

Chapter 2: Alternatives

2.0 Alternatives

Chapter 2 contains three parts:

Section 2.1 describes how the initial range of alternatives was developed.

Section 2.2 describes the alternatives that were considered.

Section 2.3 describes how the more than 129 alternatives were narrowed down to four alternatives.

Section 2.4 describes and shows the four remaining alternatives carried forward for detailed study.

Chapter 3 contains the detailed Environmental Assessment Analysis of the four remaining alternatives and the selection of the Preferred Alternative, and **Chapter 4** describes the impacts associated with the Preferred Alternative, in addition to the proposed mitigation.

Project Study Group (PSG)

This group provides project recommendations to the Joint Lead Agencies. The PSG includes representative from IDOT, FHWA, McLean County, the City of Bloomington, the Town of Normal, McLean County Regional Planning Commission, and the consultant engineering team.

Community Working Group (CWG)

A group made up of local stakeholders who volunteered to be a part of the study, and advised the PSG during major project decisions.

2.1 Alternatives Development

Where did the lines on the map come from?

The initial range of Build Alternatives was developed using input from the Community Working Group (CWG) and the Project Study Group (PSG). The CWG consisted of local stakeholders who served as representatives of the general public.

The CWG developed the initial range of Build Alternatives during a series of meetings and workshops held in the winter of 2010 and spring of 2011. The CWG members were presented with aerial maps of the study area and asked to draw alternatives based upon their understanding of the study area. For this exercise, no restrictions were imposed on where the alternatives were drawn. The CWG was instructed to ignore the constraints of adhering to the Purpose and Need, engineering feasibility, and community and environmental resource impacts since these criteria would be evaluated at future CWG meetings. Alternatives included those on new alignment and those that utilized existing roads, such as Towanda Barnes Road.



After the CWG developed the initial range of alternatives, the PSG reviewed the maps and added several additional alternatives to ensure that a full range of alternatives was considered. The range of alternatives included the Preferred Corridor from the 2009 ESH Corridor Study.

The alternative refinement process was ongoing. The alternatives were refined by the CWG and the PSG. As an example, alternatives were shifted to avoid impacts such as residences. At the first few CWG meetings, the alternatives did not include interchanges. Interchange development occurred later in the process and the type and location of interchanges were refined using input from the CWG members. The CWG meetings are discussed in detail in **Chapter 6**.

How was the public involved in the alternative development process?

Stakeholders who were not members of the CWG had an opportunity to review and provide comment on the alternatives during the Public Information Meetings (PIMs) held in August 2009, January 2012 and June 2013. The preliminary alternatives and a summary of the advisory group meetings were available for viewing on the project website. The public could comment at the PIM's, via the project mailing address, the project comment line, or the project email address.

The original alternatives were modified based upon public input and environmental resource information received. Comments and recommendations received from the public were reviewed and taken into consideration. As an example, information obtained at PIMs included the location of new residences and businesses, and information on farming operations. Based on that information, the

Focus Working Groups (FWGs)

A group made up of local stakeholders with specific interests or knowledge, who volunteered to be a part of the study, and advised the PSG during major project decisions.

alternatives were modified where feasible.

Additionally, Focus Working Groups (FWG) were established to further refine and enhance the alternatives. There were three separate FWGs: Land Use and Access Management, Sustainability, and Alternative Modes. Each group focused on different aspects of the ESH project. For example, information from the Land Use FWG helped shape the proposed interchange at I-74.

2.2 Range of Alternatives Considered

What types of Build Alternatives were considered?

One hundred and twenty nine (129) north-south Build Alternatives that connect I-55 and I-74 on the east side of Bloomington-Normal as developed by the advisory groups and the PSG were considered (see **Figure 2.2-1**).

Three different facility type options were considered for the north-south Build Alternatives: Freeway, Expressway, and Arterial. Freeway and Expressway Options consist of four travel lanes (two in each direction) and Arterial Options consist of four travel lanes (for new alignment alternatives) and six travel lanes (for alternatives that widen existing Towanda Barnes Road).

How were the north-south Build Alternatives named and numbered?

The preliminary alternatives are combinations of northern (T), middle (BN), and southern (D) sections. The northern (T) sections consisted of the various I-55 interchange connections in the Towanda area. The southern (D) sections consisted of the various I-74 interchange connections in the Downs area. The middle (BN) sections were those north-south sections that connected the northern and southern sections.

Since all of the north-south Build Alternatives had an I-55 connection, an I-74 connection, and a middle section, each possible combination of the three sections was developed into one alternative and then assigned a number. For example, Alternative 1 is a combination of sections T1, T5, BN1, D11 and D1. **Figure 2.2-1** shows the locations of all of these sections. The total of all the alternative combinations equaled one hundred and twenty nine.

In addition to the original Build Alternatives, a “No Build” Alternative was introduced.

What is the No Build Alternative?

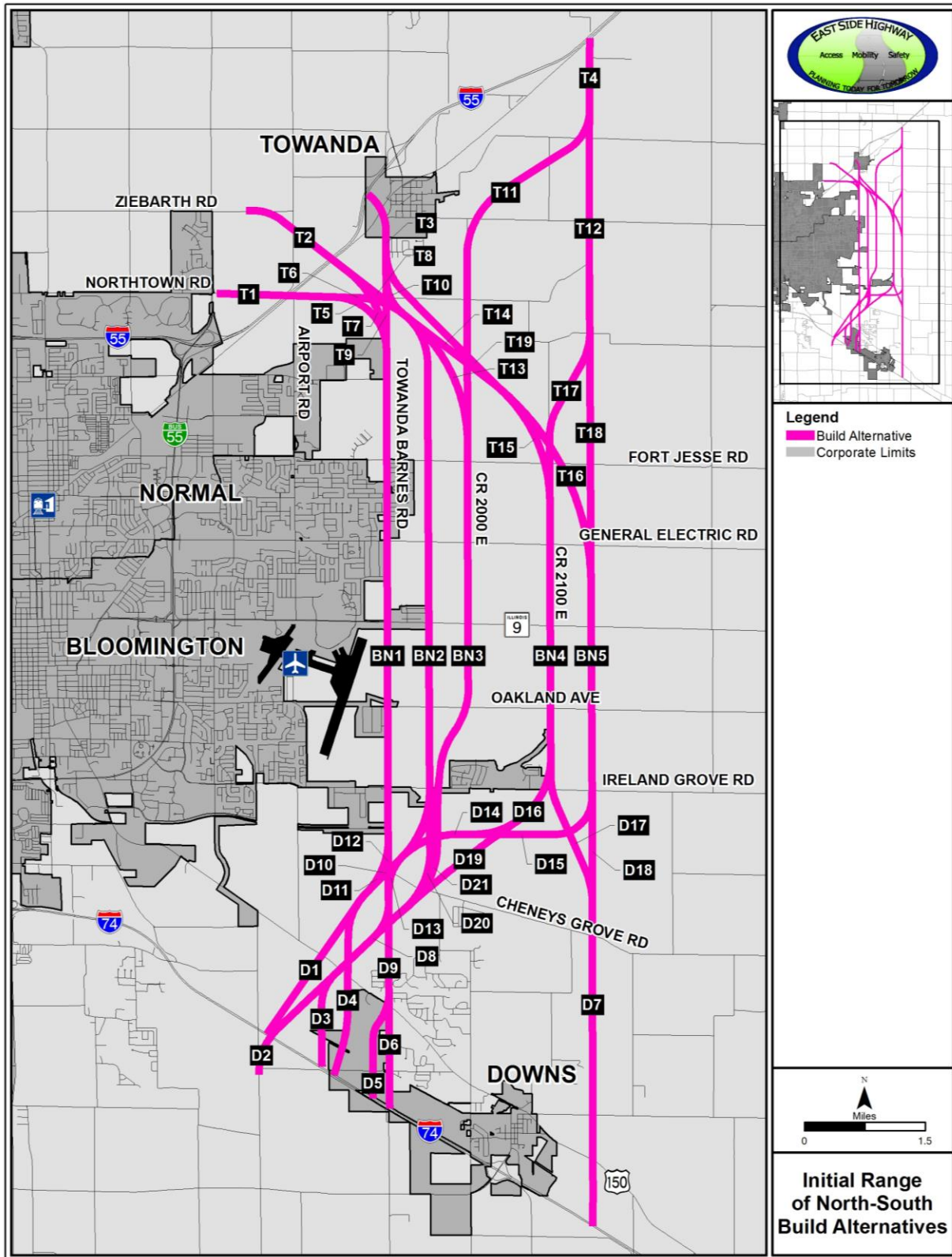
The No Build Alternative includes all improvements from the Long Range Transportation Plan 2035 for the Bloomington-Normal Urbanized Area (2007 LRTP), Bloomington-Normal Bicycle Pedestrian Plan (1997 BPP), Transportation Improvement Program – Fiscal Years 2011-2015 (2010 TIP) and other local planning documents, excluding the ESH project. The No Build Alternative assumes that the planned or programmed projects and improvements would be completed and operating within the McLean County transportation system prior to the design year for this project, Year 2035. The No Build Alternative does not meet the project’s Purpose and Need Statement, but is carried through to the end of the study and serves as a basis for comparison.

No Build Alternative

Assumes all planned or programmed transportation projects and improvements would be completed and operating prior to the design year. It does NOT include building the East Side Highway.



Figure 2.2-1: Initial Range of North-South Build Alternatives



What other alternatives were considered?

In addition to the north-south Build Alternatives and the No Build Alternative, a Transportation System Management /Travel Demand Management alternative, a Transit Alternative and a Multiple East-West Arterial Expansion Alternative were considered. A summary of these alternatives is provided below.

What is the Transportation System Management/Travel Demand Management Alternative?

Transportation Systems Management (TSM) strategies are typically small improvements to the existing transportation system, such as the installation of dedicated turn lanes, construction of spot geometric changes, or the adjustment of signal timing implemented to create a more efficient use of existing facilities and vehicle operation without adding capacity.

Some of the strategies would require new ordinances, new transportation studies, and the cooperation of the local municipality, the state, and FHWA when considering changes to state-owned roads and the National Highway System.

Travel Demand Management (TDM) strategies are policy changes implemented to influence travel behavior, spread travel demand across peak periods, and reduce the demand for single-occupancy vehicle trips. Examples include alternative work times, ride-sharing, or bicycle incentives. Some strategies may already be in use while others may be planned for future use.

Numerous TSM/TDM strategies are available, however, this alternative only included those specifically identified to be part of a goal, objective, policy, or strategy presented in the McLean County Regional Comprehensive Plan (November 2009), the 2007 and 2012 LRTPs, the City of Bloomington Comprehensive Plan (October 2005), or the Town of Normal Comprehensive Plan (February 2006).

Transportation System Management (TSM) Alternative

TSM strategies typically include minor improvements to the existing transportation system, such as adjusting lane width or improving intersections.

Travel Demand Management (TDM) Alternative

TDM strategies are policy changes implemented to influence travel behavior, spread travel demand across peak periods, and reduce the demand for single-occupancy vehicle trips.

Activity Center

An activity center is a place that attracts people for shopping, working, studying, recreation or socializing



Eastland Mall located in Bloomington is an activity center.



What is the Transit Alternative?

The Transit Alternative (shown in **Figure 2.2-2**) consists of dedicated transit corridors along the existing Union Pacific/Amtrak rail line, the Norfolk Southern rail lines, Towanda Barnes Road, US 150, Empire Street/IL Rte. 9, General Electric Road, and Fort Jesse Road. These corridors would

Multi-modal Station

A multi-modal station is a place where people can access and transfer among multiple modes of transportation. People generally enter the facility by one mode of access (e.g. on foot, riding a bicycle, by car, by bus or train, etc.) and leave by another.



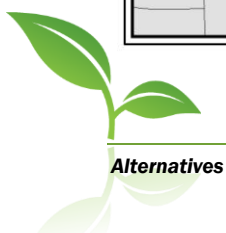
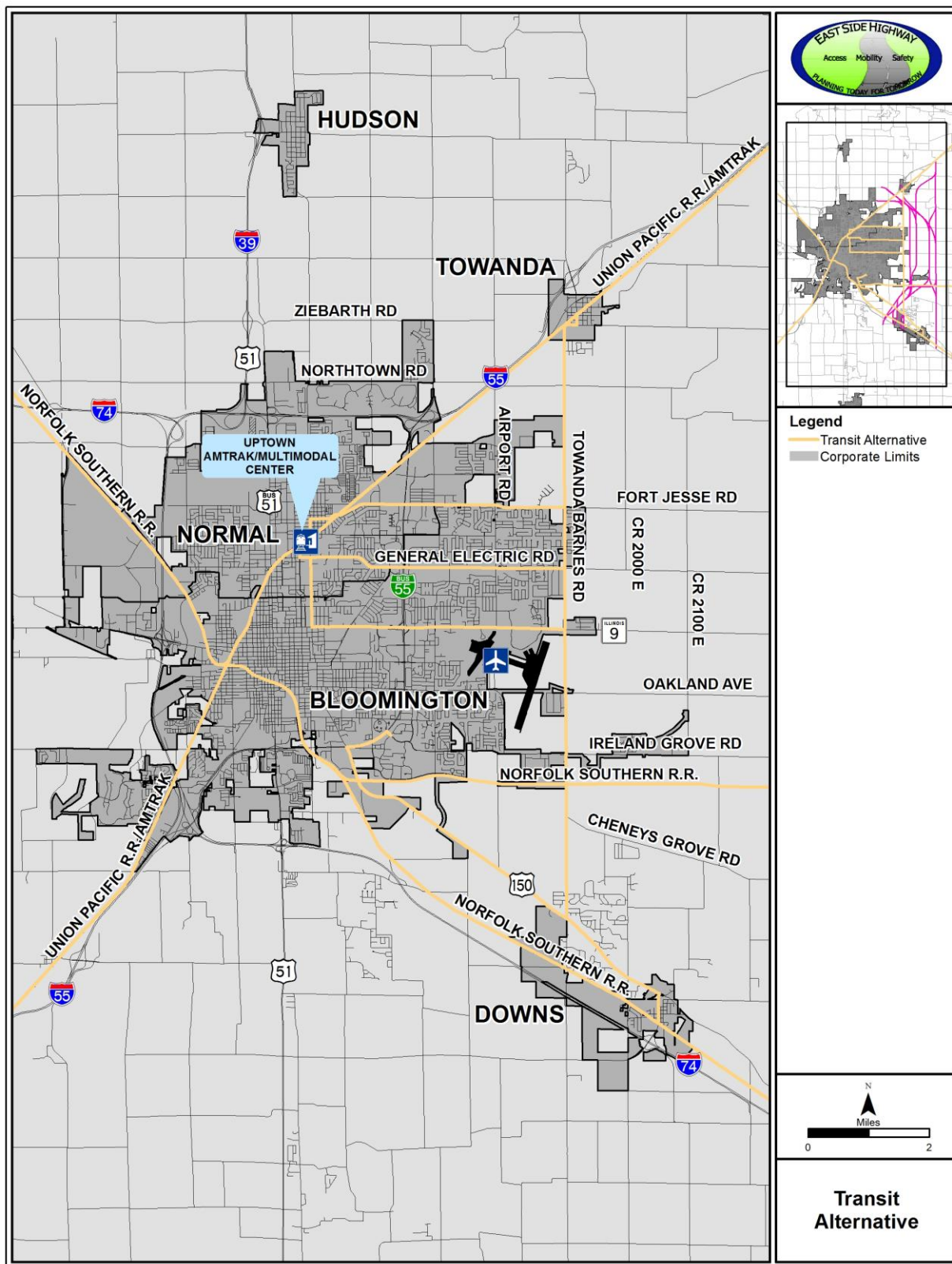
Uptown Station located in Normal is a multi-modal station

connect the east side to the various existing and future activity centers, existing bus routes, and the Uptown Amtrak/multi-modal center. Each of these routes could contain a variety of transit types (such as commuter rail, light rail transit, bus rapid transit, streetcar/trolley, and local bus service) and would also include improved pedestrian and bicycle accommodations. The service would run frequently during the peak hours in order to capture as many riders as possible. Automobile park-and-ride lots would be strategically located to congregate riders, with possible locations at the existing I-55 Towanda and I-74 Downs interchanges.

Connections with existing local bus service would occur at Eastland Mall and the Uptown Amtrak/multi-modal center. The existing Constitution Trail network would be expanded east of Towanda Barnes Road to provide access between Towanda, Downs and Bloomington-Normal.

This alternative assumed implementation of improvements contained in the No Build Alternative, transit improvements, improvements to Constitution Trail contained in the 2035 LRTP, implementation of planned 110 mph high-speed passenger rail service, and the establishment of commuter rail service between Peoria and Bloomington-Normal on existing Norfolk Southern tracks, which is currently under study by the Tri-County Regional Planning Commission.

Figure 2.2-2: Transit Alternative

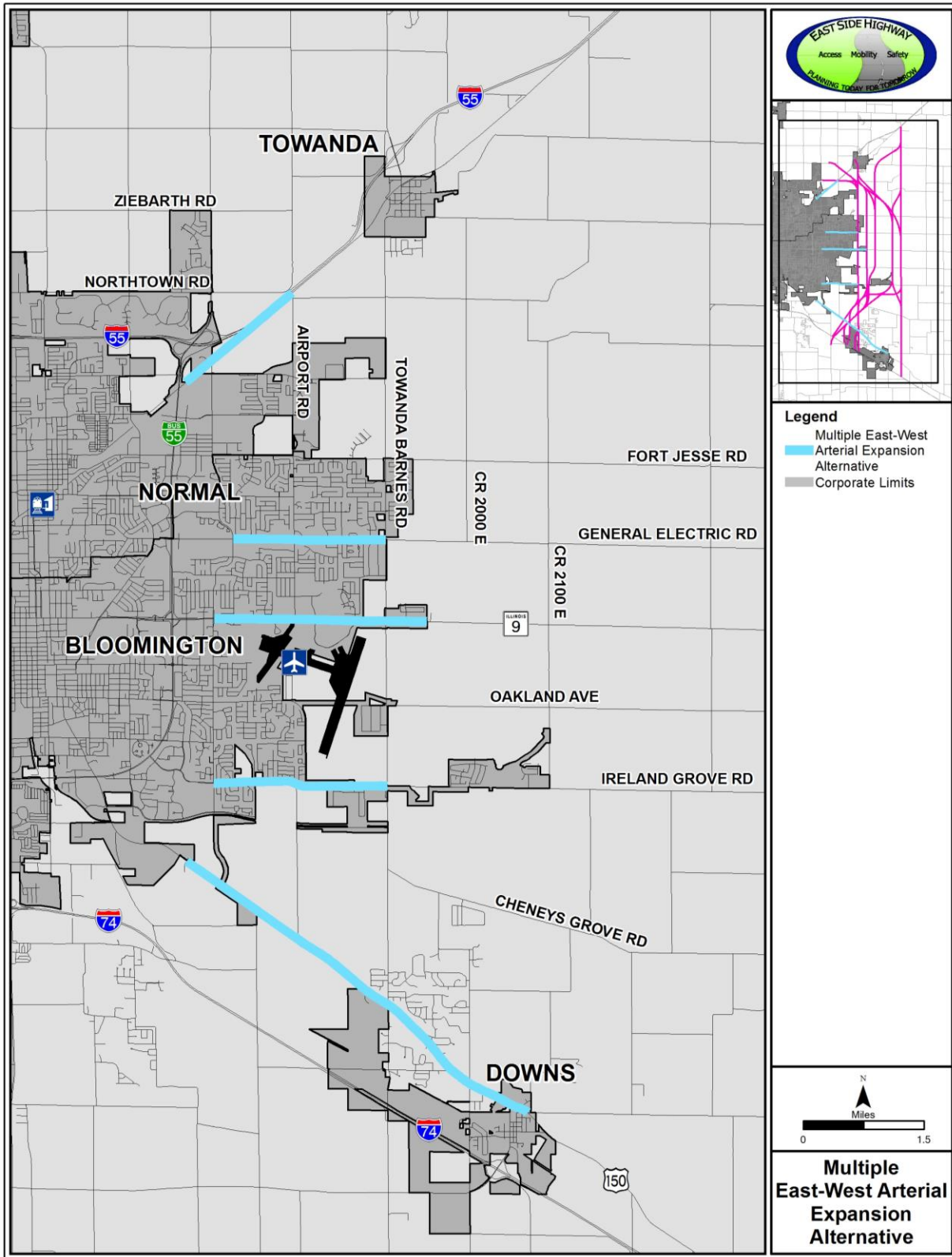


What is the Multiple East-West Arterial Expansion Alternative?

The study evaluated a Multiple East-West Arterial Expansion Build Alternative. This alternative consisted of adding one lane in each direction to strategic east-west arterials between I-55 and I-74 on the east side of Bloomington-Normal. East-west improvements for consideration are shown in **Figure 2.2-3** and include:

- Widening and improving the existing two-lane US 150 between the future extensions of Hershey Road (west) and 800 North Road (east) to a four-lane facility.
- Widening and improving the existing four-lane Ireland Grove Road between Hershey Road (west) and Towanda Barnes Road (east) to a six lane facility.
- Widening and improving the four-lane existing Empire Street/IL Rte. 9 between Hershey Road (west) and two blocks East of Towanda Barnes Road (east) to a six-lane facility.
- Widening and improving the existing four-lane General Electric Road between Hershey Road (west) and Towanda Barnes Road (east) to a six-lane facility.
- Widening and improving the two-lane existing Old Route 66 between Veterans Parkway (west) and Airport Road (east) to a four-lane facility.

Figure 2.2-3: Multiple East-West Arterial Expansion Alternative



Why were improvements to some existing major north-south roadways not considered?

The range of alternatives did include improvements to Towanda Barnes Road, the major north-south roadway in the study area. However, other north-south roadways, including Veterans Parkway (Business I-55), U.S. Route 51 through Bloomington and Normal (Business U.S. 51), and County Road 2600 East (known locally as Lexington-Leroy Road) were not considered.

Veterans Parkway and U.S. 51/Business U.S. 51 were excluded because they do not serve the movements within the east side growth area. Both roadways are located in the urban core of Bloomington-Normal, west of the planned growth area and efficient north/south travel along them is limited due to the surrounding development.

Therefore it was determined that alternatives that utilize Veterans Parkway or U.S. 51/Business U.S. 51 did not meet the Purpose and Need.

The north-south route of Lexington-Leroy Road is similar to corridors evaluated in the 2009 ESH Corridor Report. During the Corridor Study, these corridors were eliminated because they did not address the Purpose and Need as they were located too far east of the 2035 Land Use Plan Boundary to effectively address local access and mobility. Lexington-Leroy Road is located five miles east of the limits of the 2035 Land Use Plan and two miles east of the study area, therefore it was determined that alternatives that utilize Lexington-Leroy Road did not meet the Purpose and Need.

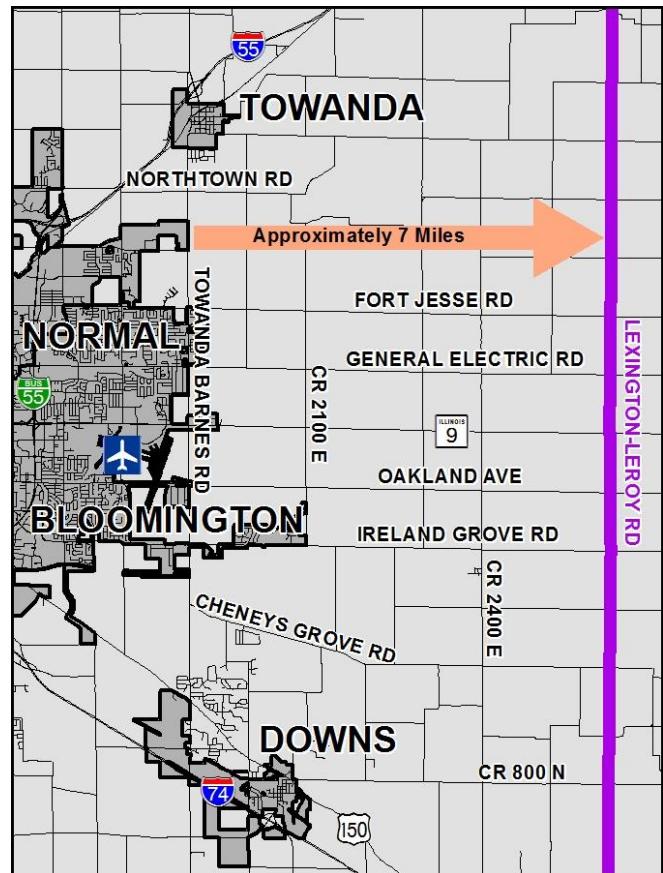
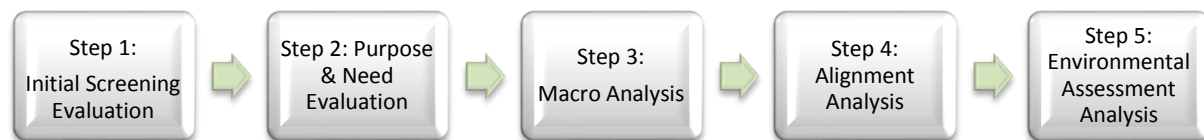


Figure 2.2-4: Lexington-Leroy Road Location

2.3 Alternatives Evaluation and Screening

How were the alternatives evaluated?

The initial range of alternatives was evaluated using a five-step process. Each step contained a set of evaluation criteria that allowed for the most feasible alternatives to be carried through to the next level of evaluation until one Preferred Alternative remained. The steps in the evaluation process are shown below.



This Chapter summarizes the first four steps of the alternative evaluation process. Step 5, the Environmental Assessment Analysis, in addition to selection of the Preferred Alternative, is documented in **Chapter 3**.

Is the No Build Alternative included in the evaluation?

The No Build Alternative was not considered in the five-step evaluation process. Although the No Build Alternative does not meet the project's Purpose and Need, it is carried through to the end of the evaluation process to serve as a basis for comparison with the remaining alternatives.

What is Step 1 in the evaluation process?

Step 1 in the alternatives evaluation process was the Initial Screening Evaluation. In this step the initial range of alternatives was reviewed and non-feasible alternatives were eliminated. This evaluation consisted of three criteria, as listed in **Table 2.3-1**. The measure for each was a Yes or No answer as to whether the criterion was met or not. If an alternative did not meet all of the criteria in this level of screening, it was eliminated from further analysis.

Community

According to the IDOT Community Impact Assessment Manual, the FHWA has identified a community as “a distinctive, homogenous, stable, self-contained unit of a larger spatial area defined by geographic boundaries, ethnic, or cultural characteristics of the inhabitants; a psychological unity among the residents; and the concentrated use of the area’s facilities. A community is an entity with economic, social and perhaps political functions. It usually has a name identity and number of community service facilities such as business districts, religious institutions, schools, health centers, and fire and police stations. By contrast, a neighborhood is a small social unit based on face-to-face contacts.” The guidelines for determining neighborhood and community boundaries contained in the Manual were consulted for this criterion.



Table 2.3-1: Initial Screening Criteria

Criterion	Unit of Measure	Processing
Does the alternative directly impact state or federally protected areas? (Illinois Natural Area Inventory Sites, Illinois Nature Preserves, State or Federal Parks)	Yes	Eliminate from further evaluation
	No	Continue for further evaluation
Does the alternative meet the horizontal and vertical clear zone requirements for the Central Illinois Regional Airport ¹ ?	Yes	Continue for further evaluation
	No	Eliminate from further evaluation
Does the alternative divide or isolate a neighborhood or community? (Is the neighborhood or community divided into 2 or more sections? Are any sections isolated from community services?)	Yes	Eliminate from further evaluation
	No	Continue for further evaluation

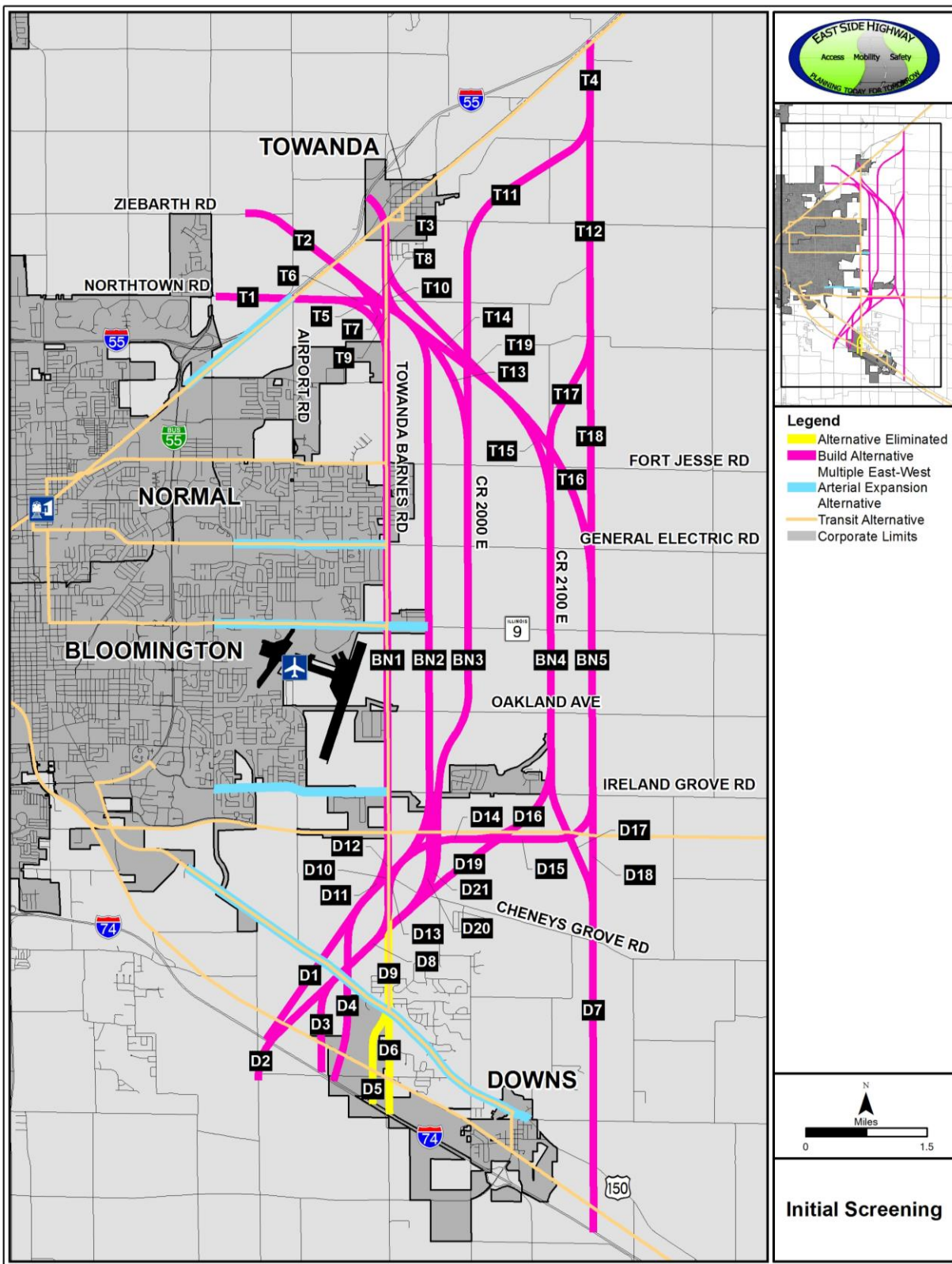
¹Clear zone requirements in accordance with expansion/operational initiatives presented in CIRA's master plan.

What were the results of the Step 1 evaluation?

Since the study area does not contain any state or federally protected areas, none of the alternatives were eliminated because of the first criteria. Similarly, all of the alternatives met the horizontal and vertical clear zone requirements of the airport, so none were eliminated for this reason. However, three sections (D5, D6, and D9) were determined to divide or isolate a neighborhood or community in accordance with the IDOT Community Impact Assessment Manual. These sections sever and/or disrupt access to existing community areas near the Village of Downs. As a result, 36 alternatives that contained these sections were eliminated. Ninety-three Build Alternatives, in addition to the Multiple East-West Arterial Expansion Alternative, the TSM/TDM Alternative, the Transit Alternative, (shown in **Figure 2.3-1**) and the No Build Alternative were carried forward into Step 2: Purpose and Need Evaluation.



Figure 2.3-1: Initial Screening



What is Step 2 of the evaluation process?

Step 2 in the alternative evaluation process was the Purpose and Need Evaluation. In this step the alternatives were evaluated to assure compliance with the goals established in the project's Purpose and Need Statement.

The needs identified in the Purpose and Need Statement were broken down into eight specific criteria, and measures were developed to determine how well the alternative met the criteria. The Purpose and Need Evaluation criteria (**Table 2.3-2**) were applied to the 93 Build Alternatives that remained after the Initial Screening evaluation in Step 1. If an alternative performed poorly compared to the No Build Alternative and other Build Alternatives, it was considered to be "less consistent" with the Purpose and Need and was eliminated. Even though the No Build Alternative does not meet the Purpose and Need of the project, it was carried forward as a basis for comparison with the alternatives.



Table 2.3-2: Purpose and Need Evaluation Criteria

Need	Criterion		Measure
Accommodate Managed Growth	1.	Is the alternative compatible with adopted land use plans?	% change in accessibility (as compared to baseline ¹)
	2.	Does the alternative restrict/reduce opportunities for uncontrolled, sporadic, or leapfrog development?	Area between the alternative and the planning boundary ² between I-55 and I-74 (square miles)
Improve Mobility	3.	Does the alternative reduce congestion in the study area?	<i>Decrease in congested road miles (v/c>0.8)</i> <i>Percent decrease in congested road miles (v/c>0.8)</i>
	4.	Does the alternative improve north/south travel efficiencies?	<i>Travel time savings from two north-south travel pairs (minutes saved)</i>
	5.	Does the alternative improve east/west travel efficiencies?	Travel time savings from two east-west travel pairs (minutes saved)
Improve Access	6.	Does the alternative improve travel efficiency to the interstate system?	Percent increase in area with travel within 5 minutes to the interstate (vehicle shed) (sq. miles)
	7.	Does the alternative improve north/south and east/west travel efficiencies to/from major travel nodes?	Cumulative travel time savings to/from major generator (vehicle hours per day)
	8.	Does the alternative improve network wide travel efficiencies?	Network wide travel time savings (number of hours saved per day)

¹Baseline is considered to be the conditions defined in the No Build Alternative.

²Planning boundary is considered the outer limit of the 2035 land use plan for Bloomington and Normal.



What were the results of the Step 2 evaluation?

The Step 2: Purpose and Need Evaluation identified three sections (D7, D17, and D18) that were less consistent with the evaluation criteria described in **Table 2.3-2** than other remaining sections.

Unmet Demand

Unmet demand is defined as the amount of volume reduction required on the failing roadway segments to make them operate at an acceptable level.

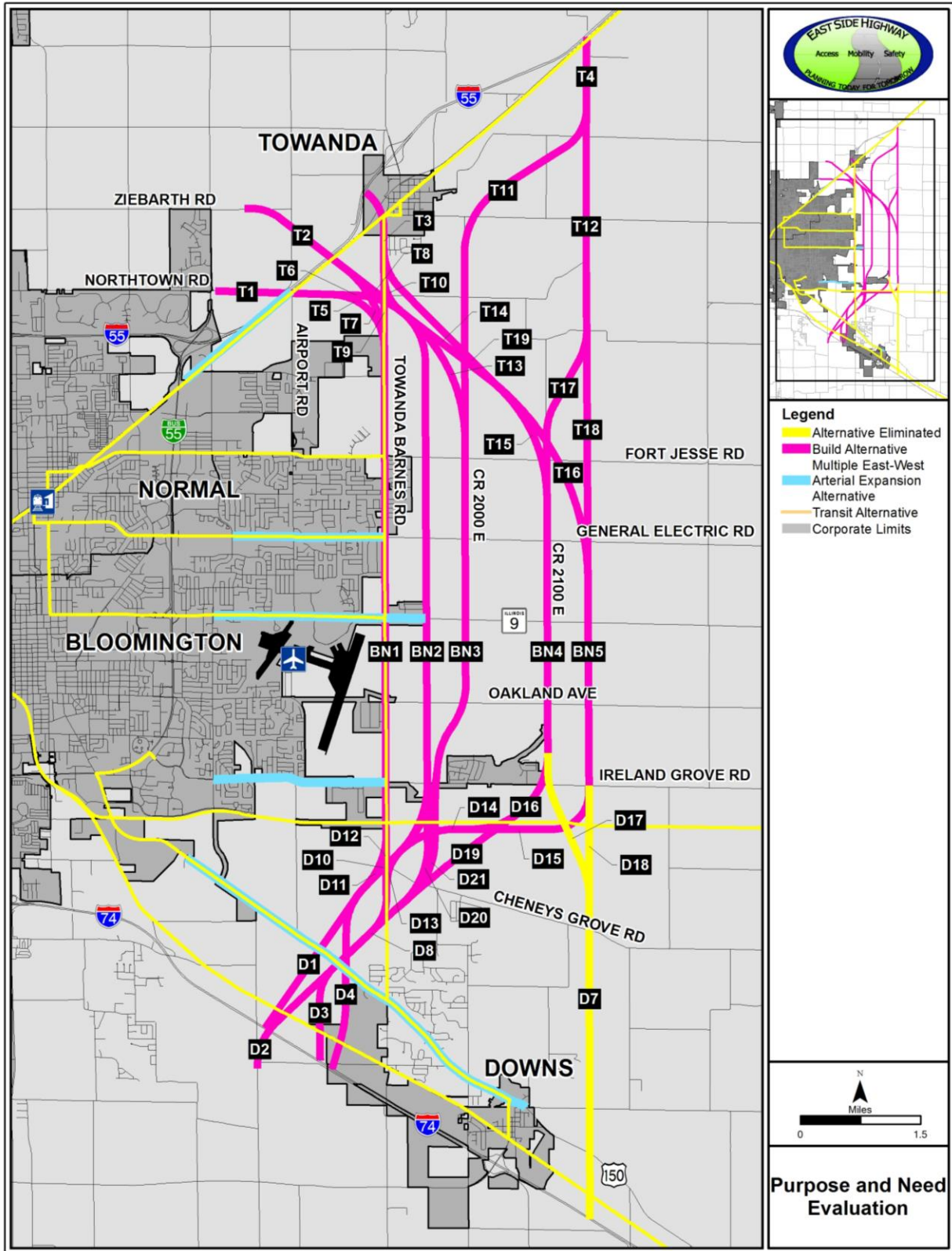
These three sections were the easternmost southern interchange connections to I-74 and did not improve congestion on the roads in the study area. As a result, eight alternatives that used these sections were eliminated.

The stand-alone TSM/TDM and Transit Alternatives were also eliminated at this step because they do not accommodate the future unmet demand, or reduce traffic congestion in the study area to an acceptable level, and therefore, do not meet the Purpose and Need. However, because they can help reduce congestion, TSM/TDM and transit elements were considered as part of the remaining roadway Build Alternatives. The stand-alone Multiple East-West Arterial Expansion Build Alternative would satisfy some elements of the Purpose and Need of the project, and attendees at the Public Information Meetings expressed interest in pursuing this alternative. It was carried forward in the analysis.

Eighty-five (85) Build Alternatives, in addition to the Multiple East-West Arterial Expansion Alternative (shown in **Figure 2.3-2**), were carried forward into Step 3: Macro Analysis.



Figure 2.3-2: Purpose and Need Evaluation



What is Step 3 in the evaluation process?

Step 3, the Macro Analysis, considered the environmental, community and economic, agricultural, cultural, design, and traffic impacts of each remaining alternative. Impacts to the resources were

Macro Analysis

This is the third step in the alternative evaluation process where the impacts to environmental, community and economic, agricultural, and cultural resources as well as design and traffic considerations for each remaining alternative were calculated. The alternatives with disproportionately high resource impacts are eliminated.

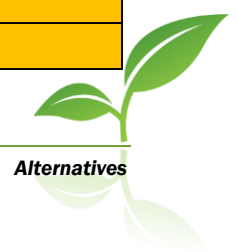
calculated for a 500 foot wide corridor for all the remaining north-south Build Alternatives. For the Multiple East-West Arterial Expansion Alternative, only a 200 foot wide corridor was examined, as this dimension represents an approximate corridor width for a multi-lane arterial. Alternatives with the greatest resource impacts were eliminated in a stepwise fashion to avoid the resources or minimize the environmental effects.

Which resources were evaluated in Step 3, Macro Analysis?

Federal and State laws that protect environmental resources were considered when determining which resources to evaluate in Step 3, along with input from the CWG. For example, avoiding wetlands is considered because Federal law states that wetlands must be avoided when practicable. Although avoiding homes is not mandated by Federal or State law, CWG members indicated that avoiding homes was important, so number of homes impacted was used to compare and eliminate alternatives. It is also IDOT policy to consider avoiding homes when possible. **Table 2.3-3** identifies the six categories and 32 criteria used to evaluate potential impacts resulting from the 85 remaining alternatives.

Table 2.3-3: Macro Analysis Criteria

Criterion	Unit of Measure
Environmental	
Water Quality/Water Resources	Floodplain (acres affected)
	Floodways (acres affected)
	Biologically Significant Streams (number of crossings)
	Class I Streams (number of crossings)
	Streams (number of crossings)
	Drinking Water Supplies - Surface Water (number affected)
Wetlands	Wetland Areas (acres affected)
	Wetland Areas (number affected)



Special Waste	CERCLIS, LUST, RCRA sites (number affected)
Forested Areas	Forested Areas (acres affected)
Threatened & Endangered Species	Threatened and Endangered Species (number affected)
Community and Economic	
Residences	Homes, including Farm Homes (number displaced)
Business	Commercial Buildings (number displaced)
Public Facilities	Public Facilities (number displaced)
	Public Facilities with Access Change (number affected)
Section 4(f)	Parklands (number affected)
	Parklands (acres affected)
Utilities	Utility Crossings (number of conflicts)
	Utility Infrastructure (number affected)
Noise	Noise Receptors (number within 500 feet of corridor)
Agricultural	
Prime and Important Farmland	Prime and Important Farmland (acres affected)
Farmsteads	Farm Outbuildings (number affected)
Tracts	Tract Severances (number affected)
	Tracts with Access Change (number affected)
Farms	Centennial/Sesquicentennial Farms (number affected)
	Farms Otherwise Affected (number affected)
Cultural	
Cultural	Historic Sites (number affected)
	Cemeteries (number affected)
	High Probability Archaeological Sites (number affected)
Design	
Right-of-Way	Right-of-Way Acquisition (acres)
Length of Roadway	Length (miles)
Traffic	
Safety Analysis	Percent Change in Total Crashes

	Not Impacted
	Impacted within same range or preliminary data
	Impacted with wide range, differentiating criteria



Where did the resource information used in the evaluations come from?

Information for some of the environmental and agricultural resources came from existing data. Numerous Federal, State, and local agencies along with non-governmental organizations were

Illinois Natural Area Inventory (INAI) Site

An INAI site is a high quality natural area, habitat of endangered species, or other significant natural feature as identified by the Illinois Department of Natural Resources.

contacted for their available data. For example, the floodplain information came from the Federal Emergency Management Agency (FEMA), who maintains an inventory of floodplain data for the country. Other resources with existing data included wells, Illinois Natural Area Inventory (INAI) sites, parks, prime and important farmland, and Centennial and Sesquicentennial Farms.

Sensitive Receptor

IDOT defines a sensitive receptor as a land use where frequent outdoor human activity occurs and where a low traffic noise level would be of benefit. Sensitive receptors typically include homes, schools, hospitals, nursing homes, and parks.

Some of the data was supplemented with information received through public involvement activities. For example, although much of the Centennial Farm information was obtained from the Illinois Department of Agriculture (IDOA), in several instances the public would notify the project team when they thought that the data collected from IDOA was missing a registered Centennial Farm. The project team would then verify

the information and add it to the data set.

Some of the environmental, cultural, and community resource information was gathered specifically for the ESH project. A team of state biologists and scientists from the Illinois Natural History Survey (INHS) conducted field surveys in the study area in 2012 and 2013. The INHS collected field data on wetlands, high-quality woodlands, threatened and endangered species, and important habitat areas. Other state agencies conducted field surveys to obtain information on special waste sites, cultural information, and historic sites. The project team gathered some of the community information specifically for the project. The project team reviewed existing maps and performed field reviews to document the locations of homes, businesses, commercial buildings, public buildings, and cemeteries. The information was refined based upon public input.

At the second set of CWG meetings, exhibits were displayed consisting of collected data overlain on aerial photographs. Attendees were asked to review the data and to mark up the maps to show any observed discrepancies. The exact location of the features was verified and entered into the data set. New information was received from the public throughout the course of this project as new attendees came to meetings and shared their knowledge of the community. The information was updated throughout the duration of the project.

How were the impacts used to eliminate alternatives?

Impacts were calculated for each resource listed in **Table 2.3-3**. The resources shown in yellow were not impacted by any remaining alternatives. The resources shown in orange were impacted similarly by all of the alternatives; or the data was incomplete, so they were not used to eliminate alternatives.

Only the resources shown in green, where the magnitude of impacts varied widely, were identified as differentiating criteria and were used to eliminate alternatives. The primary resources used to eliminate alternatives include number of homes displaced and acres of prime and important farmland affected.

Differentiating Criteria

Differentiating criteria are criteria where the impacts varied widely among the remaining alternatives. The differentiating criteria were used to eliminate alternatives in the Macro Analysis.

How were home and farmland impacts used to eliminate alternatives?

For these resources, the range of impacts of the alternatives was graphed and a threshold value was selected based upon the range. The threshold value was established in order to eliminate alternatives with disproportionately high impacts. Alternatives with impacts equal to or greater than the threshold value were eliminated. The threshold values were reviewed by the CWG and PSG for reasonableness and agreed upon.

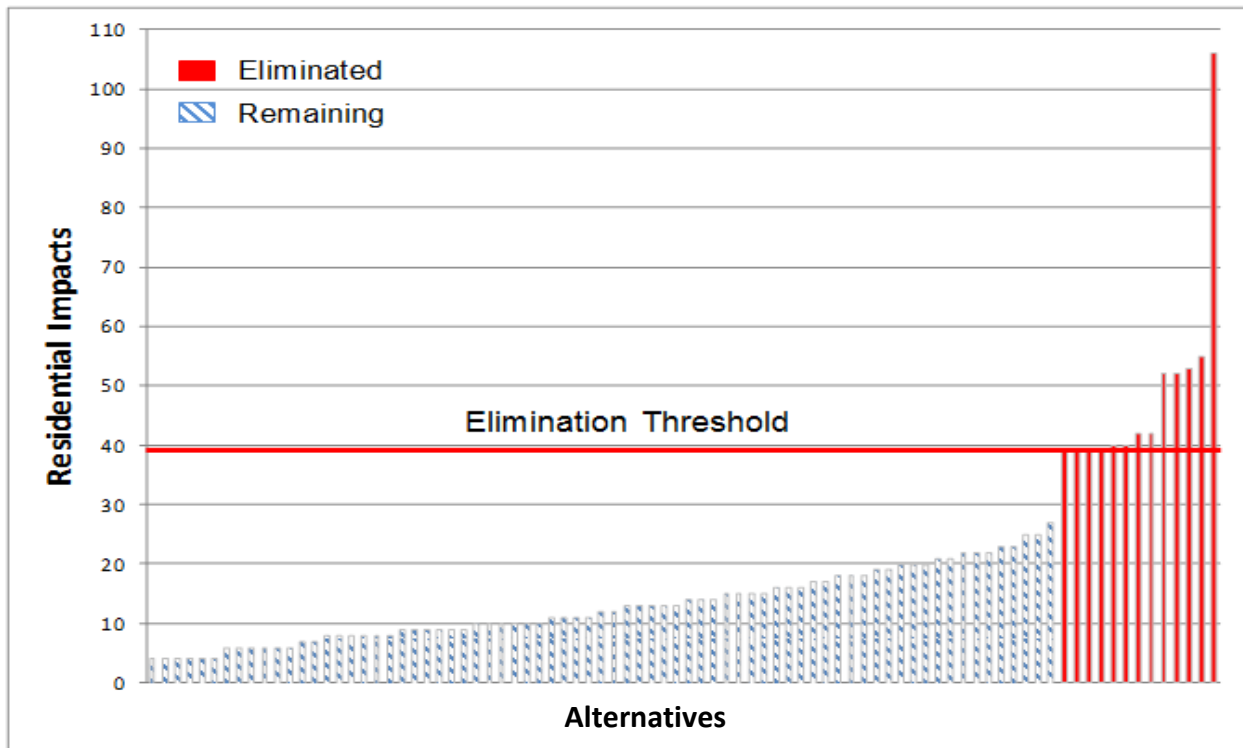
Residential Displacements: Residential displacements ranged from 4 to 106 homes, with the higher number of impacts concentrating along Towanda Barnes Road and the Multiple East-West Arterial Expansion Alternative. Based on this range, the threshold was determined to be 39 displacements (see **Figure 2.3-3**). Therefore, alternatives with 39 or more displacements were eliminated.

Displacement

A displacement is a direct impact to a home, business, or other building. Impacts to driveways, detached garages, and parking lots are not displacements, nor are visual or noise impacts.



Figure 2.3-3: Macro Analysis Residential Elimination



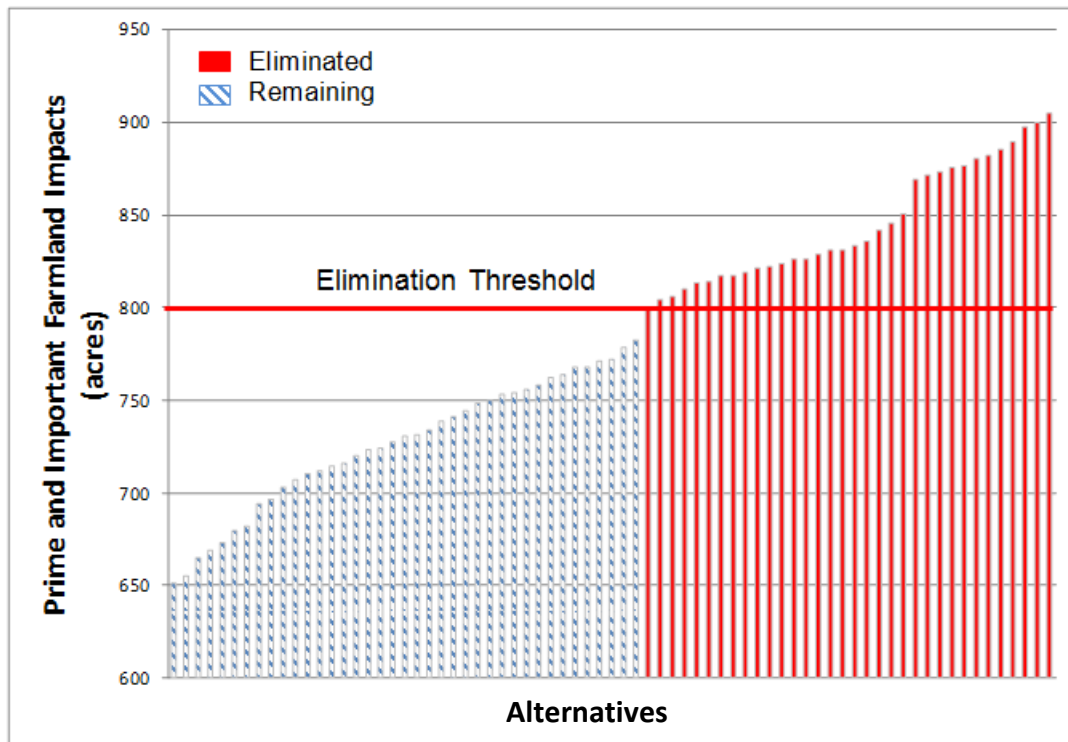
Thirteen alternatives, including the Multiple East-West Arterial Expansion Alternative (which would displace over 100 residences), were eliminated. Of note, all alternatives that included the widening of Towanda Barnes Road (also called BN1), were eliminated at this step in the process. See **Figure 2.3-5** for the location of BN1. A total of 73 alternatives remained.

Prime and Important Farmland

Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is also available for these uses. Prime farmland does not have to be cleared; however, it cannot be urbanized, paved, or permanently under water.

Prime and Important Farmland: The second differentiating criterion was acres of prime and important farmland. The 73 remaining alternatives impacted between 651 and 905 acres of prime and important farmland. Based on this range, a threshold value of 800 acres was established (see **Figure 2.3-4**).



Figure 2.3-4: Macro Analysis Prime and Important Farmland Elimination

Twenty-six alternatives impacting 800 or more acres of prime and important farmland were eliminated. The alternatives that were eliminated were the easternmost north-south alternatives, namely BN4 and BN5. See **Figure 2.3-5** for the location of these sections. A total of 47 alternatives remained.

The Macro Analysis also showed that resource impacts associated with sections D2, D3, and D4 are comparable. These sections were southern I-74 interchange connections located west of the existing Downs interchange, and were located very close to each other. Section D3 provided the same function as sections D2 and D4 and offered no identifiable advantage over these two sections. However, section D3 was less desirable from a design perspective because there was a curve within the northern portion of the section. Therefore, the seven alternatives containing section D3 were eliminated. Forty Build Alternatives (shown in **Figure 2.3-5**) were carried through to Step 4: Alignment Analysis.

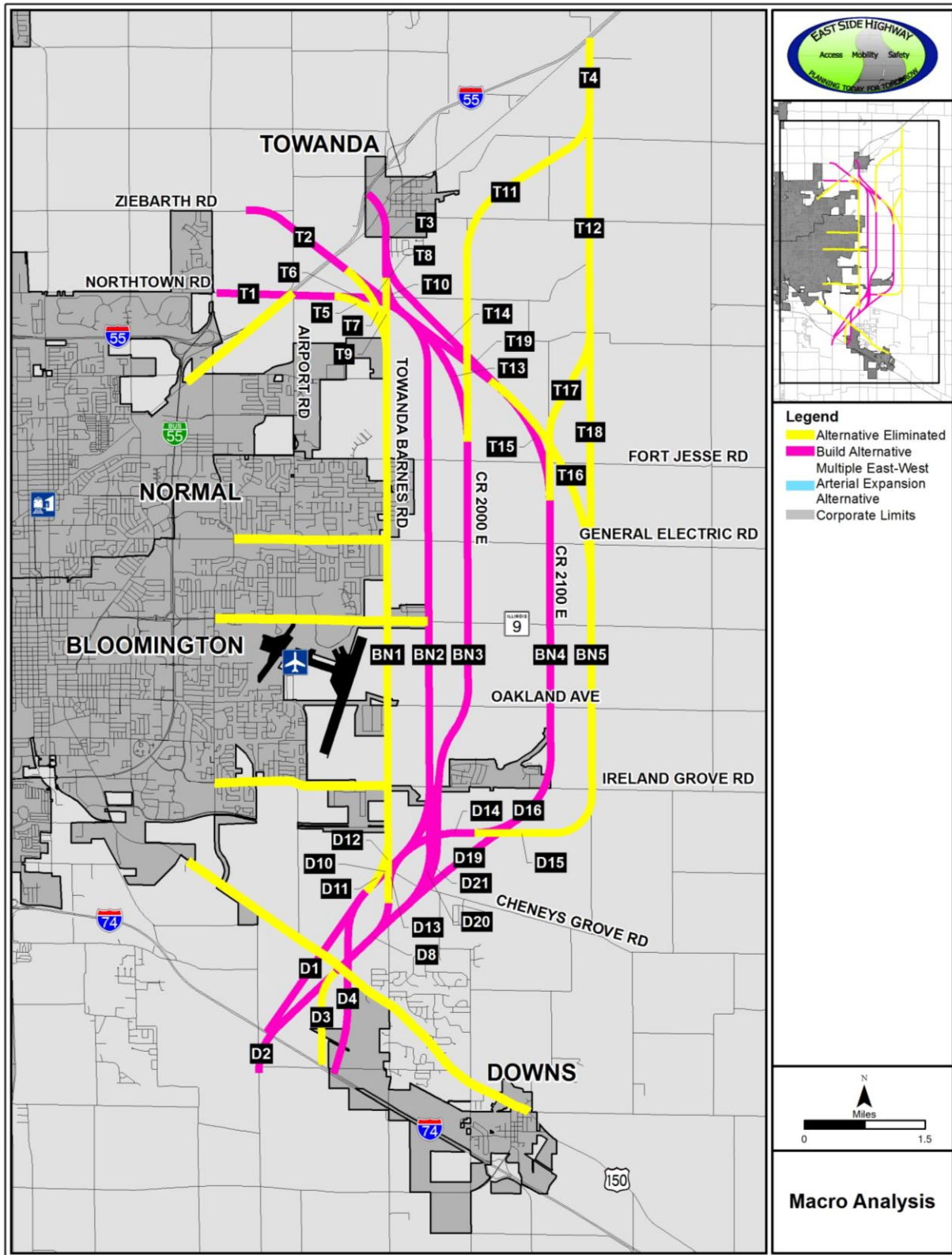
85 alternatives



40 alternatives



Figure 2.3-5: Macro Analysis



What is Step 4 of the evaluation process?

Step 4, the Alignment Analysis, further refined the impacts to environmental, community and economic, agricultural, and cultural resources, in addition to design, sustainability and traffic. The alternatives with disproportionately high impacts were eliminated.

This step followed an identical process as Step 3, comparing impacts and eliminating alternatives based on these impacts. However, Step 4 used a refined right-of-way width of 250 feet, assuming geometric standard for a four lane facility. Step 4 also added an additional resource category (Sustainability) to the evaluation. **Table 2.3-4** identifies the seven categories and 44 criteria used to evaluate environmental resources and potential impacts resulting from the 40 remaining alternatives.

Table 2.3-4: Alignment Analysis Criteria

Criterion	Unit of Measure
Environmental	
Water Quality/Water Resources	Floodplain (acres affected)
	Floodways (acres affected)
	Biologically Significant Streams (number of crossings)
	Class 1 Streams (number of crossings)
	Streams – Main stems (number of crossings)
	Streams – Tributaries (number of crossings)
	Drinking Water Supplies – Surface Water (number affected)
Wetlands	Wetland Areas (acres affected)
	Wetland Areas (number affected)
Special Waste	CERCLIS, LUST, RCRA Sites (number affected)
Forested Area	Forested Area (acre affected)
Threatened & Endangered Species	Threatened & Endangered Species (number of species)
Community and Economic	
Residences	Homes, including Farm Homes (number displaced)
Business	Commercial Buildings (number displaced)
Public Facilities	Public Facilities (number displaced)
	Public Facilities with Access Change (number affected)
Section 4(f) & 6(f) Impacts	Parklands (acres affected)
	Parklands (number affected)



Utilities	Utilities Crossings (number of conflicts)
	Utility Infrastructure (number affected)
Noise ¹	Noise Receptors (number of receptors within 500 feet of corridor)
Agricultural	
Prime and Important Farmland	Prime and Important Farmland (acres affected)
Farmsteads	Farm Outbuildings (number affected)
Tracts	Tract Severances (number affected)
	Tracts with Access Change (number affected)
Farms	Centennial/Sesquicentennial Farms (number affected)
	Farms Otherwise Affected(number affected)
Cultural	
Cultural	Historic Sites (number affected)
	Cemeteries (number affected)
	High Probability Archaeological Sites (acres affected)
Design	
Right-of-Way	Right-of-Way Acquisition (acres)
Termini Connections	Engineering and Operation Consideration of North Termini
	Engineering and Operation Consideration of South Termini
Area of Total Pavement	Area of Total Pavement (square miles)
Constructability	Desirable from an engineering perspective (Y/N)
Sustainability	
Area of New Pavement	Area of New Pavement Required (square miles)
Farmland Preservation	Area of Farmland Consumed Outside of 2035 Land Use Plan (acres within Alternatives)
	Number of Farm Tracts Located between the 2035 Land Use Plan and Alternative
	Area of Farmland Consumed Outside of 2035 Land Use Plan (acres between Alternative and Land Use Plan)
Watershed	Amount of Right-of-Way within Each Watershed (% watershed affected)
Riparian Areas	Riparian Areas (acres affected)
Highly Erodible Soils	Highly Erodible Soils (acres affected)
Bike/Pedestrian Access	Is Alternative Adjacent to Proposed or Existing Bike/Pedestrian Network? (Yes or No)



Traffic	
Safety Analysis	Percent Change in Total Crashes

	Not Impacted
	Impacted within same range or preliminary data
	Impacted with wide range, differentiating criteria

¹IDOT defines a sensitive receptor as a land use where frequent outdoor human activity occurs and where a low traffic noise level would be of benefit. Sensitive receptors typically include homes, schools, hospitals, nursing homes, and parks.

How were the impacts used to eliminate alternatives?

As with Step 3, the resources and the threshold values used for eliminating alternatives were reviewed by the CWG and PSG to assure consensus with the process. **Table 2.3-4** shows the impacts and their corresponding categories. The differentiating criteria are shown in green and were used to eliminate alternatives. These criteria included termini connections (interchanges), constructability, residential displacements, farmland, and several of the sustainability criteria.

Termini Connections: The first differentiating criterion was termini (I-55 and I-74 interchange) connections. The complexity and engineering feasibility of the interchanges at I-55 and I-74 were evaluated. Termini interchange complexity was determined through an inventory of interchange ramp length, total auxiliary and Collector-Distributor (CD) lane miles, the number of conflict points, and the number of bridge structures on skew or on a curve. The termini were given a rating of High, Medium, or Low complexity, relative to the alternative being evaluated. The alternatives with a High complexity rating, indicating a high inventory number, were eliminated. Based on this analysis, the 16 alternatives containing sections T3 or T19 (see **Figure 2.2-1**) were eliminated. Twenty-four alternatives remained.

Collector-Distributor Road
 A Collector-Distributor road is a parallel, controlled-access roadway that separates through traffic from local traffic that is entering and exiting the freeway or interstate system.

Auxiliary Lane
 An auxiliary lane is the portion of a roadway adjoining the traveled way to help facilitate traffic movements: by providing for parking, speed change, turning, storage for turning, weaving, truck climbing, or for other purposes.



Constructability: The second differentiating criterion was constructability. Alternatives that contained a skewed crossing at Towanda Barnes Road (sections D8 and D13 in **Figure 2.2-1**) were eliminated. These alternatives would require a bridge over Towanda Barnes Road at a steeply skewed angle and would not be desirable from a design, constructability, or maintenance perspective. Six alternatives containing sections D8 and D13 were eliminated. Eighteen alternatives remained.

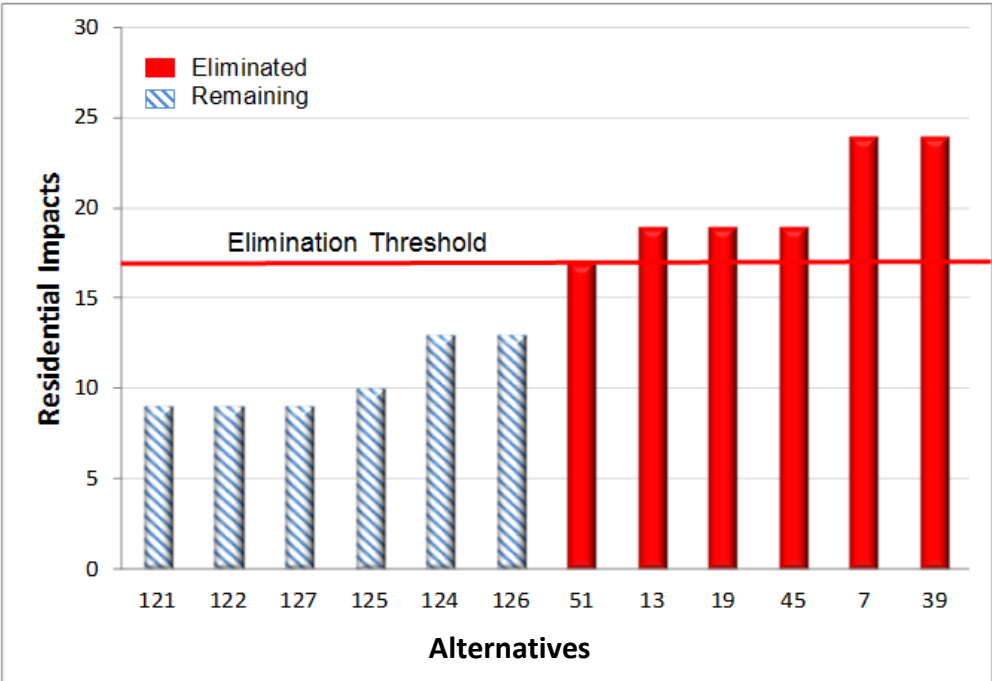


Next, alternatives that did not provide access to Cheney's Grove Road from Towanda Barnes Road (sections D4 and D10 in **Figure 2.2-1**) were eliminated. Maintaining access from Towanda Barnes Road would require a skewed intersection of the ESH, Towanda Barnes Road, and Cheney's Grove Road and would not be desirable from a design, constructability, or maintenance perspective. Six alternatives containing sections D4 and D10 were eliminated. Twelve alternatives remained.



Residential Displacements: Residential displacements ranged from 9 to 24 homes for the 12 remaining alternatives. (See **Figure 2.3-6**)

Figure 2.3-6: Alignment Analysis Residential Elimination



Two alternatives with impacts of 24 or more displacements were eliminated, as these demonstrated disproportionately high impacts when compared to the remaining alternatives.

Residential displacements for the remaining ten alternatives ranged from 9 to 19 homes. Four alternatives containing section D1 had the highest residential displacements (ranging from 17 to 19) because they would displace a cluster of homes within a proposed interchange footprint at US 150. This interchange also resulted in the displacement of a place of worship. The interchange could not be shifted to avoid the displacements because it would impact an electrical substation to the west or would replicate other alternatives to the east. For these reasons, the four alternatives that contain section D1 and resulted in the displacement of the cluster of homes at US 150 and the place of worship were eliminated. Six alternatives remained (see **Figure 2.3-7**).

Sensitivity analysis was conducted for this step of the elimination process. When the order of the criteria used in Step 4 was switched (e.g., agricultural impacts were measured first instead of residential displacements), the analysis resulted in the same six alternatives remaining.

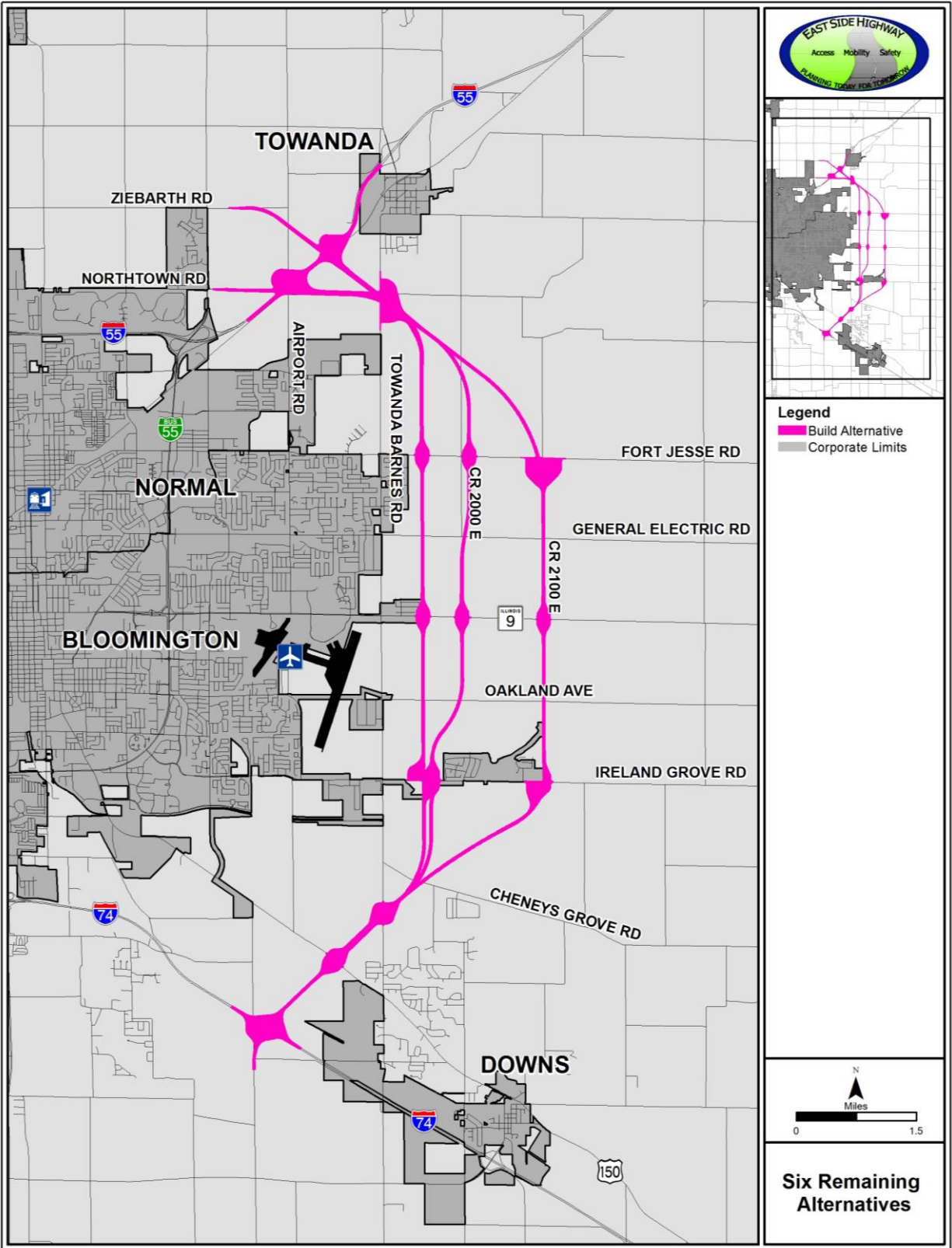
12 alternatives



6 alternatives



Figure 2.3-7: Six Remaining Alternatives



The remaining six alternatives were further evaluated for consistency with local and regional planning goals, impacts to resources identified as important to the general public, or having differing levels of impact among the proposed alternatives. These resources included agriculture and resources related to sustainability.

Agriculture Impacts

Agriculture impacts were measured according to the amount of prime and important farmland acres that would be acquired for the roadway, the number of farm tracts severed, and farms otherwise affected. The greatest loss of prime and important farmland in acres is associated with Alternatives 121 and 122, the two alternatives that use section BN4, which is the farthest east of the remaining alternatives. **Figure 2.3-8** shows the range of prime and important farmland impacts for the six remaining alternatives.

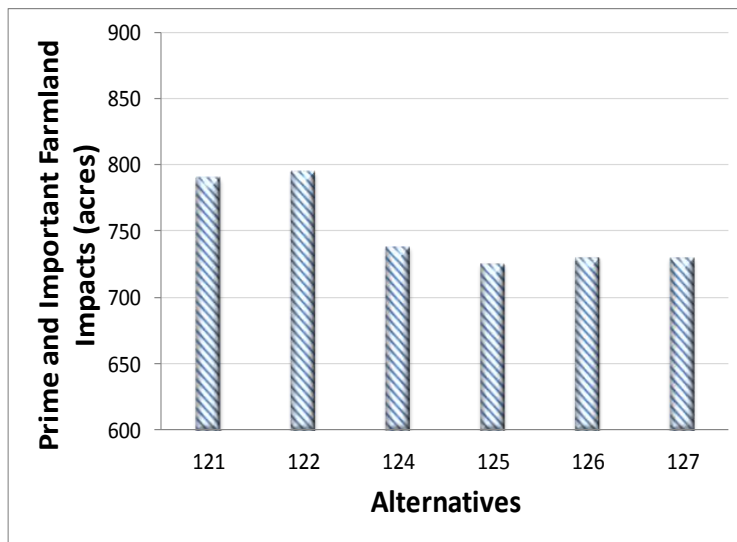
Farm Tract Severance

Severed farm operations occur when a new roadway divides a farm either laterally or diagonally, and separates one or more tract from others within a single farm operation. If an alignment takes farm land on the edge or perimeter of a farm tract, this is not a severance.

Farms Otherwise Affected

Farms otherwise affected are tracts that are either total acquisitions by a proposed alignment or less than a 1/3 of a tract was acquired by a proposed alignment. Farms otherwise affected also included severed tracts where the resulting farmable area was less than 5 acres (uneconomical remnant).

Figure 2.3-8: Prime and Important Farmland Impacts for the Six Remaining Alternatives



Other measures of impacts to agriculture were the severing of farm tracts and the number of otherwise affected farms. When these two measures are combined to represent the disturbance to farm tracts, Alternatives 121 and 122 represent the greatest impact to overall farm tracts (total of 77 farm tracts affected) when compared to the other four remaining alternatives where the impact is 71 tracts affected for each of the alternatives.



Sustainability

Sustainability creates and maintains the conditions under which humans and nature can exist in productive harmony and that permit fulfilling the social, economic and other requirements of present and future generations.

Sustainability Criteria

Eight sustainability criteria were used to evaluate the six remaining alternatives. (See **Table 2.3-4**). Of these criteria, the proposed right-of-way (ROW) within each watershed was not considered a differentiating criterion as the impacts resulting from each alternative were similar. The remaining sustainability criteria represented environmental impacts and planning factors that varied among the six alternatives.

Farmland Preservation Criteria: The proposed alternatives' compatibility with the land use plans contained in the McLean County Regional Comprehensive Plan, the City of Bloomington Comprehensive Plan, and the Town of Normal Comprehensive Plan were used as a measure of sustainability. This evaluation demonstrated "potential" land development effects due to the location of the proposed ESH (including leapfrog development, other unplanned growth outside the 2035 Land Use Plan Boundary, and associated infrastructure extension demand). The Farmland Preservation Criteria was evaluated in three ways that considered immediate and potential impacts of compatibility with the 2035 land use designated in the plans:

- **Area of Farmland Consumed Outside of 2035 Land Use Plan (acres within Alternative):** Each alternative was examined to determine how many acres of farmland in 2035 would be used for ESH ROW. Alternative 121 and 122, which used Section BN4, were farthest from the areas representing development and had the greatest disparity with the planning boundaries. These alternatives utilized the greatest amount of farmland for ROW purposes compared to the other four alternatives.
- **Number of Farm Tracts Located between the 2035 Land Use Plan and Alternative:** The second analysis measured the number of farm tracts between the 2035 Land Use Plan boundaries for Bloomington & Normal (per their comprehensive plans) and each proposed alternative. The greater the number of farm tracts between the proposed alternatives and the planning boundary for development, the greater the potential for leapfrog development, unplanned growth (and unplanned loss of agricultural production) and inconsistency with local and regional planning goals. Alternatives 124, 125, 126 and 127 potentially affect fewer farm tracts.



- Area of Farmland Consumed Outside of 2035 Land Use Plan (acres between Alternative and Land Use Plan): The third analysis measured the area of farmland between the 2035 Land Use Plan boundaries and each alternative. The greater the separation distance between an alternative and the planning boundary for development, the greater the potential for leapfrog development, unplanned growth (and unplanned loss of agricultural production) and inconsistency with local and regional planning goals.

Leapfrog Development
 Leapfrog development (also referred to as urban sprawl) is the development of lands in a manner requiring the extension of public facilities and services on the periphery of an existing urbanized area where such extension is not provided for in the existing plans of the local governing body.

Figure 2.3-9 depicts this range of primary agriculture area potentially affected for the six remaining alternatives. Alternative 122 was separated from the edge of the Land Use Plan by 5,200 acres of primary agriculture land, followed by Alternative 121 at 5,000 acres. The other four alternatives were in closer proximity to the edge of the Land Use Plan and thus the range of area was 2,200 acres (Alternative 124) to 3,400 acres (Alternative 127). **Figure 2.3-10** illustrates the 2035 Land Use Plan boundaries for Bloomington & Normal (per their comprehensive plans) relative to the six remaining alternatives.

Figure 2.3-9: Area of Primary Agriculture Land between 2035 Land Use Plan Boundaries and the Six Remaining Alternatives

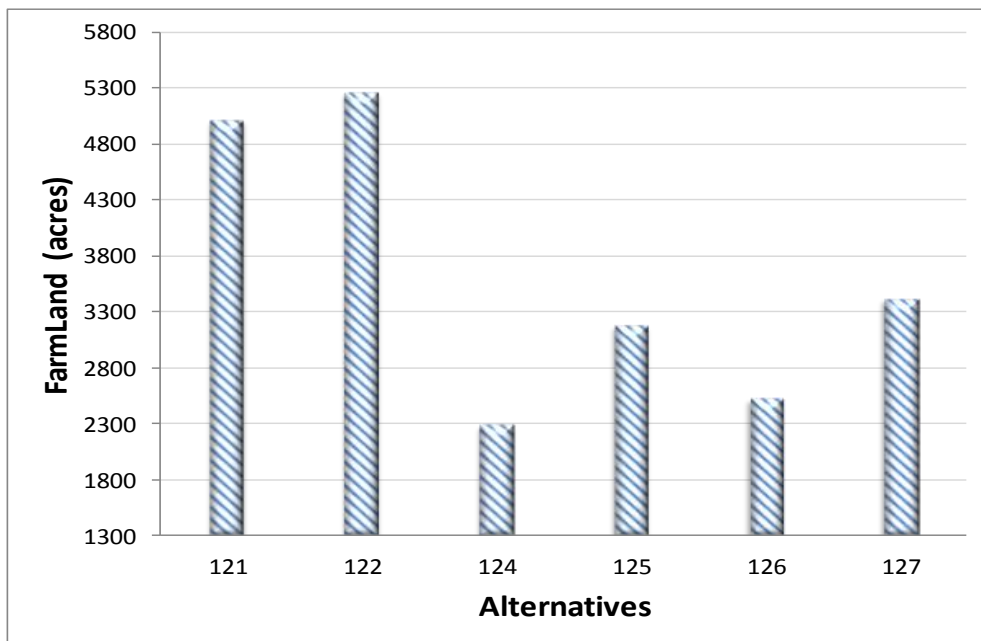
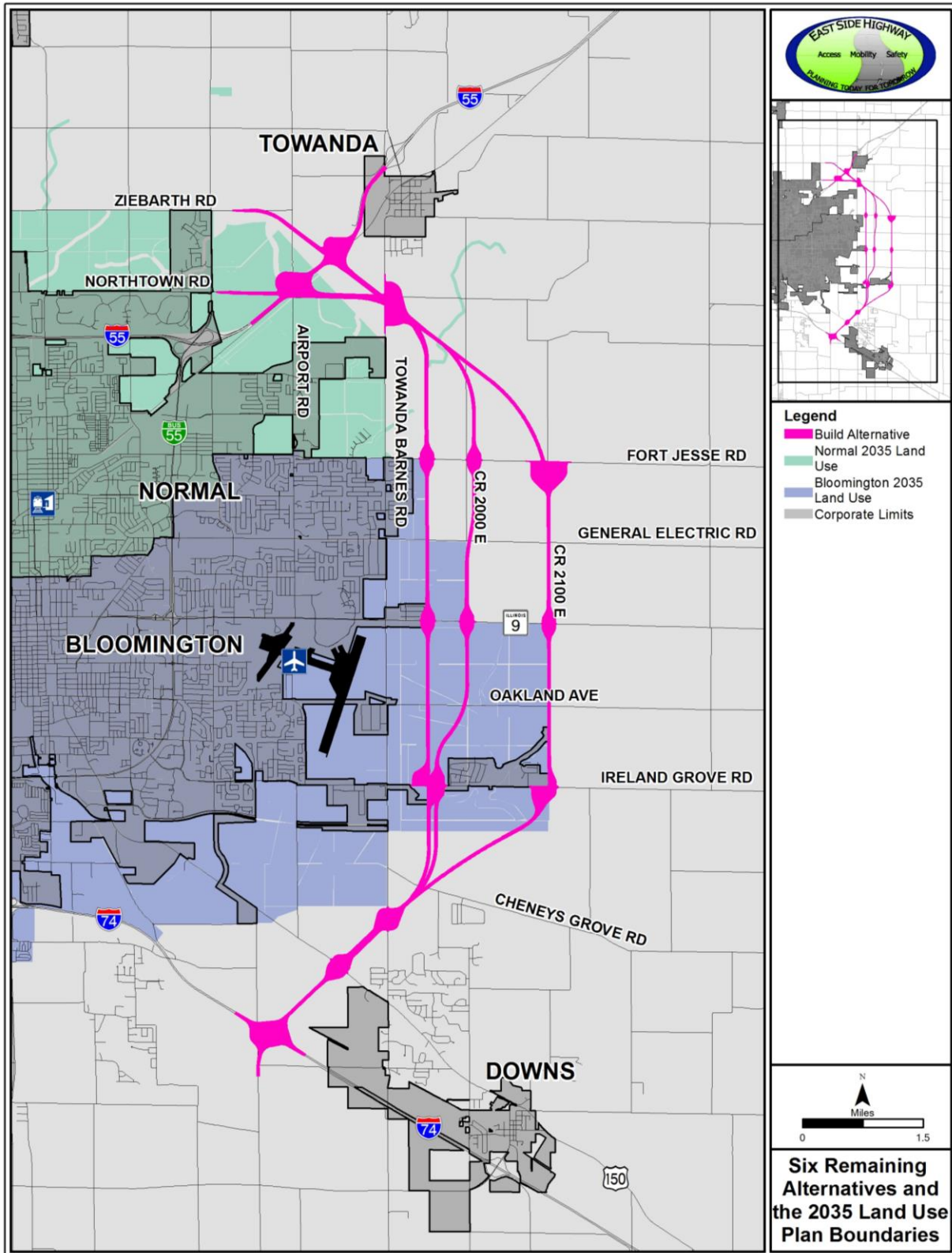


Figure 2.3-10: 2035 Land Use Plan Boundaries and the Six Remaining Alternatives



Riparian Areas: Riparian areas were another sustainability measure used to evaluate sustainability of the remaining alternatives.

There are no lakes in the study area, so riparian impacts were limited to streams. The three alternatives 121, 124, and 125 all utilize the section T1 interchange at I-55 that is associated with eight acres of riparian impacts. **Table 2.3-5** presents the range of riparian impacts among the six remaining alternatives.

Riparian Area

Riparian Areas are transition zones between land and water ecosystems (banks and vegetation along streams). Riparian areas protect water resources from nonpoint source pollution and provide bank stabilization and aquatic and wildlife habitat.

Table 2.3-5: Riparian Impacts for the Six Remaining Alternatives

Alternative	Riparian Impacts (acres)
121	24.1
124	20.6
125	19.1
122	13.8
126	9.6
127	8.8

Area of New Pavement Required: The area of new pavement required to construct each alternative was another sustainability criterion used to differentiate between the six remaining alternatives.

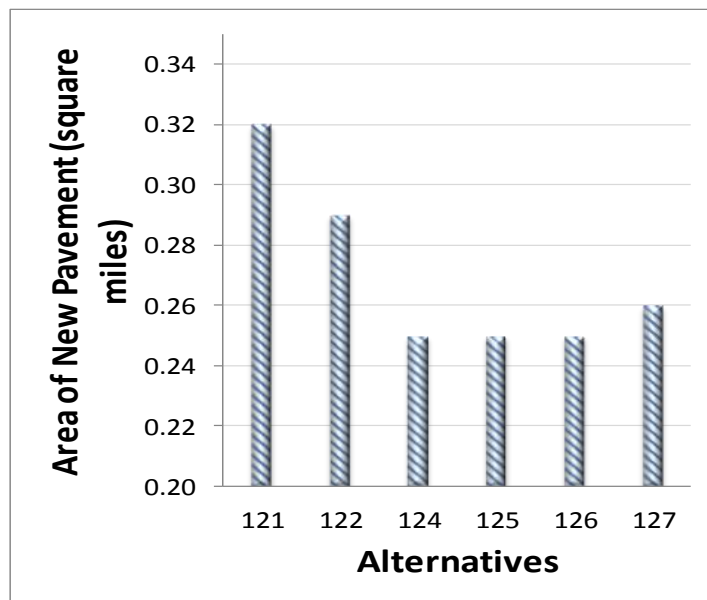
Figure 2.3-11 depicts the area of new pavement within each alternative. This comparison demonstrates that Alternatives 121 and 122 require the most new pavement area. This is attributed to the length of these alternatives and reduced use of existing roadway systems for their construction.

Highly erodible soils

Soils identified by the U.S. Department of Agriculture to have a potential for erosion that exceeds tolerable erosion rates. Highly erodible soils can affect storm water quality, require special erosion control measures, and are typically found near streams. Highly erodible soils represent areas sensitive to the construction and operational impacts of roadways. Increased soil erosion reduces soil quality, suitability for agricultural use, and soil permeability.



Figure 2.3-11: Area of New Pavement Required for the Six Remaining Alternatives



Highly Erodible Soils: Highly erodible soil was a fourth measure used to evaluate sustainability of the remaining six alternatives. Alternatives 121 and 122 result in greater impacts to highly erodible soils compared to Alternatives 124, 125, 126, and 127.

Table 2.3-6: Highly Erodible Soil Impacts for the Six Remaining Alternatives

Alternative	Highly Erodible Soil Impacts (acres)
122	44.7
121	40.7
127	30.7
125	26.7
126	26.5
124	22.6

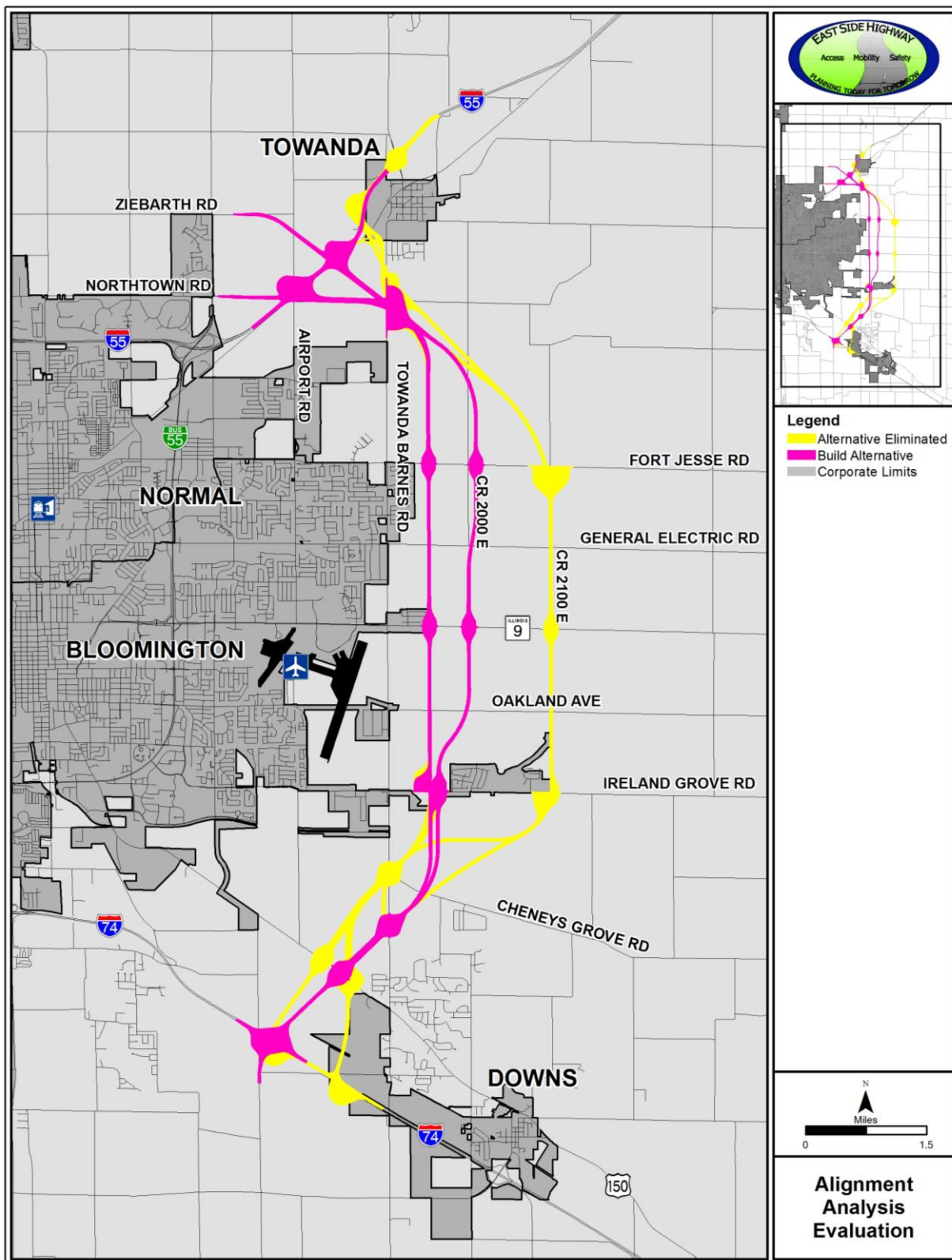
Proximity to Existing Bicycle/Pedestrian Network: Bicycle/pedestrian access was the final measure used to evaluate sustainability of the remaining alternatives. The existing and proposed bicycle/pedestrian network was reviewed to determine the proximity of the remaining alternatives to this network. Alternatives farther from the bicycle/pedestrian network would have reduced opportunities for multimodal use. Alternatives 121 and 122 are two miles from a proposed bicycle route on Towanda Barnes Road. The other four alternatives were less than one mile from this route.



Summary of Sustainability Criteria: The cumulative impacts of the environmental and planning factors were considered in determining reasonable alternatives to carry forward into Step 5, the Environmental Assessment Analysis. The location of Alternatives 121 and 122, with portions outside the 2035 Land Use Plan Boundary, results in greater impacts to farmland and primary agriculture, greater likelihood of unplanned urban development (and associated infrastructure extensions), higher riparian impacts, and greater distances from planned bicycle/pedestrian routes. In accordance with the objectives of the McLean County Regional Comprehensive Plan (November 2009), Alternatives 121 and 122 were removed given their consistently greater impact on these resources. Four Build Alternatives (shown in **Figure 2.3-12**) were carried through to Step 5: Environmental Assessment (EA) Analysis.



Figure 2.3-12: Alignment Analysis



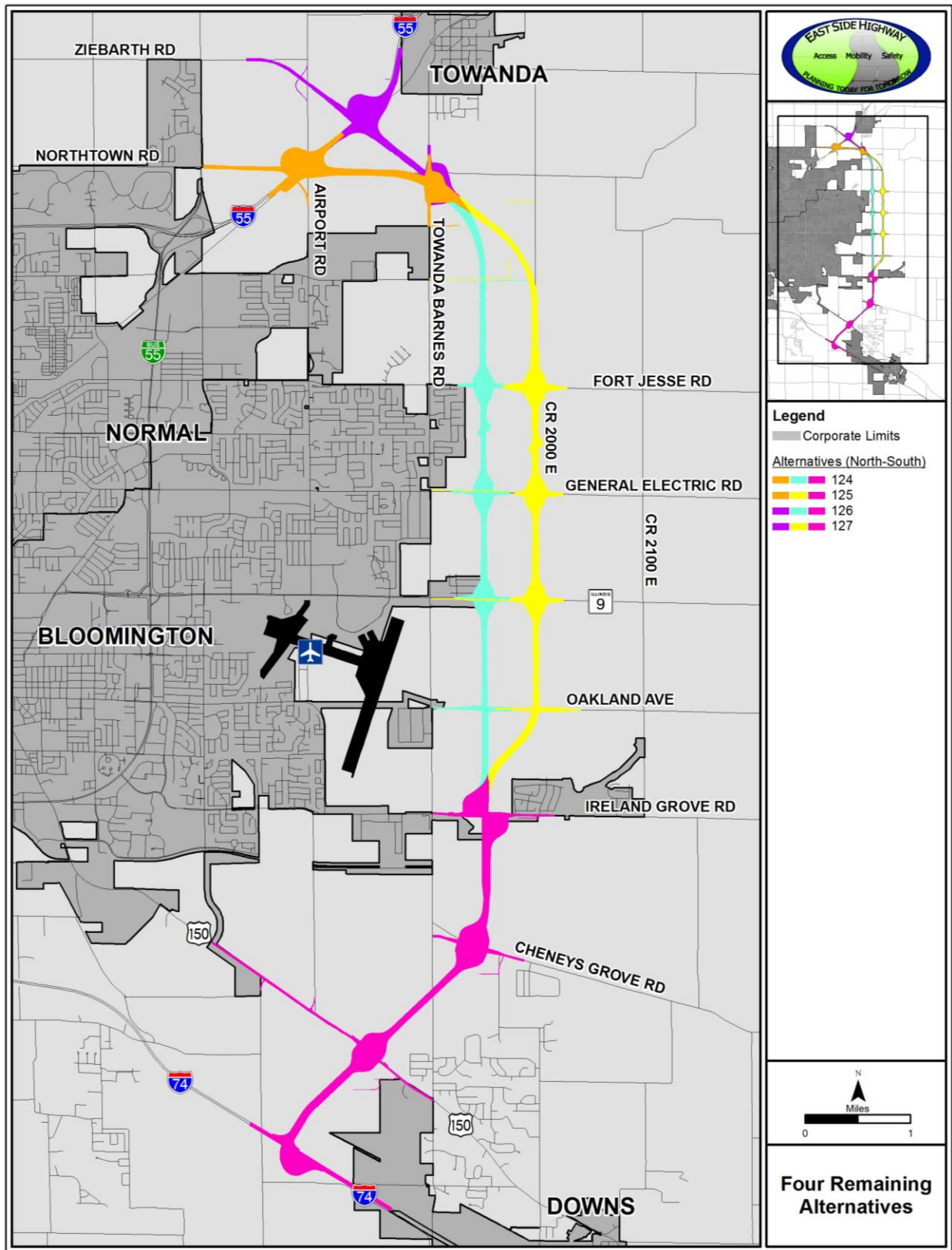
2.4 Remaining Alternatives

What are the remaining alternatives?

The four ESH alternatives (shown in **Figure 2.4-1** and individually in **Figures 2.4-2 to 2.4-5**) are four-lane freeways (two lanes in each direction) with full access control. However, if the project were to be constructed in phases, an expressway could be considered as an interim facility for either part or all of the proposed ESH. The four remaining alternatives consist of parallel north-south sections located approximately 2,250 feet apart. There are two interchange options at I-55 and one interchange option at I-74. The alternatives include interchanges at the major east-west cross roads. The impacts resulting from the alternatives are evaluated in Step 5 of the analysis.



Figure 2.4-1: Four Remaining Alternatives

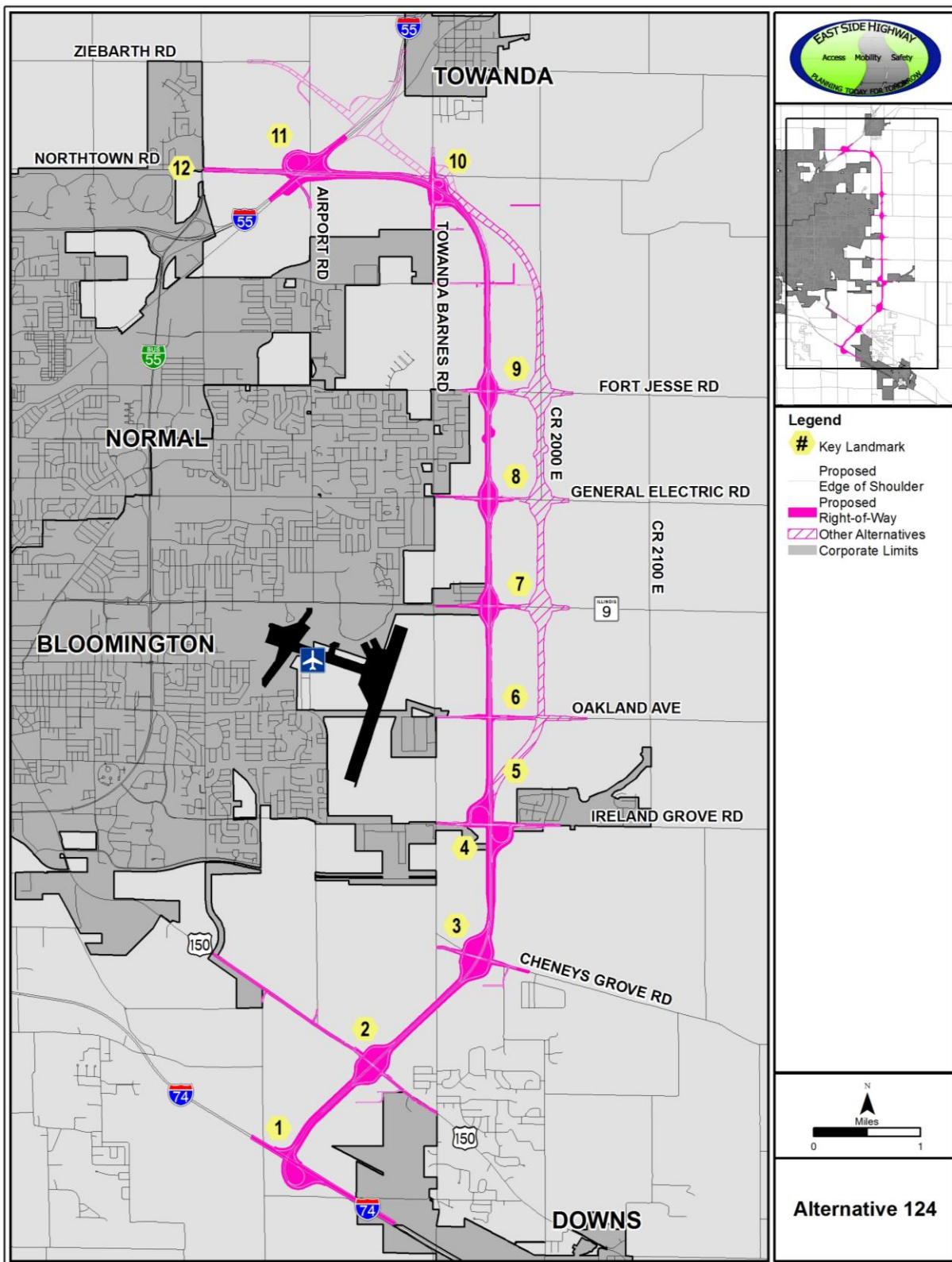


Alternative 124

At the southern limit, the alternative intersects with I-74 via a trumpet interchange **(1)**. From there, the alternative traverses northeast intersecting U.S. Route 150 **(2)** and Cheneys Grove Road **(3)** via diamond interchanges and then curves north. The alternative then intersects with Ireland Grove Road via a partial cloverleaf interchange **(4)**. From there, the alternative traverses west of The Grove subdivision and continues north on new alignment **(5)** crossing under Oakland Avenue via a grade-separation **(6)**. The alternative intersects Illinois Route 9 (Empire Street) **(7)**, General Electric Road **(8)**, and Fort Jesse Road **(9)**, via diamond interchanges and then curves west to intersect with Towanda Barnes Road via a partial cloverleaf interchange **(10)**. The alternative continues west along Northtown Road and intersects I-55 via a modified trumpet interchange **(11)**. The northern limit is along existing Northtown Road west of I-55 **(12)**.



Figure 2.4-2: Alternative 124

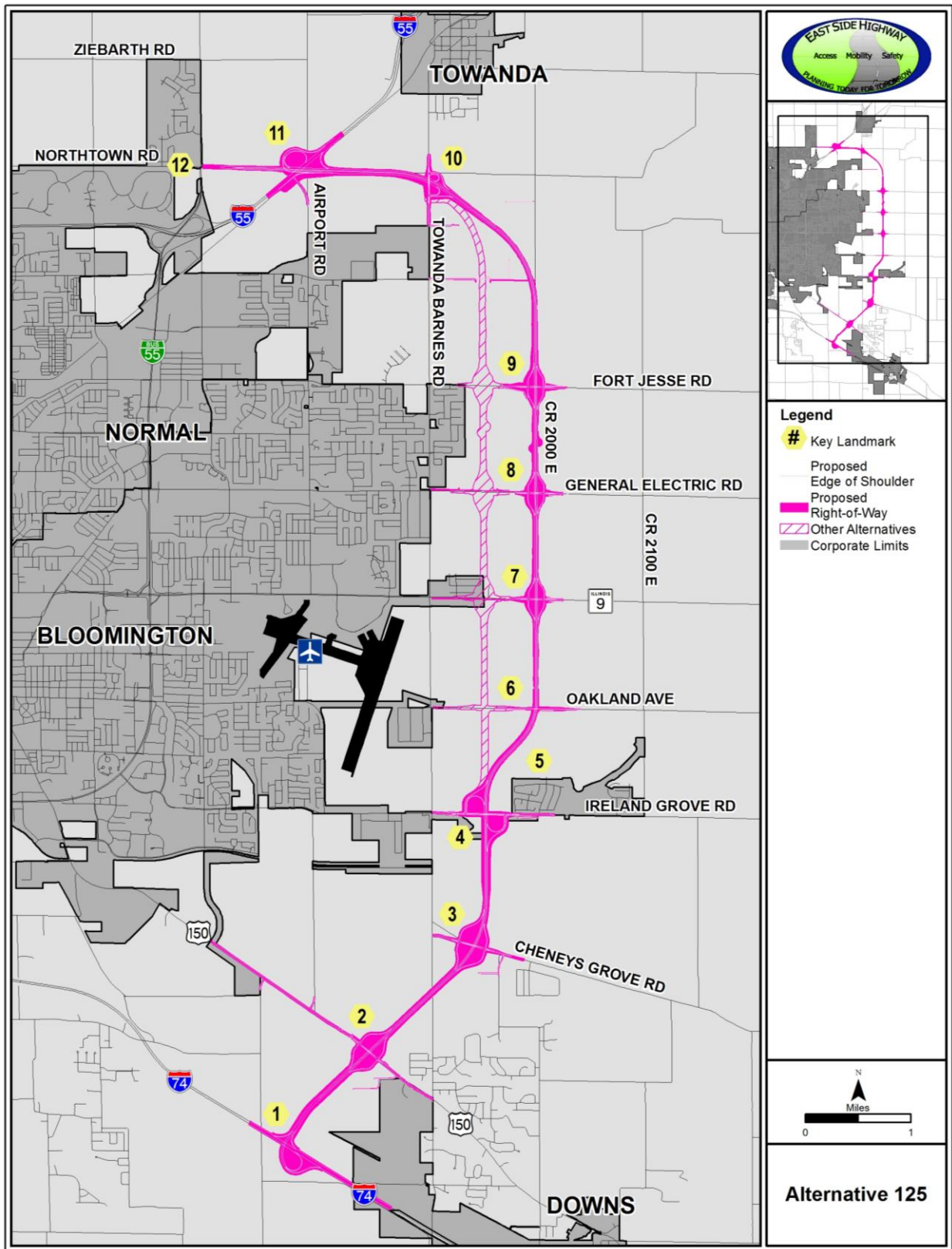


Alternative 125

At the southern limit, the alternative intersects with I-74 via a trumpet interchange **(1)**. From there, the alternative traverses northeast intersecting U.S. Route 150 **(2)** and Cheneys Grove Road **(3)** via diamond interchanges and then curves north. The alternative then intersects with Ireland Grove Road via a partial cloverleaf interchange **(4)**. From there, the alternative curves to the east after avoiding The Grove subdivision and continues north on new alignment **(5)** crossing under Oakland Avenue via a grade-separation **(6)**. The alternative intersects Illinois Route 9 (Empire Street) **(7)**, General Electric Road **(8)**, and Fort Jesse Road **(9)**, via diamond interchanges, traverses north along existing CR 2000 East alignment, and then curves west to intersect with Towanda Barnes Road via a partial cloverleaf interchange **(10)**. The alternative continues west along Northtown Road and intersects I-55 via a modified trumpet interchange **(11)**. The northern limit is along existing Northtown Road west of I-55 **(12)**.



Figure 2.4-3: Alternative 125

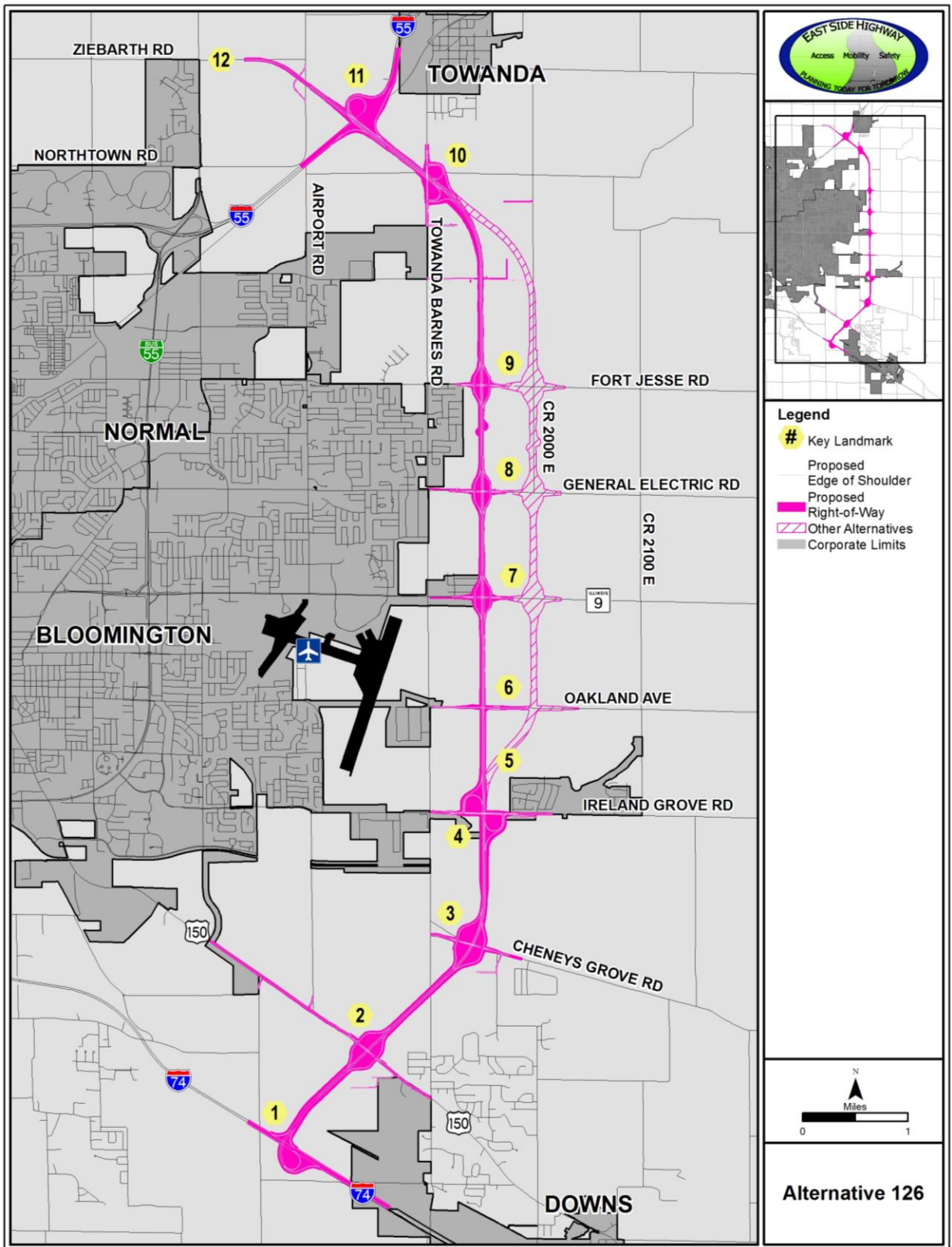


Alternative 126

At the southern limit, the alternative intersects with I-74 via a trumpet interchange **(1)**. From there, the alternative traverses northeast intersecting U.S. Route 150 **(2)** and Cheneys Grove Road **(3)** via diamond interchanges and then curves north. The alternative then intersects with Ireland Grove Road via a partial cloverleaf interchange **(4)**. From there, the alternative traverses west of The Grove subdivision and continues north on new alignment **(5)** crossing under Oakland Avenue via a grade-separation **(6)**. The alternative intersects Illinois Route 9 (Empire Street) **(7)**, General Electric Road **(8)**, and Fort Jesse Road **(9)**, via diamond interchanges and then curves west to intersect with Towanda Barnes Road via a partial cloverleaf interchange **(10)**. The alternative intersects I-55 via a modified trumpet interchange **(11)**. The northern limit is along E. Ziebarth Road northwest of I-55 **(12)**.



Figure 2.4-4: Alternative 126

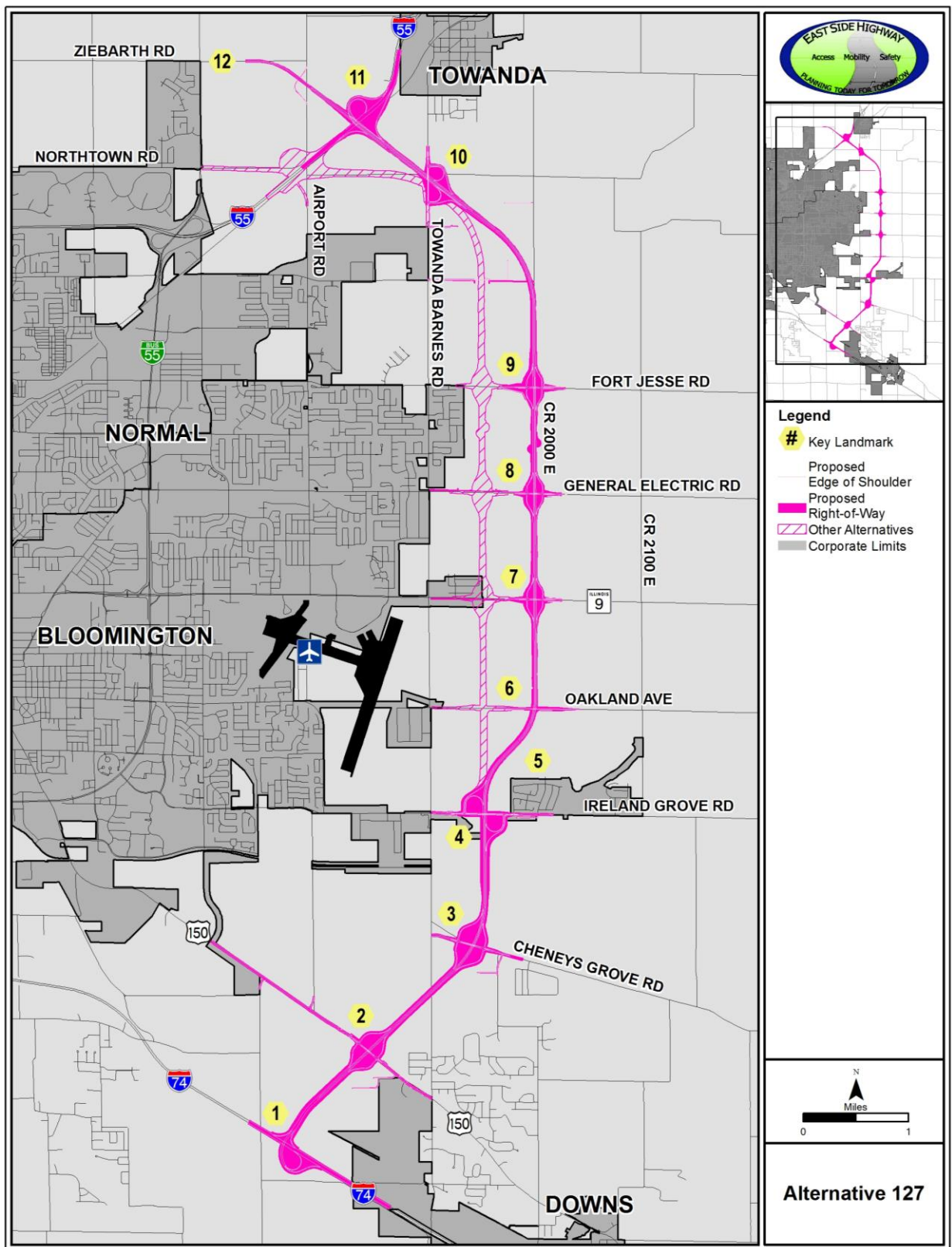


Alternative 127

At the southern limit, the alternative intersects with I-74 via a trumpet interchange **(1)**. From there, the alternative traverses northeast intersecting U.S. Route 150 **(2)** and Cheneys Grove Road **(3)** via diamond interchanges and then curves north. The alternative then intersects with Ireland Grove Road via a partial cloverleaf interchange **(4)**. From there, the alternative curves to the east after avoiding The Grove subdivision and continues north on new alignment **(5)** crossing under Oakland Avenue via a grade-separation **(6)**. The alternative intersects Illinois Route 9 (Empire Street) **(7)**, General Electric Road **(8)**, and Fort Jesse Road **(9)**, via diamond interchanges, traverses north along existing CR 2000 East alignment, and then curves west to intersect with Towanda Barnes Road via a partial cloverleaf interchange **(10)**. The alternative intersects I-55 via a modified trumpet interchange **(11)**. The northern limit is along E. Ziebarth Road northwest of I-55 **(12)**.



Figure 2.4-5: Alternative 127



What is Step 5 of the analysis?

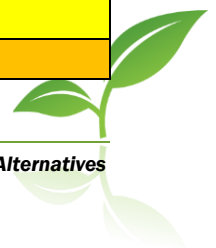
Step 5, the Environmental Assessment Analysis, was the last step in the process. In Step 5 the impacts to environmental, community and economic, agricultural, and cultural resources as well as design and sustainability considerations, interchanges, access roads, and bicycle facilities were evaluated for the remaining four alternatives. The analysis is presented in **Chapter 3** of this document.

This step followed a similar process as Steps 3 & 4, comparing impacts and eliminating alternatives based on the greatest impacts. However, Step 5 used a more refined ROW that varied between 250 and 350 feet based on a preliminary engineered right-of-way width. **Table 2.3-5** identifies the six categories and 71 criteria used in the analysis.



Table 2.3-5: Environmental Assessment Analysis Criteria

Criterion	Unit of Measure
Environmental	
Water Quality/ Water Resources	Floodplain (acres affected)
	Floodways (acres affected)
	Biologically Significant Streams (number of crossings)
	Class I Streams (number of crossings)
	Streams (number of main branch crossings)
	Streams (number of tributary crossings)
	Drinking Water Supplies - Private Wells within ROW (number affected)
	Drinking Water Supplies - Private Wells within 200 ft. setback zone (number affected)
	Wellhead Protection Areas (number affected)
Wetlands	Wetland Areas (number affected)
	Wetland Areas (acres affected)
	High Quality Wetland Areas (number affected)
	High Quality Wetland Areas (acres affected)
Special Waste	Recognized Environmental Conditions (RECs) (number affected)
INAI Sites	INAI Sites (acres affected)
T&E Species	State and Federal Threatened and Endangered Species (number affected)
Ecologically Sensitive Areas	Ecologically Sensitive Areas (number affected)
Community and Economic	
Residences	Homes, including homes on a farmstead (number displaced)
Environmental Justice	Minority and/or Low Income Population Impacted? (y/n)
Business	Businesses (number displaced)
	Parking (number of spaces lost)
Tax Base	Change in Tax Revenue (percent)
Public Facilities & Services	Public Facilities (number displaced)
	Public Service Facilities with Access Change (number affected)
Section 4(f) & 6(f) Impacts	Parklands (number affected)
	Parklands (area affected)
Utilities	Utilities Crossings (number of crossings)



Utility Infrastructure	Utility Infrastructure (number affected)
Noise	Representative Receptors within 500' of Each Alternative ¹ (number)
	Representative Receptors within 200' of Each Alternative (number)
	Representative Receptors within 100' of Each Alternative (number)
	Preferred Alternative Only: Impacted receptors and anticipated noise levels (number with mitigation required)
Agricultural	
Prime and Important Farmland	Prime and Important Farmland (acres affected)
Landlocked Parcels	Landlocked Parcels (acres/number)
Farmsteads	Farm Residences (number affected)
	Farm Outbuildings (number affected)
Severances	Diagonally Severed Tracts (number affected)
	Laterally Severed Tracts (number affected)
	Severance Management Zones (acres)
Adverse Travel	Adverse Travel (miles)
	Tracts with Access Change (number affected)
Farms Otherwise Affected	Farms Otherwise Affected(acres)
Number of Owners	Owners (number affected)
Uneconomical Remnants	Uneconomical Farm Remnants (number)
Centennial/ Sesquicentennial Farms	Centennial or Sesquicentennial Farms (number affected, by family)
Cultural	
Cultural	Historic Sites (number affected)
	Cemeteries (number affected)
	High Probability Archaeological Sites (acres affected)
Design	
ROW	Total ROW (acres)
Termini Connections	I-55 Operational/Connectivity Impacts
	Terminus Impacts
	Route 66/High Speed Rail Impacts
	Existing and Future Land Use Impacts
Operations	Volume to Capacity (congestion reduction)
	Intersection Level of Service
	Arterial Access



Topography	Net Fill Required (cubic yards, in 1000s)
Drainage Structure	Total Drainage Structures (number)
Estimated Cost	Estimated Cost (shown in \$1000s)
Sustainability	
Pavement	Area of New Pavement required (acres)
Right-of-Way	Area of New ROW required (acres)
Farmland Preservation	Area of farmland between the alternative and the 2035 Land Use Plan (acres)
	Farm tracts located between the alternative and the 2035 Land Use Plan (number)
Watershed	Amount of ROW within each watershed (% watershed affected)
	Six Mile Creek-Mackinaw River Watershed
	Money Creek Watershed
	Sugar Creek Watershed
Kickapoo Creek Watershed	
Riparian Areas	Riparian Areas (acres affected)
Highly Erodible Soils	Highly Erodible Soils (acres affected)
Bike/Pedestrian Access	Is alternative adjacent to proposed or existing bike/pedestrian network? (Y/N)

	Not Impacted
	Impacted within same range or preliminary data
	Impacted with wide range, differentiating criteria

¹Additional noise receptors will be studied beyond 500' of ESH to address public comments on this issue. There are 13 representative receptors beyond 500' from the roadway for Alternatives 125 and 127, and 20 such representative receptors for Alternatives 124 and 126.

How was the public involved in the Step 5: Environmental Assessment evaluation?

The results of Step 5 were shared with the CWG members and presented at a Public Information Meeting (PIM) in June, 2013. Similar to Steps 3 & 4, the resources and conditions used for elimination were reviewed by the CWG and public to make sure they were in agreement with the elimination process. The regulatory mandates and protection of resources, in addition to CWG and public input, were considered by the PSG when determining the differentiating criteria used to select the Preferred Alternative.



How was the Preferred Alternative selected?

The resource impacts resulting from the four remaining alternatives were compared in order to identify one Preferred Alternative. Generally, the Preferred Alternative is the alternative that meets the purpose and need and minimizes the impacts to residences, environmental, cultural, agricultural, and community resources. Public input is considered when selecting the Preferred Alternative. However, FHWA and IDOT must comply with Federal and State laws that protect environmental resources.

All of the four remaining Build Alternatives meet the Purpose and Need of the project. Although the No Build Alternative does not meet the Purpose and Need, it can be selected as the Preferred Alternative if the impacts resulting from the Build Alternatives are of a magnitude that FHWA, IDOT, or the Federal and State resource agencies consider to be a greater environmental detriment than the No Build Alternative's inability to meet the project's Purpose and Need.

Discussion of the Preferred Alternative is presented in **Chapter 4** of this document, along with a summary of impacts and ways to compensate for the impacts (also known as mitigation).



