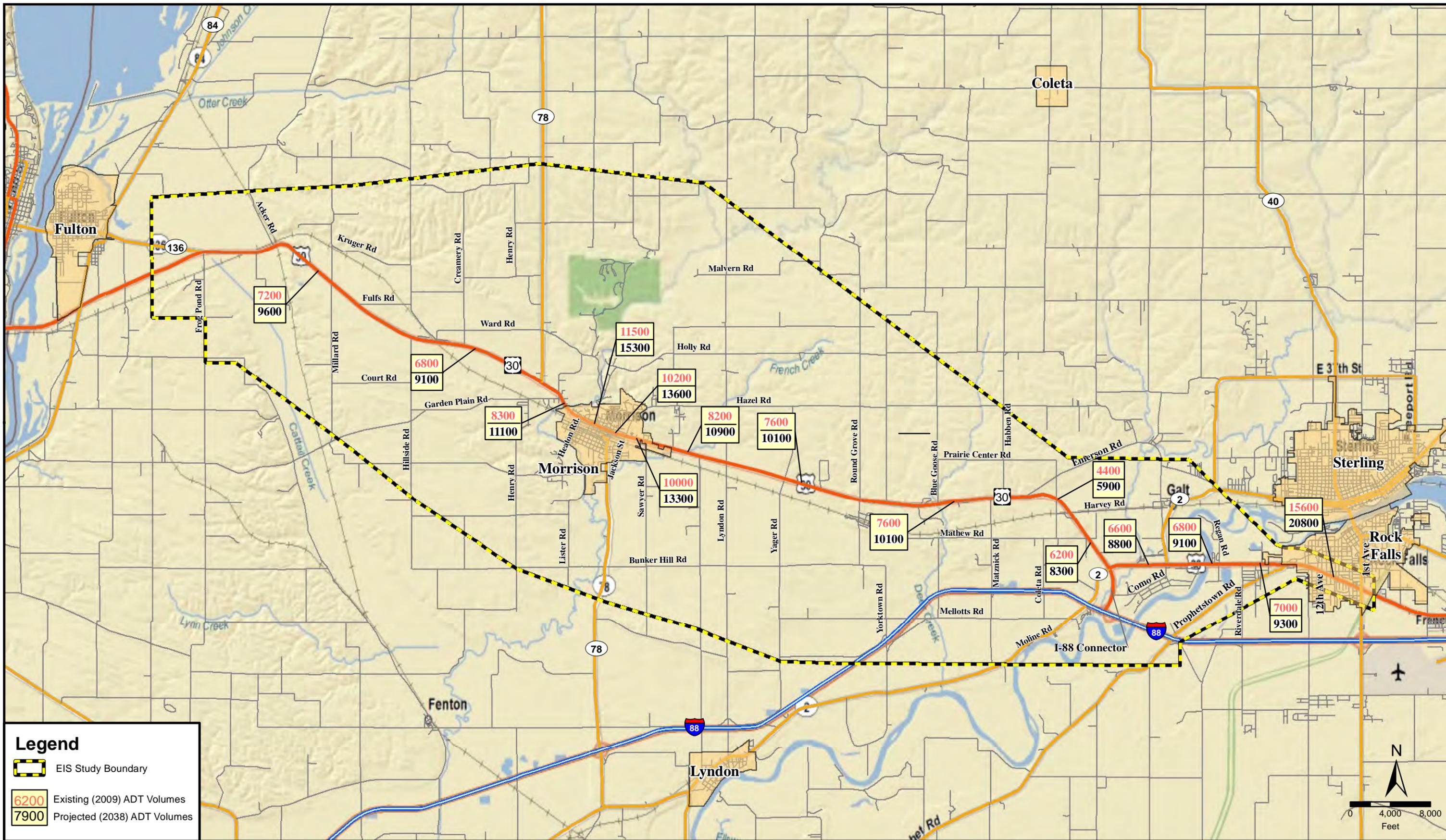


Exhibit 1-2
Existing (2009) & Projected (2038) - ADT Volumes
U.S. 30 Environmental Impact Statement
Whiteside County, Illinois

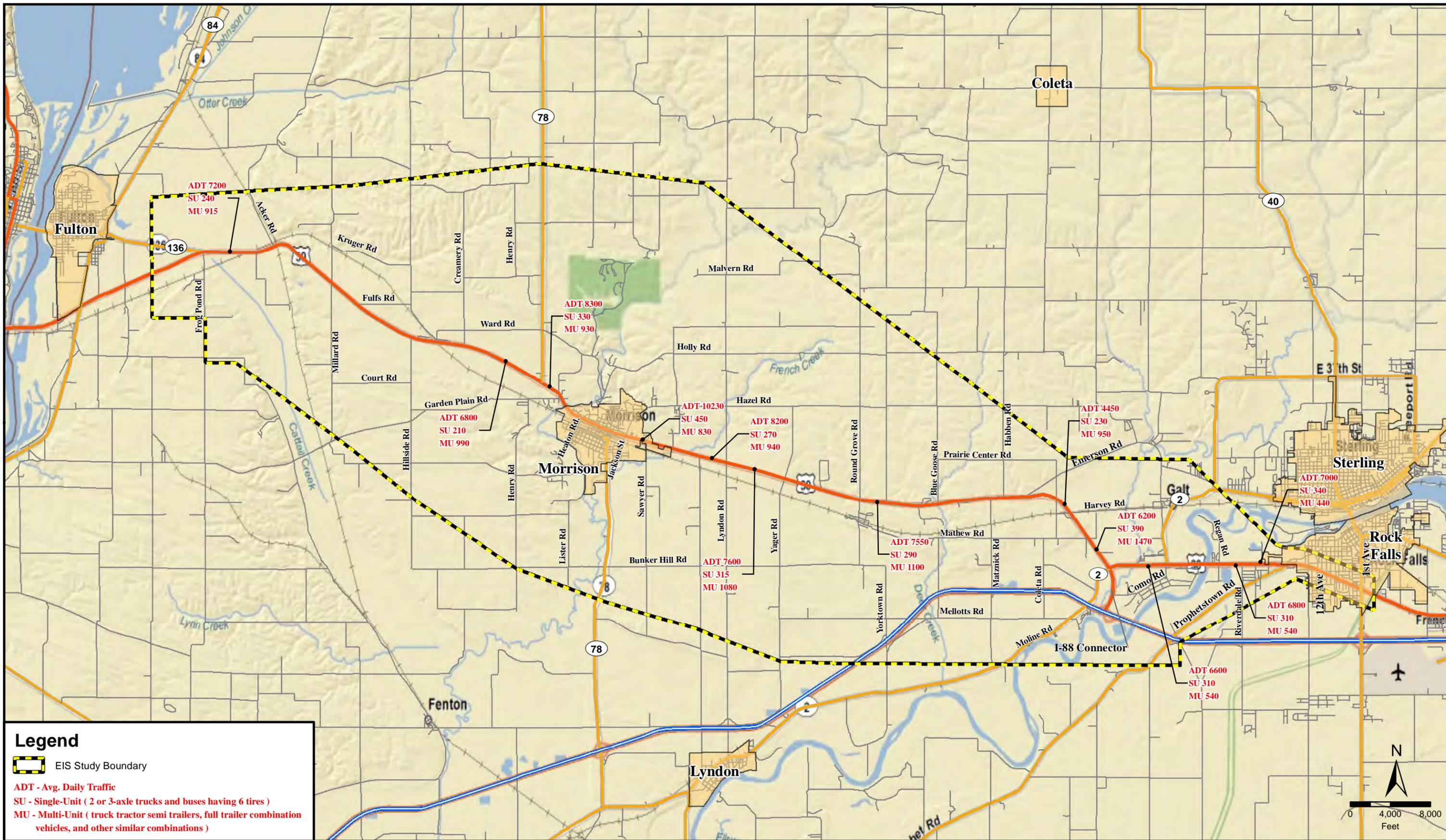


Exhibit 1-3
Existing (2009) Truck ADT Volumes
U.S. 30 Environmental Impact Statement
Whiteside County, Illinois

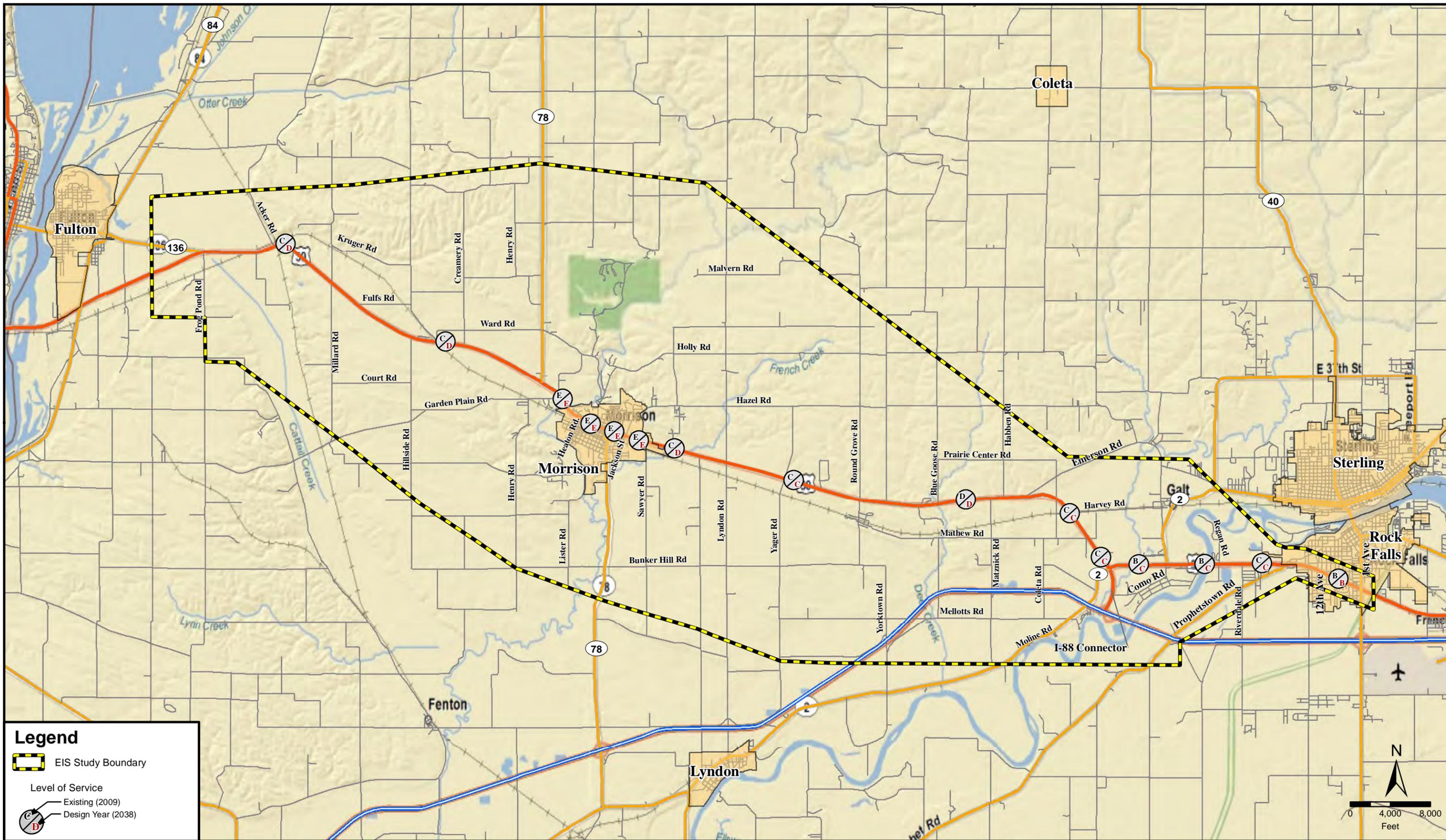


Exhibit 1-4
Existing (2009) & Projected (2038) LOS
U.S. 30 Environmental Impact Statement
Whiteside County, Illinois

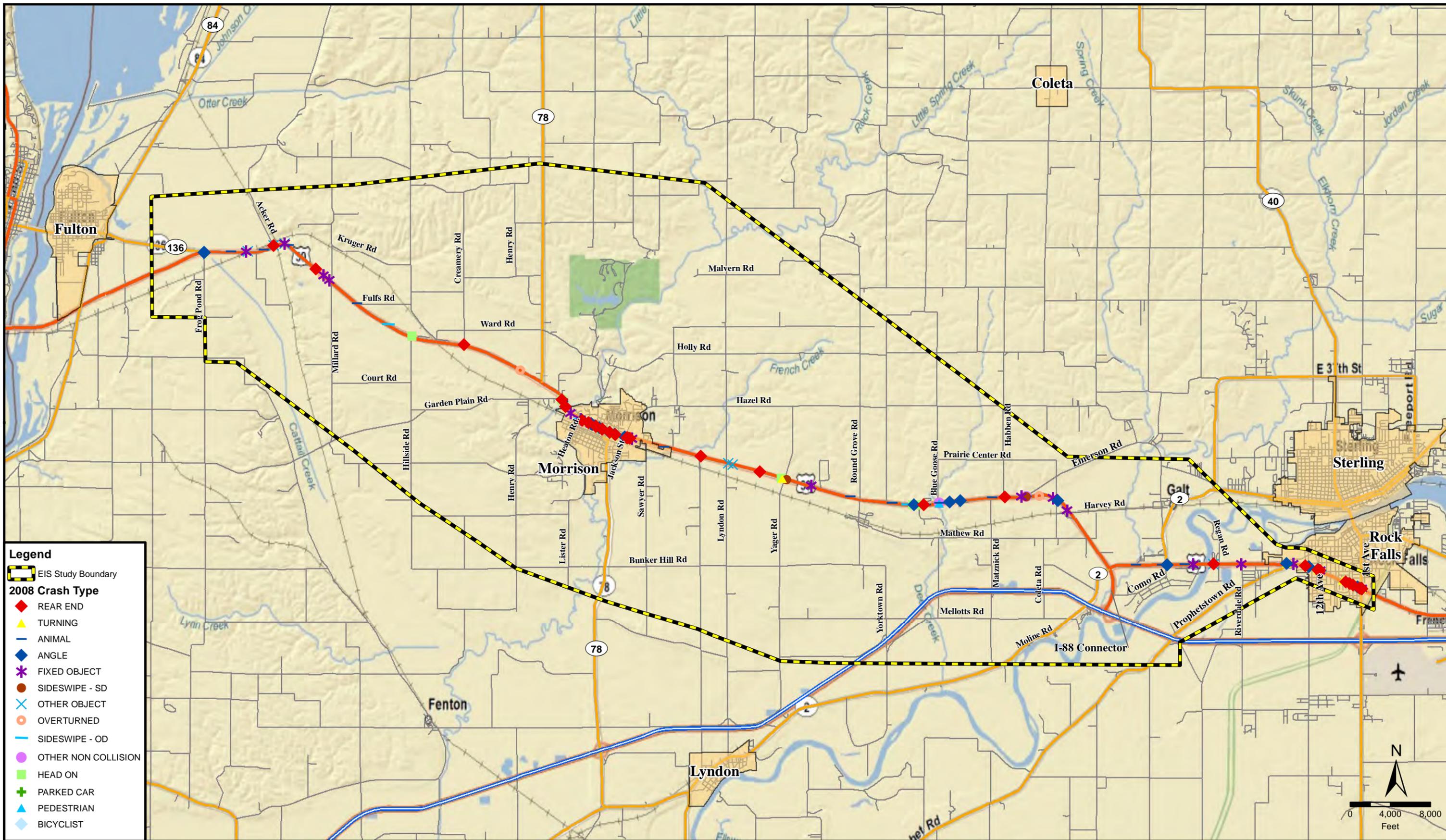
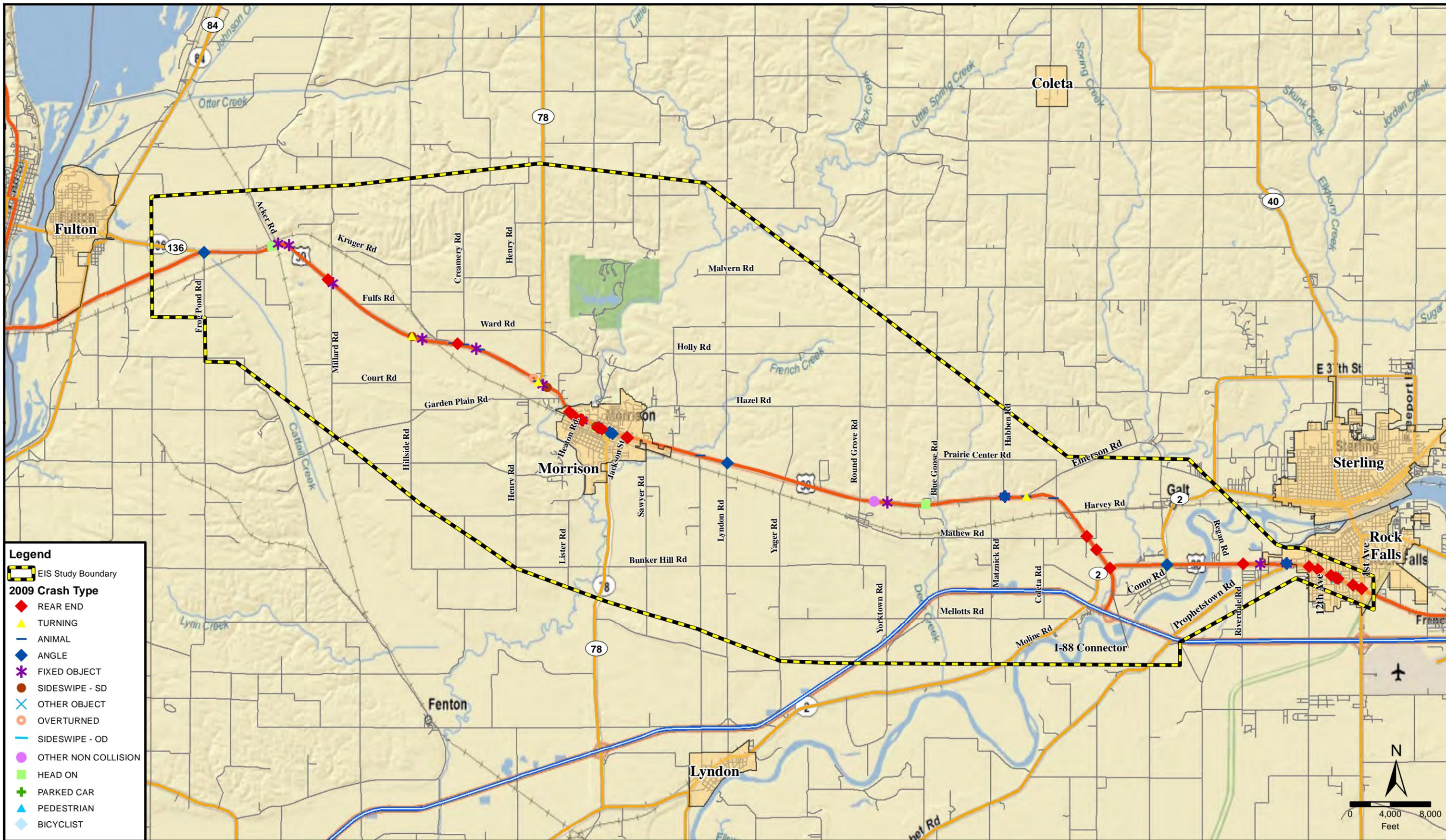


Exhibit 1-5B
2008 Crash Type
U.S. 30 Environmental Impact Statement
Whiteside County, Illinois



Legend

EIS Study Boundary

2009 Crash Type

- REAR END
- TURNING
- ANIMAL
- ANGLE
- FIXED OBJECT
- SIDESWIPE - SD
- OTHER OBJECT
- OVERTURNED
- SIDESWIPE - OD
- OTHER NON COLLISION
- HEAD ON
- PARKED CAR
- PEDESTRIAN
- BICYCLIST

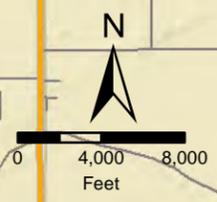


Exhibit 1-5C
2009 Crash Type
U.S. 30 Environmental Impact Statement
Whiteside County, Illinois

