

SIMPO Herrin Road Extension Corridor Study

JACKSON COUNTY

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PREPARED BY:
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INTRODUCTION

A. Project Location and Study Area

The Study Area is located on the north side of Carbondale with Reed Station Road as the approximate eastern boundary and the Southern Illinois Airport area as the approximate western boundary as shown in **Figure 1** below.

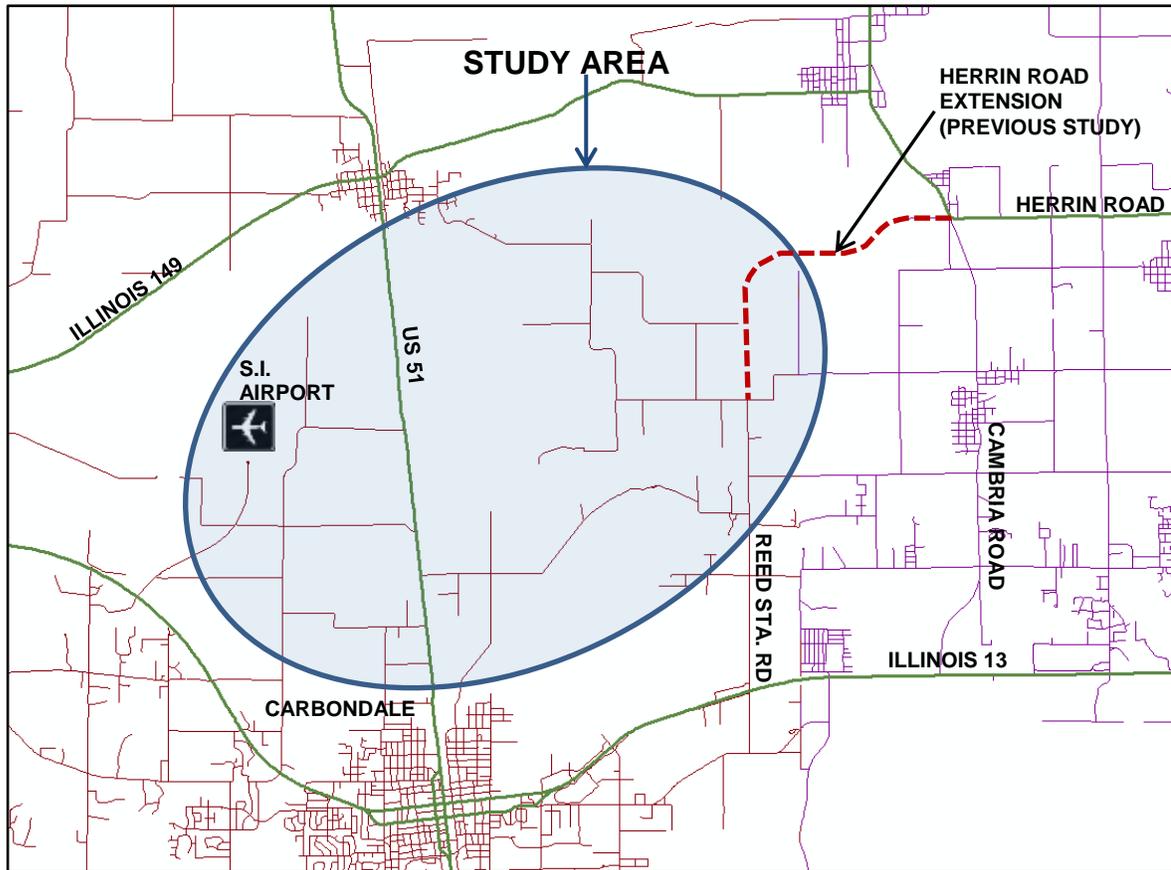


Figure 1- Study Area

The Study Area includes a portion of a potential westward expansion of Herrin Road (shown as a red dashed line in **Figure 1**). A possible extension of Herrin Road was studied as part of SIMPO's East/West Corridor Study which was completed in May of 2016. This current study will consider alternatives which connect with either existing Reed Station Road or the potential Herrin Road extension. This study does not include a reexamination of the Herrin Road extension. Details and analysis of the Herrin Road extension may be found in the East/West Corridor Report on SIMPO's website.

STUDY PURPOSE AND NEED

A. Study Purpose

The purpose of this study is to evaluate the need and feasibility of an improved connection from Reed Station Road to US 51 north of Carbondale. This study will build upon the recommendations of SIMPO's East/West Corridor Study which recommended that Herrin Road should be the priority for east-west corridor transportation improvements and additionally that a westward expansion to Reed Station Road should be pursued as opportunities become available. This study will build on those recommendations by focusing on a potential further westward expansion of Herrin Road from Reed Station Road to US 51 (**see Figure 1**). This improved or new roadway would be constructed using design criteria appropriate for a Minor Arterial or at minimum a Major Collector type facility.

B. Previous Studies

a. Carbondale Northside Parkway

IDOT District 9 and the city of Carbondale jointly selected a consultant in 1991 to conduct a study of a new northern route around the city. This new roadway was proposed to alleviate congestion on IL 13 by providing a northern bypass for through traffic. The project would also improve access to the industrial area north of town and provide a much needed grade separated crossing over the Canadian National Railroad. A draft Environmental Impact Statement (EIS) was prepared and two public meetings were held. The range of build alternatives was narrowed to a northern route crossing US 51 north of Dillinger Road and a southern route crossing US 51 south of Ready Mix Road. Ultimately, the consensus of IDOT and the city of Carbondale was that the cost of the project would exceed its benefits and the study terminated before the EIS document was completed. The needs identified in the study (supplemental east west connectivity, better access to the industrial area and a grade separated railroad crossing) still exist today.

b. SIMPO East-West Corridor Study

In June of 2016, SIMPO completed a study to identify the most feasible and beneficial corridor in the SIMPO planning area that could serve as a supplementary parallel corridor to IL 13 which is the primary east/west arterial route within the MPO. The study evaluated the Herrin Road Corridor and the Crenshaw Road/College Street/Sycamore Road corridor. The study identified the Herrin Road Corridor as having the greatest potential to meet the transportation needs of the region. The study also recommended that Herrin Road be extended westward to connect with

Reed Station Road. Further westward expansion of Herrin Road to US 51 was beyond the scope of the East-West Corridor Study; however, this would be a logical continuation of the westward expansion and several comments were received during the public involvement process indicating a desire for such a connection.

C. Regional Transportation Network

The regional highway transportation network in southern Illinois depends primarily on Interstate 57 for north-south traffic flow and Illinois 13 for east-west traffic flow. **Figure 2** shows the major highway arteries in the region. For north-south traffic; IL 13/127, US 51, IL 148 and I-57 provide Principal Arterial or higher facilities. East-west arterials are much more limited with only IL 13 providing a Principal Arterial or higher facility.

Within the MPO, connections to the Interstate system are provided at IL 13, Old IL 13, Morgan Avenue and Herrin Road. The Old IL 13 and Morgan Avenue connections serve the same area as IL 13 since Morgan Avenue is part of a Collector-Distributor system with IL 13 and Old IL 13 is only one half mile south of IL 13. The Herrin Road Corridor serves the Herrin and Johnston City area and has the potential to serve Carbondale, especially areas north and west of Carbondale which would include the Southern Illinois Airport and the Carbondale Industrial Park. Businesses and residents in this area currently must travel through downtown Carbondale competing with local traffic on IL 13 before heading east towards I-57. There is a need to provide a supplemental connection to I-57 that does not entail adverse travel and the congestion in downtown Carbondale.

REGIONAL TRANSPORTATION NETWORK

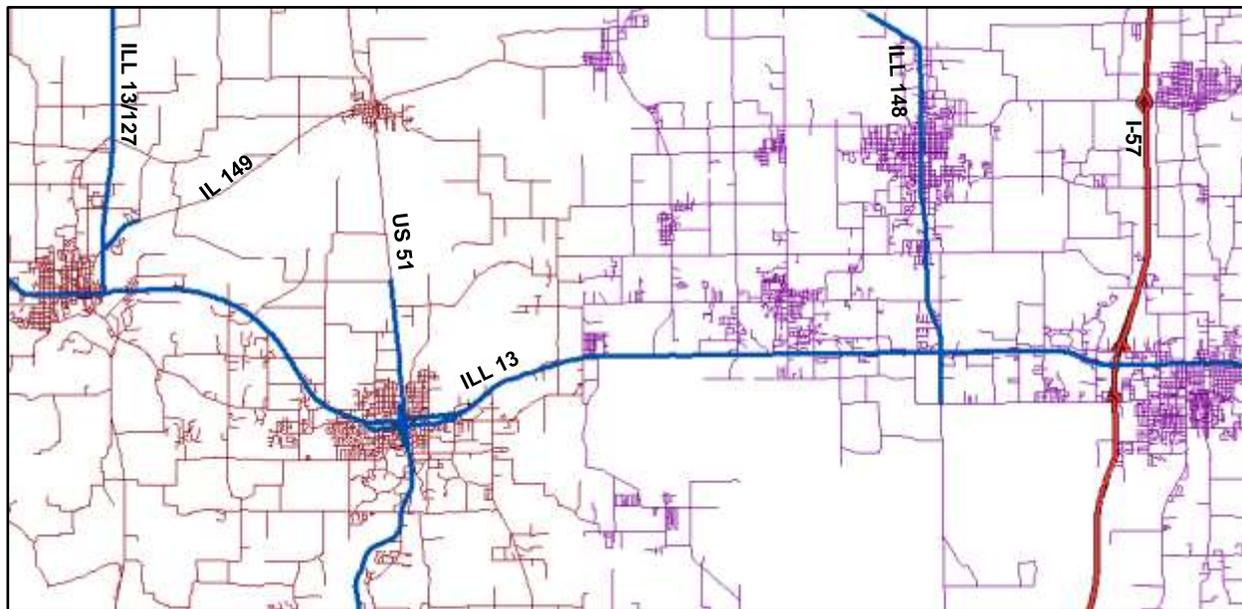


Figure 2

D. Regional Economic Benefit

A regional highway facility, parallel and north of IL 13, from US 51 to I-57 could provide an efficient connection to I-57 especially for areas north and west of Carbondale. Businesses and the traveling public would benefit from reduced travel times and lower fuel consumption. Most notably, the Southern Illinois Airport, the Carbondale Industrial Parks and the Walker's Bluff Resort would benefit from a supplementary east/west arterial and connection to Interstate 57.

Existing Conditions

A. Existing State Highways (Regional Network- See **Figure 3)**

- a. Interstate 57 – I-57 is a fully access controlled freeway that traverses most of the State of Illinois in the north/south direction, extending from Chicago to Cairo. I-57 is a major freight corridor at both the state and national level and is designated by the Federal Highway Administration (FHWA) as part of the National Highway Freight Network. Downstate, I-57 is primarily a four lane facility, however; six through lanes do exist at high volume locations including from Marion northward to Herrin Road. Average Daily Traffic (ADT) on I-57 within the study area is about 40,000 vehicles per day (vpd) with about 30% trucks.
- b. Illinois 13 – IL 13 is a partially access controlled expressway with a functional classification of Other Principal Arterial and extends across southern Illinois in an east/west direction. On a local level, IL 13 serves as the primary east/west corridor for commuters, commercial use and freight access to the Interstate system. IL 13 is primarily a four lane facility but 6 through lanes are provided from IL 37 in Marion westward to Carterville and IDOT is pursuing the completion of 6 lanes all the way to Carbondale. Average Daily Traffic on IL 13 within the study area is about 25,000 vpd with about 7% trucks.
- c. Illinois 13/127 – At Murphysboro, IL 13 turns northward and is combined with IL 127. IL 13/127 is primarily a two lane highway that extends northward to Pinckneyville where the two highways separate, with IL 13 extending northwest to the metro-east area and IL 127 extending northward. A short section of IL 13/127 from Ava Road southward to IL 13 is four lane and a Phase I study to extend the four lanes northward to Pinckneyville has been completed by IDOT. IL 13/127 has a functional classification of Other Principal Arterial with Average Daily Traffic ranging from

about 10,000 in Murphysboro to about 4,000 north of Murphysboro. Truck volumes range from 5% to 7%.

- d. Illinois 148 – Illinois 148 bisects the MPO in a north/south direction extending from an intersection with IL 37 south of Marion northward through Herrin and on to Mt. Vernon. IL 148 is primarily a two lane facility although four through lanes are provided from the IL 13 intersection northward through Herrin and Energy. IL 148 has a functional classification of Other Principal Arterial with Average Daily Traffic ranging from about 18,000 in Herrin to about 4,700 north of Herrin. Truck volumes range from 3% to 6%.
- e. Illinois 149 – Illinois 149 is marked as Walnut Street through Murphysboro and serves the downtown area. At the IL 13/127 intersection IL 149 turns north sharing the IL 13/127 facility until it turns northeastward at the north end of town. From there, IL 149 extends northeast to the small communities of Desoto, Hurst, Bush, Royalton, Ziegler, and Plumfield and eventually connects to I-57 at West Frankfort. IL 149 has a functional classification of Minor Arterial with Average Daily Traffic ranging from about 3,500 vpd to a high of about 6000 vpd near I-57. Truck volumes range from 3% to 9%.
- f. US 51 – US 51 is the major north/south route through Carbondale serving the Southern Illinois University campus and the Carbondale downtown area. US 51 is primarily a two lane facility although four lanes are provided via the one-way couple system in Carbondale. US 51 has a functional classification of Other Principal Arterial with Average Daily Traffic ranging from about 15,000 vpd in Carbondale to about 8000 vpd north and south of Carbondale. Truck volumes range from 6% to 8%.
- g. Herrin Road – Although not a marked route, Herrin road is under State of Illinois jurisdiction except for the city limits of Herrin where it is maintained by the city. Herrin Road is classified as a Minor Arterial or Major Collector with traffic volumes ranging from about 8,900 vpd in the city of Herrin to 5,700 vpd west of Herrin and 7,000 vpd near I-57. Truck volumes range from 3% to 5%.

MARKED STATE ROUTES & HERRIN ROAD

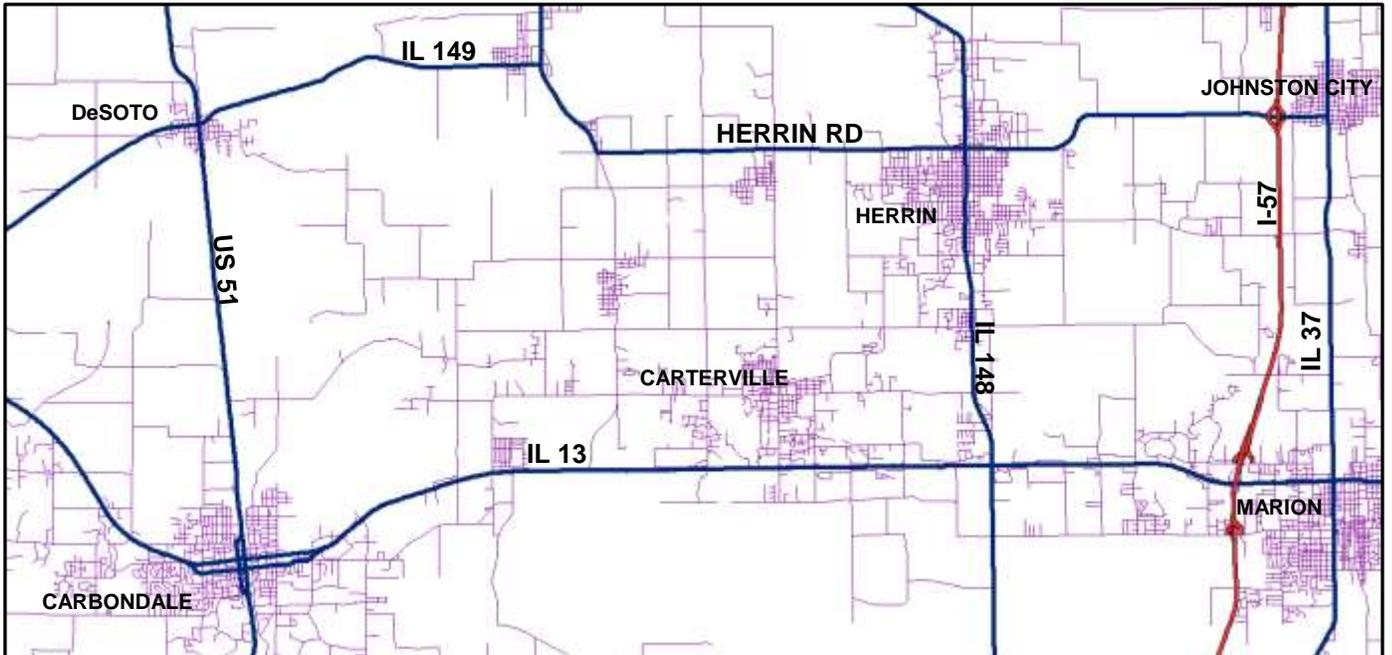


Figure 3

B. Existing Local Roads and Streets

Within the study area there are local roads and streets under the jurisdiction of Williamson County, Jackson County, the city of Carbondale and the Townships of Carbondale and Desoto (see **Figure 4**).

Existing Local Roads and Streets

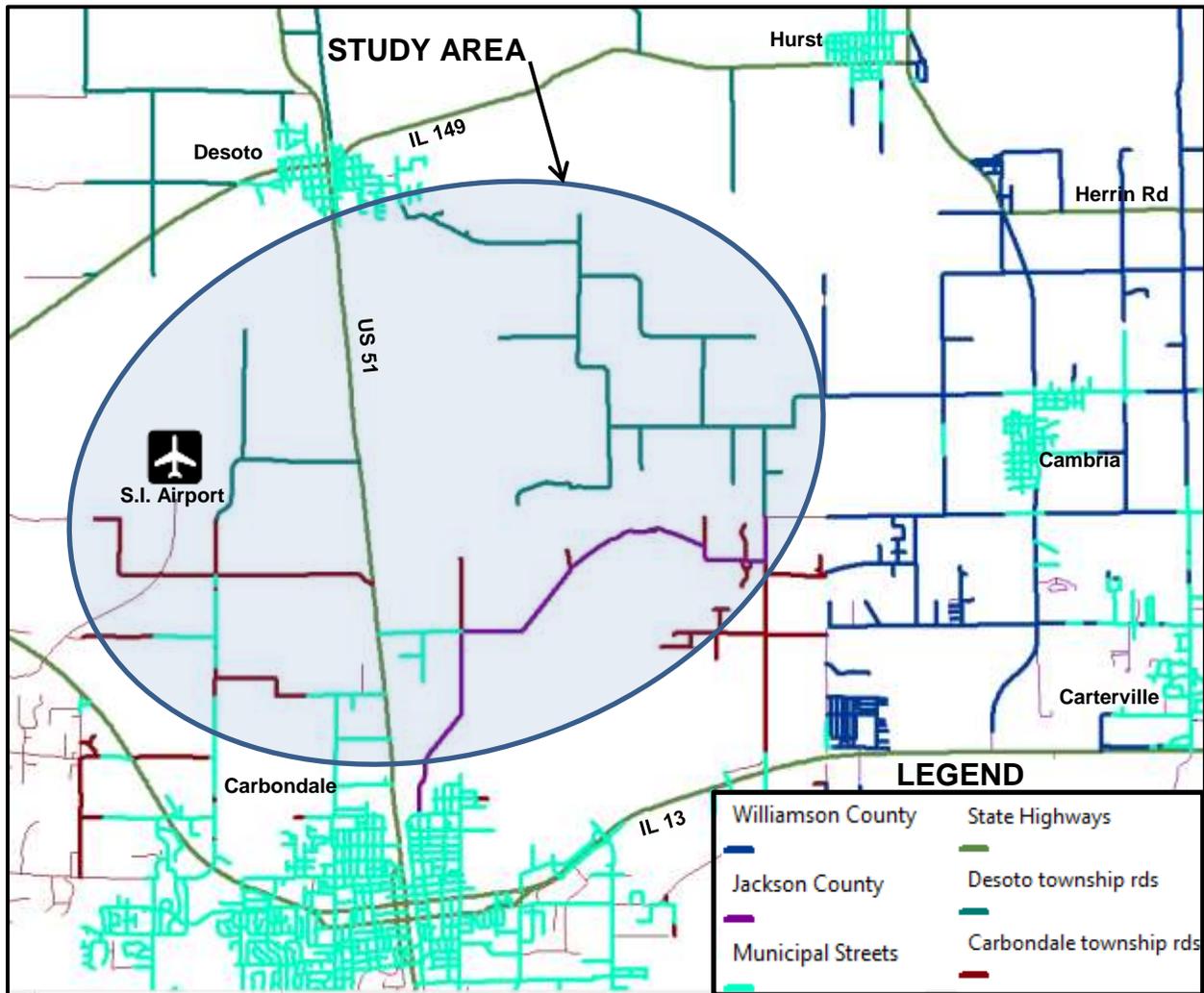


FIGURE 4

The local roads and streets shown in the study area are, for the most part, low volume roadways with oil and chip surfaces. The only exception to this is a short section of Dillinger Road which has an HMA surface starting at US 51 and extending westward to McRoy Drive. Accordingly, none of the local roads in the study area are suitable for use as an arterial type roadway facility without complete reconstruction. In addition, the floodplain of the Big Muddy River has been an obstacle to the development of local roadways with only Reed Station Road crossing the river near the northern limits of the study area and Dillinger Road crossing the floodplain near the southern limits of the study area.

C. Existing Traffic Generators

The major traffic generators in the study area are shown below in **Figure 5**.

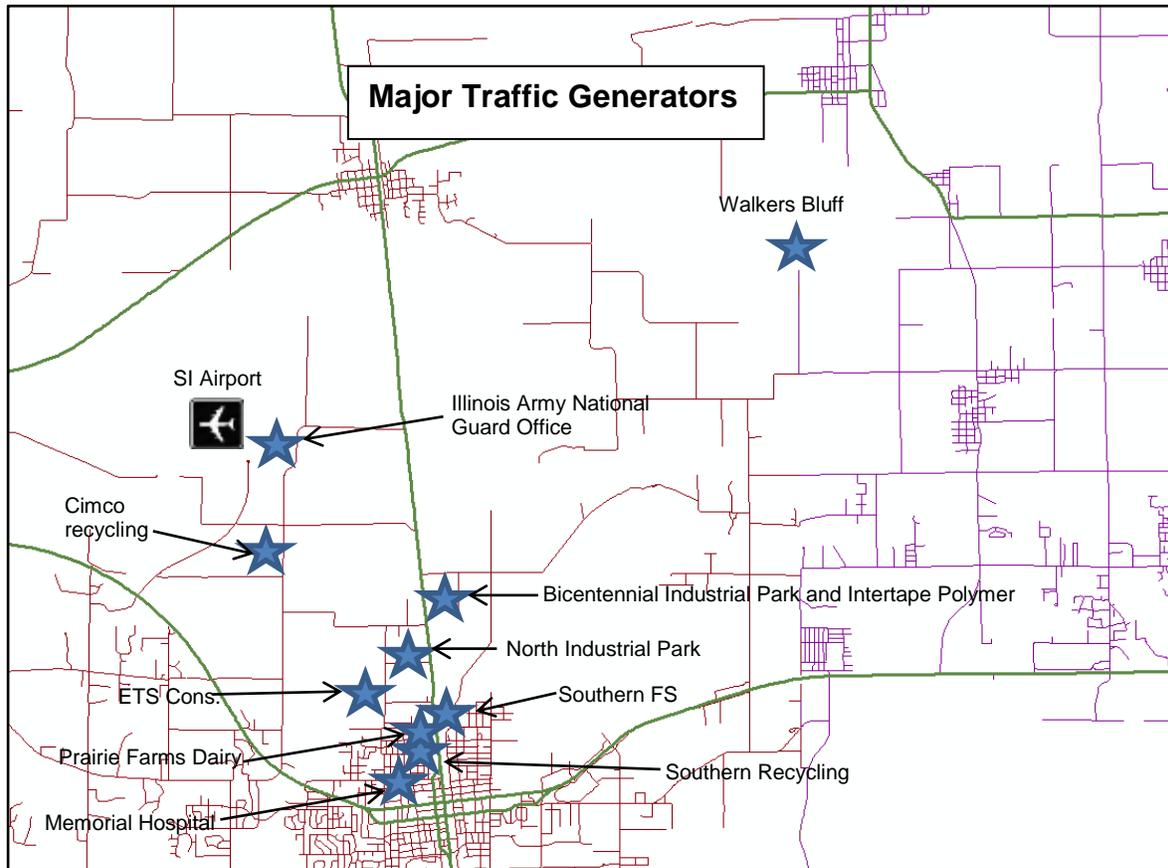


Figure 5

The major traffic generators on the north side of Carbondale are primarily light industrial, commercial businesses and the Carbondale Memorial Hospital. A summary of the major traffic generators is listed in **Table 1**; the table also includes the total volume of traffic generated by development type. A complete listing of the traffic generators is included in **Exhibit 6**. **Table 1** also includes the square footage under roof and the acreage of the various types of development. This data was used to estimate the traffic generated using the TripGen module of the Synchro traffic analysis program. While approximate, the data in **Table 1** clearly indicates that the major traffic generators shown in **Figure 5** generate a significant portion of the current ADT on US 51 (10,600vpd).

Traffic Generator	Acreage	Area Under Roof	Weekday Daily Trips
Southern Illinois Airport	600	150,000	600
Illinois Army National Guard	43	47,500	35
North Industrial Park	146	296,200	1000
Carbondale Memorial	12	152,000	800
Bicentennial Industrial Park	60	279,300	600
Commercial	22	65,700	700
General Light Industrial	83	313900	500
TOTALS	966	1,304,600	4235

Table 1

D. 5% Segments and Intersections in the Study Area

Within the Study area there are nine 5% segments and one 5% intersection (see **Figure 6**). The 5% segments and intersections are locations that rank in the top 5% for injury crashes when compared to their peer group of similar intersections and roadway segments.

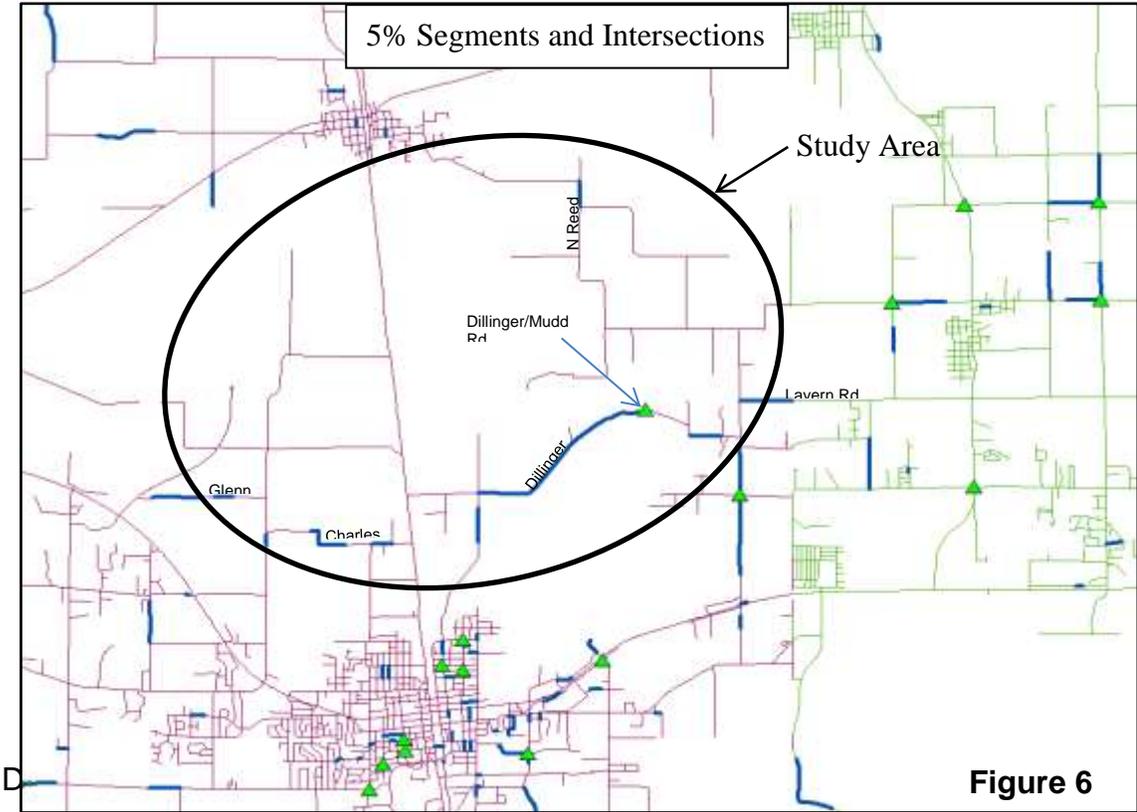


Figure 6

TABLE 2

SEGMENT	LENGTH	FATALS	A-INJ.	B-INJ.	C-INJ.	PD ONLY	TOTAL CRASHES
Dillinger Rd (west segment)	1.84	0	1	1	0	14	16
Dillinger Rd (east segment)	0.31	0	1	1	0	2	4
Charles Road (west segment)	0.47	0	0	1	0	2	3
Charles Road (east segment)	0.12	1	0	0	0	3	4
New Era Road	0.12	0	0	0	0	2	2
North Reed Station Road	0.29	0	0	0	0	3	3
Lavern Road	0.5	0	1	1	1	5	9
Dillinger/Mudd Rd Int.	-	0	1	0	0	2	3

The most significant issue in the above locations is obviously Dillinger Road. Dillinger Road has significant traffic (1,400 to 1,100 vpd) and the existing roadway has substandard alignment, pavement width and clear zones. The Lavern Road segment has 9 crashes with 6 of those clustered at the Lavern Road/Reed Station intersection. The only fatal crash occurred on Charles Road and involved an alcohol impaired driver that ran off the road and struck a tree. A complete listing of the crash data from all the segments and intersections is included in **EXHIBIT 4**. Counter measures for these high crash locations are discussed where proposed alternatives are connected to these locations.

E. Environmental Concerns

Floodplain Impacts:

Any roadway connection from Reed Station Road to US 51 will involve a crossing of the floodplain of the Big Muddy River. Floodplain impacts would result from the placement of fill (roadway embankment) below the 100 year flood elevation. Floodplain impacts are classified as either transverse or longitudinal. Transverse crossings generally involve less extensive impacts and the permitting process is less complicated. Longitudinal impacts are typically more severe and will require compensatory storage and additional permitting. Due to the irregular shape of the floodplain in the study area (see **Figure 7** below) any new alignment is likely

to involve longitudinal floodplain encroachments. Floodplain impacts could be greatly reduced or even eliminated by utilizing an existing roadway corridor to cross the floodplain.

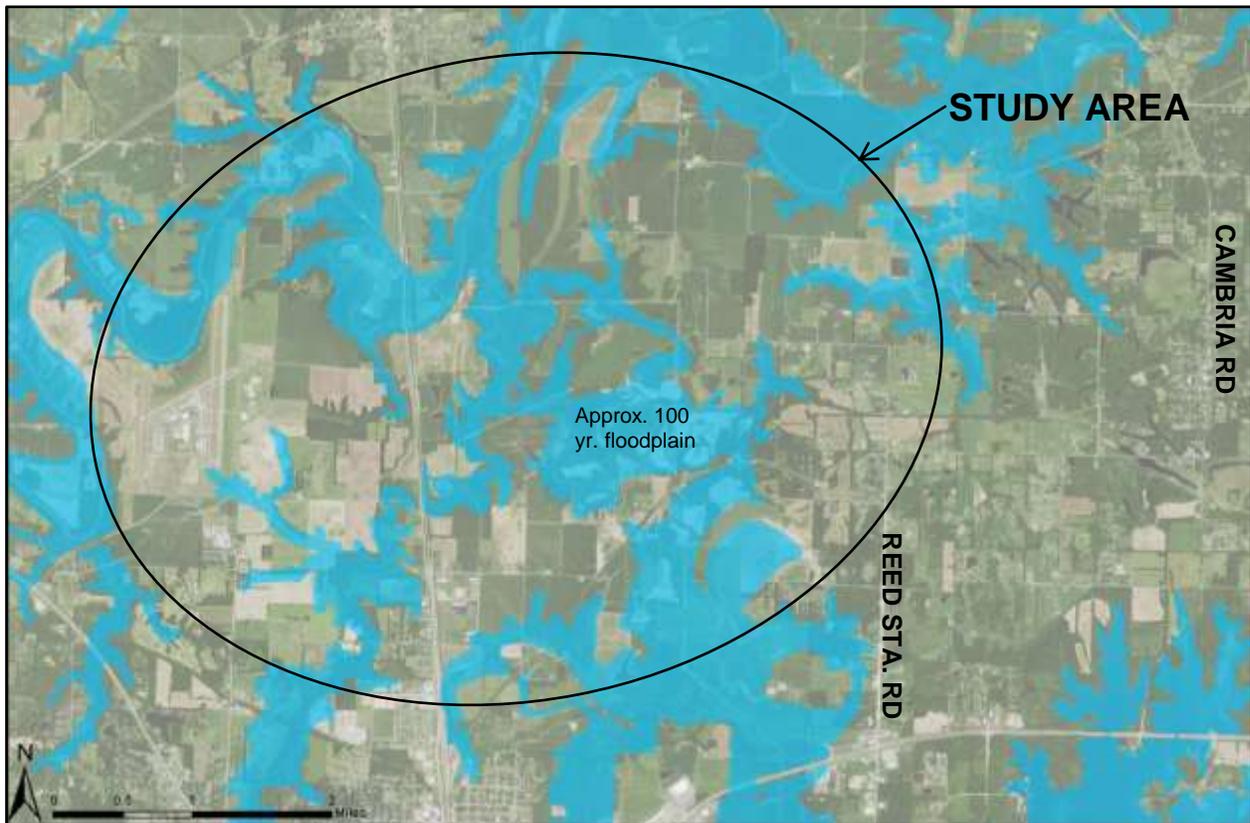


Figure 7

Regulatory Floodway:

Portions of the floodplain in the study area are designated as a Regulatory Floodway (See **Figure 8**) by the Federal Emergency Management Agency (FEMA). Any alternatives that cross the Regulatory Floodway would require compensatory storage and additional permitting requirements.



Figure 8

Threatened and Endangered Species:

The study area boundary was submitted to IDNR via the online Ecological Compliance Assessment Tool (EcoCAT). The Indiana Bat was the only T&E species identified in the Study Area by the EcoCAT tool. The primary impact to the Indiana Bat would be the loss of habitat due to tree removal. These impacts would apply to any alternative that involves tree removal. Mitigation for these impacts would involve restricting tree clearing to certain times of the year and tree replacement.

Wetland Impacts:

Preliminary wetland information was obtained from available National Wetland Inventory (NWI) maps. The NWI maps indicate that five categories of wetlands exist in the Study Area. These are: Freshwater Emergent; Freshwater Forested/Shrub; Freshwater Pond; Freshwater Lake; and Riverine. Of these, the Freshwater Forested/Shrub wetland is by far most prevalent and would be the most impacted by construction of a roadway on new alignment. A map depicting the existing wetlands is shown in **Figure 9** below.

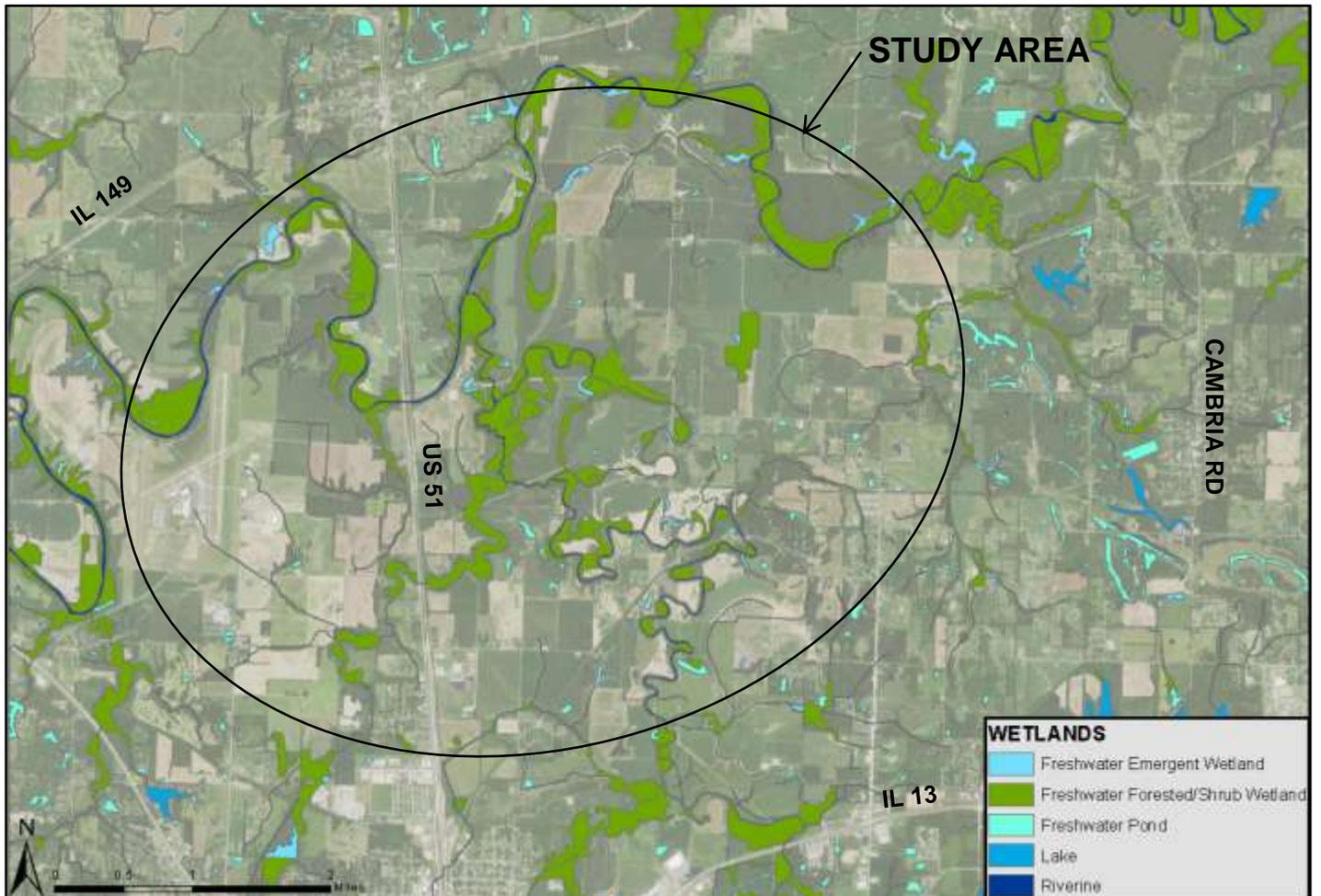


Figure 9

DESIGN CRITERIA

Design criteria for any Build Alternative depends upon the Functional Classification, type of jurisdiction (State or Local), type of improvement and traffic volume. A Functional Classification of Major Collector or Minor Arterial would be appropriate for the type of facility that is desired. A summary of the major design requirements from the IDOT BDE Manual and the IDOT BLRS Manual for these facility types is listed in **Table 3** and **Table 4** below. Improvements to existing roadways could utilize the 3R Design Criteria, while improvements on new alignment would utilize the New Construction/Reconstruction criteria.

TABLE OF NEW CONSTRUCTION/RECONSTRUCTION DESIGN CRITERIA				
Design Feature	Minor Arterial (STATE)	Collector (STATE)	Collector (LOCAL)	Local Road
Pavement Width	24'	24'	24'	24'
Pavement Type	HMA or Conc.	HMA or Conc.	HMA or Conc.	HMA or Conc.
Shoulder Width (Total)	10'	8'	8'	8'
Shoulder Width (Paved)	4'	4'	Not required	Not Required
Foreslopes	6:1	4:1	4:1	4:1
Minimum Structure Width (to remain in place)	30'	30'	28'	28'
Horizontal Curvature(Minimum Radius)	3,000' desirable 1,330' min.	3,000' desirable 1,330' min.	1,205'	1,205'
Vertical Alignment - Min. K value (Crest/Sag)	151/136	151/136	114/115	114/115

Table 3

TABLE OF 3R DESIGN CRITERIA				
Design Feature	Arterial & Collector	Unmarked State Routes	Collector (LOCAL)	Local Road
Pavement Width	24'	24'	24'	24'
Pavement Type	HMA or Conc.	HMA or Conc.	HMA or Conc.	HMA or Conc.
Shoulder Width (Total)	6'	6'	6'	6'
Shoulder Width (Paved)	3'	Not Required	Not required	Not Required
Foreslopes	Existing	Existing	Existing	Existing
Minimum Structure Width (to remain in place)	30'	28'	28'	28'
Horizontal Curvature(Minimum Radius to remain in place)	600'	600'	465'	465'
Vertical Alignment - Min. K value (Crest/Sag)	44/Existing	44/Existing	44/Existing	44/Existing

Table 4

STUDIED ALTERNATIVES

Four Build Alternatives were identified for analysis. Two of the alternatives were developed around the concept of utilizing existing roadways (North Reed Station Road and Dillinger Road) and two alternatives were developed to provide a more direct connection to US 51 (Fox Farm Road and Airport Road). All of the Build Alternatives are shown below in **Figure 10**.

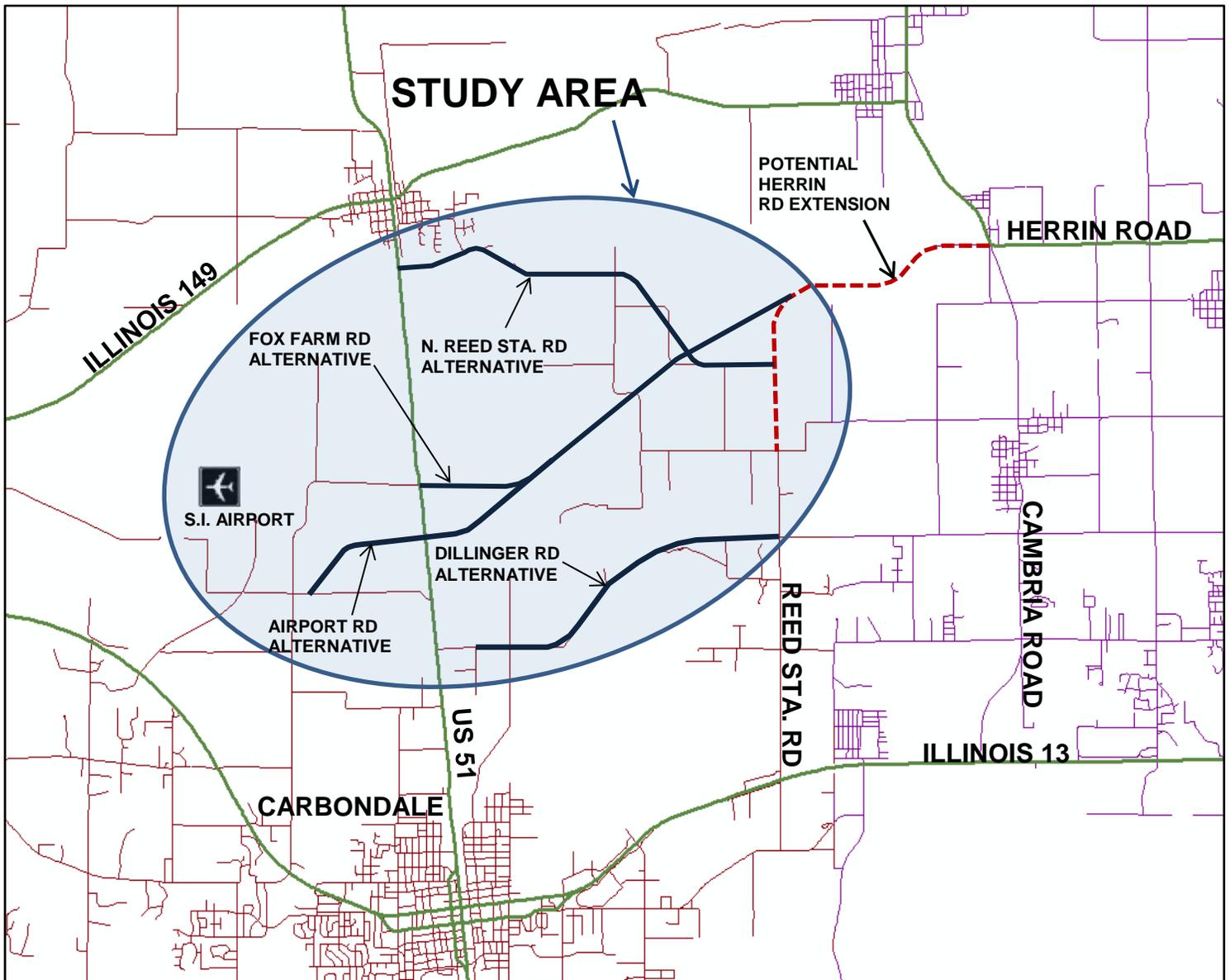


Figure 10

A. North Reed Station Road Alternative

a. General Description

The North Reed Station Road Alternative would begin at an intersection with the potential Herrin Road Extension and would extend westward using portions of Hill Road, Maple Grove Road and North Reed Station Road (see **Figure 11**). Hill Road and Maple Grove Road are only 1 lane wide (width 10') and have an oil and chip surface. North Reed Station Road also has an oil and chip surface and varies from 18' to 20' in width. The existing shoulders are sod and are vary from 0' to 3' in width. The vertical alignment of these roadways generally follows the existing topography and several sharp horizontal curves also exist. Clearly, where the existing alignment is utilized the roadway would still require major reconstruction to meet the recommended design criteria. This alternative would be able to utilize an existing bridge over the Big Muddy River near DeSoto which would be a very significant cost savings.

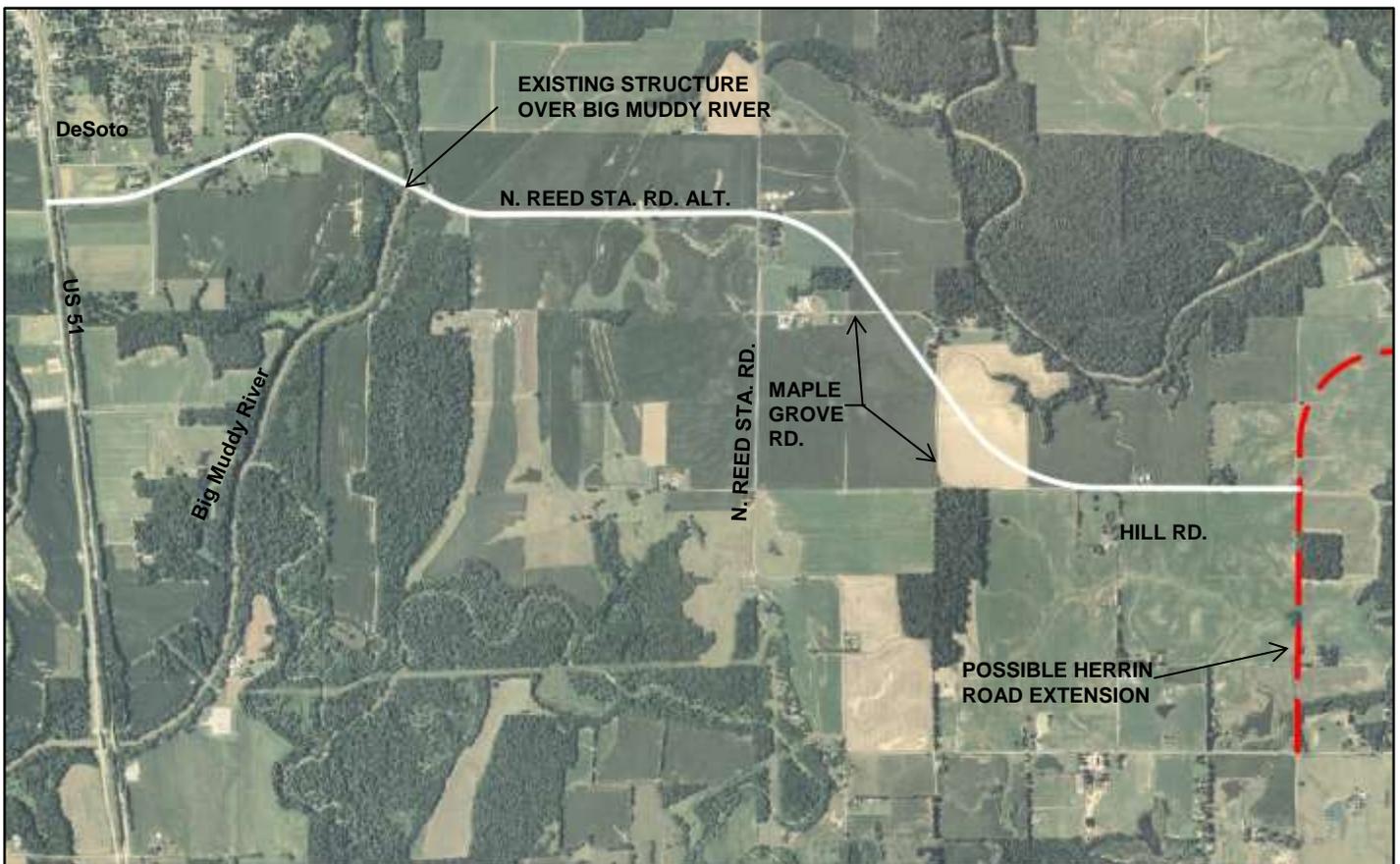


Figure 11

b. Big Muddy River and Floodplain Crossing

As previously mentioned, North Reed Station Road crosses the Big Muddy River via an existing county maintained bridge near Desoto. This structure (039-3137) was constructed in 1980 by Jackson County. The structure is 391' long and has 5 spans, the longest being 100'. The structure has a clear width for traffic of 24'. The structure is in relatively good condition with a Deck Condition rating of 8 and a sufficiency rating of 81.5. However, the structure does not meet the recommended Design Criteria to remain in place (minimum 28') for new construction or even a 3R improvement. If this alternative was selected for implementation, a policy improvement would require replacing the structure along with the roadway improvements. Another reasonable option would be to utilize the structure for its remaining useful life before replacing it with a wider structure in the future. The cost estimate for this alternative assumes that the structure would not be replaced with the initial improvements.

This alternative would cross the floodplain of the Big Muddy River at four locations as shown in **Figure 12** below. Three of these crossings would occur on existing roadway alignments so the new impacts would be minimal. A portion of the far west crossing would involve new roadway construction and a longitudinal floodplain encroachment. This encroachment would require compensatory storage and additional permitting requirements.

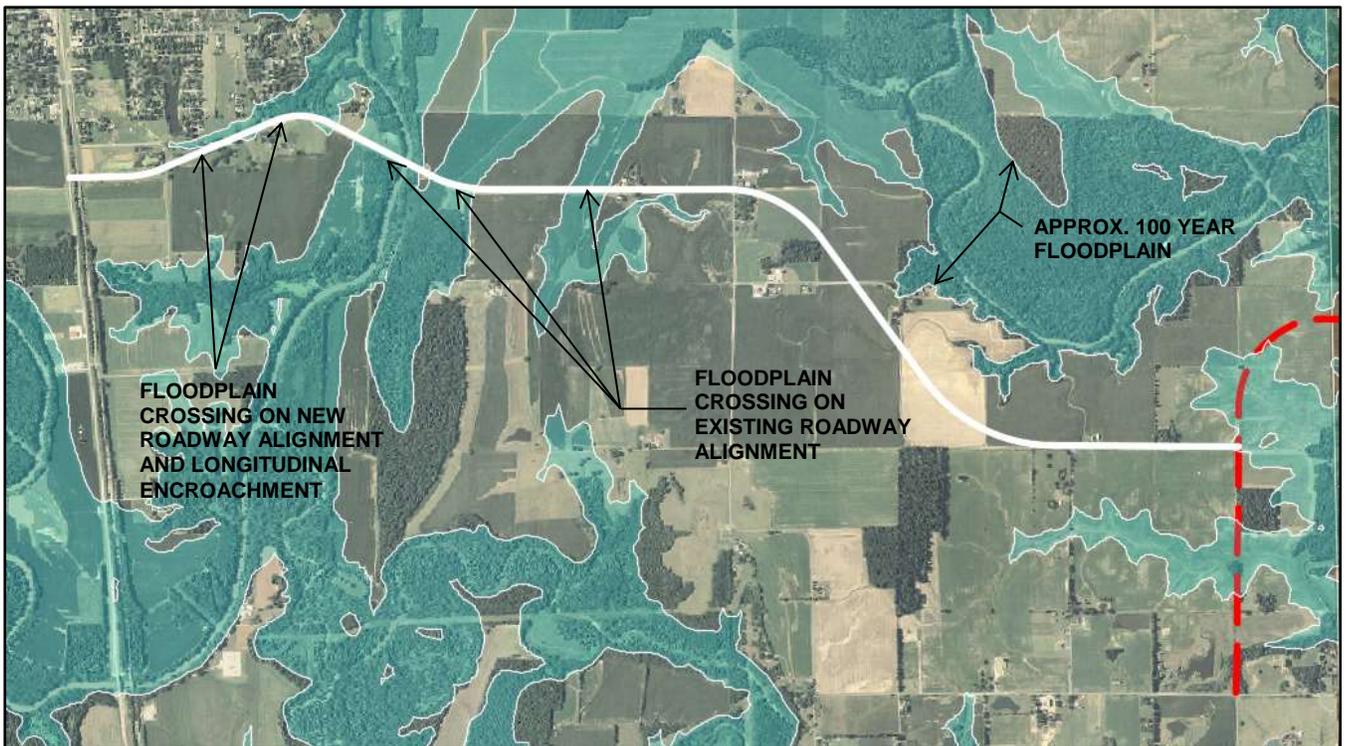


Figure 12

c. Railroad Crossing

Within the Study Area, the Canadian National Railroad closely parallels US 51 on the east side so that all of the Build alternatives will require a rail crossing to connect to US 51. New at grade rail crossings are generally not desirable and very difficult to achieve necessitating a grade separated crossing or the use of an existing at grade crossing. Another option is to relocate an existing crossing to a more desirable location so that service can be improved without increasing the number of at grade crossings. There appears to be an opportunity for just such a crossing relocation for this alternative. The crossing at East Logan Street could potentially be moved to the south about 0.3 miles to connect with a relocation of North Reed Station Road providing a more direct connection to US 51 as depicted in **Figure 13** below.

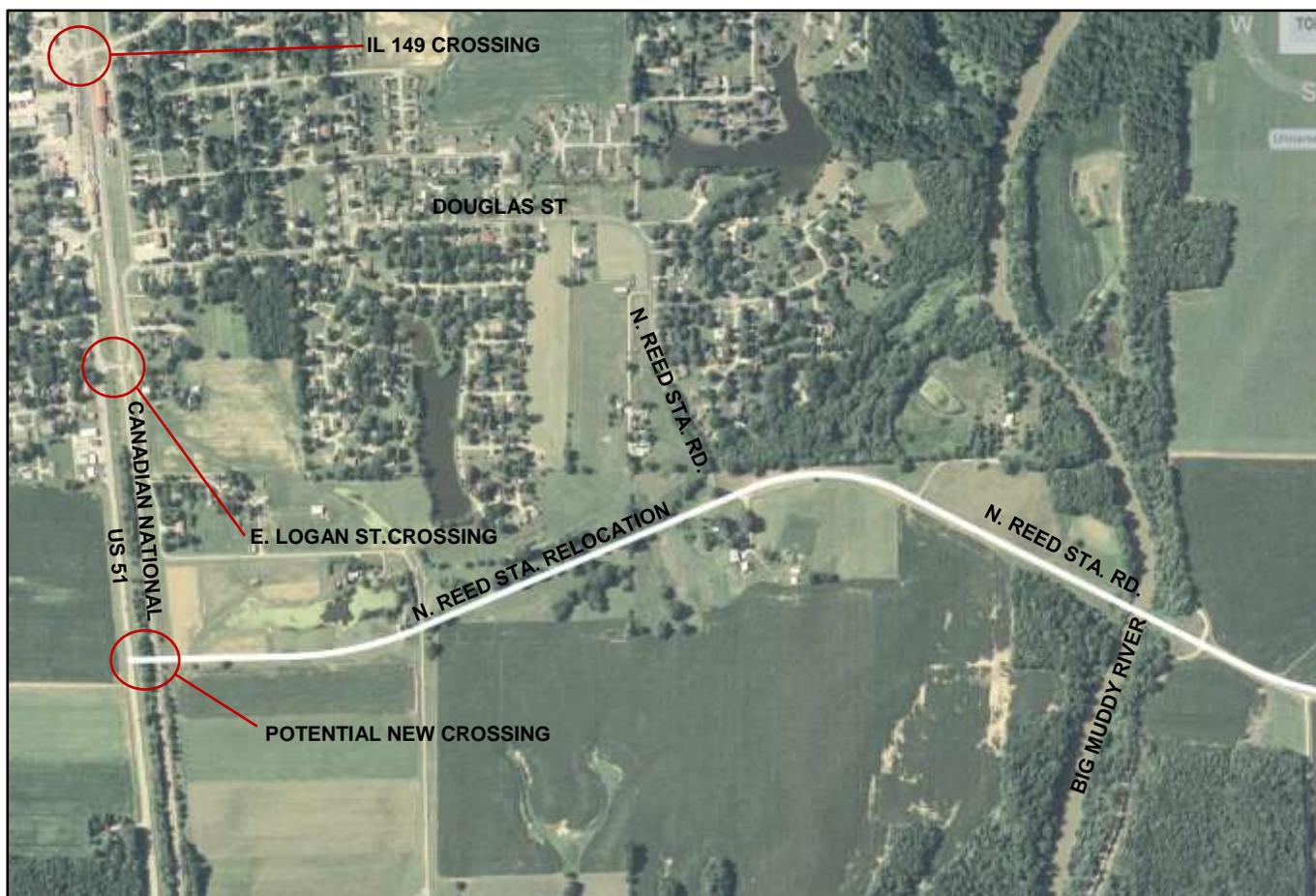


Figure 13

If negotiations to move the East Logan Street crossing were unsuccessful, this alternative would have to route to the existing crossing locations on IL 149 or East Logan Street. A much more expensive option would be to construct a railroad overpass which, due to the close proximity, would also have to span US 51. Due to the expense of an overpass and availability of other options an overpass was not considered for the North Reed Station Road Alternative.

d. Safety Benefits

Implementation of this alternative would have a positive impact on a minor 5% location on North Reed Station Road (see **Figure 14**). This location experienced three Property Damage crashes in the 2011 to 2016 crash data. These crashes were roadway departure type and likely attributable to the existing narrow pavement and lack of shoulders.

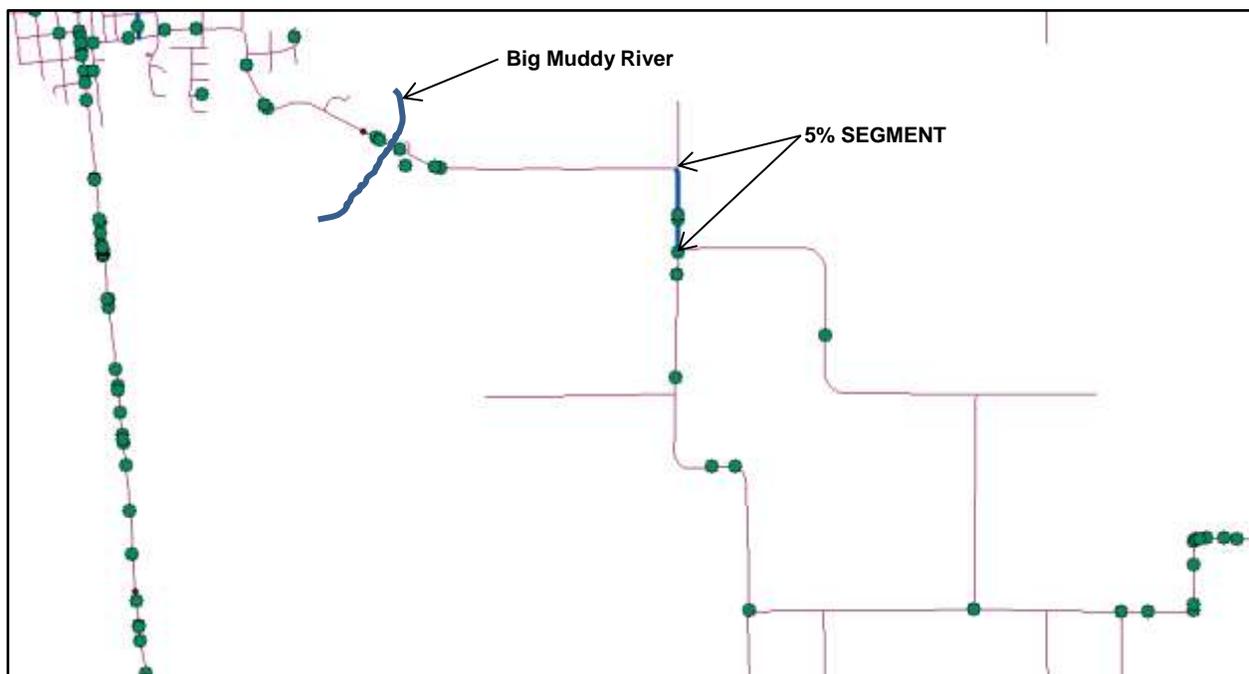


Figure 14

Although not identified as a 5% segment, there is also a cluster of roadway departure crashes near the Big Muddy River Bridge (see **Figure 14**). Narrow pavement and shoulders is a likely contributor to this cluster of crashes as well. One A and one B injury resulted from these crashes. An improved roadway with wider pavement surface and improved shoulders would have a positive impact on all the roadway departure crashes in the corridor

e. Traffic Benefits

All of the Build Alternatives would provide the traffic benefits associated with the Herrin Road extension (see SIMPO's East/West Corridor Study). The North Reed Station Road Alternative would be the least beneficial alternative for improving connectivity to the major traffic generators in the northern part of Carbondale (see **Figure 15**). As shown in **Figure 15**, the North Reed Station Road Alternative takes a northern turn away from Carbondale and connects with US 51 south of Desoto. The resulting distance from the connection point southward to Airport Road is just less than 3 miles (see **Figure 15**). It seems likely that this adverse travel distance would discourage a significant percentage of traffic from using this corridor thus largely negating the benefits of an improved corridor.

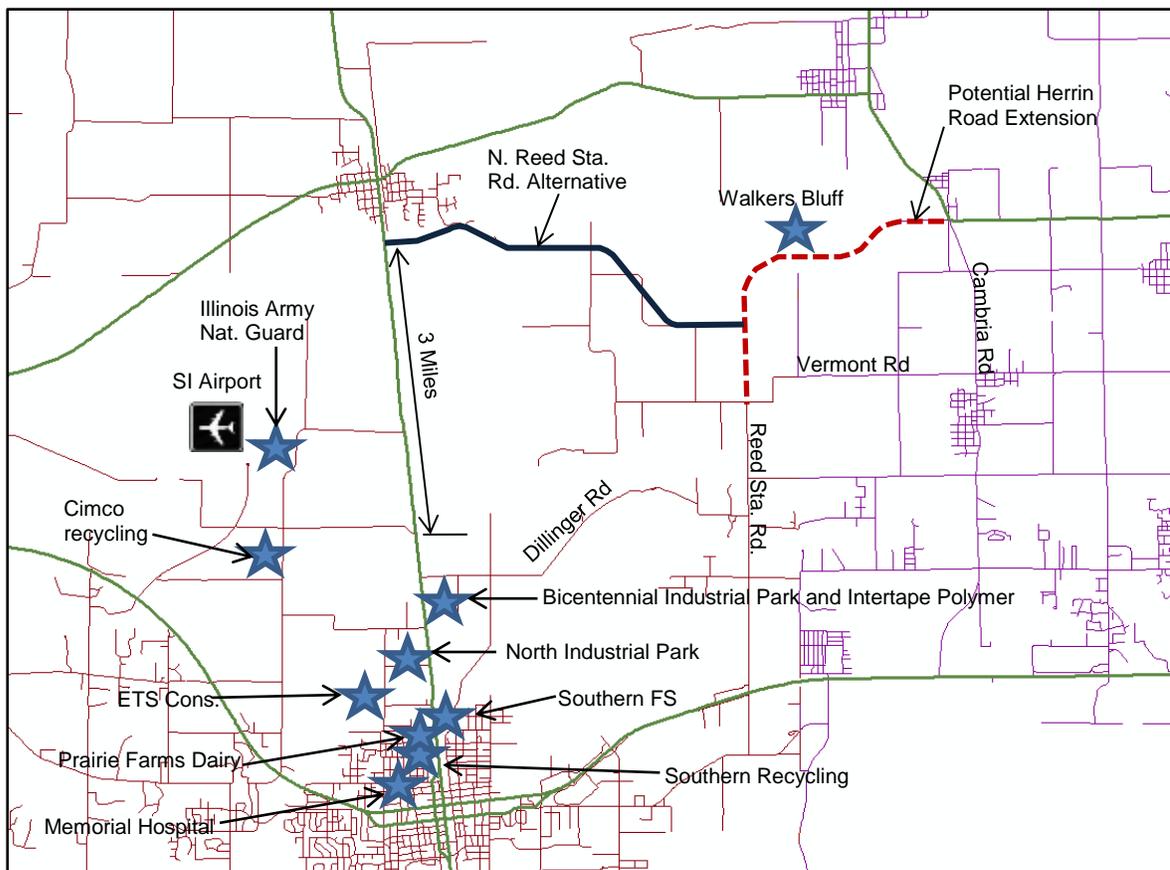


Figure 15

This route appears to be too far north of the major traffic generators to provide significant benefits. There would be some benefit for the Walkers Bluff Development since patrons from areas north of Carbondale currently must take a very circuitous route via Cambria and Vermont Roads or Dillinger and Reed Station Roads.

g. Economic Development

The North Reed Station Road Alternative has the least potential to spur economic development. It is too far north to adequately serve the major traffic generators. There is some potential for this alternative to increase business for the Walkers Bluff Development but this would be difficult to quantify.

h. Environmental Impacts

The primary environmental impact of this alternative would be approximately 1.6 acres of Forested Wetland near the Big Muddy River. This impact occurs in a location where the existing roadway alignment is utilized (see **Figure 16**). In addition, approximately 0.5 acres of Riverine Wetlands would be impacted. The alternative would also impact a total of about 0.5 acres of woodlands, these impacts are scattered over several locations along the alignment. The woodland impacts could have some impact on the Indiana Bat (the only T&E species identified in the project area). These impacts are relatively minor and could be successfully mitigated with replacement wetlands, tree clearing restrictions and replacement tree plantings. The environmental document for this alternative would likely be a Categorical Exclusion (CE). An individual 404 permit would be required from the Army Corps of Engineers due to the wetland impacts but the lower level of environmental processing would significantly reduce the time and expense for the engineering of this alternative.

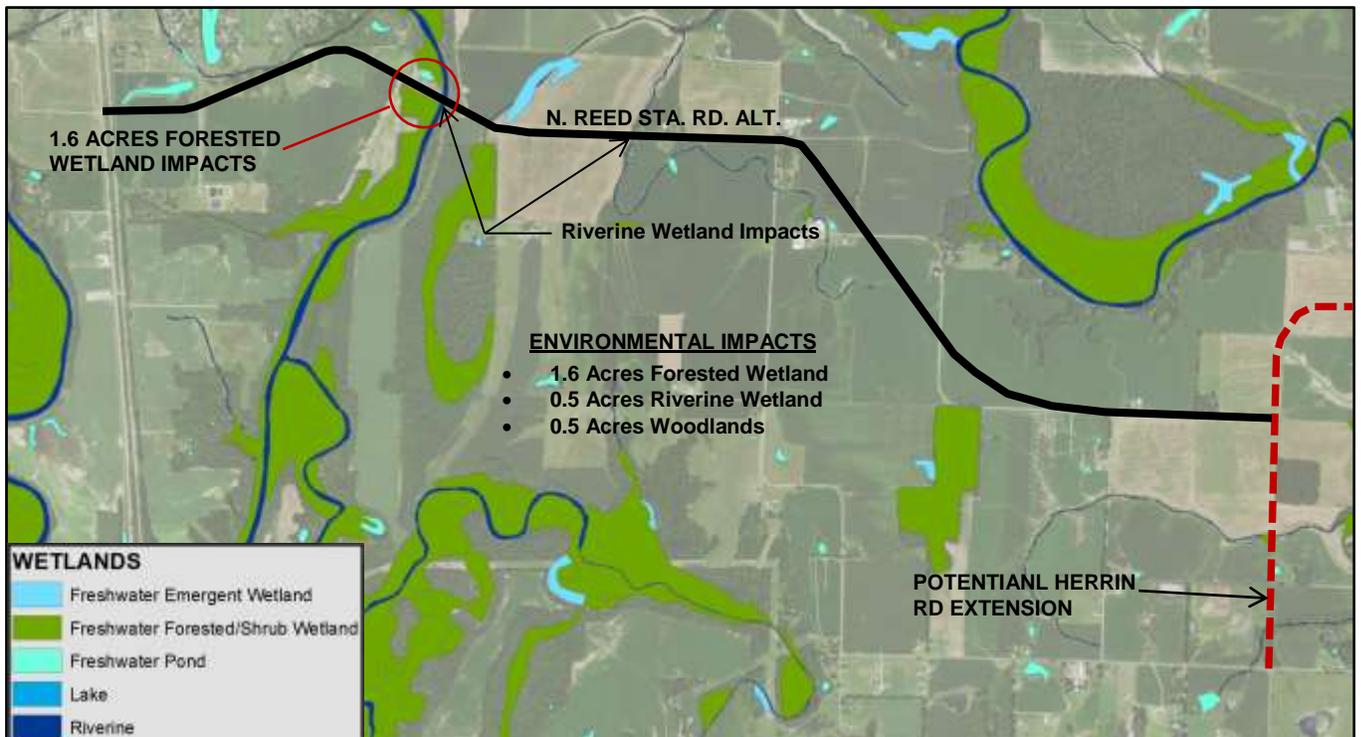


Figure 16

i. Property Impacts

Impacts to private property would largely be to existing farmed ground. There is little residential development along the corridor so impacts to residential properties can largely be avoided. Approximately 20 acres of farm ground would be taken out of production by the new sections of roadway. This loss could be partially mitigated by returning portions of the old sections of roadway to farm ground.

j. Cost

The North Reed Station Road Alternative is estimated to cost approximately \$15.1 Million (**See Exhibit 7-1**).

B. Fox Farm Road Alternative

a. General Description

The Fox Farm Road Alternative would begin at an intersection with the potential Herrin Road Extension and would extend southwestward before turning due west to intersect with US 51 across from Fox Farm Road. Since there is no existing at grade crossing an overpass over the Canadian National would likely be required. Due to the close proximity, the overpass would also span US 51. Improvements to Fox Farm Road would also be needed from the point of touchdown of the overpass westward to a proposed relocation of Fox Farm Road that is planned by the Southern Illinois Airport. The Fox Farm Road Alternative and proposed airport improvements are depicted in **Figure 17**.

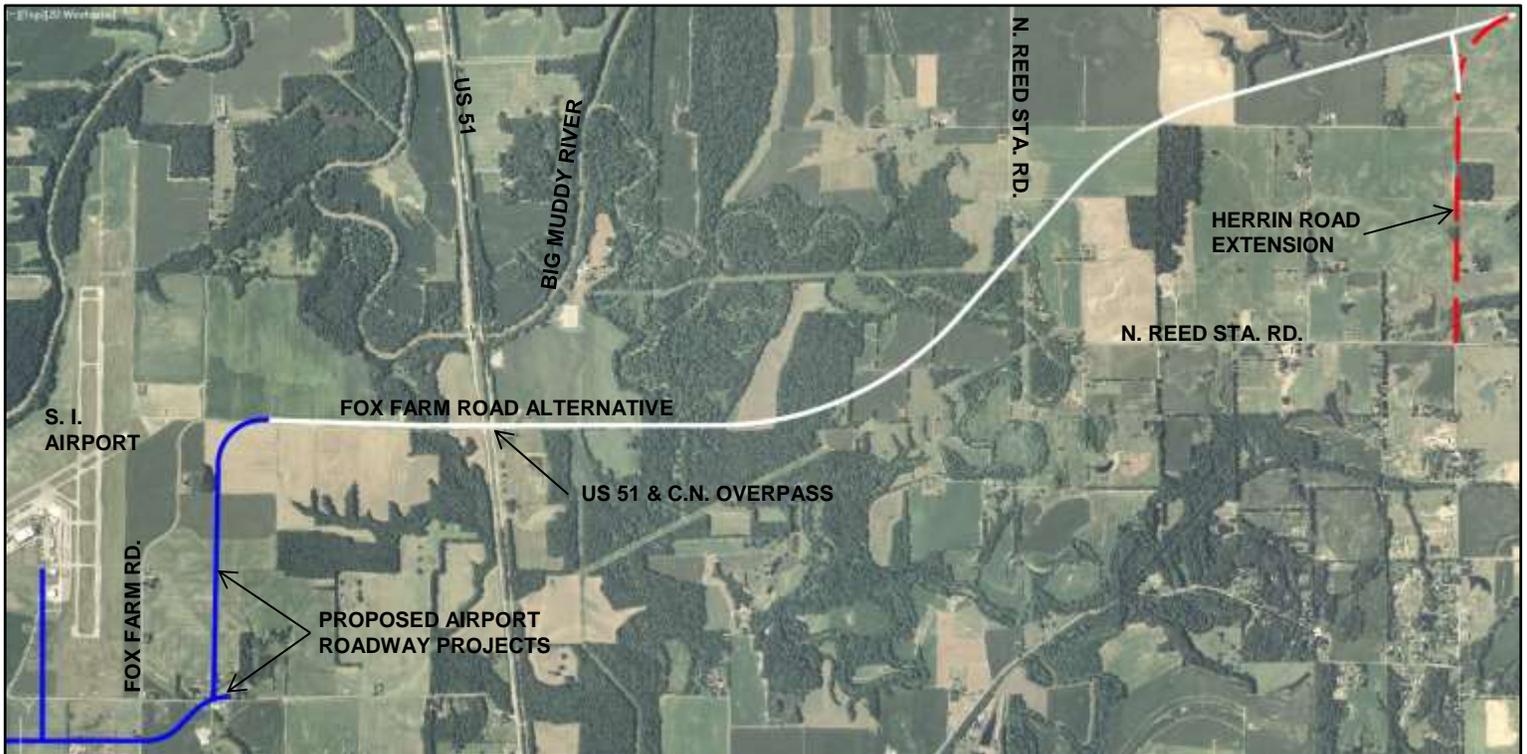


Figure 17

b. Big Muddy River, Floodplain crossing and Regulatory Floodway

The Fox Farm Alternative will cross the Big Muddy River Floodplain in 7 locations (see **Figure 18**). The crossings near the eastern and western limits of the alternative are relatively minor transverse crossings and do not represent a significant obstacle to implementation of this alternative. The three middle crossings are much more significant, requiring fill heights of up to 36 feet to maintain an elevation 3' above the 100 year water flood level (approximately elevation 380'). These crossings appear transverse to their respective tributaries, however, the overall roadway alignment is parallel to the Big Muddy River and these encroachments may be ruled as one overall longitudinal encroachment. Such an encroachment would involve additional permitting requirements and a large volume of compensatory storage.

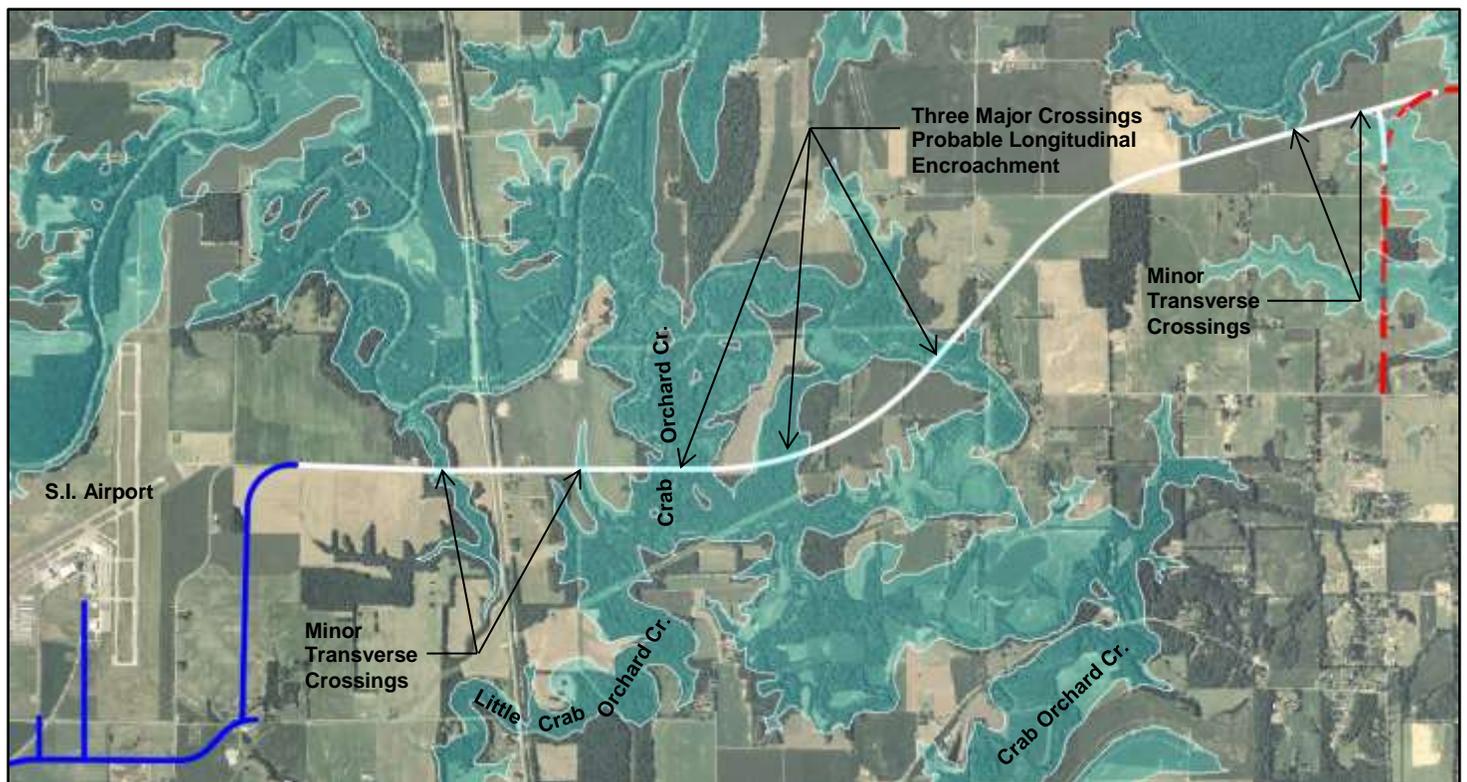


Figure 18

Additionally, this alternative crosses a section of the floodplain that is designated as a Regulatory Floodway (See **Figure 19**). This crossing would require compensatory storage, additional permitting and hydraulic analysis.



Figure 19

c. Structures:

At the Crab Orchard Creek Crossing the roadway will need a structure large enough to accommodate a drainage area of about 287 square miles. A preliminary estimate is for a 250' long structure at that location. At the other two major crossings the size of the structure will be governed by flood flows from the Big Muddy River rather than by flows from the upstream drainage basin. A preliminary estimate for those locations is a 10'x10' box culvert at the eastern most location and a double 10'x10' box culvert at the central major crossing.

d. Railroad Crossing

Across from the existing Fox Farm Road/US 51 intersection there exists an at grade crossing of the Canadian National Railroad. However, this crossing is a private entrance and it is very unlikely that the crossing could be approved for use by a public road. Consequently, this alternative includes an overpass of the railroad and US 51. The minimum vertical clearance required over the railroad is 23.0 feet. This clearance requirement (and the need to also span US 51) results in the need for a structure that is approximately 1,100 feet in length. A preliminary plan view for this overpass is shown in **Figure 20** below. A two lane connector road to US 51 will also be needed as shown in **Figure 20**.



e. Safety Benefits

This alternative will not have a direct impact on any of the identified 5% segments or intersections. However, it will have an indirect impact on the Dillinger Road locations since some traffic that currently uses Dillinger Road would divert to this improved corridor which will have a lower crash rate due its wider pavement, shoulders, roadside clear zone and flatter

earth slopes. There could also be an indirect benefit on the crashes at the intersection of Cambria Road and IL 13 since a portion of that traffic which is bound for Carbondale could also use the new corridor.

f. Traffic Benefits

In conjunction with an extension of Herrin Road, the Fox Farm Road Alternative would provide several traffic benefits. First, it would provide a safer and more direct connection to IL 13 and Carbondale for commuters from the Herrin/Colp/Carterville/Blairsville/Hurst area. Currently, about 1,400 vehicles access westbound IL 13 daily from southbound Cambria Road, these same commuters return via eastbound IL 13 and turn north onto Cambria Road for a total volume of about 2,800 vehicles per day. A good percentage of these commuters would use the Herrin Road extension and signalized intersection at IL 13/Reed Station Road avoiding the unsignalized IL 13/Cambria Road intersection which has experienced numerous severe crashes and has historically been a 5% intersection location. The Fox Farm Alternative would also provide a convenient alternative connection for all of the major traffic generators shown in **Figure 21**. This corridor would meet the study purpose and need of providing a convenient alternative connection eastward to Interstate 57.

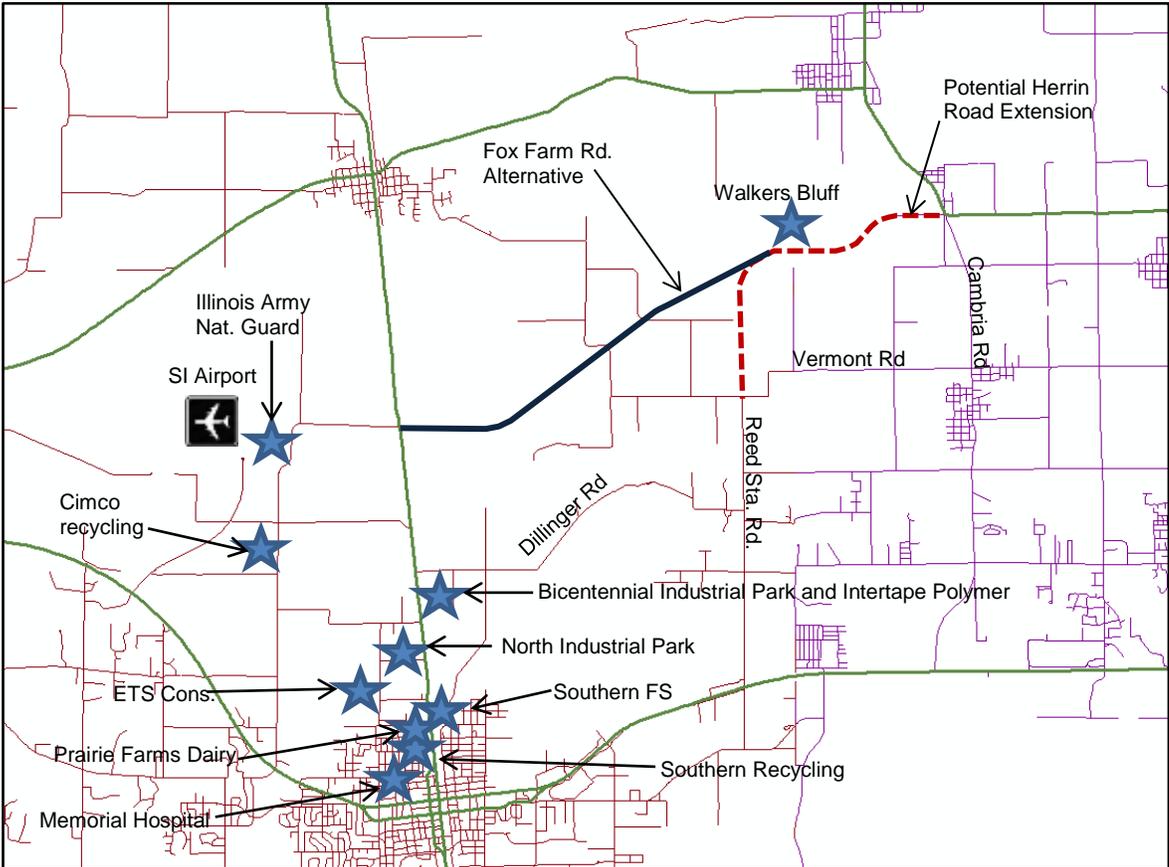


Figure 21
27

g. Economic Development

The Fox Farm Alternative could spur economic development on the north side of Carbondale. The existing Industrial Parks would have an improved corridor to access Interstate 57, this would be especially beneficial for traffic that would be outbound to northbound I-57 or inbound on southbound I-57. This connection would be much more direct for any Interstate traffic that is headed to or from the Southern Illinois Airport and this could spur additional development at the airport facility.

h. Environmental Impacts

The primary environmental impact of the Fox Farm Alternative is 6.5 acres of Forested Wetland impact where the alternative crosses the floodplain of the Big Muddy River (see **Figure 22**). Riverine Wetlands (0.7 Acres) would also be impacted at 4 stream crossings in the floodplain. A total of 24 acres of woodlands would be impacted at various locations along the alignment. Impacts to the Indiana Bat could occur from the woodland impacts. This alternative would require a significant environmental mitigation program. Wetland replacement would likely be around 3:1 resulting in a need for more than 20 acres of wetland replacement. Replacement tree plantings would also be significant with at least a 1:1 replacement ratio required. An Individual 404 permit would be required from the Army Corps of Engineers due to the wetland impacts. The level of environmental processing for this alternative would be at least an Environmental Assessment (EA) and an Environmental Impact Statement (EIS) could be required. Either of these environmental documents would be quite expensive and would require at a minimum a couple of years to complete.

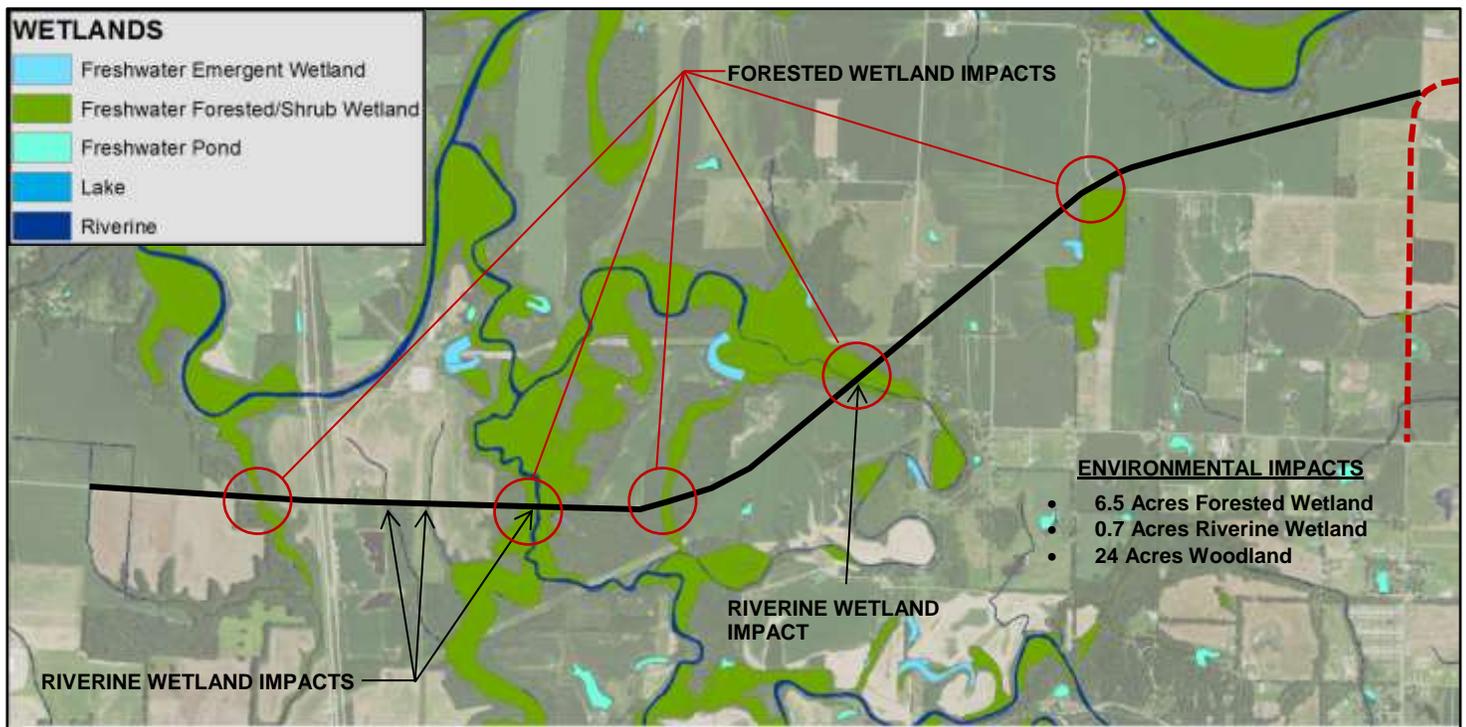


Figure 22

i. Property Impacts

Impacts to private property would primarily be to existing farmed ground. Some areas of woodland in private ownership would also be acquired. Impacts to residential properties are largely avoided but near US 51 the alignment passes between two residential properties and due to the grade raise needed for the overpass these properties would need to be acquired in whole or in part (see **Figure 20**). Alternatively, the alignment could be shifted north or south so that only one of these properties would have to be acquired.

j. Cost

The Fox Farm Road Alternative is estimated to cost approximately \$45.6 Million making it the second most expensive alternative (**See Exhibit 7-2**).

C. Airport Road Alternative

a. General Description

The Airport Road Alternative would also begin at an intersection with the potential Herrin Road Extension and would extend southwest following the same alignment as the Fox Farm Road Alternative but would extend further southwest before turning westward and crossing US 51 and the Canadian National Railroad approximately midway between the existing Fox Farm and Airport Road intersections with US 51. Since there is no existing at grade crossing, an overpass over the Canadian National would likely be required. As with the Fox Farm Alternative, the overpass would also have to span US 51. The new roadway would extend further to the west and connect to a proposed relocation of Airport Road that is planned by the Southern Illinois Airport. The Airport Road Alternative and the proposed airport roadway improvements are depicted in **Figure 23**.

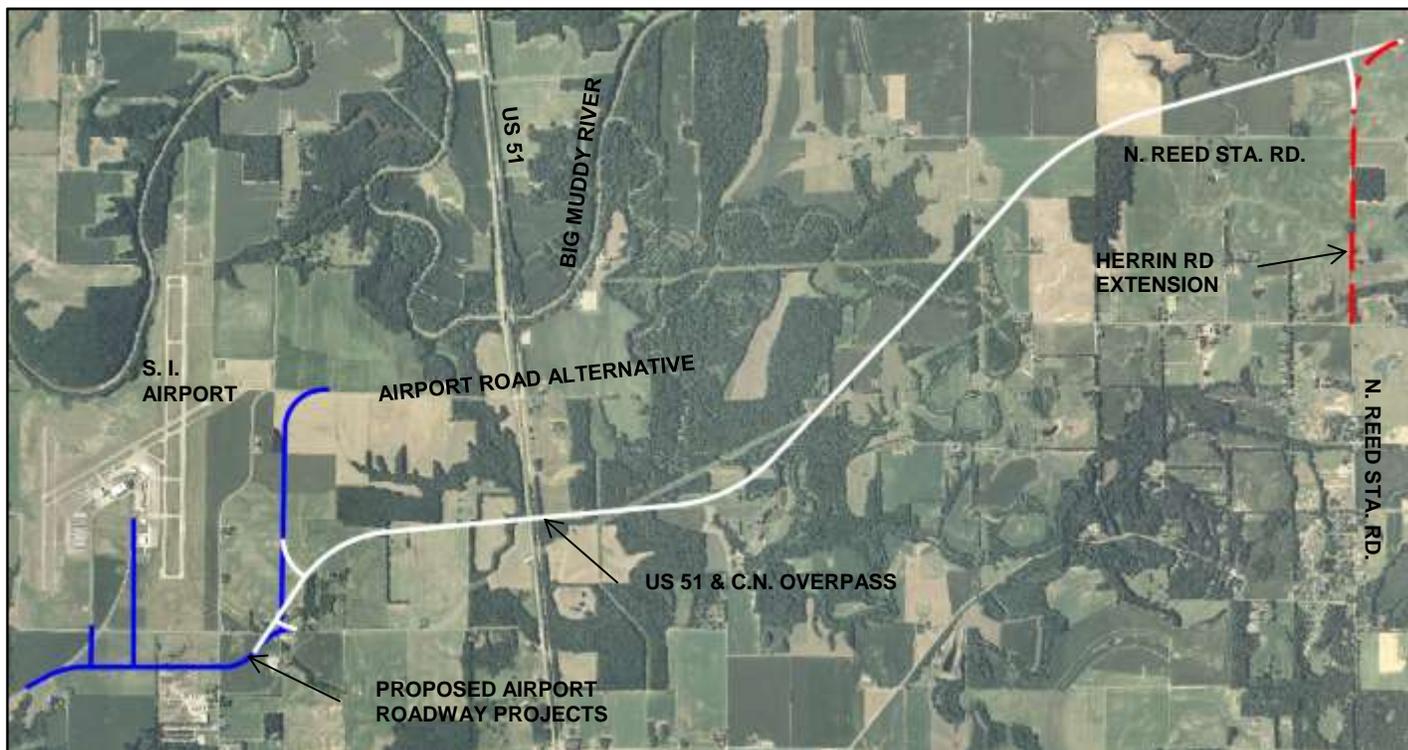


Figure 23

b. Big Muddy River, Floodplain Crossing and Regulatory Floodway

The Airport Road Alternative will cross the Big Muddy River Floodplain in 6 locations (see **Figure 24**). The crossings near the eastern and western limits of the alternative are relatively minor transverse crossings and do not represent a significant obstacle to implementation of this alternative. The three middle crossings are much more significant requiring fill heights of up to 36 feet to maintain an elevation 3' above the 100 year water flood level (approximately elevation 380'). These crossings appear transverse to their respective tributaries, however, the overall roadway alignment is parallel to the Big Muddy River and these encroachments may be ruled as one overall longitudinal encroachment. Such an encroachment would involve additional permitting requirements and a large volume of compensatory storage.

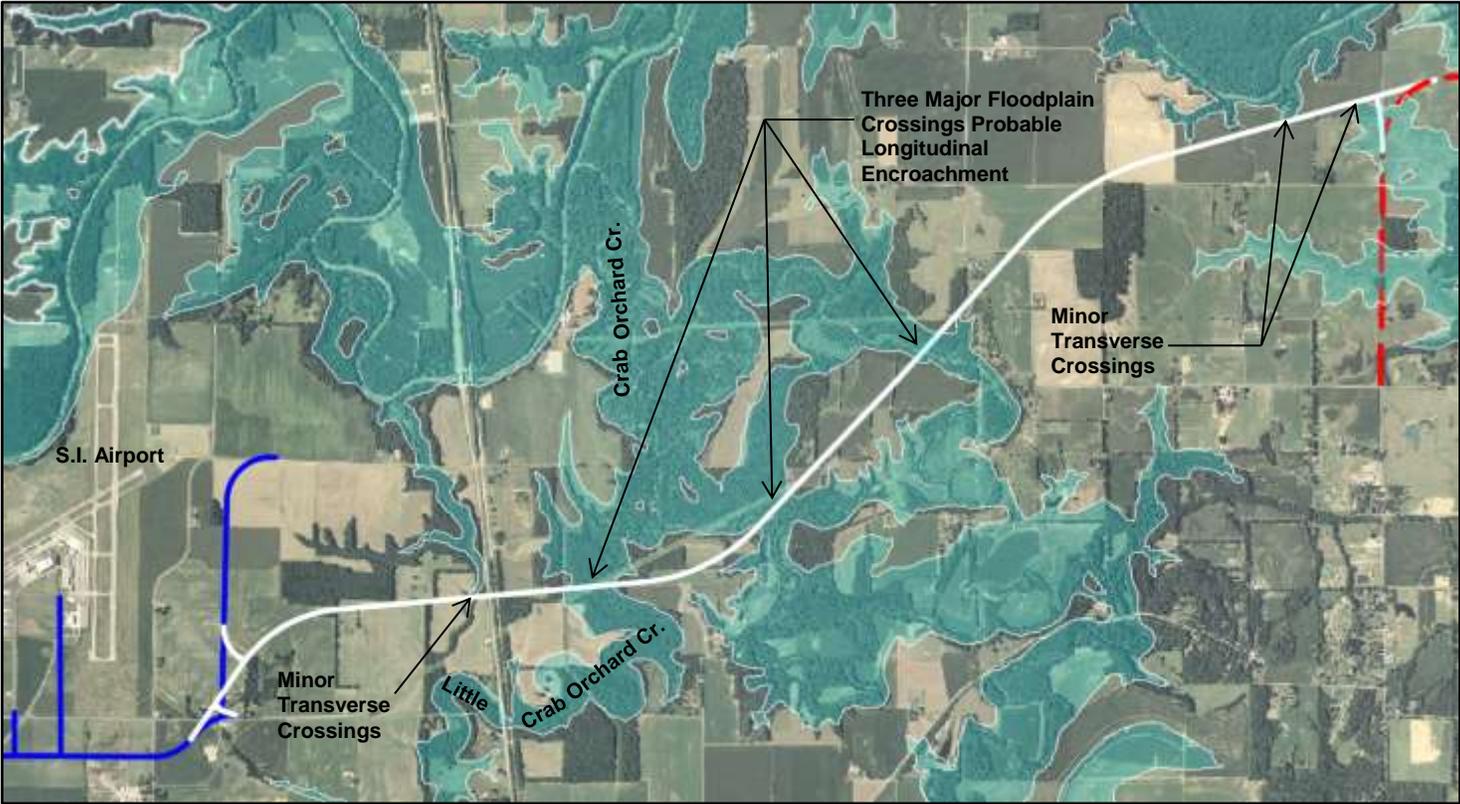


Figure 24

Additionally, this alternative crosses two sections of the floodplain that are designated as a Regulatory Floodway (See **Figure 25**). These crossings would require compensatory storage, additional permitting and hydraulic analysis.

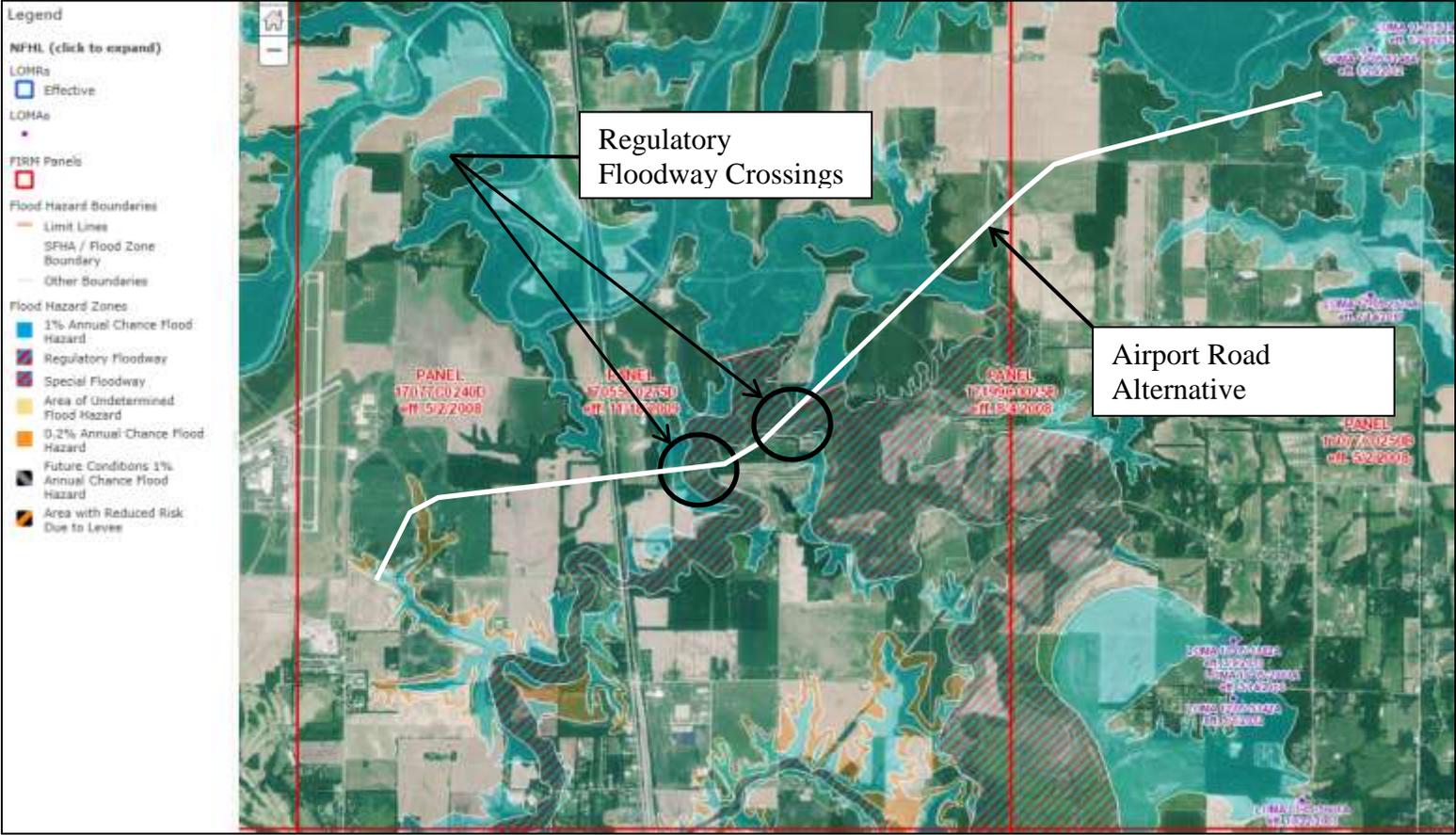


Figure 25

c. Railroad Crossing

The Airport Road Alternative will also require an overpass for the Canadian National Railroad and US 51. A preliminary plan view for this overpass is shown in **Figure 26** below. The overpass would be approximately 1,100' in length. A two lane connector road to US 51 will also be needed as shown in **Figure 26**.



Figure 26

d. Safety Benefits

Similar to the Fox Farm Road Alternative, this alternative will not have a direct impact on any of the identified 5% segments or intersections. This alternative would have the same indirect benefits on the Dillinger Road

locations as the Fox Farm Alternative. It would also have the same indirect benefits on crashes at the intersection of Cambria Road and IL 13.

e. Traffic Benefits

The Airport Road Alternative would provide the same traffic benefits as the Fox Farm Alternative, providing a safer and more direct connection to IL 13 and Carbondale from the Herrin/Colp/Carterville/Blairsville/Hurst area. The Airport Road Alternative would provide a convenient alternative connection for all of the major traffic generators shown in **Figure 27** and would provide a more direct connection to the Southern Illinois Airport. This corridor would also provide the same convenient alternative connection eastward to Interstate 57 as does the Fox Farm alternative.

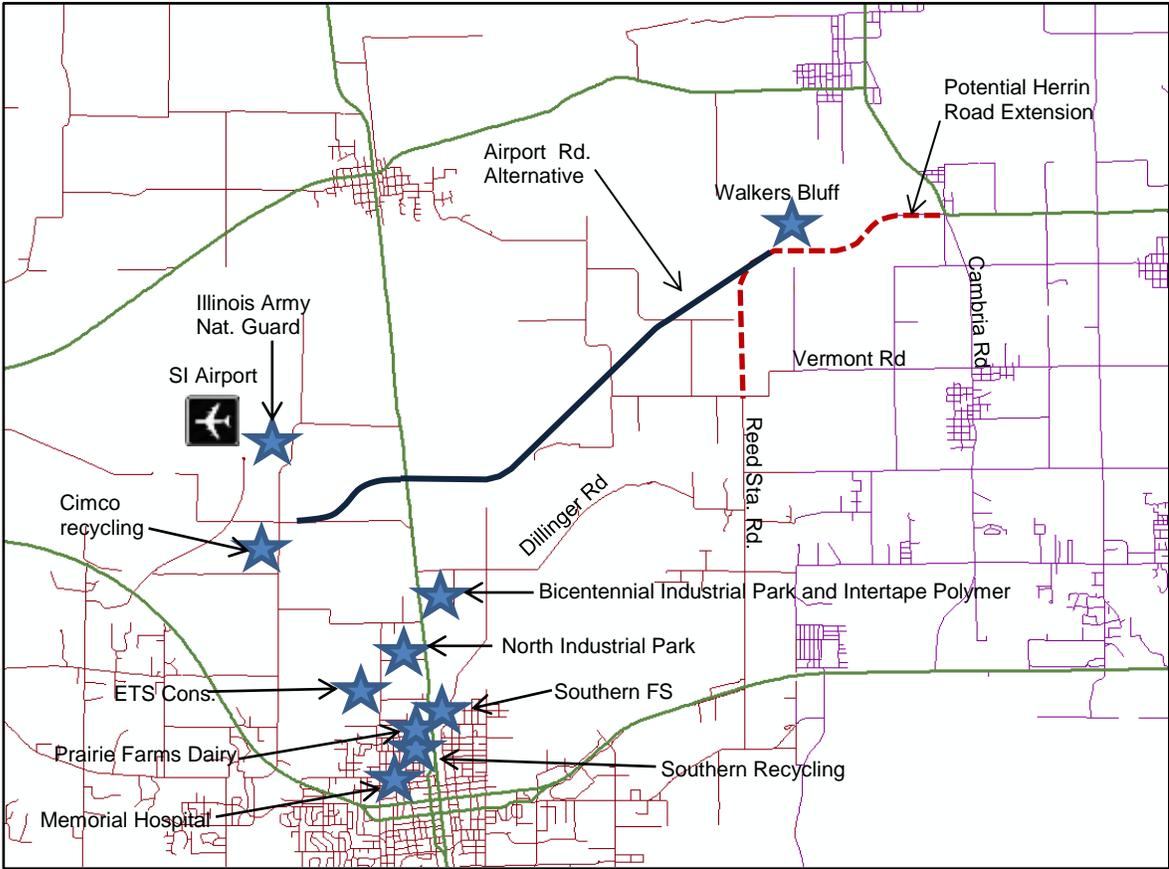


Figure 27

f. Economic Development

The Airport Road Alternative would provide similar economic potential benefits as the Fox Farm Alternative. The existing Industrial Parks would have an improved corridor to access Interstate 57. The Southern Illinois Airport would also have a direct connection to the

Herrin Road extension that would include an overpass over the Canadian National Railroad and US 51. The additional access provided by this alternative could also spur additional development at the airport facility.

g. Environmental Impacts

The primary environmental impact of the Airport Road Alternative is 7.1 acres of Forested Wetland impact where the alternative crosses the floodplain of the Big Muddy River (see **Figure 28**). Riverine Wetlands (1.3 Acres) would also be impacted at 7 stream crossings in the floodplain. In addition, 0.6 acres of freshwater pond wetland would be impacted for a total of 9.0 acres of wetland impacts. A total of 25.4 acres of woodlands would be impacted at various locations along the alignment. Impacts to the Indiana Bat could occur from the woodland impacts. This alternative would require a significant environmental mitigation program. Wetland replacement would likely be around 3:1 resulting in a need for more about 27 acres of wetland replacement. Replacement tree plantings would also be significant with at least a 1:1 replacement ratio required. An Individual 404 permit would be required from the Army Corps of Engineers due to the wetland impacts. The level of environmental processing for this alternative would be at least an Environmental Assessment (EA) and an Environmental Impact Statement (EIS) could be required. Either of these environmental documents would be quite expensive and would require at a minimum a couple of years to complete.

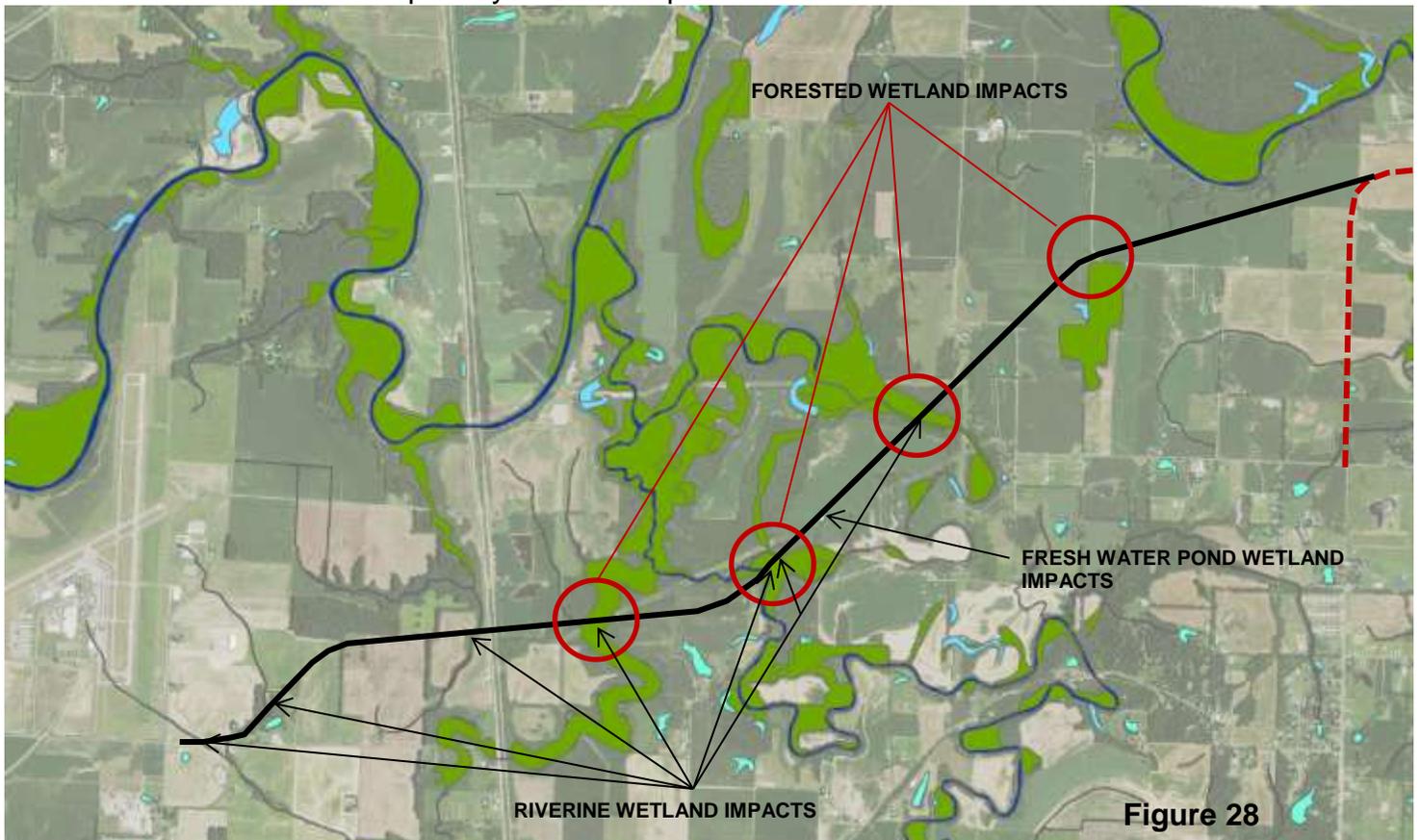


Figure 28

h. Property Impacts

Impacts to private property would primarily be to existing farmed ground. Some areas of woodland in private ownership would also be acquired. Impacts to residential property are largely avoided with this alternative.

i. Cost

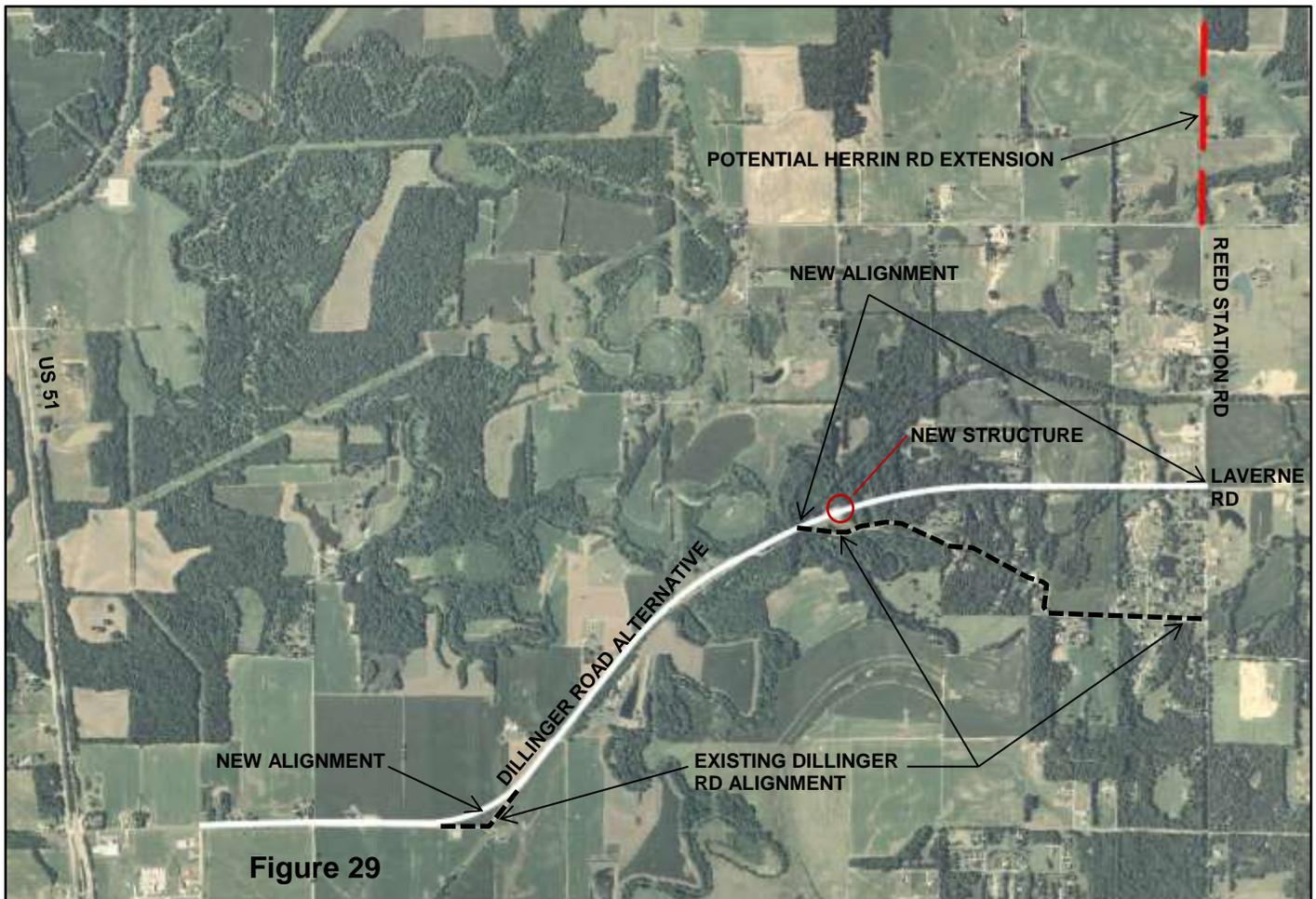
The Airport Road Alternative is estimated to cost approximately \$48.1 Million (See **EXHIBIT 7-3**) making it the most expensive alternative.

D. Dillinger Road Alternative

a. General Description

The eastern terminus of the Dillinger Road Alternative will vary depending on how much of the existing roadway alignment is utilized. Except for a short paved section between US 51 and McRoy Drive, existing Dillinger Road is relatively narrow with a 20' wide oil and chip surface and 2' wide sod shoulders. The existing vertical and horizontal alignment is also substandard contributing to the higher than average crash rate previously discussed in part D of the Existing Conditions Section.

One Alternative would be to relocate Dillinger Road directly across from Laverne Road. This alternative would eliminate all but one of the substandard horizontal curves but would also require a new structure over Crab Orchard Creek and would also have greater environmental and property impacts (See **Figure 29**). Also shown in **Figure 29** is a relocation of a very sharp curve west of Marion Street, this location is also within an identified 5% segment.



Another alternative would be to straighten the deficient curves while using as much of the existing alignment as practical and possibly utilizing the existing structure over Crab Orchard Creek. A preliminary configuration of this alternative is shown in **Figure 30**. This option would reduce the cost and environmental impacts of the Dillinger Road Alternative. However, due to the existing narrow width, major reconstruction would still be needed to meet the recommended design criteria.

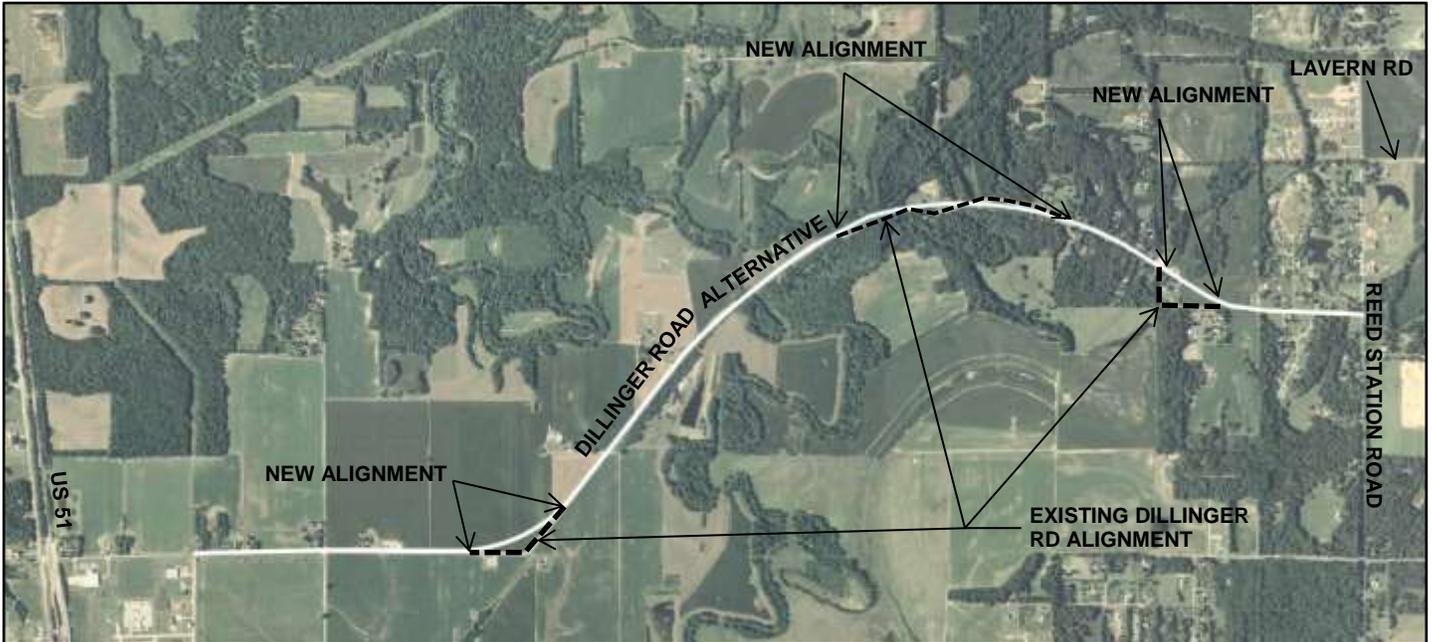


Figure 30

b. Big Muddy River

The Dillinger Road Alternative does not cross the Big Muddy River; however, it does cross Crab Orchard Creek and the floodplain of the Big Muddy River as shown in **Figure 31**. The Crab Orchard Creek Structure (039-3097) was constructed in 1968 by Jackson County. The structure is 287' long and has 5 spans. The longest span is 57'. The structure has a clear width for traffic of 27.3'. The structure is in relatively good condition with a Deck Condition rating of 8 and a sufficiency rating of 83.9. The structure width is slightly below the recommended Design Criteria to remain in place (minimum 28') for new construction or even a 3R improvement. If this alternative was selected for implementation a policy improvement would require replacing the structure along with the roadway improvements. Another reasonable option would be to utilize the structure for its remaining useful life before replacing it with a wider structure in the future. The

cost estimate for this alternative includes a range of options some of which would replace the structure while others would utilize the existing structure.

This alternative crosses the floodplain of the Big Muddy River at three locations. The smaller crossings are transverse so the impacts would be relatively minor. The larger crossing could be on existing roadway embankment or on new alignment depending on the option selected for this alternative. A crossing on existing alignment would have no new impacts to the floodplain, a crossing on new alignment would have some impact but these could be mitigated by removal of the existing roadway embankment.

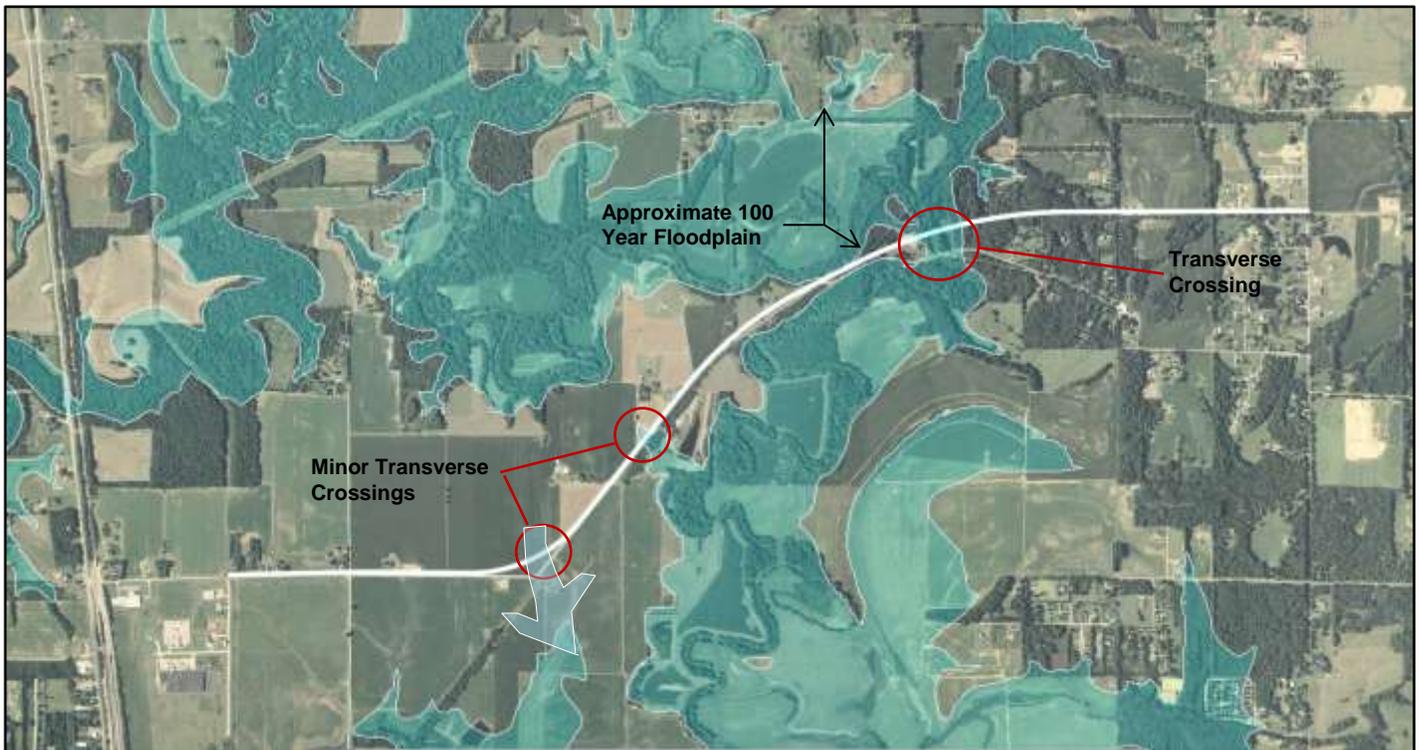


Figure 31

Additionally, this alternative crosses a section of the floodplain that is designated as a Regulatory Floodway (See **Figure 32**). Depending on the final alternative this crossing could be on existing alignment or new alignment. In either case, placement of fill in the regulatory floodway would require compensatory storage, additional permitting requirements and detailed hydraulic analysis.

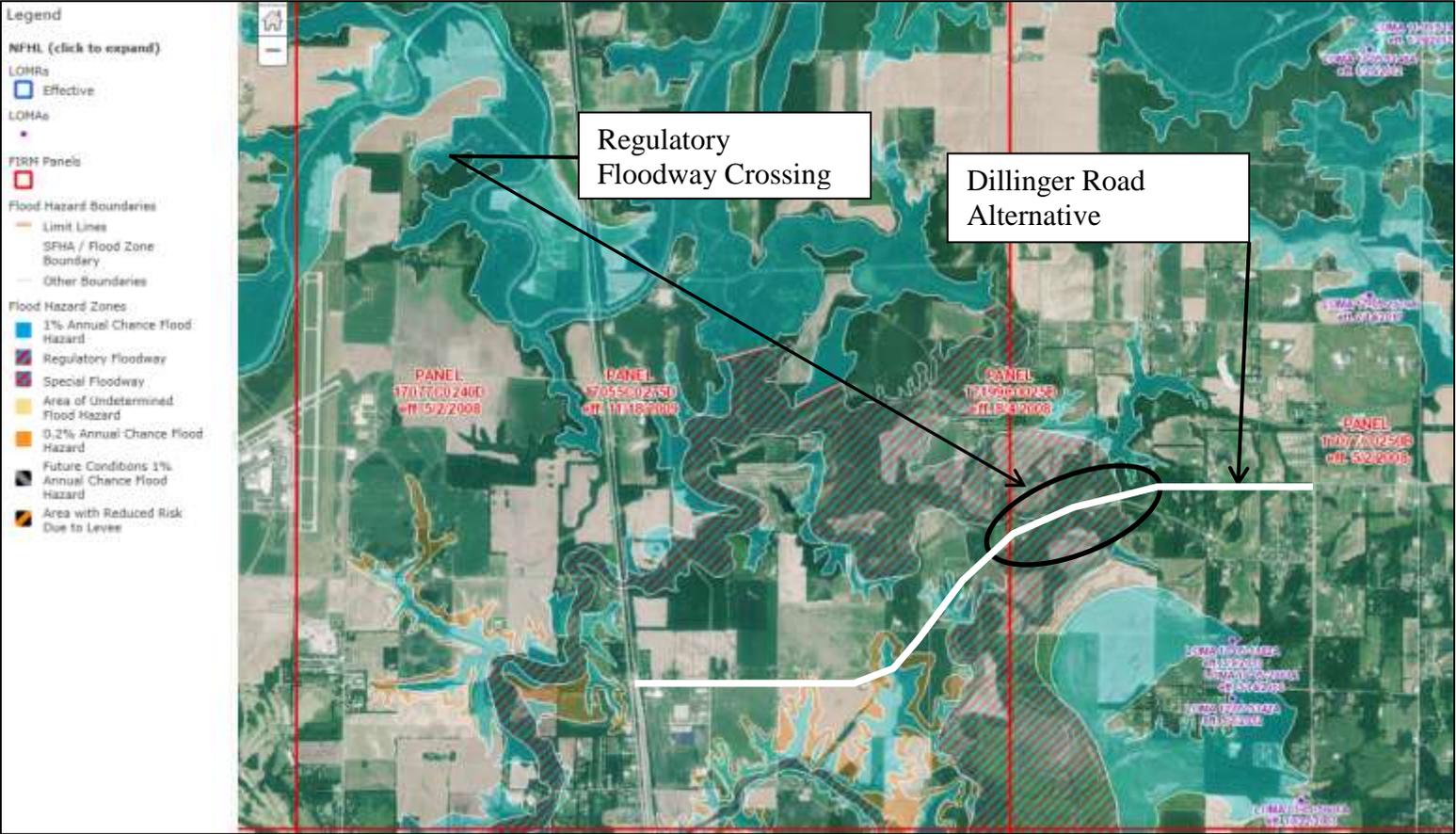


Figure 32

c. Railroad Crossing

This Alternative would utilize the existing Dillinger Road at grade railroad crossing. This crossing is protected with lights and gates.

d. Safety Benefits

Implementation of this alternative would have a positive impact on two 5% locations along Dillinger Road (see **Figure 33**). As shown in **Figure 33**, much of Dillinger Road between Reed Station Road and US 51 has been identified as 5% segment. For the years 2011 through 2015 the total number of crashes on Dillinger Road from Reed Station Road to US 51 was 25, of these, 16 occurred in the identified 5% segments. There were also 9 total injuries with 6 of these occurring in the 5% segments. Ten of these crashes were roadway departure type and likely attributable to the existing narrow pavement, substandard horizontal alignment and narrow shoulder. The crash types, injuries and other data are shown in **Table 5**.

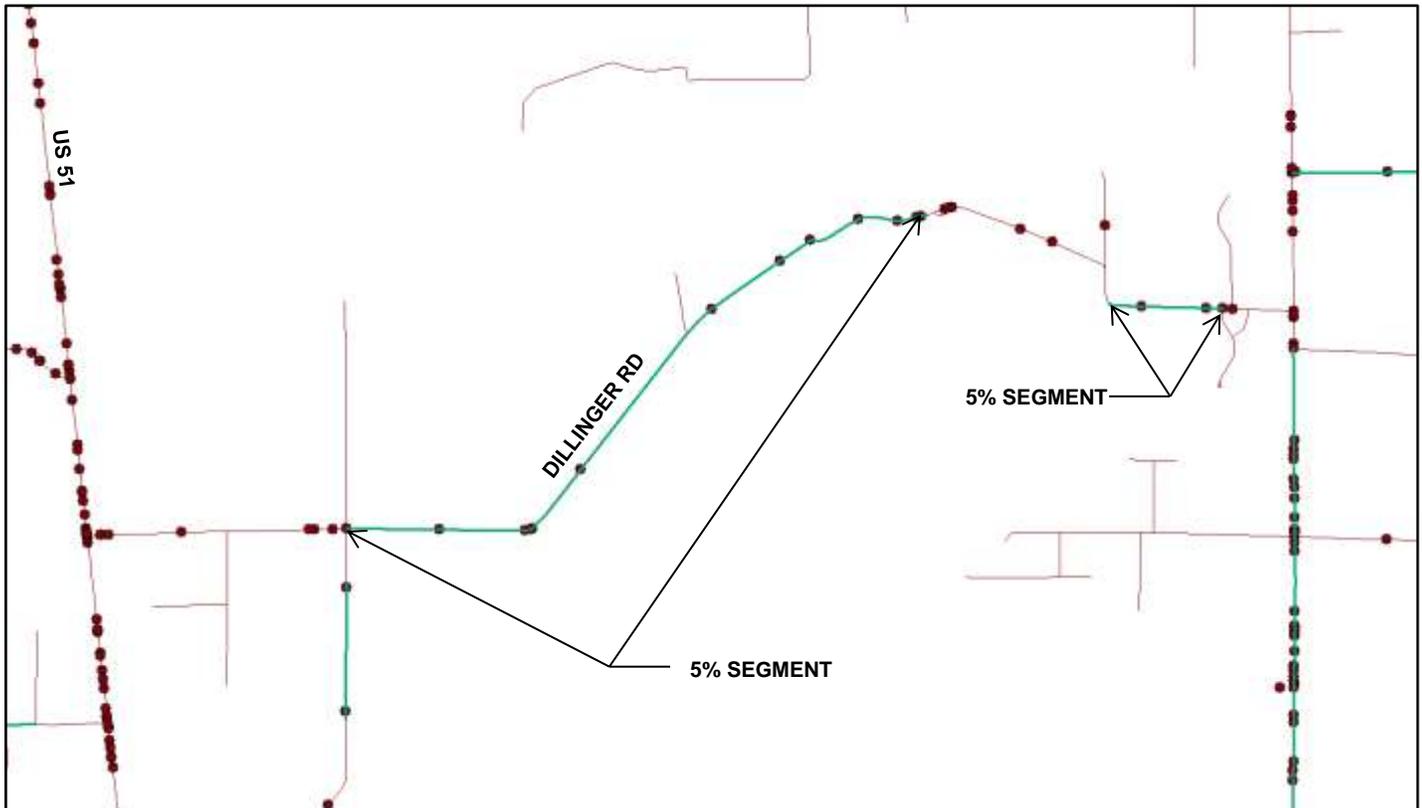


Figure 33

Table 5

Year	No. Injuries	Crash Type	Lighting	Driver	Injury Type	5% Segment
2013	0	Angle	Darkness	Normal	PD	No
2015	0	Animal	Darkness	Normal	PD	No
2013	0	Animal	Darkness	Normal	PD	Yes
2011	0	Animal	Daylight	Normal	PD	Yes
2011	0	Animal	Darkness	Normal	PD	Yes
2011	0	Animal	Darkness	Normal	PD	No
2011	0	Animal	Darkness	Normal	PD	Yes
2015	0	Fixed Object	Darkness	Normal	PD	No
2015	0	Fixed Object	Darkness	Had Been Drinking	PD	Yes
2014	1	Fixed Object	Darkness	Had Been Drinking	B-Injury	Yes
2013	1	Fixed Object	Darkness	N/A	B-Injury	No
2012	0	Fixed Object	Darkness	Normal	PD	Yes
2012	0	Fixed Object	Daylight	Normal	PD	Yes
2011	0	Fixed Object	Daylight	Normal	PD	No
2011	0	Fixed Object	Dusk	Normal	PD	Yes
2011	0	Fixed Object	Daylight	Other/Unknown	PD	Yes
2012	2	Other Non-Collision	Darkness	Alcohol Impaired	A-Injury	No
2015	0	Overtaken	Darkness	Alcohol Impaired	PD	No
2014	1	Rear End	Daylight	Normal	B-Injury	Yes
2014	0	Rear End	Daylight	Other/Unknown	PD	Yes
2014	0	Sideswipe Opp. Dir.	Daylight	Other/Unknown	PD	No
2011	2	Sideswipe Opp. Dir.	Daylight	Normal	A-Injury	Yes
2015	0	Turning	Daylight	Normal	PD	Yes
2014	2	Turning	Dusk	Normal	C-Injury	Yes
2011	0	Turning	Daylight	Normal	PD	Yes

e. Traffic Benefits

In conjunction with an extension of Herrin Road the Dillinger Road Alternative would provide some of traffic benefits provided by the Airport Road and Fox Farm Alternatives. This corridor would provide a convenient alternative connection to most of the major traffic generators shown in **Figure 34**. This Alternative would not serve the Southern Illinois Airport and Cimco recycling as well as the Fox Farm and Airport Road Alternatives but it would provide good service to the Bicentennial Industrial Park. A disadvantage of this alternative is that it requires a left turn (eastbound traffic) or right turn (westbound traffic) at Reed Station Road to make the connection with the Herrin Road Extension. This disadvantage is more pronounced (due to increased adverse travel) if Dillinger Road is

not realigned to connect with Reed Station Road across from Lavern Road. This alternative would also require improvements to the unimproved section of Reed Station Road from the Vermont Road intersection southward to Lavern Road.

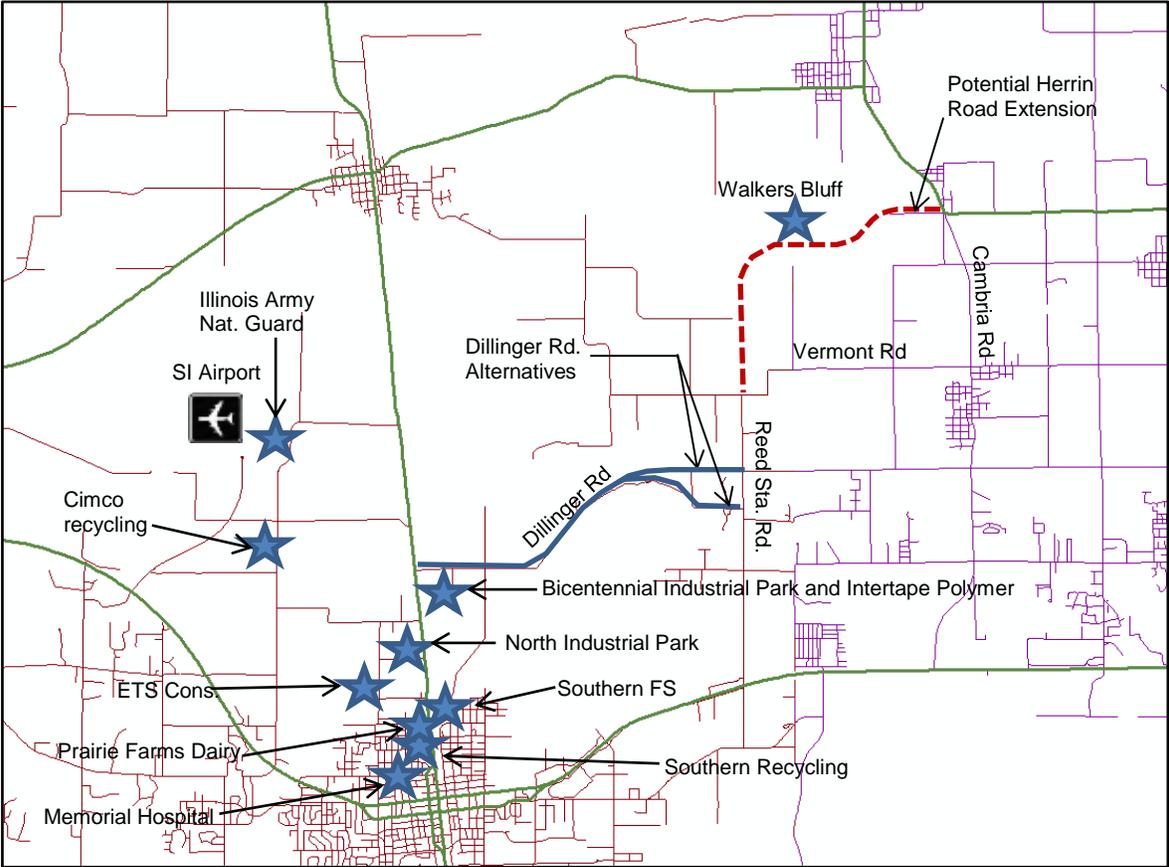


Figure 34

f. Economic Development

This alternative would enhance the transportation facilities serving the Bicentennial Industrial Park and could spur additional development at that location. However, the alternative does provide as much potential for economic benefit to the Southern Illinois Airport as does the Airport Road or Fox Farm Alternatives.

g. Environmental Impacts

The environmental impacts of this alternative would vary depending on how much of the existing Dillinger Road alignment is utilized. The maximum environmental impacts would be 1.3 acres of wetland impacts and 13.1 acres of woodland impacts with associated Indiana Bat habitat impacts. These impacts would occur from the alternative which includes a relocation of Dillinger Road to align with Lavern Road as shown below in **Figure 35**. These impacts would be significantly reduced by alternatives which utilize more of the existing Dillinger Road alignment.

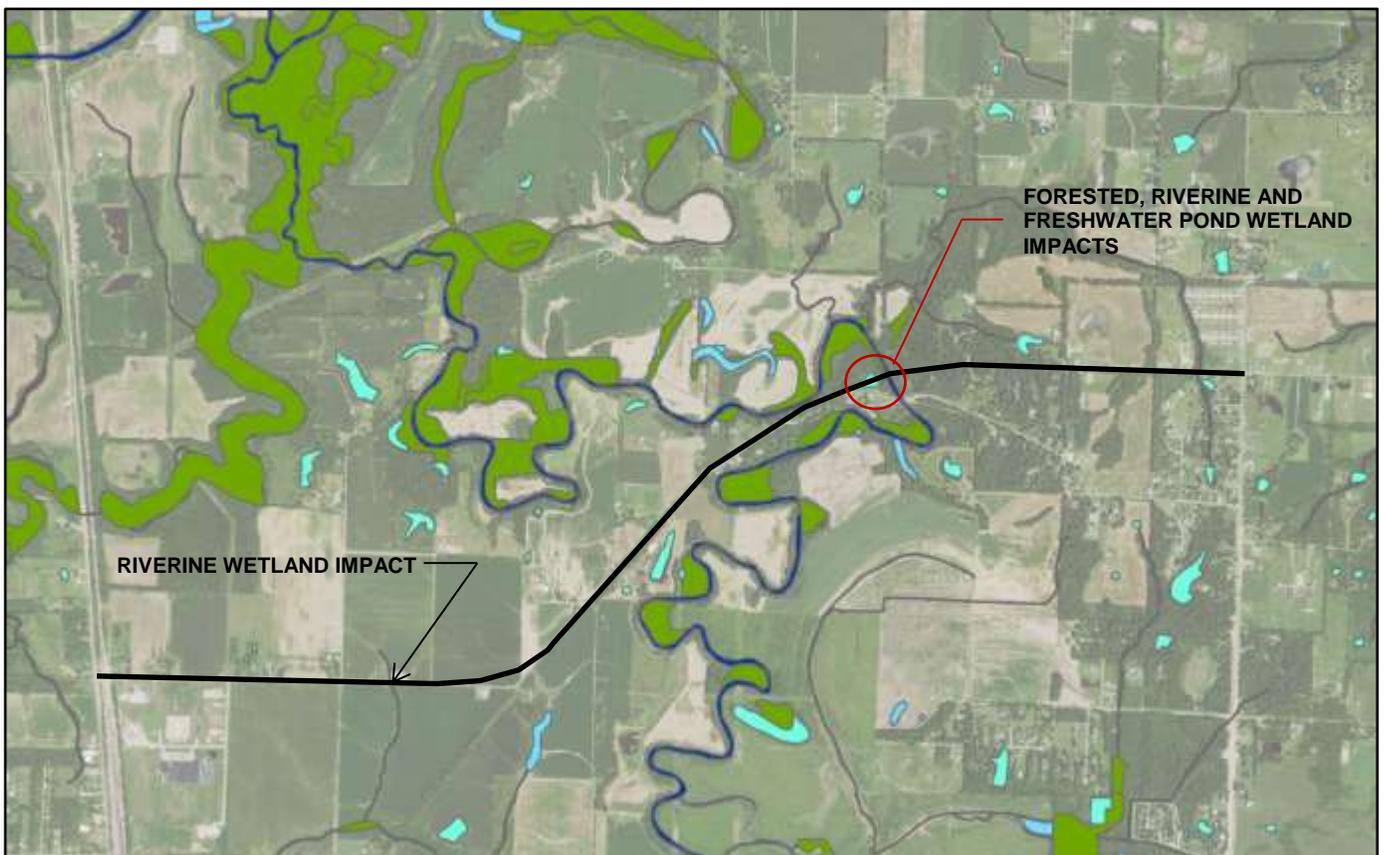


Figure 35

h. Property Impacts

The property impacts for this alternative would also vary significantly depending on how much of the existing alignment is utilized. In any case this alternative would have the least amount of impact to farm lands. The impacts to residential property, however, would be significant, especially if the realignment across from Lavern Road is implemented. This option would significantly impact at least 10 residential properties as shown in **Figure 36** below.

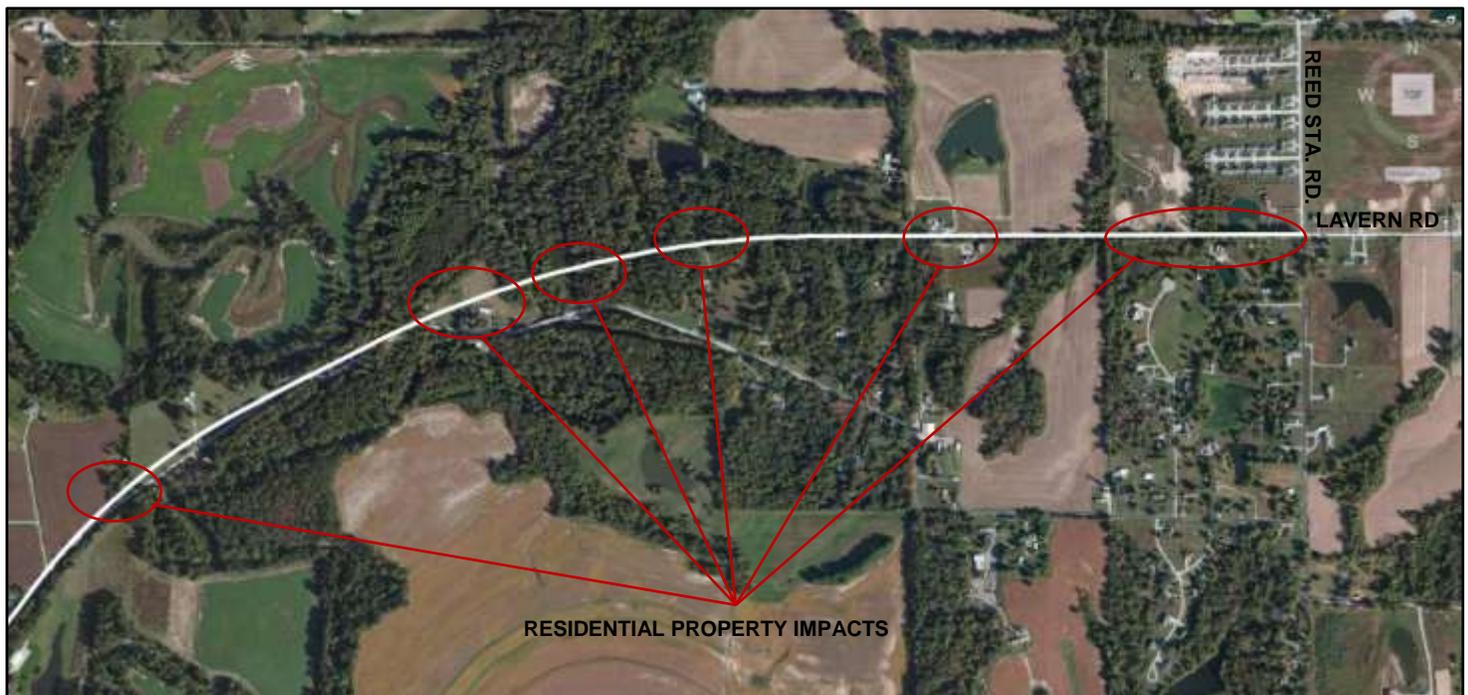


Figure 36

i. Cost

The cost for the Dillinger Road Alternative would vary from about \$10 Million for an alternative that primarily uses the existing alignment to about \$18.9 Million (**See Exhibit 7-4**) for an alternative that utilizes a relocation across from Lavern Road and requires a new structure over Crab Orchard Creek. In any case, this alternative would be similar in cost to the North Reed Station Road Alternative making these the least expensive of the build alternatives considered.

Public Involvement

A public meeting to solicit comments regarding this study was held on February 14, 2017 from 4:30 p.m. to 6:30 p.m. at Herrin City Hall. The meeting was attended by approximately 25 people. The handout, attendance list, online survey results and public comments received are included in **Exhibit 8**.

A total of 10 written comments were received. Of the comments received, 8 were supportive of the concept for a Reed Station to US 51 connection, 2 commenters expressed concern that the project was too expensive and designed to primarily benefit the Walker's Bluff development. There were 4 comments favoring the Airport Road Alternative, 2 favoring Dillinger Road and 1 favoring the North Reed Station Road Alternative.

An online survey was also made available and it received 7 responses. Five responders indicated that a new or improved corridor was needed, while 2 responders indicated these improvements were not needed. Four responders indicated that a new corridor would be more desirable while 3 responders indicated that improvements should be focused on existing roadways. The alternative preference among the online responses was mixed with 2 responders each favoring the Airport Road, Fox Farm Road and Dillinger Road alternatives, while only one responder favored the North Reed Station Road alternative.

Conclusions/Recommendations

A. Evaluation Matrix

A comparison matrix of the alternatives was prepared to provide an analysis of how well each met the established comparison criteria and to also compare the various impacts. The alternatives were scored separately on 9 different criteria and those scores were combined to provide a composite score. The result of that analysis is shown in **Table 6** below.

ALTERNATIVE EVALUATION MATRIX										
ALTERNATIVE	FLOODPLAIN IMPACTS	CANADIAN NATIONAL RR	SAFETY	CAPACITY/TRAVEL TIME BENEFITS	ECONOMIC POTENTIAL	ENV & WETLAND IMPACTS	FARM LAND IMPACTS	RESIDENTIAL PROPERTY IMPACTS	COST	COMPOSITE SCORE
NORTH REED STATION ROAD	BEST	POOR	FAIR	POOR	POOR	GOOD	POOR	GOOD	BEST	11
FOX FARM ROAD	POOR	BEST	BEST	BEST	BEST	POOR	POOR	FAIR	POOR	13
AIRPORT ROAD	POOR	BEST	BEST	BEST	BEST	POOR	POOR	GOOD	POOR	14
DILLINGER ROAD	BEST	FAIR	GOOD	FAIR	FAIR	GOOD	GOOD	POOR	BEST	15
BEST = 3, GOOD = 2, FAIR = 1, POOR = 0 For Environmental Impacts LOW = 3, MODERATE = 2, HIGH = 0										

Table 6

The North Reed Station Road alternative has the lowest score primarily because it is too far north to provide the economic and traffic benefits that are desired, this alternative's low cost and relatively minor environmental and property impacts were beneficial to its overall score. The Fox Farm Road and Airport Road alternatives are very similar and therefore have a nearly identical score. These alternatives scored well in the economic and traffic benefits criteria but scored poorly in the environmental, floodplain, cost and farm land impacts criteria. The Dillinger Road alternative received the highest score because it scored poorly in only one category (residential property impacts). An improved Dillinger Road would not provide the same traffic and economic benefits as the Fox Farm and Airport Alternatives, but it would provide some benefit with much less cost and environmental impacts.

B. Recommendations

a. North Reed Station Road Alternative

Further consideration of the North Reed Station Road alternative is not recommended; this alternative does not meet the stated purpose and need of providing and improved roadway connection from Reed Station Road to US 51 north of Carbondale.

b. Fox Farm Road Alternative

Of the two alternatives that provide a complete new facility, the Fox Farm Road alternative does not serve the Southern Illinois Airport and other major traffic generators as well as the Airport Road alternative and it also has more significant property impacts. **Therefore, further consideration of the Fox Farm Road Alternative is not recommended.**

c. Airport Road Alternative

Of all the alternatives, the Airport Road alternative most effectively fulfills the stated purpose and need. However, the cost and environmental impacts are a significant hurdle to the implementation of this alternative. **This alternative should be considered a long range plan with further consideration given if the Herrin Road Extension is constructed.**

d. Dillinger Road Alternative

The Dillinger Road alternative fulfills the purpose and need to a lower degree than the Airport Road alternative but with lower cost and impacts while also addressing a roadway segment with a significant safety problem. **This alternative should be the focus for roadway improvements in the near term. Additionally, the section of Reed Station Road from the Lavern Road intersection northward to Vermont road should be targeted for improvement.** An extension of Herrin Road, coupled with improvements to Reed Station Road and Dillinger Road would be a significant improvement to the existing roadway network and would serve the identified purpose and need (improved connection from Reed Station Road to US 51 north of Carbondale) reasonably well.

EXHIBIT 1

LOCATION AND ROADWAY CLASSIFICATION MAP

LOCATION AND ROADWAY CLASSIFICATION MAP

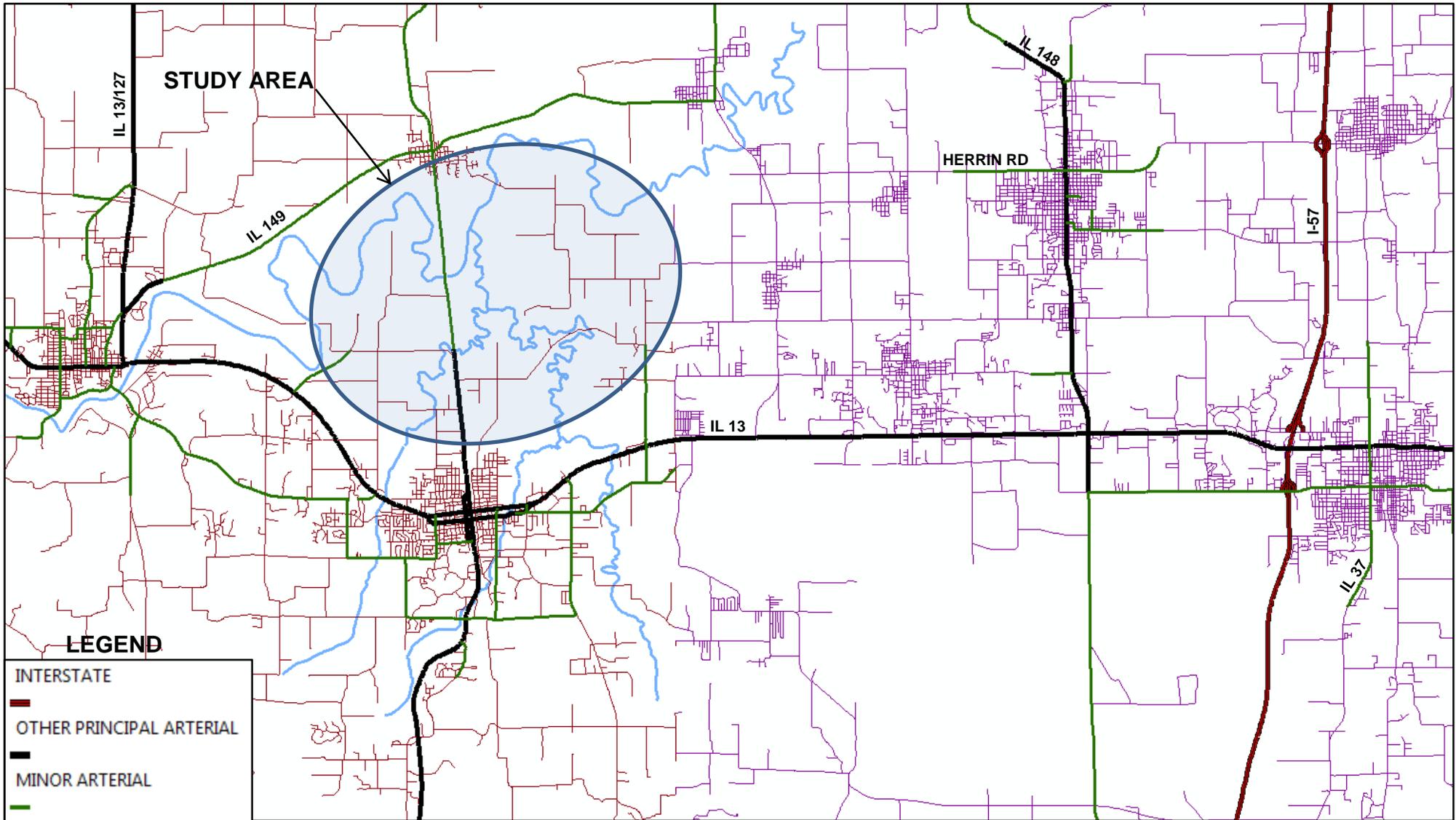


EXHIBIT 2

IRIS DATA AND PHOTOGRAPHS

ILLINOIS ROADWAY INFORMATION SYSTEM DATA

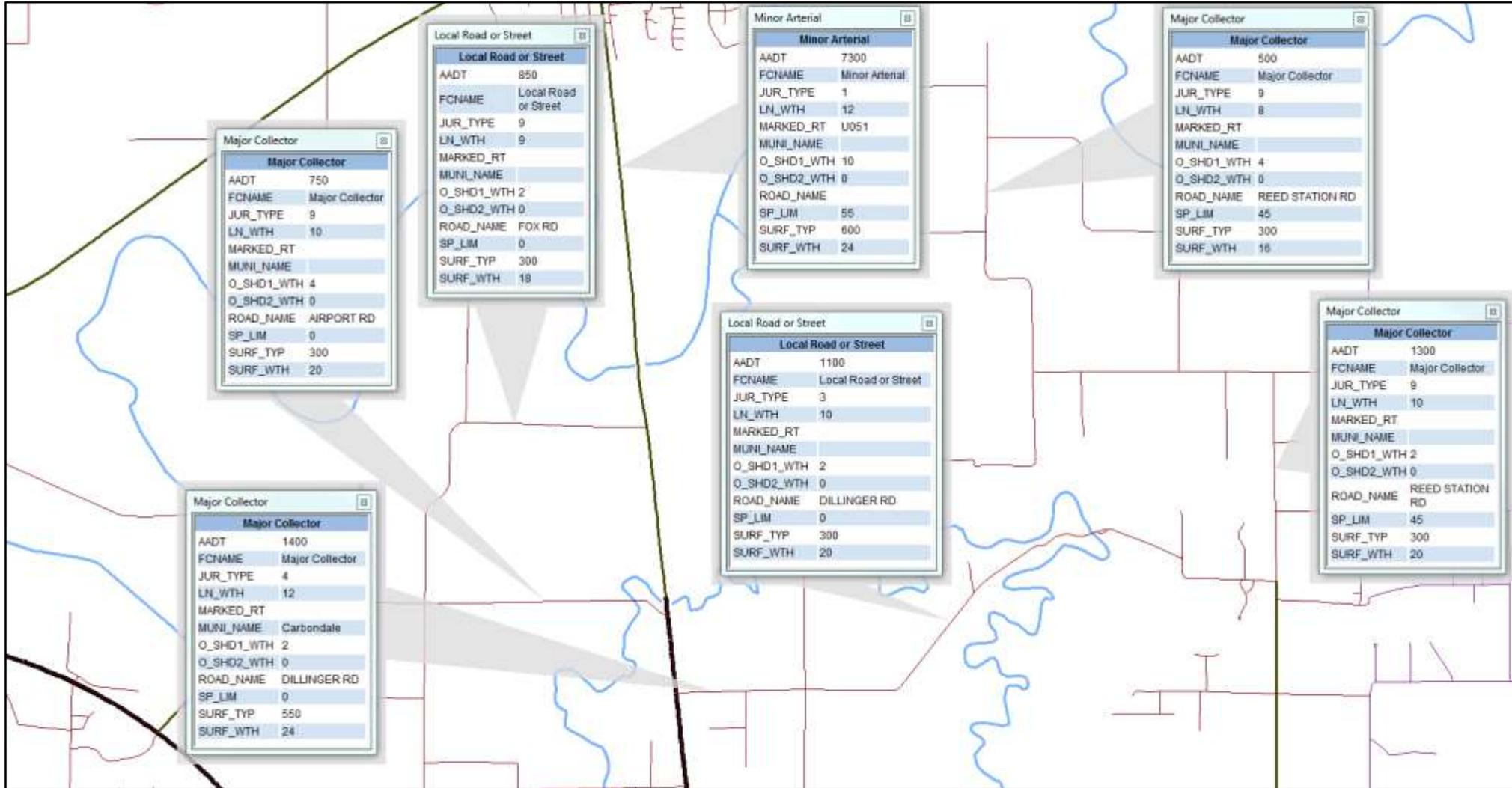


EXHIBIT 2-1

US 51 LOOKING NORTH AT DESOTO



EXHIBIT 2-2

US 51 LOOKING SOUTH AT THE BIG MUDDY RIVER



US 51 LOOKING SOUTH NEAR FOX FARM ROAD



US 51 LOOKING SOUTH AT LITTLE CRAB ORCHARD CREEK



EXHIBIT 2-5

US 51 LOOKING SOUTH NEAR DILLINGER ROAD



EXHIBIT 2-6

US 51 LOOKING SOUTH NEAR INDUSTRIAL PARK ROAD



EXHIBIT 2-7

AIRPORT ROAD LOOKING NORTH AT THE SI AIRPORT ENTRANCE



AIRPORT ROAD LOOKING EAST TOWARD NEW ERA ROAD



EXHIBIT 2-9

AIRPORT ROAD LOOKING EAST AT NEW ERA ROAD



EXHIBIT 2-10

AIRPORT ROAD LOOKING EAST NEAR GEORGIA ROAD



AIRPORT ROAD LOOKING EAST AT LITTLE CRAB ORCHARD CREEK



AIRPORT ROAD LOOKING EAST AT US 51



EXHIBIT 2-13

FOX FARM ROAD LOOKING EAST AT US 51



EXHIBIT 2-14

FOX FARM ROAD LOOKING WEST NEAR US 51



EXHIBIT 2-15

FOX FARM ROAD LOOKING EAST NEAR US 51



EXHIBIT 2-16

FOX FARM ROAD LOOKING EAST AT KOONCE ROAD



EXHIBIT 2-17

FOX FARM ROAD LOOKING WEST AT KOONCE ROAD



EXHIBIT 2-18

DILLINGER ROAD LOOKING WEST AT REED STATION ROAD



EXHIBIT 2-19

DILLINGER ROAD LOOKING SOUTH AT RUSSELL ROAD



DILLINGER ROAD LOOKING WEST AT RUSSELL ROAD



EXHIBIT 2-21

DILLINGER ROAD LOOKING WEST AT CRAB ORCHARD CREEK



EXHIBIT 2-22

DILLINGER ROAD LOOKING EAST AT CURVE EAST OF MARION ST



EXHIBIT 2-23

DILLINGER ROAD LOOKING WEST AT THE BICENTENNIAL INDUSTRIAL PARK



NORTH REED STATION ROAD LOOKING WEST NEAR DESOTO



EXHIBIT 2-25

NORTH REED STATION ROAD LOOKING EAST NEAR DESOTO



EXHIBIT 2-26

NORTH REED STATION ROAD LOOKING NORTH AT INDIAN HILL CEMETERY



NORTH REED STATION ROAD LOOKING EAST AT INDIAN HILL CEMETERY



EXHIBIT 2-28

NORTH REED STATION ROAD LOOKING EAST AT CREEKSIDER LANE



EXHIBIT 2-29

EXHIBIT 3

EXISTING STRUCTURES AND PHOTOGRAPHS

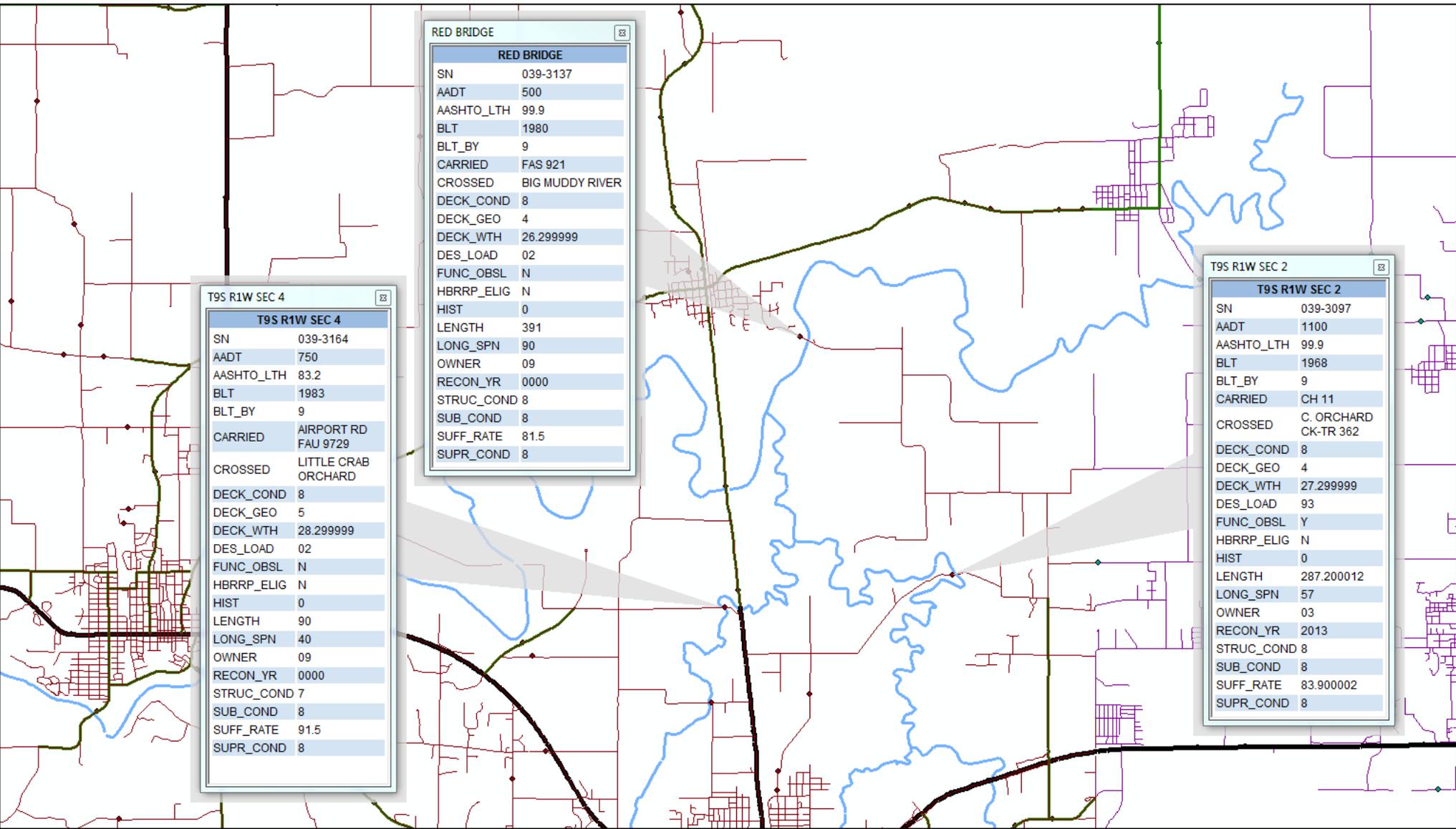


EXHIBIT 3-1

STRUCTURE 039-3164 OVER LITTLE CRAB ORCHARD CREEK LOOKING EAST



EXHIBIT 3-2

STRUCTURE 039-3137 OVER THE BIG MUDDY RIVER



EXHIBIT 3-3

STRUCTURE 039-3097 OVER CRAB ORCHARD CREEK – LOOKING WEST



EXHIBIT 3-4

STRUCTURE 039-3097 OVER CRAB ORCHARD CREEK – LOOKING EAST



EXHIBIT 3-5

STRUCTURE 039-3097 OVER CRAB ORCHARD CREEK – LOOKING NORTHWEST

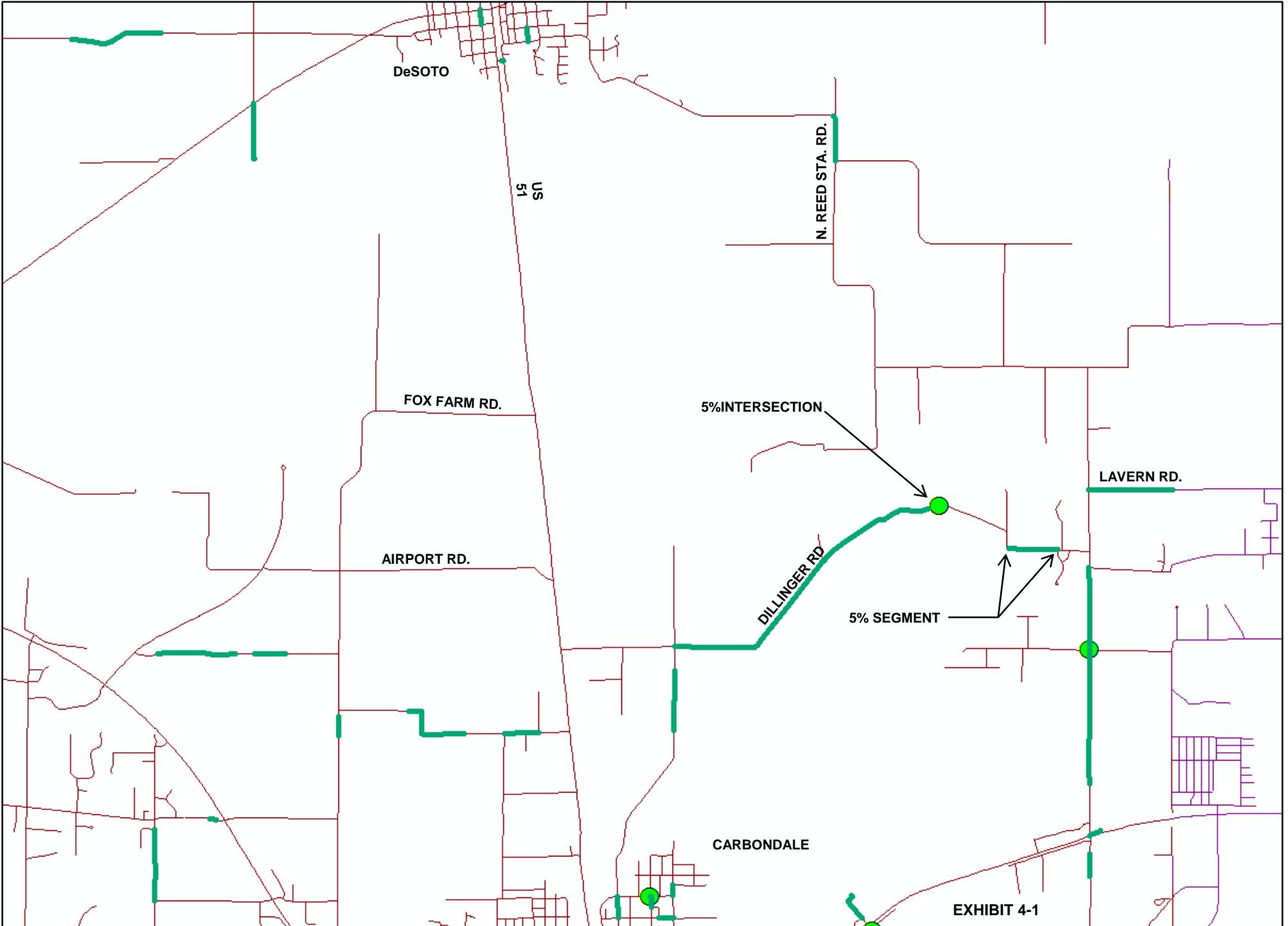


EXHIBIT 3-6

EXHIBIT 4

5% LOCATIONS AND FATAL/INJURY CRASHES

LOCAL 5% SEGMENTS AND INTERSECTIONS



FATAL AND INJURY CRASHES

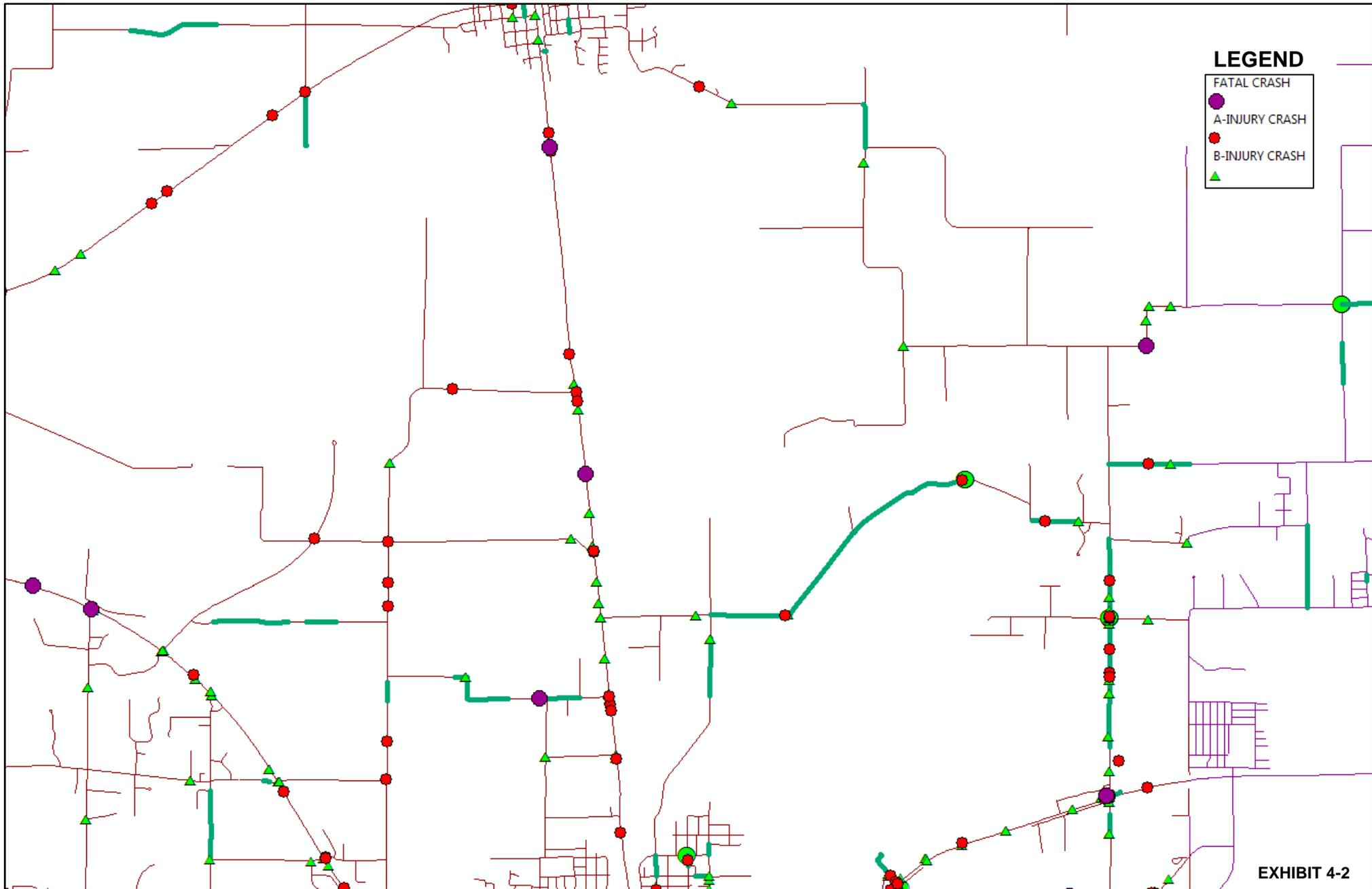


EXHIBIT 5

UTILITIES

Mapping

(37.806569/-89.221403)

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+ - m Roads Seg Blk Line Dist x f Near 150ft ? Clear

Home Search Places Lat/Long Grids Layers

Find Street Intersection Clear Work Area

Zoom Work Area Place County Found Flags

Highlight Street Cross All Clear

Zoom Zoom Zoom

Search Parcel Address Pt Show Parcels Address Pts Clear

Swap Street < Cross Web Google Bing

Place Check Grids Clear Work Area Size Check

Work Information

Work Type

Extent

Expand Last Word Expanded Word List Abbreviations

Boring Depth >7FT Premarked

Done For

Begin Date 06/10/2017 Sat Time 08:00 AM CT NORM 115:17

Dig By Date Expires Date

06/20/2017 11:59:59 PM Tue 07/04/2017 11:59:59 PM Tue

Remarks

Expand Last Word Expanded Word List Abbreviations

Members

Code	Name	Type	By
CIPSSA	AMEREN CIPS	E&G	S
CLWV0A	CLEARWAVE COMMUNICATIONS	PHON	S
DESO0A	DESOTO VILLAGE OF	S&W	G
EGEC0A	EGYPTIAN ELECTRIC COOP	ELEC	G
FRNT1A	FRONTIER COMMUNICATIONS (SOUTH)	PHON	S
MCI0A	MCI	PHON	S
TCIIA	MEDIACOM	CATV	S
USIC0A	USIC LOCATING SERVICES	LOCT	R
WWFR0A	ZAYO/FNA 360 NETWORKS	FIBR	S

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Mapping



+ - m Roads Seg Blk Line Dist x f Near 150ft ? Clear

Home Search Places Lat/Long Grids Layers

Find Street Intersection Clear Work Area

Zoom Work Area Place County Found Flags

Highlight Street Cross All Clear

Zoom Zoom Zoom

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Place Check Grids Clear Work Area Size Check

Work Information

Work Type

Extent

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Remarks

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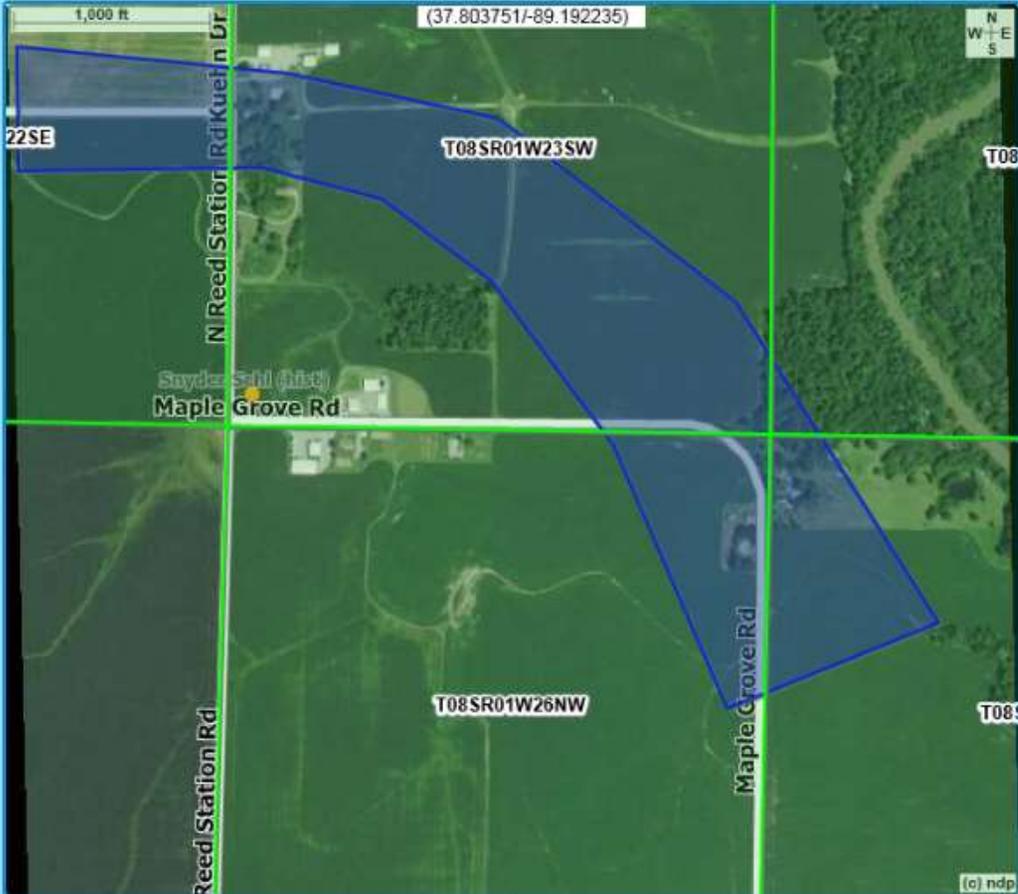
Members

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BLWD0A	BLAIRSVILLE PUBLIC WATER DISTRICT	S&W	G
CLWV0A	CLEARWAVE COMMUNICATIONS	PHON	S
DESO0A	DESOTO VILLAGE OF	S&W	G
EGEC0A	EGYPTIAN ELECTRIC COOP	ELEC	G
FRNT1A	FRONTIER COMMUNICATIONS (SOUTH)	PHON	S
TCIIA	MEDIACOM	CATV	G
USIC0A	USIC LOCATING SERVICES	LOCT	R

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Mapping



+ - m Roads Seg Blk Line Dist x f Near 150ft ? Clear

Home Search Places Lat/Long Grids Layers

Find Street Intersection Clear Work Area

Zoom Work Area Place County Found Flags

Highlight Street Cross All Clear

Zoom Zoom Zoom

Search Parcel Address Pt Show Parcels Address Pts Clear

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Place Check Grids Clear Work Area Size Check

Work Information

Work Type

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Remarks

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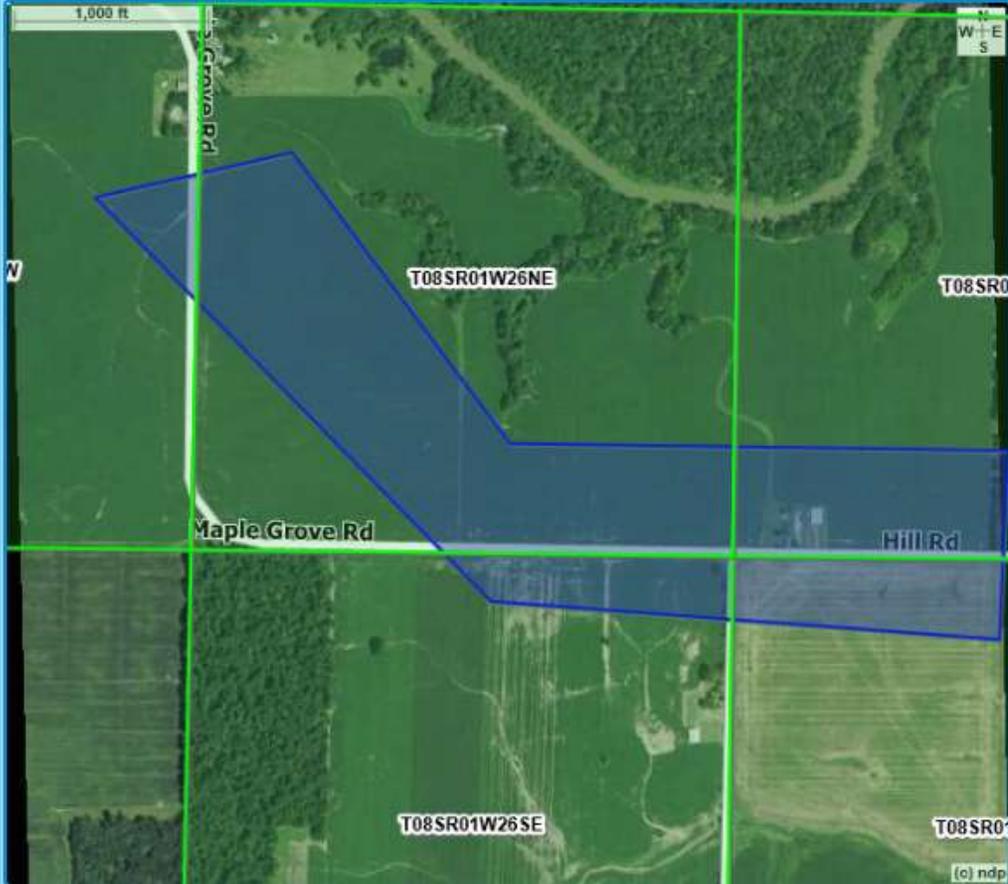
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Code	Name	Type	By
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CLWV0A	CLEARWAVE COMMUNICATIONS	PHON	S
EGEC0A	EGYPTIAN ELECTRIC COOP	ELEC	G
FRNT1A	FRONTIER COMMUNICATIONS (SOUTH)	PHON	S
USIC0A	USIC LOCATING SERVICES	LOCT	R

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Mapping



+ - m Roads Seg Blk Line Dist x f Near 150ft ? Clear

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Find Street Intersection Clear Work Area

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Work Information

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06/20/2017 11:59:59 PM Tue 07/04/2017 11:59:59 PM Tue

Remarks

Expand Last Word Expanded Word List Abbreviations

Members

Code	Name	Type	By
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EGEC0A	EGYPTIAN ELECTRIC COOP	ELEC	G
FRNT1A	FRONTIER COMMUNICATIONS (SOUTH)	PHON	S
USIC0A	USIC LOCATING SERVICES	LOCT	R

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Mapping



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Find Street Intersection Clear Work Area

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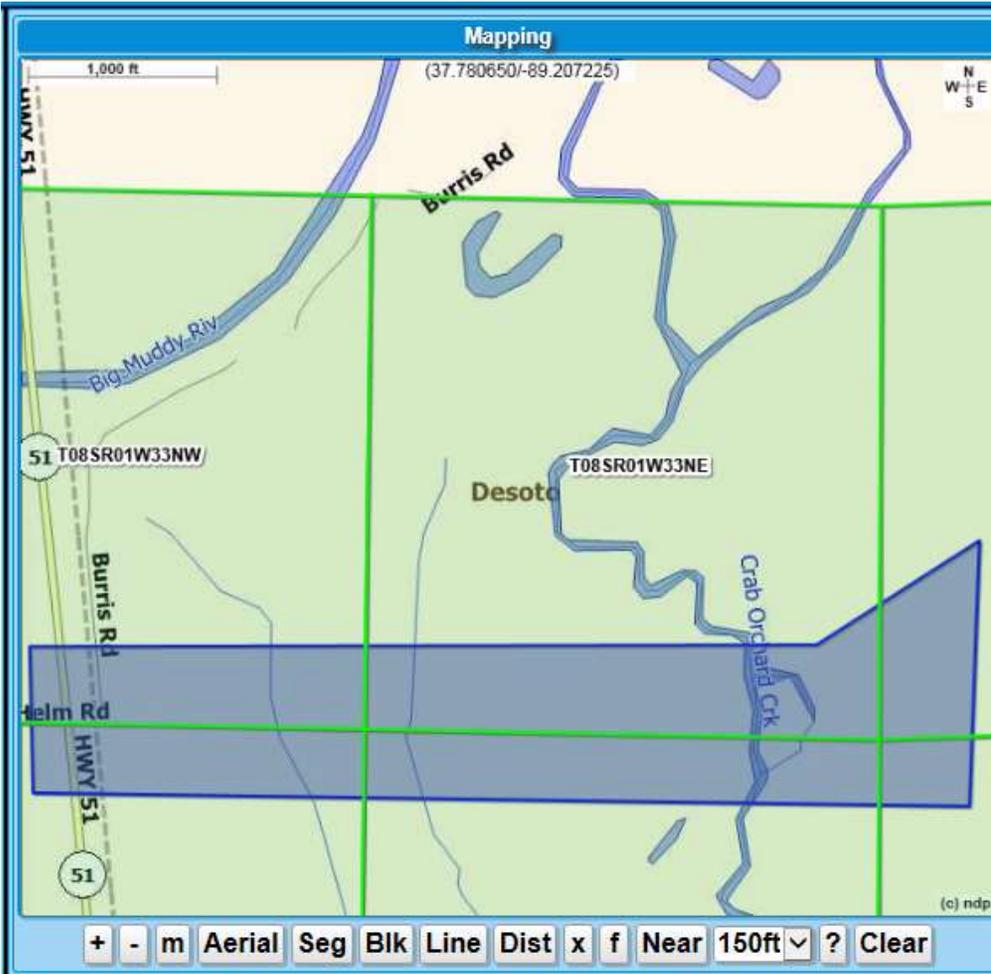
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EGEC0A	EGYPTIAN ELECTRIC COOP	ELEC	G
FRNT1A	FRONTIER COMMUNICATIONS (SOUTH)	PHON	S
USIC0A	USIC LOCATING SERVICES	LOCT	R

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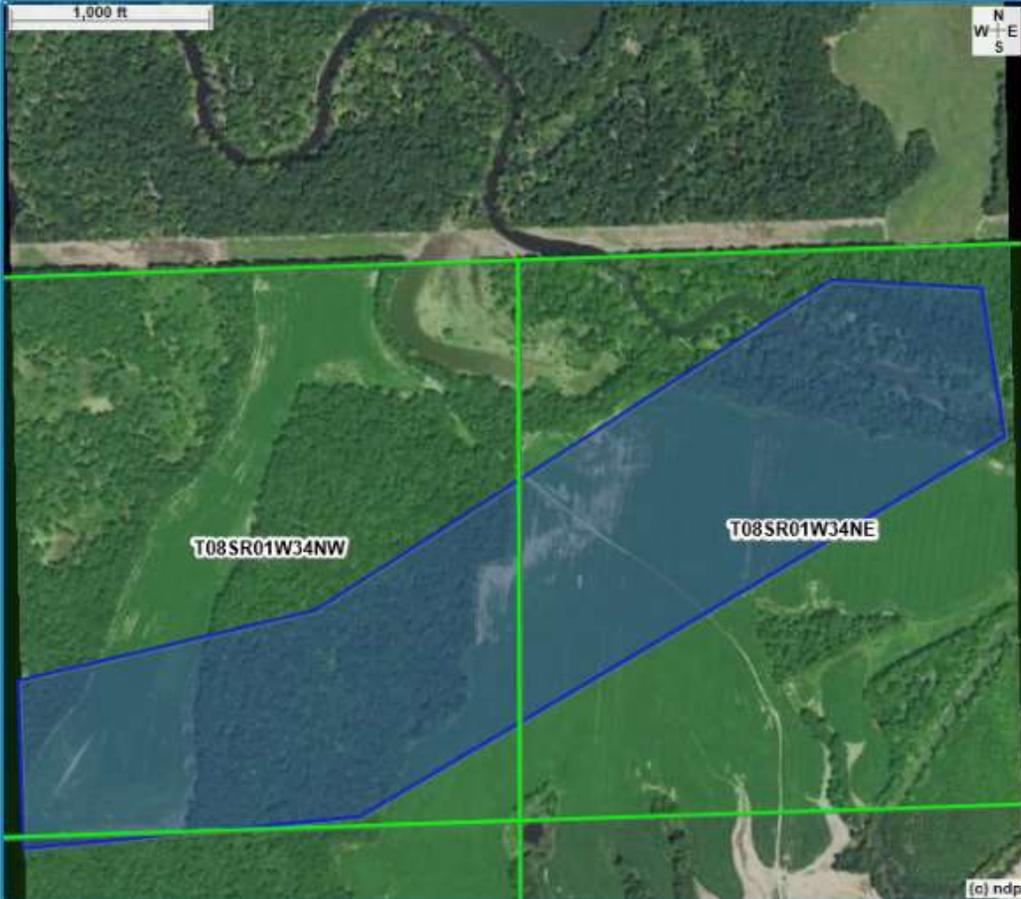
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FRNT1A	FRONTIER COMMUNICATIONS (SOUTH)	PHON	S
MC10A	MCI	PHON	S
TC11A	MEDIACOM	CATV	G
USIC0A	USIC LOCATING SERVICES	LOCT	R
WWFR0A	ZAYO/FNA 360 NETWORKS	FIBR	S

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Highlight Street Cross All Clear

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Work Information

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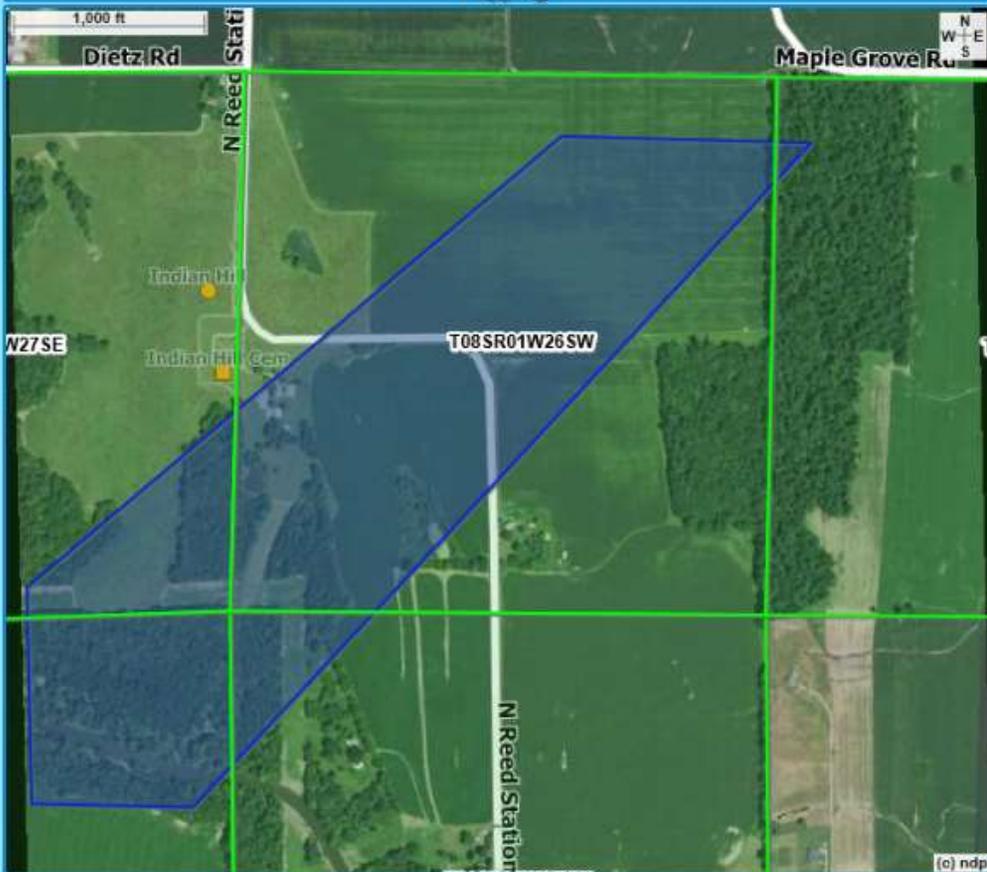
Members

Code	Name	Type	By
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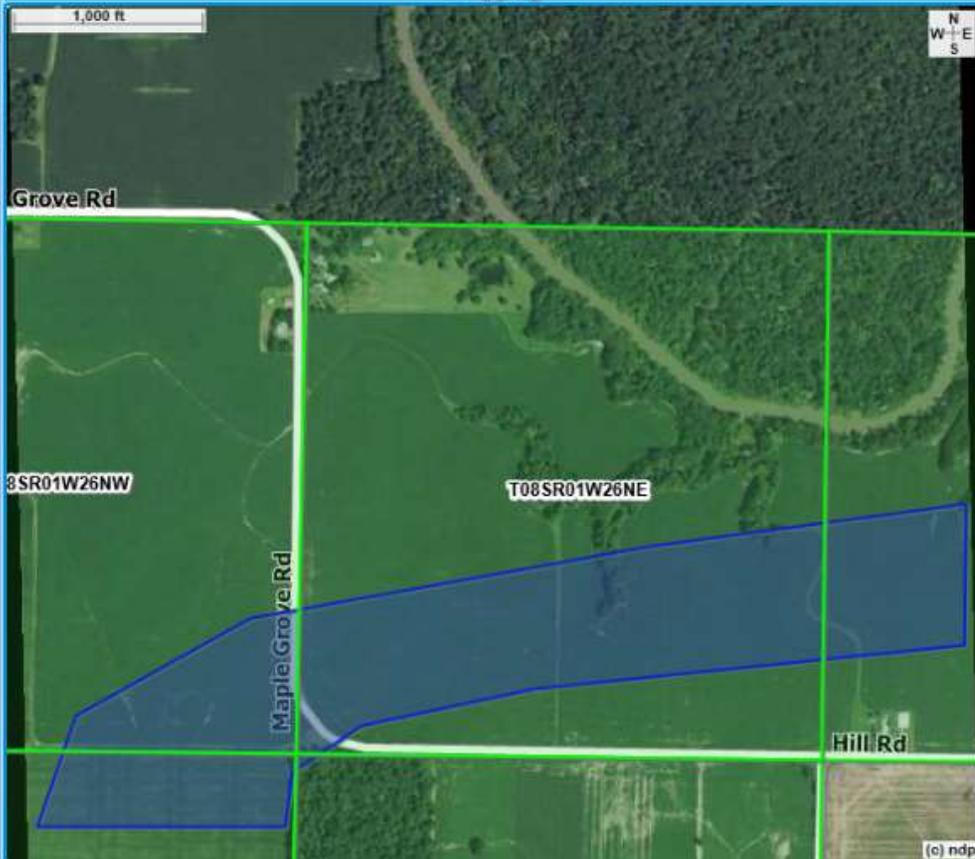
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CLWV0A	CLEARWAVE COMMUNICATIONS	PHON	S
EGEC0A	EGYPTIAN ELECTRIC COOP	ELEC	G
FRNT1A	FRONTIER COMMUNICATIONS (SOUTH)	PHON	S
USIC0A	USIC LOCATING SERVICES	LOCT	R

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Mapping



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Home Search Places Lat/Long Grids Layers

Find Street Intersection Clear Work Area

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Highlight Street Cross All Clear

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EGEC0A	EGYPTIAN ELECTRIC COOP	ELEC	G

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Mapping

1,000 ft (37.800867/-89.160207)

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Navigation: Home Search Places Lat/Long Grids Layers

Find: Street Intersection Clear Work Area

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Highlight: Street Cross All Clear

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Place: Check Grids Clear Work Area Size Check

Work Information

Work Type

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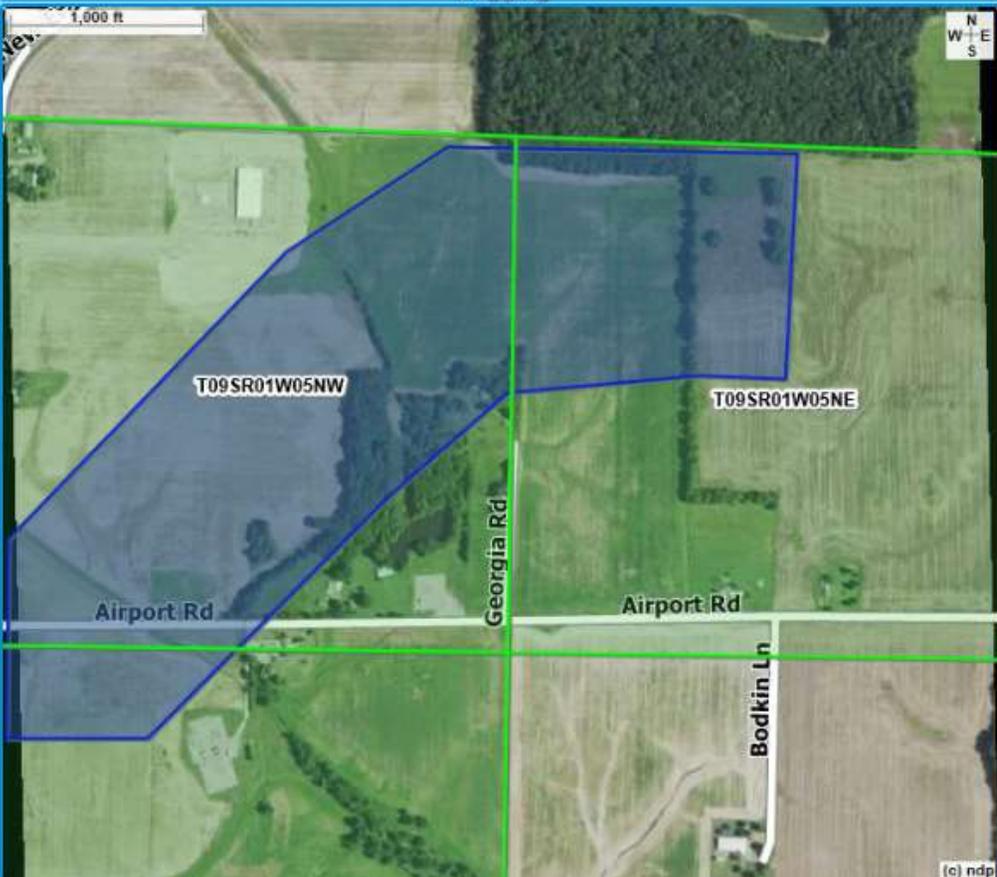
Expand Last Word Expanded Word List Abbreviations

Members

Code	Name	Type	By
EGEC0A	EGYPTIAN ELECTRIC COOP	ELEC	G
FRNT1A	FRONTIER COMMUNICATIONS (SOUTH)	PHON	S
USIC0A	USIC LOCATING SERVICES	LOCT	R

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Mapping



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Home Search Places Lat/Long Grids Layers

Find Street Intersection Clear Work Area
 Zoom Work Area Place County Found Flags
 Highlight Street Cross All Clear
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Search Parcel Address Pt Show Parcels Address Pts Clear
 Swap Street < Cross Web Google Bing
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Work Information

Work Type

Extent

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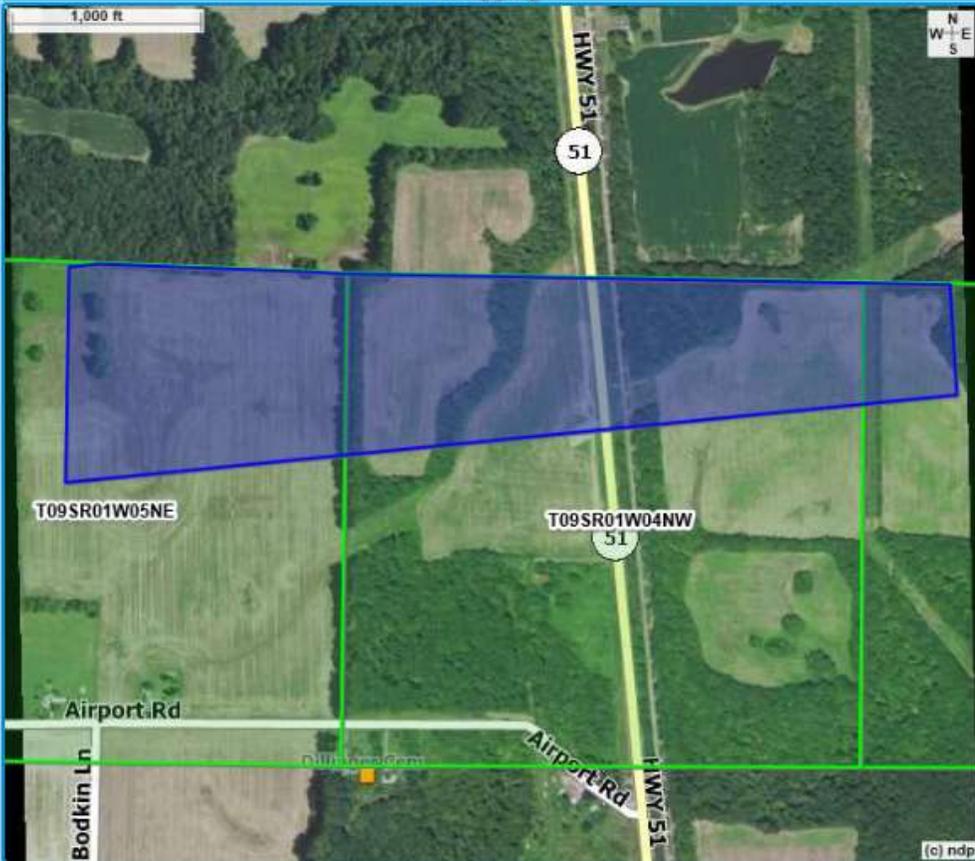
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CRBD0A	CARBONDALE CITY OF	SWE	G
EGEC0A	EGYPTIAN ELECTRIC COOP	ELEC	G
FRNT1A	FRONTIER COMMUNICATIONS (SOUTH)	PHON	S
GLXY0A	ZITO MEDIA	CATV	G
MWD0A	MURDALE WATER DISTRICT	WATR	S
USIC0A	USIC LOCATING SERVICES	LOCT	R

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Mapping



+ - m Roads Seg Blk Line Dist x f Near 150ft ? Clear

Home Search Places Lat/Long Grids Layers

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Highlight Street Cross All Clear

Zoom Zoom Zoom

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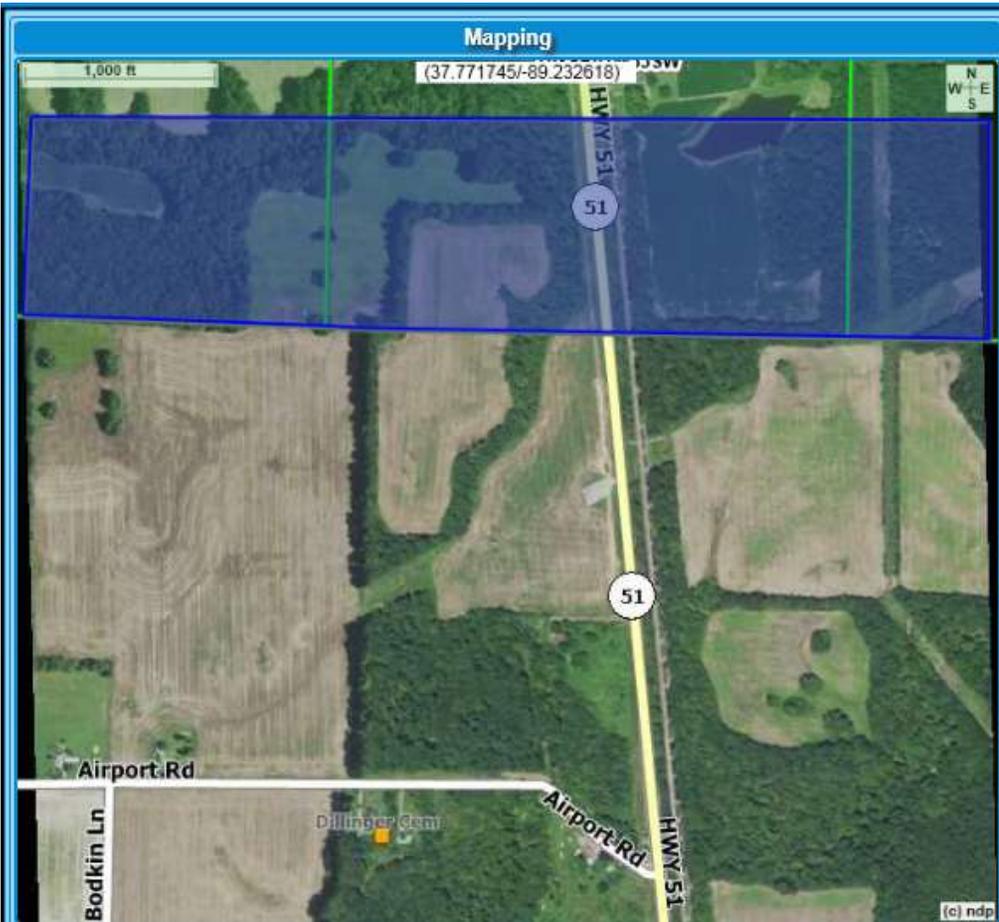
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Members

Code	Name	Type	By
CIPSSA	AMEREN CIPS	E&G	S
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EGEC0A	EGYPTIAN ELECTRIC COOP	ELEC	G
FRNT1A	FRONTIER COMMUNICATIONS (SOUTH)	PHON	S
MC10A	MCI	PHON	S
MWD0A	MURDALE WATER DISTRICT	WATR	S
TCIIA	MEDIACOM	CATV	G
USIC0A	USIC LOCATING SERVICES	LOCT	R
WWFR0A	ZAYO/FNA 360 NETWORKS	FIBR	S

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+ - m Roads Seg Blk Line Dist x f Near 150ft ? Clear

Home Search Places Lat/Long Grids Layers

Find Street Intersection Clear Work Area

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Highlight Street Cross All Clear

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Swap Street < Cross Web Google Bing

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Work Information

Work Type

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Remarks

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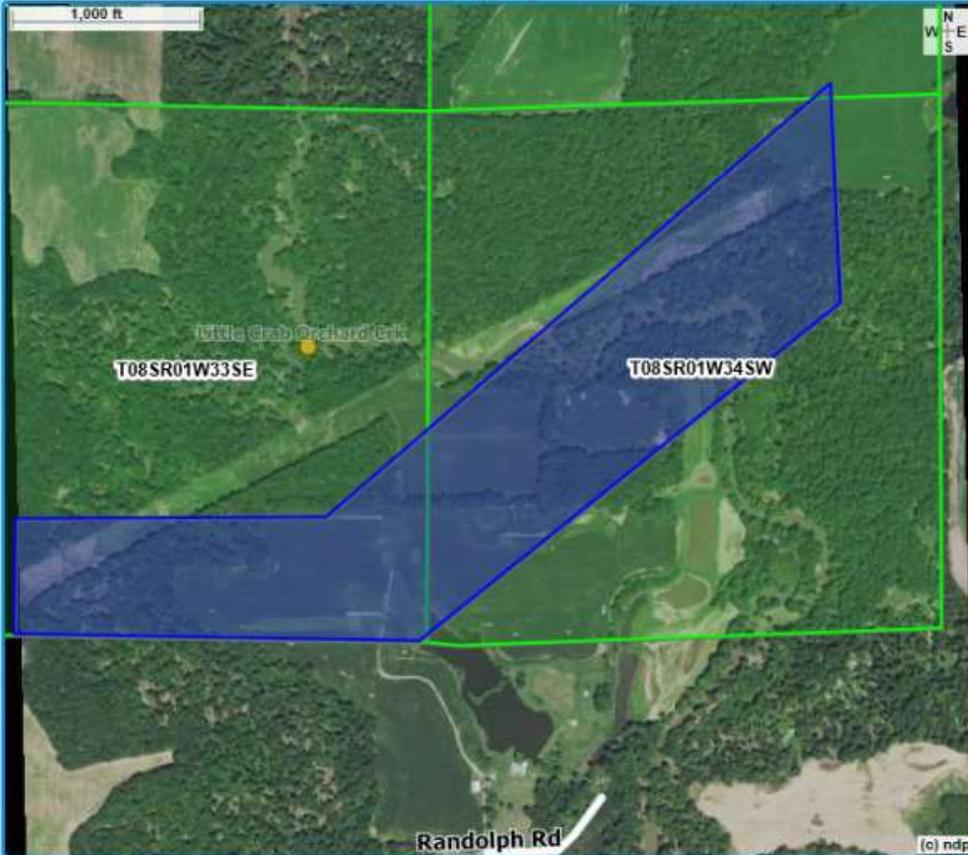
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FRNT1A	FRONTIER COMMUNICATIONS (SOUTH)	PHON	S
MCI0A	MCI	PHON	S
MWD0A	MURDALE WATER DISTRICT	WATR	S
TCIIA	MEDIACOM	CATV	G
USIC0A	USIC LOCATING SERVICES	LOCT	R
WWFR0A	ZAYO/FNA 360 NETWORKS	FIBR	S

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Mapping



+ - m Roads Seg Blk Line Dist x f Near 150ft ? Clear

Home Search Places Lat/Long Grids Layers

Find Street Intersection Clear Work Area

Zoom Work Area Place County Found Flags

Highlight Street Cross All Clear

Zoom Zoom Zoom

Search Parcel Address Pt Show Parcels Address Pts Clear

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Work Information

Work Type

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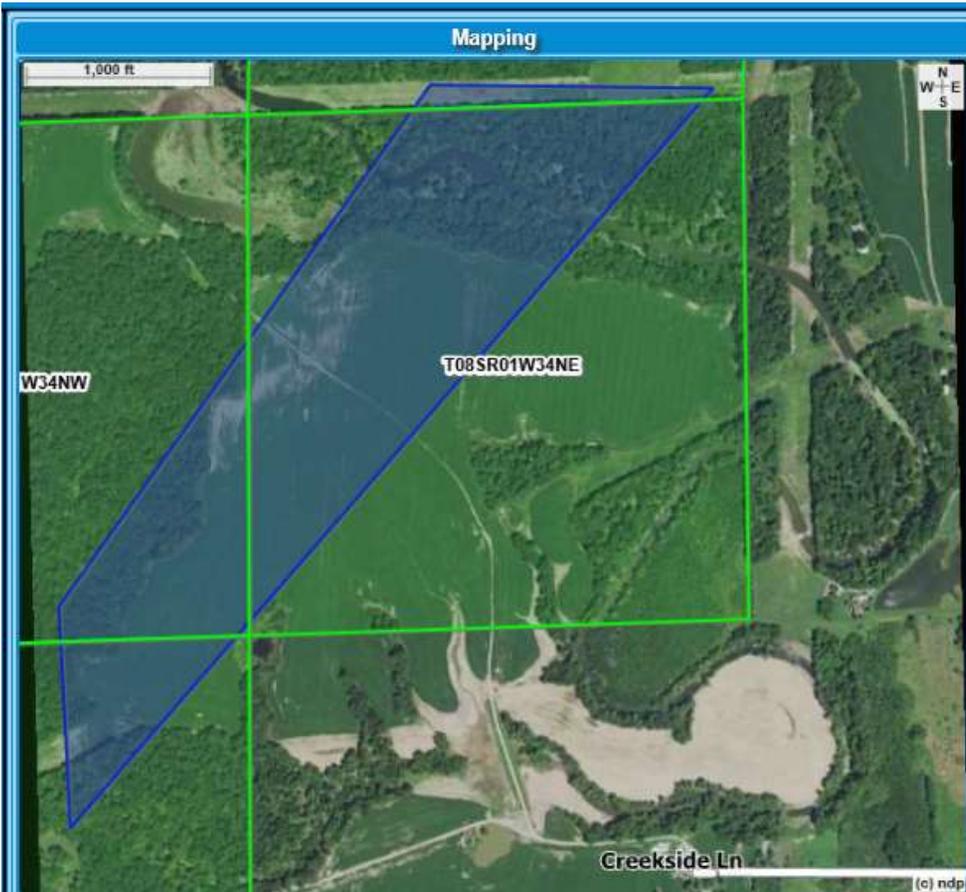
Expand Last Word Expanded Word List Abbreviations

Members

Code	Name	Type	By
EGEC0A	EGYPTIAN ELECTRIC COOP	ELEC	G

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+ - m Roads Seg Blk Line Dist x f Near 150ft ? Clear

Home Search Places Lat/Long Grids Layers

Find Street Intersection Clear Work Area

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Place Check Grids Clear Work Area Size Check

Work Information

Work Type

Extent

Expand Last Word Expanded Word List Abbreviations

Boring Depth>7FT Premarked

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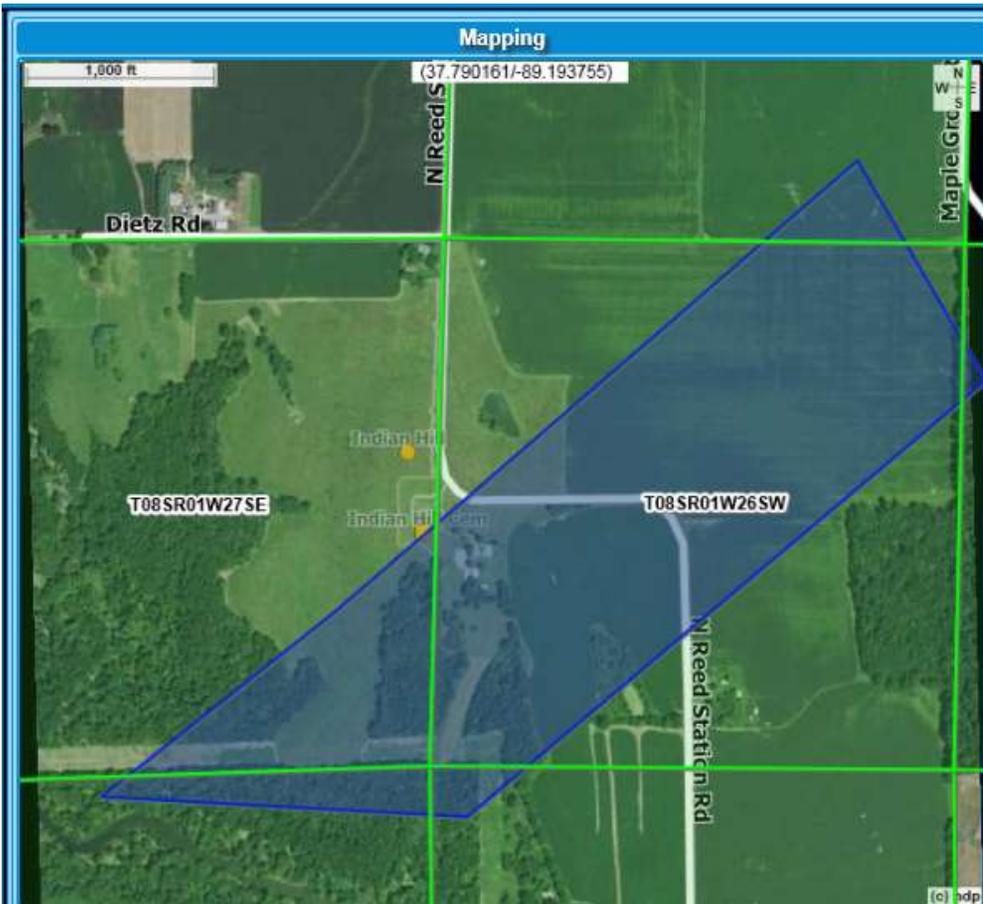
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Members

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EGEC0A	EGYPTIAN ELECTRIC COOP	ELEC	G

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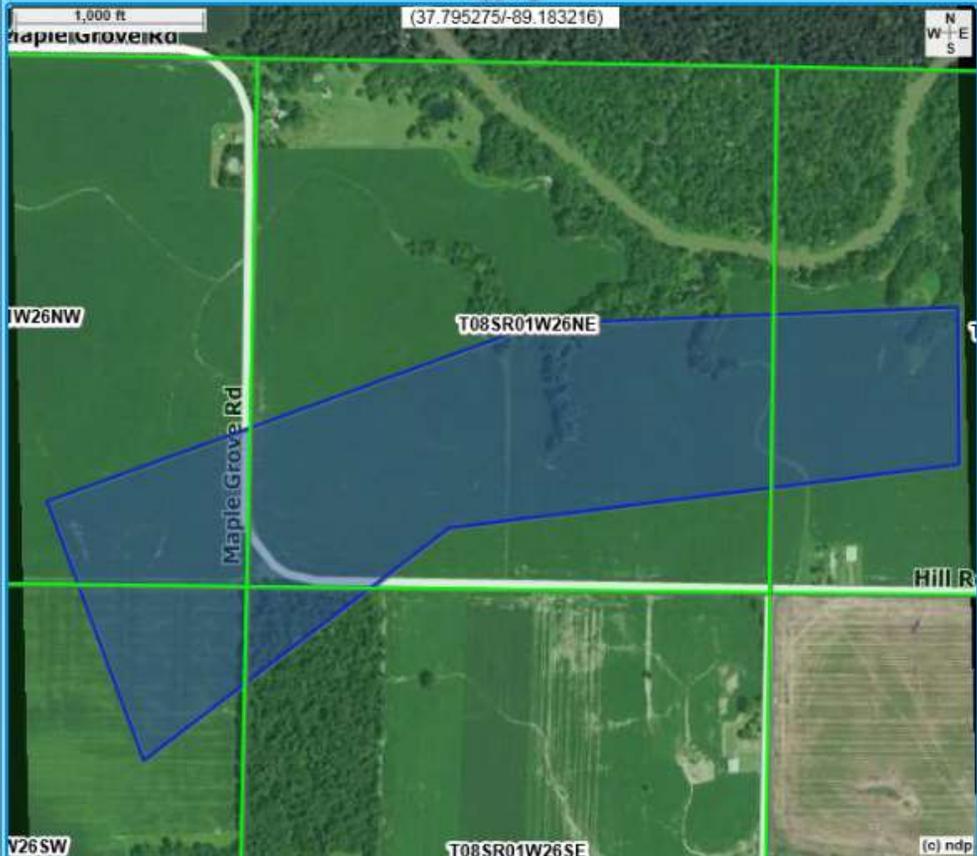
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Remarks

Members

Code	Name	Type	By
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CLWV0A	CLEARWAVE COMMUNICATIONS	PHON	S
EGEC0A	EGYPTIAN ELECTRIC COOP	ELEC	G
FRNT1A	FRONTIER COMMUNICATIONS (SOUTH)	PHON	S
USIC0A	USIC LOCATING SERVICES	LOCT	R

Mapping



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Zoom Work Area Place County Found Flags

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Work Information

Work Type

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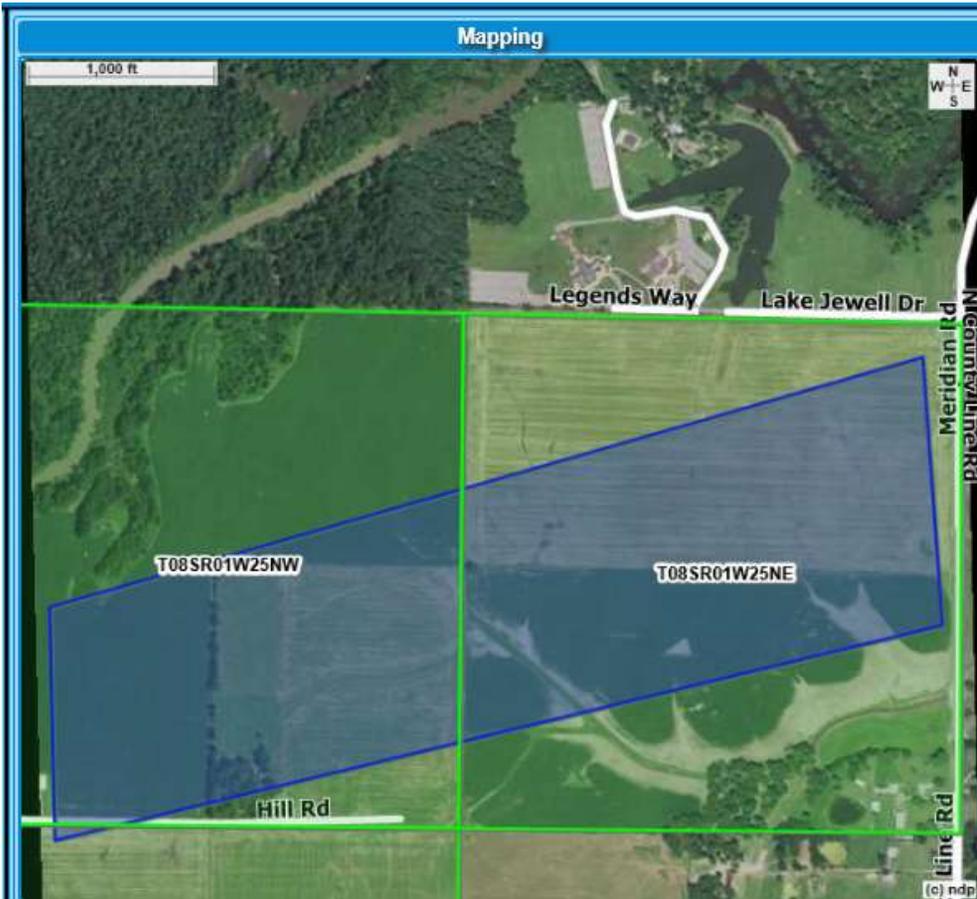
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Members

Code	Name	Type	By
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Work Information

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Remarks

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Mapping

+ - m Roads Seg Blk Line Dist x f Near 150ft ? Clear

Home Search Places Lat/Long Grids Layers

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Highlight Street Cross All Clear

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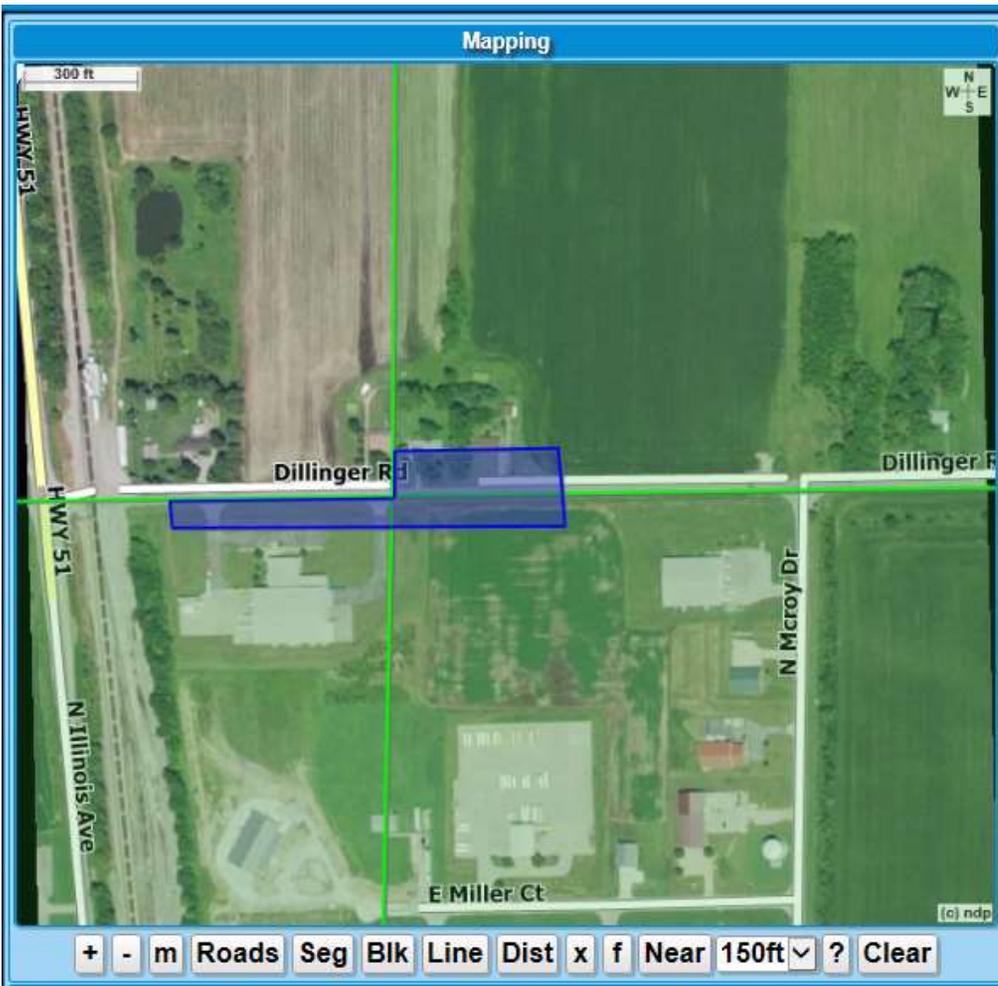
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FRNT1A	FRONTIER COMMUNICATIONS (SOUTH)	PHON	S
GLXY0A	ZITO MEDIA	CATV	G
LKSD0A	LAKESIDE WATER DISTRICT	WATR	S
MC10A	MCI	PHON	S
TC11A	MEDIACOM	CATV	G
US1C0A	USIC LOCATING SERVICES	LOCT	R
WWFR0A	ZAYO/FNA 360 NETWORKS	FIBR	S

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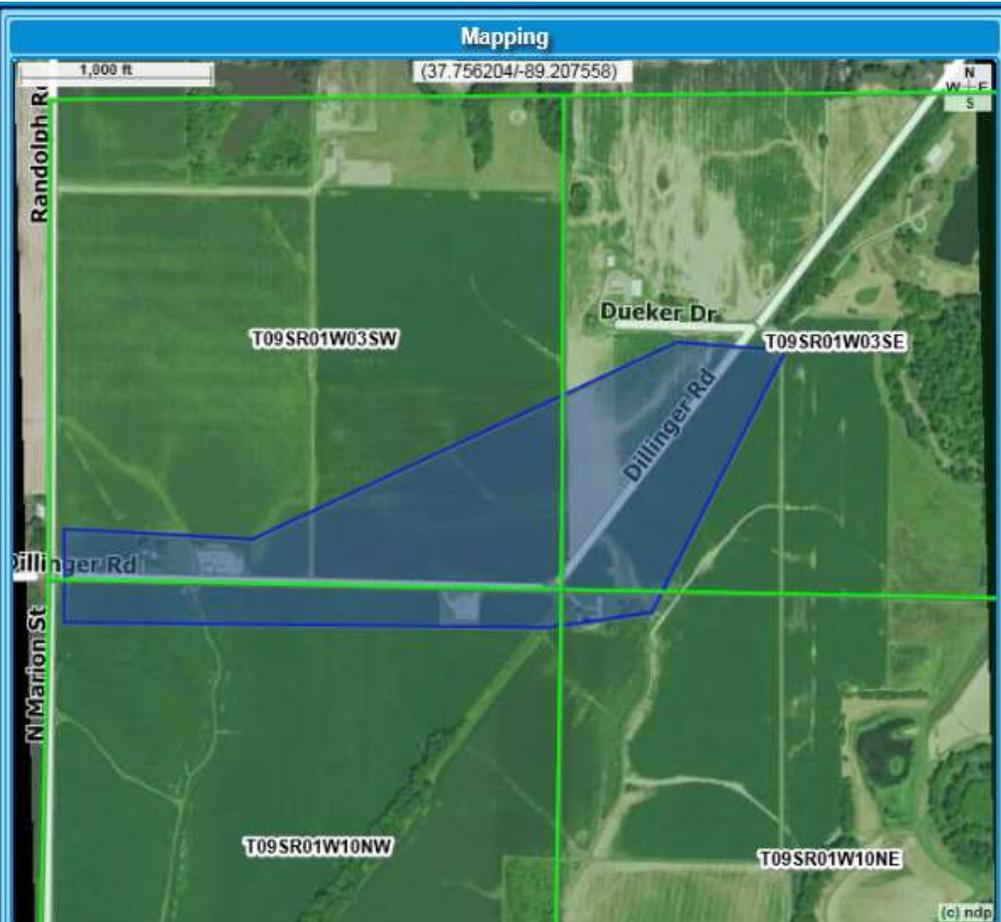
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FRNT1A	FRONTIER COMMUNICATIONS (SOUTH)	PHON	S
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TCIIA	MEDIACOM	CATV	G
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WWFR0A	ZAYO/FNA 360 NETWORKS	FIBR	S



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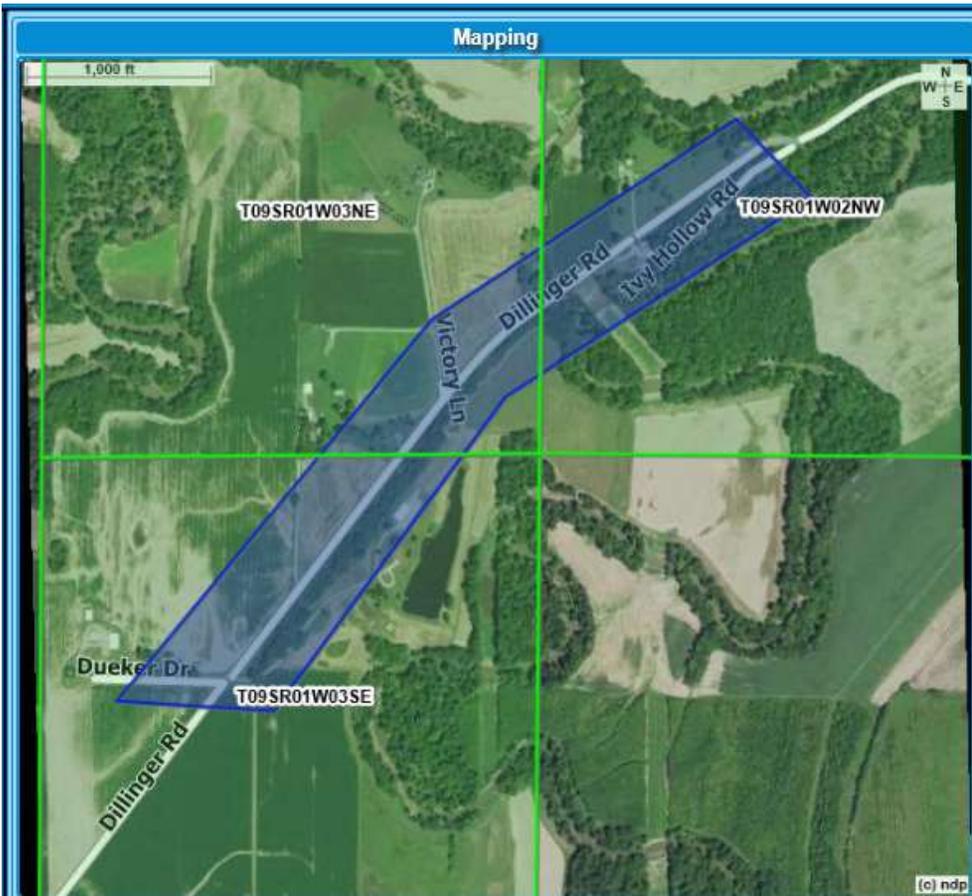
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Members

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EGEC0A	EGYPTIAN ELECTRIC COOP	ELEC	G
FRNT1A	FRONTIER COMMUNICATIONS (SOUTH)	PHON	S
LKSD0A	LAKESIDE WATER DISTRICT	WATR	S
USIC0A	USIC LOCATING SERVICES	LOCT	R



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Work Information

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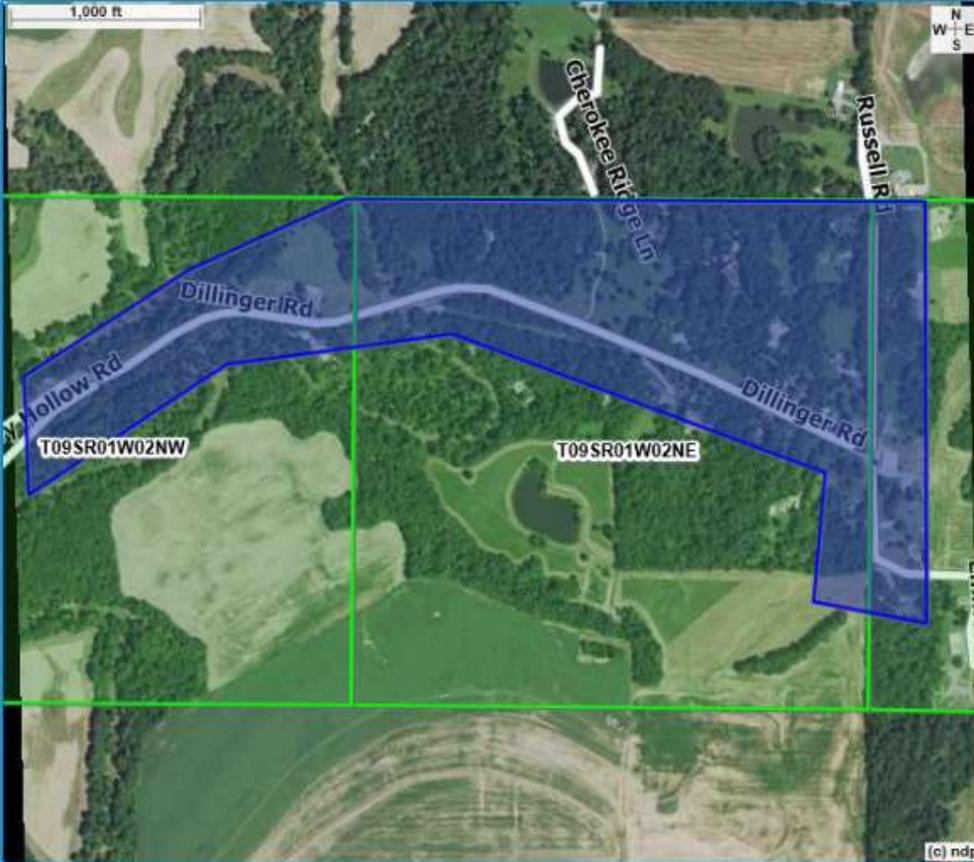
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Members

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EGEC0A	EGYPTIAN ELECTRIC COOP	ELEC	G
FRNT1A	FRONTIER COMMUNICATIONS (SOUTH)	PHON	S
LKSD0A	LAKESIDE WATER DISTRICT	WATR	S
USIC0A	USIC LOCATING SERVICES	LOCT	R

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Work Information

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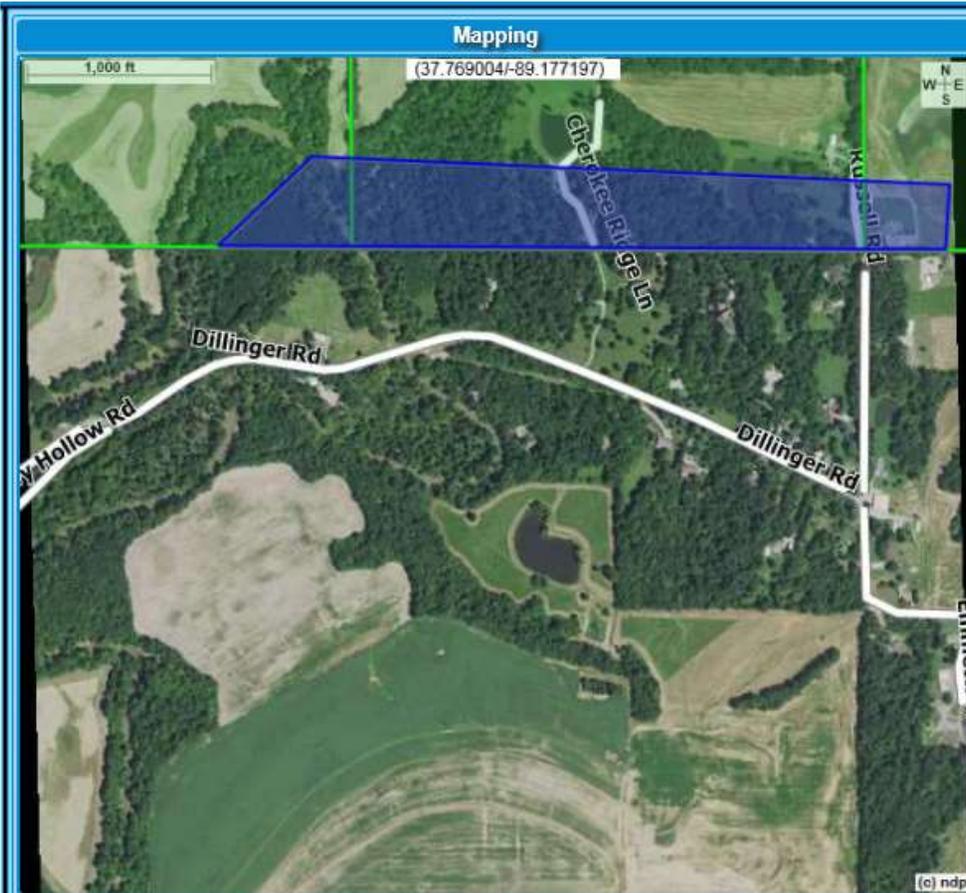
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Members

Code	Name	Type	By
EGEC0A	EGYPTIAN ELECTRIC COOP	ELEC	G
FRNT1A	FRONTIER COMMUNICATIONS (SOUTH)	PHON	S
LKSD0A	LAKESIDE WATER DISTRICT	WATR	S
USIC0A	USIC LOCATING SERVICES	LOCT	R

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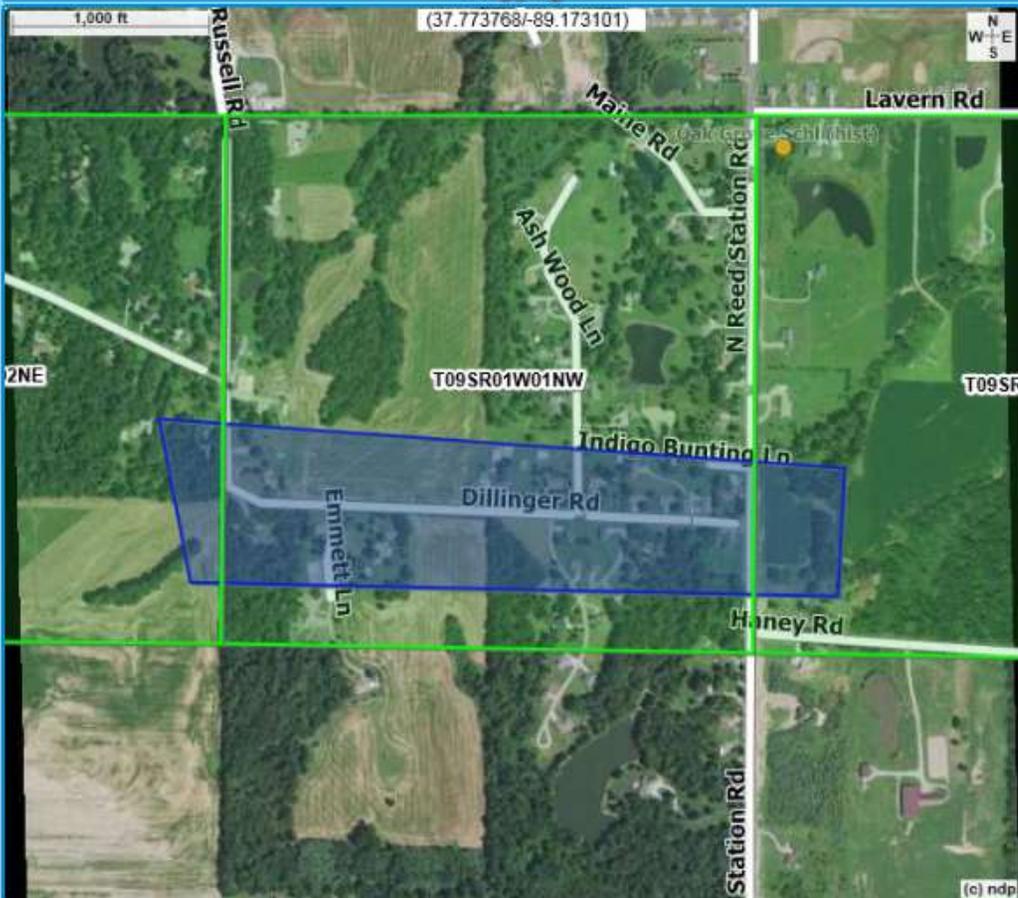
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Members

Code	Name	Type	By
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EGEC0A	EGYPTIAN ELECTRIC COOP	ELEC	G
FRNT1A	FRONTIER COMMUNICATIONS (SOUTH)	PHON	S
LKSD0A	LAKESIDE WATER DISTRICT	WATR	S
USIC0A	USIC LOCATING SERVICES	LOCT	R

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Mapping



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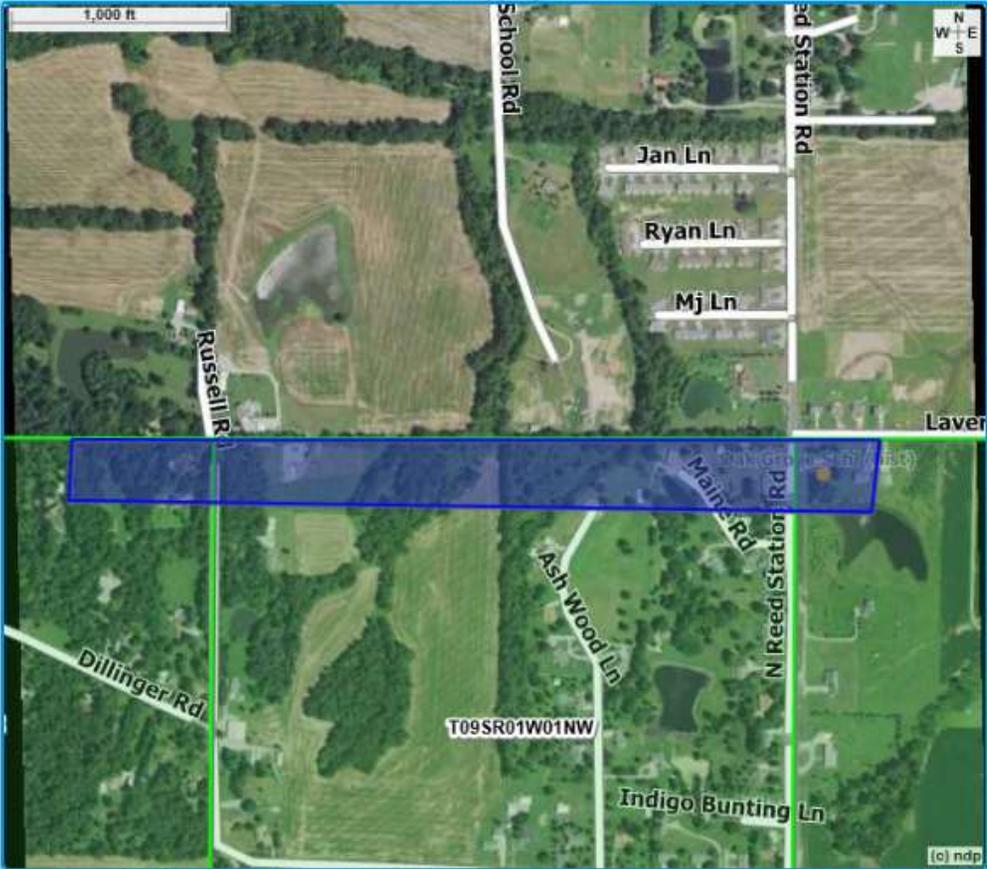
Members

Code	Name	Type	By
CLWV0A	CLEARWAVE COMMUNICATIONS	PHON	S
EGEC0A	EGYPTIAN ELECTRIC COOP	ELEC	G
FRNT1A	FRONTIER COMMUNICATIONS (SOUTH)	PHON	S
LKSD0A	LAKESIDE WATER DISTRICT	WATR	S
USIC0A	USIC LOCATING SERVICES	LOCT	R

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Mapping



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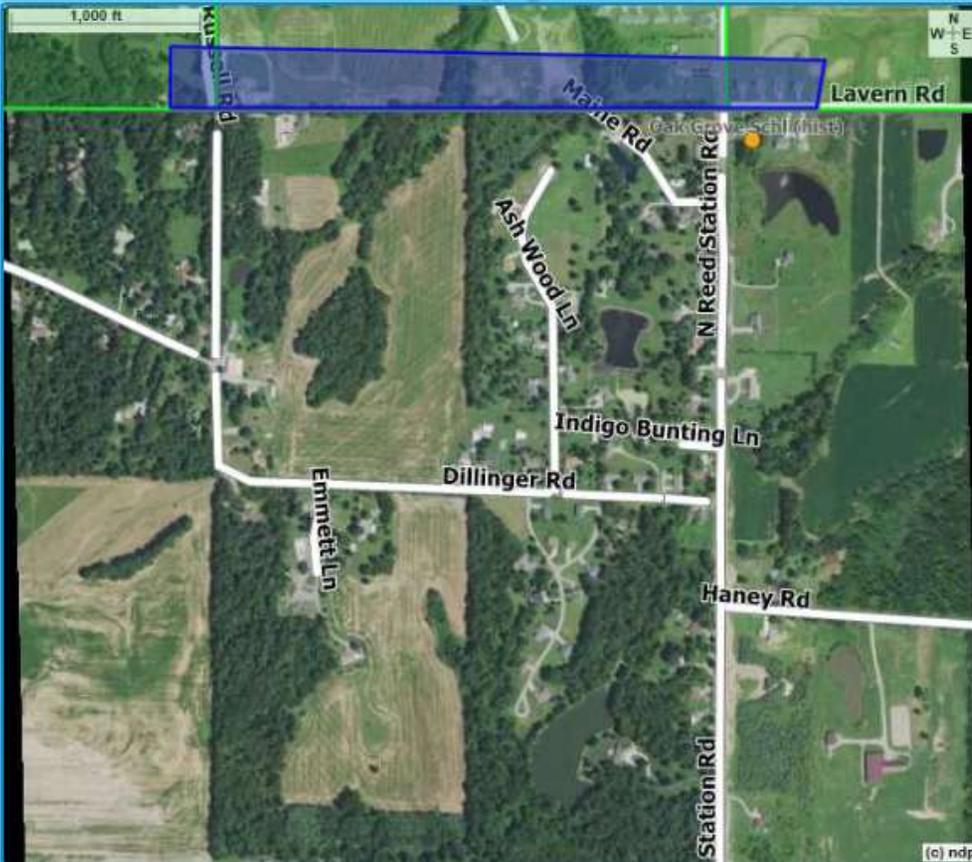
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Members

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EGEC0A	EGYPTIAN ELECTRIC COOP	ELEC	G
FRNT1A	FRONTIER COMMUNICATIONS (SOUTH)	PHON	S
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USIC0A	USIC LOCATING SERVICES	LOCT	R

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Mapping



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Members

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EGEC0A	EGYPTIAN ELECTRIC COOP	ELEC	G
FRNT1A	FRONTIER COMMUNICATIONS (SOUTH)	PHON	S
LKSD0A	LAKE SIDE WATER DISTRICT	WATR	S
USIC0A	USIC LOCATING SERVICES	LOCT	R

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EXHIBIT 6

TRAFFIC GENERATOR DATA

Development	Area Under Roof (Sq ft)	Parcel Area (acres)
Light Industrial (North Industrial Park)		
Cimco Recycling	60,000	43
ET Simonds Construction	10,000	43
Prairie Farms Dairy	34,000	1.62
Southern Recycling	123,000	3.8
Southern FS	6,000	1.79
FWS Countertops	9,000	0.31
Mid Amercia Service	3,600	0.15
Associated Lumber	21,900	4
Ultimate Gymnastics	10,700	0.65
Canadian National Railyard	0	47
Cape Electrical Supply	18,000	0.8
Totals	296,200	146.12

Development	Area Under Roof (Sq ft)	Parcel Area (acres)
Light Industrial		
Springfield Electric Supply	9,000	1.9
Kasten Inc	6,400	2
Mayberry Moving and Storage	15,000	2
Safelite AutoGlass	12,000	2
Quality Sheet Metals	32,000	4
Compac International	93,000	15
Ready Mix Solutions	8,000	43
Carbondale Brick and Block	6,000	2
J&I Robinson Development & Construc	12,000	2
Cintas	10,500	2
Burkdel Mulch	110,000	7.7
Totals	313,900	83.6

Development	Area Under Roof (Sq ft)	Parcel Area (acres)
Light Industrial (Bicentennial Industrial Park)		
Inter Tape Polymer Group	194,000	29.17
Beck Bus Transportation Corp.	4,200	5
Venegoni Horrell Distributing	26,000	7.9
Jacobs Heating & Air Cond.	6,800	1.34
Dillinger's Loading	4,000	2.24
AE Electric	5,800	1.69
RP Coatings	12,500	4.56
Quad County Ready Mix	8,000	4.3
Beautiful Displays	18,000	3.26
Totals	279,300	59.46

Development	Area Under Roof (Sq ft)	Parcel Area (acres)
Commercial		
Stiles Office Solutions	15,000	2.15
Home Improvement Warehouse	35,900	10
Big Muddy Self Storage	7,500	3.88
Club Coyote	7,300	6.12
Totals	65,700	22.15
Government/Other		
Army National Guard	47,500	42.78
Southern Illinois Airport	150,000	600
Totals	197,500	642.78

Development	Area Under Roof (Sq ft)	Parcel Area (acres)
Medical		
Carbondale Memorial Hospital	152,000	12.4
Grand Totals		
	1,304,600	966.51

EXHIBIT 7

COST ESTIMATES

NORTH REED STATION RD ALTERNATIVE PRELIMINARY COST ESTIMATE				
ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
NORTH REED STATION ROAD				
Tree Removal Acres	2	acres	\$5,000	\$10,500
Earth Excavation (Includes compensatory storage)	177,500	Cubic Yard	\$5	\$887,500
Borrow Excavation	63,000	Cubic yard	\$7	\$441,000
Erosion Control Blanket	60,000	Square Yard	\$2	\$120,000
Seeding Class II	53	acres	\$2,875	\$152,375
Temporary Ditch Checks	150	Each	\$58	\$8,625
Stone Dumped Riprap, Class A4	500	Square Yard	\$32	\$16,100
Processing Lime Modified Soil	94,666	Square Yard	\$5	\$473,330
Lime	2,303	Ton	\$70	\$161,210
Hot Mix Asphalt Binder Course	31,795	Ton	\$80	\$2,543,600
Hot Mix Asphalt Shoulders	12,800	Ton	\$75	\$960,000
Hot Mix Asphalt Surface Course	6,361	Ton	\$90	\$572,490
Box Culvert (2 @ 8x8)	2	Each	\$400,000	\$800,000
Various Drainage	1	Lump sum	\$500,000	\$500,000
New Rail Crossing & Removal of Existing	1	Each	\$700,000	\$700,000
Various Connector Roads	1	Lump sum	\$500,000	\$500,000
Steel Plate Beam Guardrail	500	Lineal Foot	\$25	\$12,500
Traffic Barrier Terminal, Type 1	4	Each	\$2,500	\$10,000
Traffic Barrier Terminal, Type 6	4	Each	\$4,500	\$18,000
Temporary Access	1	Lump Sum	\$50,000	\$50,000
Traffic Control	1	Lump sum	\$100,000	\$100,000
Wetland Mitigation	2	acres	\$30,000	\$60,000
Tree Replacement	1	Lump Sum	\$50,000	\$50,000
Contingency 20%	1	Lump sum	\$1,829,446	\$1,829,446
Total Construction Cost				\$10,976,676
Utility Adjustments				
All	1	Lump Sum	\$1,000,000	\$1,000,000
Engineering				
Phase I (Catergorical Exclusion)	1	Lump Sum	\$500,000	\$500,000
Phase II	1	Lump Sum	\$600,000	\$600,000
Phase III	1	Lump Sum	\$600,000	\$600,000
Total Engineering Cost				\$1,700,000
Right of Way				
Appraisal & Negotiations	1	Lump Sum	\$500,000	\$500,000
Parcel Cost	53	Acres	\$10,000	\$530,000
Laverne to Vaughn right of way & easement cost	200,000	square ft.	\$2.00	\$400,000
Total Right of Way Cost				\$1,430,000
Grand Total				\$15,106,676

EXHIBIT 7-1

FOX FARM RD ALTERNATIVE PRELIMINARY COST ESTIMATE

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
FOX FARM ROAD				
Tree Removal Acres	24	acres	\$5,000	\$120,000
Earth Excavation (Includes compensatory storage)	579,000	Cubic Yard	\$5	\$2,895,000
Borrow Excavation	0	Cubic yard	\$7	\$0
Erosion Control Blanket	120,000	Square Yard	\$2	\$240,000
Seeding Class II	76	acres	\$2,875	\$218,500
Temporary Ditch Checks	300	Each	\$58	\$17,250
Stone Dumped Riprap, Class A4	1,000	Square Yard	\$32	\$32,200
Processing Lime Modified Soil	116,888	Square Yard	\$5	\$584,440
Lime	2,900	Ton	\$70	\$203,000
Hot Mix Asphalt Binder Course	39,258	Ton	\$80	\$3,140,640
Hot Mix Asphalt Shoulders	15,700	Ton	\$75	\$1,177,500
Hot Mix Asphalt Surface Course	7,855	Ton	\$90	\$706,950
Various Drainage	1	Lump sum	\$500,000	\$500,000
New Structure Over Little Crab Orchard Creek	1	Each	\$3,300,000	\$3,300,000
Main Overflow Structure - Double 10x10 Box Culv.	1	Each	\$600,000	\$600,000
Secondary Overflow Structure - 10X10 Box Culv.	1	Each	\$400,000	\$400,000
RR and US 51 overpass with Connector Road	1	Lump sum	\$13,000,000	\$13,000,000
Various Connector Roads	1	Lump sum	\$2,000,000	\$2,000,000
Temporary Access	1	Lump Sum	\$50,000	\$50,000
Traffic Control	1	Lump sum	\$500,000	\$500,000
Wetland Mitigation	30	acres	\$30,000	\$900,000
Tree Replacement	1	Lump Sum	\$200,000	\$200,000
Contingency 20%	1	Lump sum	\$6,157,096	\$6,157,096
Total Construction Cost				\$36,942,576
Utility Adjustments				
All	1	Lump Sum	\$1,000,000	\$1,000,000
Engineering				
Phase I (EA or EIS)	1	Lump Sum	\$2,500,000	\$2,500,000
Phase II	1	Lump Sum	\$2,000,000	\$2,000,000
Phase III	1	Lump Sum	\$600,000	\$600,000
Total Engineering Cost				\$5,100,000
Right of Way				
Appraisal & Negotiations	1	Lump Sum	\$500,000	\$500,000
Parcel Cost	150	Acres	\$10,000	\$1,500,000
Displacements 10 @ \$300k each	2	Each	\$300,000.00	\$600,000
Total Right of Way Cost				\$2,600,000
Grand Total				\$45,642,576

AIRPORT RD ALTERNATIVE PRELIMINARY COST ESTIMATE				
ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
AIRPORT ROAD				
Tree Removal Acres	25	acres	\$5,000	\$125,000
Earth Excavation (Includes compensatory storage)	580,000	Cubic Yard	\$5	\$2,900,000
Borrow Excavation	0	Cubic yard	\$7	\$0
Erosion Control Blanket	120,000	Square Yard	\$2	\$240,000
Seeding Class II	83	acres	\$2,875	\$238,625
Temporary Ditch Checks	300	Each	\$58	\$17,250
Stone Dumped Riprap, Class A4	1,500	Square Yard	\$32	\$48,300
Processing Lime Modified Soil	131,111	Square Yard	\$5	\$655,555
Lime	3,245	Ton	\$70	\$227,150
Hot Mix Asphalt Binder Course	44,035	Ton	\$80	\$3,522,800
Hot Mix Asphalt Shoulders	15,700	Ton	\$75	\$1,177,500
Hot Mix Asphalt Surface Course	8,810	Ton	\$90	\$792,900
Various Drainage	1	Lump sum	\$500,000	\$500,000
New Structure Over Crab Orchard Creek	1	Each	\$3,300,000	\$3,300,000
Main Overflow Structure - Double 10x10 Box Culv.	1	Each	\$600,000	\$600,000
New Structure Over Little Crab Orchard Creek	1	Each	\$2,200,000	\$2,200,000
RR and US 51 overpass with Connector Road	1	Lump sum	\$13,000,000	\$13,000,000
Various Connector Roads	1	Lump sum	\$2,000,000	\$2,000,000
Temporary Access	1	Lump Sum	\$50,000	\$50,000
Traffic Control	1	Lump sum	\$500,000	\$500,000
Wetland Mitigation	36	acres	\$30,000	\$1,080,000
Tree Replacement	1	Lump Sum	\$200,000	\$200,000
Contingency 20%	1	Lump sum	\$6,675,016	\$6,675,016
Total Construction Cost				\$40,050,096
Utility Adjustments				
All	1	Lump Sum	\$1,000,000	\$1,000,000
Engineering				
Phase I (EA or EIS)	1	Lump Sum	\$2,500,000	\$2,500,000
Phase II	1	Lump Sum	\$2,000,000	\$2,000,000
Phase III	1	Lump Sum	\$600,000	\$600,000
Total Engineering Cost				\$5,100,000
Right of Way				
Appraisal & Negotiations	1	Lump Sum	\$500,000	\$500,000
Parcel Cost	150	Acres	\$10,000	\$1,500,000
Displacements 10 @ \$300k each	0	Each	\$300,000.00	\$0
Total Right of Way Cost				\$2,000,000
Grand Total				\$48,150,096

DILLINGER RD ALTERNATIVE PRELIMINARY COST ESTIMATE				
ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
DILLINGER ROAD				
Tree Removal Acres	13	acres	\$5,000	\$65,500
Earth Excavation (Includes compensatory storage)	109,500	Cubic Yard	\$5	\$547,500
Borrow Excavation	111,760	Cubic yard	\$7	\$782,320
Erosion Control Blanket	60,000	Square Yard	\$2	\$120,000
Seeding Class II	42	acres	\$2,875	\$120,750
Temporary Ditch Checks	150	Each	\$58	\$8,625
Stone Dumped Riprap, Class A4	500	Square Yard	\$32	\$16,100
Processing Lime Modified Soil	76,000	Square Yard	\$5	\$380,000
Lime	1,881	Ton	\$70	\$131,670
Hot Mix Asphalt Binder Course	25,525	Ton	\$80	\$2,042,000
Hot Mix Asphalt Shoulders	10,265	Ton	\$75	\$769,875
Hot Mix Asphalt Surface Course	5,100	Ton	\$90	\$459,000
Various Drainage	1	Lump sum	\$500,000	\$500,000
New Structure Over Crab Orchard Creek	1	Each	\$3,300,000	\$3,300,000
Various Connector Roads	1	Lump sum	\$250,000	\$250,000
Steel Plate Beam Guardrail	500	Lineal Foot	\$25	\$12,500
Traffic Barrier Terminal, Type 1	4	Each	\$2,500	\$10,000
Traffic Barrier Terminal, Type 6	4	Each	\$4,500	\$18,000
Temporary Access	1	Lump Sum	\$50,000	\$50,000
Traffic Control	1	Lump sum	\$100,000	\$100,000
Wetland Mitigation	12	acres	\$30,000	\$360,000
Tree Replacement	1	Lump Sum	\$200,000	\$200,000
Contingency 20%	1	Lump sum	\$2,048,768	\$2,048,768
Total Construction Cost				\$12,292,608
Utility Adjustments				
All	1	Lump Sum	\$1,000,000	\$1,000,000
Engineering				
Phase I (Categorical Exclusion)	1	Lump Sum	\$500,000	\$500,000
Phase II	1	Lump Sum	\$600,000	\$600,000
Phase III	1	Lump Sum	\$600,000	\$600,000
Total Engineering Cost				\$1,700,000
Right of Way				
Appraisal & Negotiations	1	Lump Sum	\$500,000	\$500,000
Parcel Cost	42	Acres	\$10,000	\$420,000
Displacements 10 @ \$300k each	10	Each	\$300,000.00	\$3,000,000
Total Right of Way Cost				\$3,920,000
Grand Total				\$18,912,608

NOTE: This estimate includes the relocation of Dillinger Road to the Lavern Road intersection location. Other options using more of the existing alignment and the existing Little Crab Orchard Creek Structure would be much less expensive.

EXHIBIT 8

PUBLIC INVOLVEMENT

Reed Station Road to US 51

Introduction

Welcome to the Public Information Meeting conducted for potential roadway improvements from Reed Station Road to US 51. This meeting is part of our public involvement process which provides study information and an opportunity for public comments and suggestions.

The success of this meeting depends on citizen participation. Please examine the displays presented and discuss the information with staff members.

If you wish to provide additional comments after the meeting, a pre-addressed comment sheet is provided for your convenience. This sheet can be folded and stapled or taped. Mailing requires proper postage. If you write your comments at this meeting, you may leave the sheet at the comment table.

Purpose of this Meeting

The purpose of this informational meeting is to obtain public input regarding a new or improved roadway corridor from Reed Station Road to US 51 north of Carbondale. Your input regarding the need to identify and plan for these potential improvements is requested. Please provide your suggestions or comments on the alternatives presented.

Next Steps

SIMPO staff will evaluate the existing conditions along each alternative, features such as topography, wetlands, utilities and existing land use will be inventoried and evaluated. Taking into consideration public input, a final report will be prepared which will include recommended further actions and a recommendation of which alternative, including a "no build" alternative, has the most potential for meeting future transportation needs of the region.

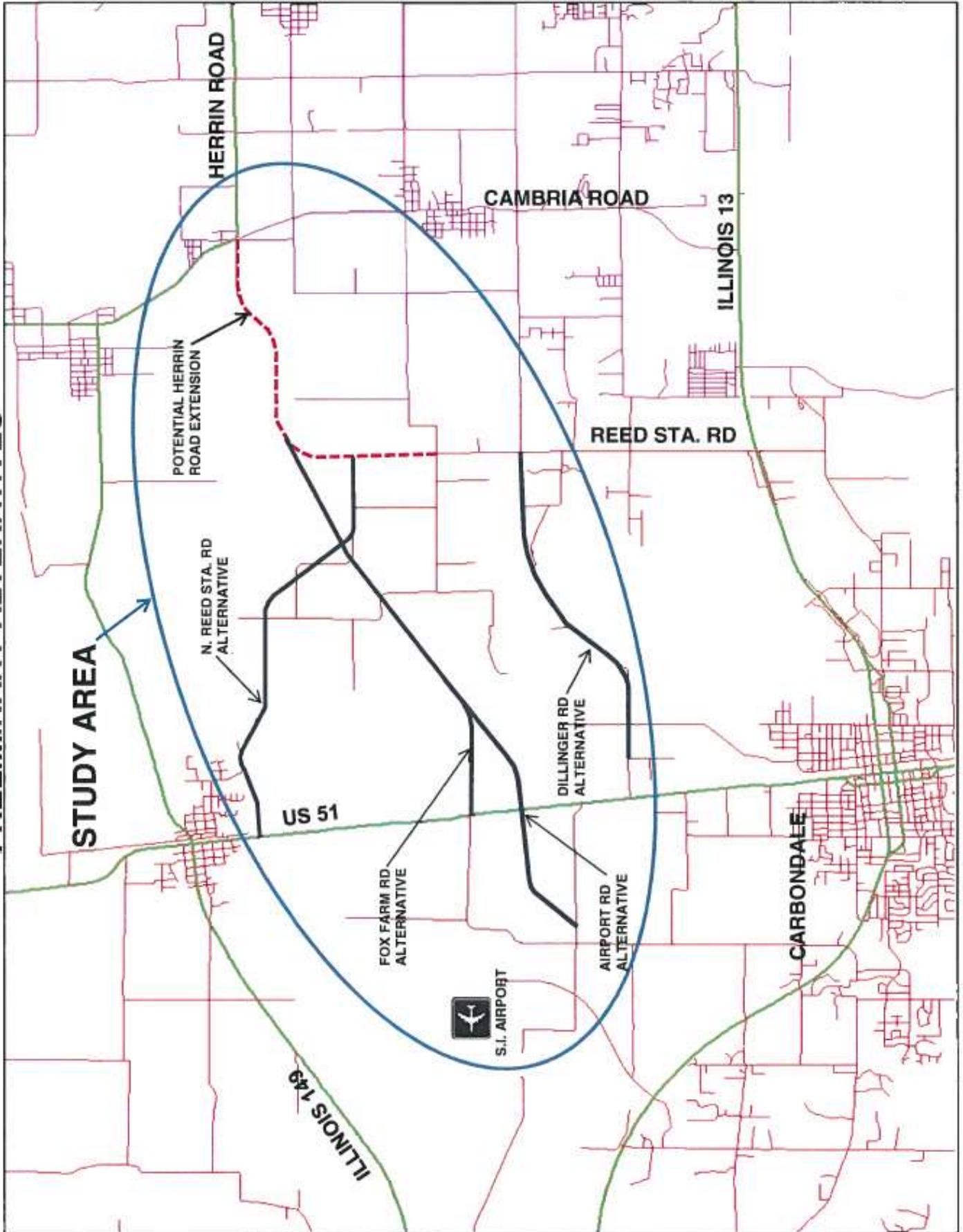
Inquiries, Comments, and Information

All attendees at today's meeting are encouraged to take a few minutes to write down their comments. SIMPO will give careful consideration to all comments received from the public. The study team will use this input to assist in evaluating the corridors and making any recommendations.

Written comments may be submitted during the meeting or later mailed to:

Southern Illinois Metropolitan Planning Organization (SIMPO)
Attn: Joe Zdankiewicz
3000 West DeYoung Street – Suite 800B-3
Marion, Illinois 62959

PRELIMINARY ALTERNATIVES



Reed Station Road to US 51 Connection Comment Sheet

SIMPO appreciates your input. Please fill out the information at the top of the comment form, answer the questions and provide your general comments. If you would like to provide additional information, please submit your comments on additional pages. You may leave the form with us today or mail to SIMPO at the address provided on the reverse side of this form. Please submit your comment(s) by March 1, 2017.

• **Please Circle the Descriptions that apply to you**

Residential Owner
Residential Tenant
Business Owner

Business Operator
Business Employee
Farm Owner

Farm Tenant
Other (please specify)

PLEASE PRINT

NAME: _____

ADDRESS: _____

PHONE NUMBER: _____ EMAIL: _____

1. Please describe your main reason for attending today's public meeting:

2. Which alternative do you feel offers the most potential for transportation benefits to the region?

3. Please describe your ideas for transportation improvements to the Study Area:

5. My general comments are:

Attendance List

MEETING REED STA. Rd. to U.S. 51

LOCATION Carle City Hall

DATE 2/14/17

Name/Position (Please Print)	Organization Represented email Address	Mailing Address/Phone (For Future Information)
David Gray	Grayson Properties LLC	PO Box 3604 Carle, IL 62902
Alan Shearer	Resident	102 Easthaen Dr. Carbondale, IL 62901
Liz Hunter	Jackson Co Board lhunter@jacksoncounty-il.gov	
STEVE FRATTINI	CITY OF HERRIN	300 N Park Ave Herrin 62948
Tim Brumley	Jackson Co. Ambulance	Box 328 Carbondale, IL
Tad Thompson	Jackson Co. Ambulance 520 N. University Ave	520 N. University Ave Carbondale, IL 62901
Brandon Tanner	Hanson Professional Services	3125 New Era Rd. Murphysboro, IL 62966
Paul Hunsaker	Blairsville Water Dist. Blairsville	
STEVE MUELLER	RESIDENT	599 LANS ROAD CARBONDALE, IL 62902
Ted Gutierrez	JCMTD	director@jcmtd.com

Attendance List

MEETING REED STA. RD to U.S. 51

LOCATION C'DALE CITY HALL

DATE 2/14/17

Name/Position (Please Print)	Organization Represented email Address	Mailing Address/Phone (For Future Information)
Sarah Heyer		
Norma BROWN	_____	
Jeff Doherty	Jackson Growth Alliance	PO Box 23 C'dale, IL 62903
Jan Alstat		8047 N Reed Station De Soto, IL
Fred Alstat		"
Julie Peterson	Jackson County Board	
Lee M. Frombarger	Carbondale City Council	1140 Morningside Dr Carbondale, IL 62901
Bruce Wallace		1915 MOUNTAIN MURKIN, MO, IL
Erin Beke		
Teri Bryant	State Representative Bryant Gen. Assembly 115th	@gmail.com 

Attendance List

MEETING KEED STA. Rd. to U.S. 51

LOCATION C'DALE City Hall

DATE 2/14/17

Name/Position (Please Print)	Organization Represented email Address	Mailing Address/Phone (For Future Information)
NAUREET KANG COUNCIL MAN	City.	
Andrew Eber	Jackson Co Board	
JEFF GRUBBS	CITY OF CARBONDALE	

REED STATION TO US 51 SUMMARY OF PUBLIC MEETING

Date: February 14, 2017

Attendance: Approximately 25

Written Comments Received

- 8 Written responses
- 6 supportive comments
- 2 negative comments
- 4 comments favoring the Airport Rd alternative
- 1 comment favoring improvements to Dillinger Road
- 1 comment favoring the Fox Farm Road Alternative

Online survey results

Question #1 – Do you feel there is a need for a new or improved corridor from Reed Station to US 51?

Yes – 5 responses

No – 2 responses

Question #2 – In your opinion, is a new roadway corridor desirable or should future projects focus on improving existing roadways?

New Corridor – 4 responses

Improve existing – 3 responses

Question #3 – Which corridor do you feel would be best for implementation?

Fox Farm – 2

Airport Road – 2

North Reed Station – 1

Dillinger Road – 2

Reed Station Road to US 51 Connection Comment Sheet

SIMPO appreciates your input. Please fill out the information at the top of the comment form, answer the questions and provide your general comments. If you would like to provide additional information, please submit your comments on additional pages. You may leave the form with us today or mail to SIMPO at the address provided on the reverse side of this form. Please submit your comment(s) by March 1, 2017.

• Please Circle the Descriptions that apply to you

<u>Residential Owner</u>	Business Operator	Farm Tenant
Residential Tenant	Business Employee	Other (please specify)
<u>Business Owner</u>	Farm Owner	<u>City Councilman</u>

PLEASE PRINT

NAME: NAVARET KANG

ADDRESS: 308 W. MAIN ST., CARBONDALE, IL 62901

PHONE NUMBER: 618-549-1755 EMAIL: NKang@explora.carbondale.com

1. Please describe your main reason for attending today's public meeting:
AS A CONCERNED CITIZEN, BUSINESS OWNER
& CITY OF CARBONDALE COUNCILMAN, I AM
INTERESTED IN HOW WE COULD DEVELOP THIS
AREA + BRING MORE HIGH PAYING JOBS.

2. Which alternative do you feel offers the most potential for transportation benefits to the region?
AIRPORT RD ALTERNATIVE SEEMS TO BE THE BEST.

3. Please describe your ideas for transportation improvements to the Study Area:
WE SHOULD HAVE A MORE ROBUST, READILY
AVAILABLE MASS TRANSIT SYSTEM, WHICH
SHOULD BE AVAILABLE THROUGHOUT SOUTHERN
ILLINOIS. AN EASY & QUICK ACCESS TO
CARBONDALE / MURPHYSBORO FROM I-57.

5. My general comments are:
KEEP UP THE FIGHT FOR SOUTHERN
ILLINOIS.

RECEIVED
FEB 17 2017

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Residential Tenant
Business Owner

Business Operator
Business Employee
Farm Owner

Farm Tenant
Other (please specify)
City Councilman

PLEASE PRINT

NAME: Lee M. Fronabarger

ADDRESS:

1140 Morningside Drive

PHONE NUMBER: 618-713-7406 EMAIL: pineridge.place@Frontier.com

1. Please describe your main reason for attending today's public meeting:

To view the proposed routes and see what impacts might result.

2. Which alternative do you feel offers the most potential for transportation benefits to the region?

The SI Airport Rd to Herrin Road route offers most economic growth potential and provides another eastwest corridor to avoid Highway 13 congestion.

3. Please describe your ideas for transportation improvements to the Study Area:

Another connection from I-57 westward towards the SI Airport tract and on to Hwy 13 would open up more opportunities for economic growth along and near this corridor.

5. My general comments are:

The top priority right now is to complete 6 lanes expansion from Carterville into Carbondale and continue westward to intersection of Hwy 127.

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<input checked="" type="checkbox"/> Residential Owner	<input type="checkbox"/> Business Operator	<input type="checkbox"/> Farm Tenant
<input type="checkbox"/> Residential Tenant	<input type="checkbox"/> Business Employee	<input type="checkbox"/> Other (please specify)
<input checked="" type="checkbox"/> Business Owner	<input type="checkbox"/> Farm Owner	

PLEASE PRINT

NAME: David Gray

ADDRESS: PO Box 3604 Cable Jk 62901

PHONE NUMBER: 618 201-6859 EMAIL: jobz1999@yahoo.com

1. Please describe your main reason for attending today's public meeting:
To find out reason for development, objects on the residential areas

2. Which alternative do you feel offers the most potential for transportation benefits to the region?

2 part (one) the Northern route would possibly least affect residential areas 2) more direct route to destinations from Northern route.

3. Please describe your ideas for transportation improvements to the Study Area:
None at this time *options*

5. My general comments are:

I am mostly concerned how traffic would increase on Reed station going North from I3 therefore the Dillinger improvement would draw more traffic from I3 to access the Horizon extension (Full length of Reed station). I would prefer a complete split from I3 to the new access to Airport 37 / ← 2 bus lanes a. more Northern extension to Airport

Reed Station Road – U.S. 51 Connector Study

Jeff Doherty, Executive Director
Jackson Growth Alliance
P.O. Box 2047
Carbondale, IL 62906
jdoherty@jacksonbiz.org
618-713-9210

The Airport Road Alternative is the preferred alternative for the Reed Station Road to U.S. 51 Connector. The advantages of the Airport Road Alternative over the other study alternatives are:

- The Airport Road Alternative corridor connects directly with the proposed Herrin Road Extension and would provide a contiguous alignment from the west side of Carbondale (Airport Road and Route 13) to Interstate 57, parallel to Route 13.
- The Airport Road Alternative would serve the Southern Illinois Airport and the development area in and around the airport by providing a direct link to Interstate 57. In addition, the alignment would adequately serve the Bicentennial Industrial Park and the Carbondale Industrial Park.
- The Airport Road Alternative would provide better access to the Walkers Bluff development from the west and would encourage other economic development projects along its corridor.
- The Airport Road Alternative would provide an additional grade separation of the CN Railroad in the Carbondale area.

In regards to the other alternatives, the North Reed Station Road Alternative moves the Connector's intersection with U.S. 51 to DeSoto and further away from Carbondale, which will be the major traffic generator for the Connector. The alternative includes an at-grade crossing of the CN Railroad in DeSoto. It will be less attractive for drivers to and from Carbondale.

The Dillinger Road Alternative follows much of Dillinger Road's current alignment with an at-grade crossing of the CN Railroad. Dillinger Road terminates at Reed Station Road south the Herrin Road Extension and would require extra turning movements to travel from U.S. 51 to Herrin and Interstate 57. Also, Dillinger Road terminates at U. S. 51. However, with some upgrades, it could be used as a temporary connector until funding can be obtained for the preferred alternative.

The Fox Farm Road Alternative includes a new public at-grade crossing which will be difficult to obtain from the CN Railroad without closing an existing at-grade crossing, which is not desirable.

Reed Station Road to US 51 Connection Comment Sheet

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Residential Tenant
Business Owner

Business Operator
Business Employee
Farm Owner

Farm Tenant
Other (please specify)

PLEASE PRINT

NAME: Sarah Heyes

ADDRESS: 1442 E Gary Dr

PHONE NUMBER: 549 5230 EMAIL: hey sar 41@yahoo.com

1. Please describe your main reason for attending today's public meeting:
Find out more

2. Which alternative do you feel offers the most potential for transportation benefits to the region?
Dillinger Rd will be less disruptive

3. Please describe your ideas for transportation improvements to the Study Area:
extension of Reed Stn to Herrin/Colp makes sense -

5. My general comments are:
First impression -
it feels like taxpayer dollars
will make it easier for casino patrons
to fly in and get to Walker's Bluff.
I think we should see if the airport is
bringing in all the business they want.
Not justified at this point.

Reed Station Road to US 51 Connection Comment Sheet

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Residential Owner
 Residential Tenant
 Business Owner

Business Operator
 Business Employee
 Farm Owner

Farm Tenant
 Other (please specify)
Board Member
Blairsville Water Dist.

PLEASE PRINT

NAME: Paul Hunsaker

ADDRESS: 1529 Club Rd, Cartersville IL 62918

PHONE NUMBER: 618 987 2339 EMAIL: hunsaker2-3@aol.com

1. Please describe your main reason for attending today's public meeting:

Water District + I also have a residence on Club Rd.

2. Which alternative do you feel offers the most potential for transportation benefits to the region?

Club Rd - ^(Herrin Rd extension) to Reed Station

3. Please describe your ideas for transportation improvements to the Study Area:

5. My general comments are:

Reed Station Road to US 51 Connection Comment Sheet

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Residential Owner
Residential Tenant
Business Owner

Business Operator
Business Employee
Farm Owner

Farm Tenant
Other (please specify)

PLEASE PRINT

NAME: _____

Dennis Presley

ADDRESS: _____

1100 Marion Street - Carterville (Crainville), IL 62918

PHONE NUMBER: _____

618-922-2255

EMAIL: _____

dennis@presley@yahoo.com

1. Please describe your main reason for attending today's public meeting:

I'm opposed to the present configuration of this project, and more specifically, to the apparent primary goal of the project. It is transparently clear that this project has been initiated and engineered to benefit Walker's Bluff, and any potential future developments at Walker's Bluff. If there are any other benefits to business, industry, or the residents of this region, those benefits are minimal and cited only to support an attempted justification of this project and its enormous costs to the taxpayers of the state.

2. Which alternative do you feel offers the most potential for transportation benefits to the region?

In lieu of this project, these funds should be expended to offer more accessible and abundant transit routes, transfer stations, and transportation hubs for the residents of this region. A special emphasis should be placed upon accessible transit for the elderly and those seeking transportation from rural areas for health care appointments and other essential needs.

3. Please describe your ideas for transportation improvements to the Study Area:

A comprehensive study should be conducted of physical improvements that have facilitated transit accessibility in other rural areas throughout the nation, and of which are potentially replicable to this region. The study should include consultation with those entities that have implemented such physical improvements, as well as organizations with expertise and data that informs an implementation project, which is designed to construct such physical improvements.

5. My general comments are:

See attachment, please.

February 23, 2017

I wish to express my opposition to the Reed Station Road to US 51 Connection road construction project, as featured in a February 14, 2017 report by WSIL TV news (<http://www.wsiltv.com/story/34506617/new-roads-planned-for-williamson-jackson-counties>) and as currently under consideration by the Southern Illinois Metropolitan Planning Organization and the Illinois Department of Transportation. The aim of this project is to build several new linking roads in western Williamson County and eastern Jackson County.

Although there may be some other peripheral, marginal benefits from this project, it is transparently clear to many residents of this region that this project primarily and substantially benefits the private development at Walker's Bluff winery, located on the Jackson County/Williamson County line. The massive investment of public funds for this project is misguided and unreasonable, especially in view of many other roads projects that are crucially needed in this region, which would facilitate economic development in an exceedingly greater manner than this project and/or would decrease traffic crashes and deaths.

When everything is analyzed with an objective eye, it is clear that this entire project is Walker's Bluff-centric, and nearly the entire benefit of the project is to be derived by this private entity. Any other explanation for this project would be disingenuous. LITERALLY-----ALL ROADS LEAD TO WALKER'S BLUFF.

Particularly frustrating is the scope of this project in the context of the state's current fiscal chaos, and proposals from the General Assembly that portend an increase in the taxation of the state's residents. These proposed tax increases accompany the growing tax burden placed upon local residents in the form of higher municipal sales taxes and county property taxes. Yet, there seems to be plenty of money for specious programs and projects, spent in this instance on roads that lead to a winery and potential casino, and only enhance the fortunes of one private entity. I'm certain that these millions of dollars (hundreds of millions?) could be spent on roadway and infrastructure projects that would result in much greater economic development elsewhere in the region, or on the improvement of transit services for the essential needs of the people of this rural region.

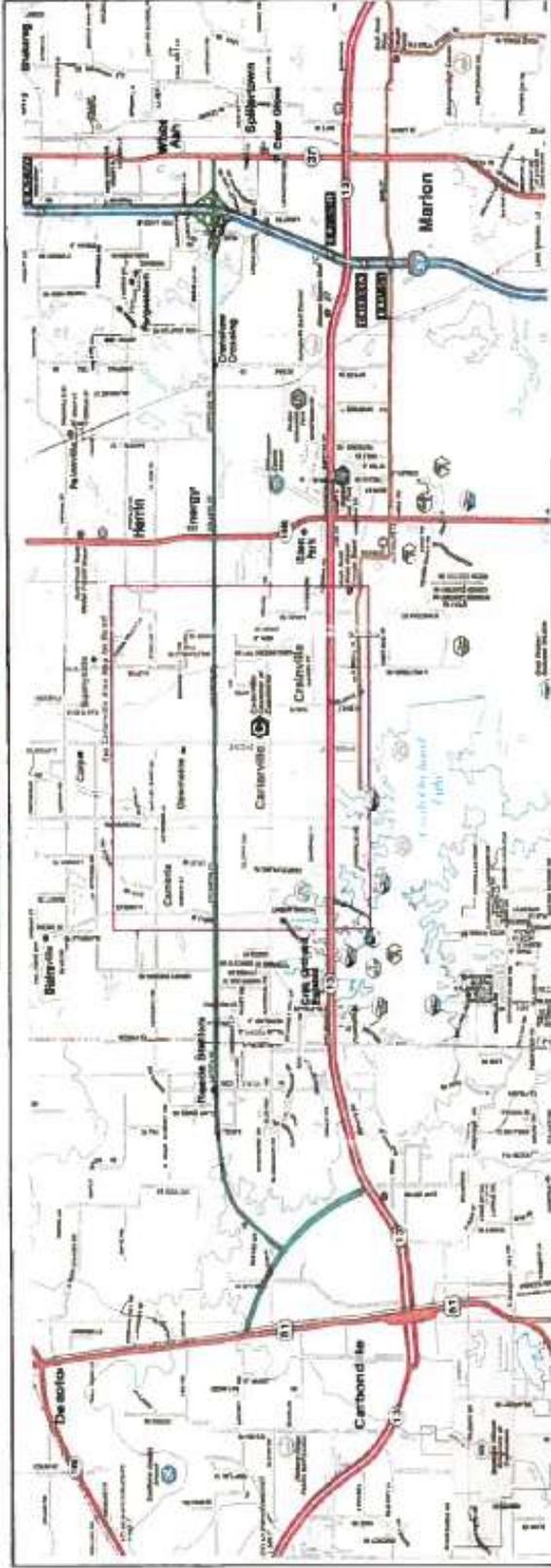
I ask for you to abandon this wasteful and unethical project, and instead, focus upon projects that benefit the region's residents, as a whole, as well as potentially nurtures robust industrial growth.

Sincerely,

A handwritten signature in black ink, appearing to read "Dennis Presley", with a long horizontal line extending to the right.

Dennis Presley

ALTERNATE ROUTE 13



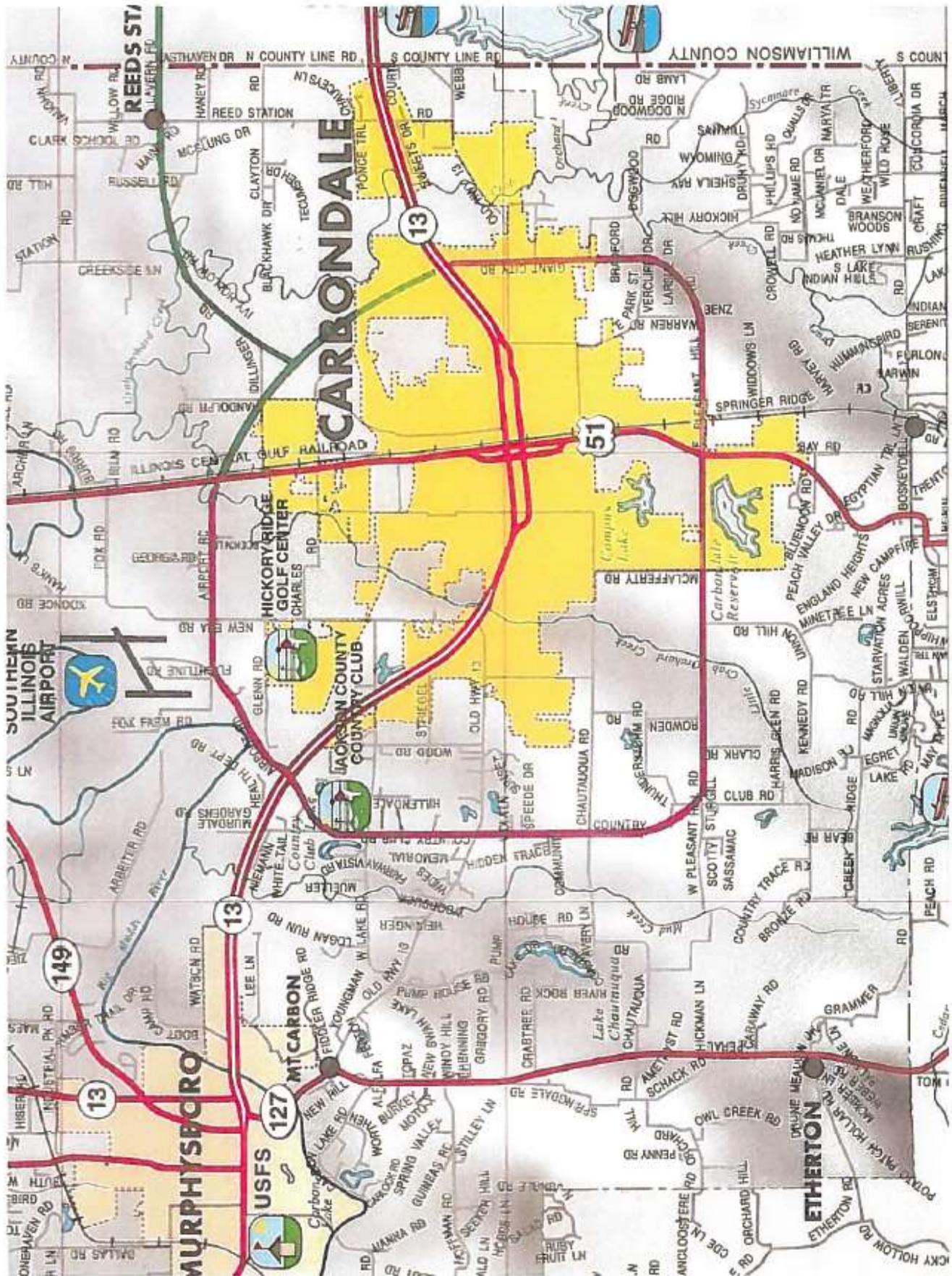
There are several ways to travel north-south in Williamson and Jackson Counties, however, there is only one east-west highway between the counties. Routes 166, 37, 57, 148, 51, 127, and Route 3 effectively move traffic north-south. Route 13 is the only east-west highway between Williamson and Jackson Counties.

With approximately 85% of the population of Williamson county living in the Northwest quarter of the county, and most of the population of Jackson County concentrated in the eastern one-third of that county, there is created a dispersed city of 70,000 to 80,000 people.

The future of this virtual city will depend on the degree of co-operation between local leaders. If community leaders continue to operate in isolation--concentrating only on immediate benefits for their particular area, progress will be slow.

However, if they choose to work for the good of the whole region, and develop long-range plans and priorities, the economic conditions of the region could be transformed within a decade.

Transportation infrastructure improvements are essential if the region is to fulfill its potential for economic growth.



CARBONDALE



149

13

13

127

13

51

MURPHYSBORO

USFS

MT CARBON

ETHERTON

WILLIAMSON COUNTY

SOUTHERN ILLINOIS AIRPORT

HICKORY RIDGE GOLF CENTER

JACKSON COUNTY CLUB

REEDS ST

ASTHAVEN DR N COUNTY LINE RD S COUNTY LINE RD
WILLOW RD HANEY RD REED STATION
MAYNARD RD MCCLUNG DR CLAYTON
RUSSELL RD BURKHAWK DR TECUMSEH DR
STATION RD CREEKSIDE LN
ILLINOIS CENTRAL GULF RAILROAD
HICKORY RIDGE GOLF CENTER
JACKSON COUNTY CLUB
SOUTHERN ILLINOIS AIRPORT
MURPHYSBORO
MT CARBON
ETHERTON
WILLIAMSON COUNTY