



## **2040 Metropolitan Transportation Plan Task Force**

March 24, 2014; 12:00 – 1:30 p.m.

City Hall, Hooker Room (245)

I. Welcome

II. Existing Plus Committed Project Discussion

- a. defining a committed project
- b. what projects of Alternative 5 from old plan were done or not done
- c. which projects are still valid to bring forward
- d. any new projects to be considered

III. Next Meeting: April 28, 2014

*Adjournment*

Based on these county-wide control totals, the growth of 21,119 new households, 1,402 retail jobs, and 20,366 non-retail jobs from 2000 to 2030 was spatially allocated to the TAZs on the basis of past trends, known development projects, and the future development recommendations contained in the City of Bloomington's Growth Policies Plan, Monroe County's Comprehensive Land Use Plan, and Ellettsville's Comprehensive Plan.

Finally, the updated MPO Travel Demand Model was used to forecast future travel based on the allocation of future growth to the TAZs and to test the performance of subsequent transportation improvement alternatives. As a result of the increase in population and households, continuing decline in household size, increase in the number of vehicles per household, increase in employment in Monroe County as a regional retail and employment center, and increase in external travel passing through Monroe County, there will be an increase in trip-making activity from 2000 through 2030. Forecasted increases in congestion over the next 25 years cannot be accommodated by merely taking transportation system management actions (low-cost capital investments such as intersection and signalization improvements) to preserve the capacity of the existing roadway network or by doubling public transportation's share vehicle trips.

### COMMITTED PROJECTS

Before identifying existing and future transportation problems, the base year 2000 highway network of the Travel Demand Model was modified to reflect programmed transportation improvements (known as "committed" projects) in the Fiscal Years 2006 through 2008 Transportation Improvement Program for the Bloomington/Monroe County Metropolitan Planning Organization. This modified network, which is termed the Existing Plus Committed (E+C) roadway network, incorporates transportation improvements that are realistically anticipated to be completed in the immediate future, that will be funded before new projects are identified, and that will not be second-guessed in the development of the future transportation plan. The committed highway projects are listed as follows (see Figure 1-1 for a map of committed projects):

- West 3<sup>rd</sup> Street Phase II: Widen to four lanes with landscaped median from Landmark Avenue to SR 37
- Curry Pike (City Phase): Widen to four lanes from SR 45 to Constitution Avenue
- Vernal Pike Phase I: Widen to three lanes from Curry Pike to Loesch Road and two-lane reconstruction from Loesch Road to Hartstrait Road
- Vernal Pike Phase II: Widen to three lanes from SR 37 to Curry Pike
- Country Club Drive/Rogers Street: Reconfigure intersection to add left-turn lanes
- Rogers Road/Smith Road: Realign curve to improve safety
- 3<sup>rd</sup> Street/Atwater Avenue: Extend one-way pair from Mitchell Street to High Street; spot intersection and safety improvements
- Basswood Drive: Extend two lane road from end of Basswood Drive to West 3<sup>rd</sup> Street/Johnson Avenue intersection

## FUTURE TRANSPORTATION NEEDS PLAN (CONT.)

- Weimer Road: Realign between Tapp Road and Wapahani Road
- State Road 45/46 Bypass: Widen to four lanes from North Walnut Street to East 3<sup>rd</sup> Street
- State Road 48: Widen to four lanes from Curry Pike to west of Hartstrait Road
- State Road 45: Widen to four lanes from SR 45/46 Bypass to Pete Ellis Drive; Widen to three lanes and reconstruction from Pete Ellis Drive to Russell Road
- Sare Road (Phases I & II): Reconstruction from Rogers Road to David Drive, including signalization at Rogers Road; Reconstruction from McCartney Lane to 400 feet south of Moores Pike

### MAJOR TRAFFIC PROBLEMS

Having added “committed” transportation improvements to the existing highway network, existing traffic (year 2000) and future traffic (year 2030) were assigned to the “existing-plus-committed” (E+C) highway network to identify traffic problems for which additional major transportation investments may be needed. Major traffic problem areas projected for year 2030 are as follows:

- State Road 46: Union Valley Road to Smith Pike
- State Road 48: Curry Pike to State Road 37
- 3<sup>rd</sup> Street: Woodlawn Avenue to Indiana Avenue
- Hartstrait Road: State Road 48 to Woodyard Road
- 2<sup>nd</sup> Street/Bloomfield Road: Patterson Drive to Rogers Street, Weimer Road to Allen Street, and Rogers Street to College Avenue
- State Road 45/46 Bypass: North Walnut Street to East 3<sup>rd</sup> Street congested even after widening project
- Atwater Avenue: East 3<sup>rd</sup> Street to Woodlawn Avenue
- Walnut Street: 10<sup>th</sup> Street to 17<sup>th</sup> Street and 2<sup>nd</sup> Street to 3<sup>rd</sup> Street
- College Avenue: 10<sup>th</sup> Street to 17<sup>th</sup> Street
- Adams Street: Kirkwood Avenue to Vernal Pike
- Rogers Street: Rockport Road to 17<sup>th</sup> Street
- Henderson Street: Winslow Road to Hillside Drive and Grimes Lane to 1<sup>st</sup> Street
- Indiana Avenue: 12<sup>th</sup> Street to 13<sup>th</sup> Street
- Woodyard Road: Thomas Road to Vernal Pike
- Vernal Pike: Woodyard Road to 11<sup>th</sup> Street
- 10<sup>th</sup> Street: Walnut Street to Dunn Street and Fee Lane to Jordan Avenue
- Grimes Lane: Rogers Street to Henderson Street
- Moores Pike: College Mall Road to Smith Road
- State Road 37: Rockport Road to State Road 45 and State Road 48 to the State Road 45/46 Bypass
- State Road 45: Pete Ellis Drive to John Hinkle Place

- State Road 46: Owen County Line to Maple Grove Road, Smith Pike to Arlington Road, Arlington Road to State Road 37 (westbound traffic only), and College Mall Road to Pete Ellis Drive
- 11<sup>th</sup> Street: Adams Street to Rogers Street
- That Road: State Road 37 to Rogers Street
- Victor Pike: State Road 37 to Church Lane

### TRANSPORTATION NEEDS PLAN

The Transportation Needs Plan addresses multi-modal transportation needs including transit investments, bicycle/pedestrian investments and roadway investments (“capacity expansion” projects). Of particular import, the Needs Plan also recognizes the essential need to first preserve existing transportation investments. The preservation of existing transportation investments (termed “capacity preservation”) involves:

- The ongoing operation and maintenance of the existing roadway system, improvements to public transportation fixed-route services, and new bicycle and pedestrian facilities to promote commuting and short distance trips;
- The preservation of roadways through resurfacing and reconstruction based on a pavement management program, bridges through rehabilitation and reconstruction based on a bridge management program, and public transit services through a bus replacement and capital facilities maintenance program; and
- The preservation of safety and roadway capacity through low-cost capital improvements to address spot safety and localized congestion concerns through intersection signalization, signage, pavement marking, access management, traffic calming and guardrail improvements.

Due to their on-going nature capacity preservation projects are not defined in the 2030 Long Range Transportation Plan, but rather funding must be set aside for transportation preservation activities which are defined in the annual operating and capital improvement programs for the City of Bloomington, Monroe County, the Town of Ellettsville, Bloomington Public Transportation Corporation, Indiana University Campus Bus Service, and Rural Transit, as well as those in the Transportation Improvement Program of the MPO.

## FUTURE TRANSPORTATION NEEDS PLAN (CONT.)

In addition to continuing to improve the operations of Bloomington Transit, Indiana University Campus Bus Service and Rural Transit, several specific transit needs have been identified. These include:

- Increased levels of service (number of days, hours of operation, frequency, and geographic coverage);
- A downtown shuttle system;
- New Park and Ride lot locations/ride sharing programs;
- Alternative fuels;
- A new/expanded downtown transfer facility;
- The creation of a regional transit authority; and
- Investigation of developing high occupancy vehicle (HOV) lanes.

In terms of bicycle and pedestrian needs, the Transportation Needs Plan:

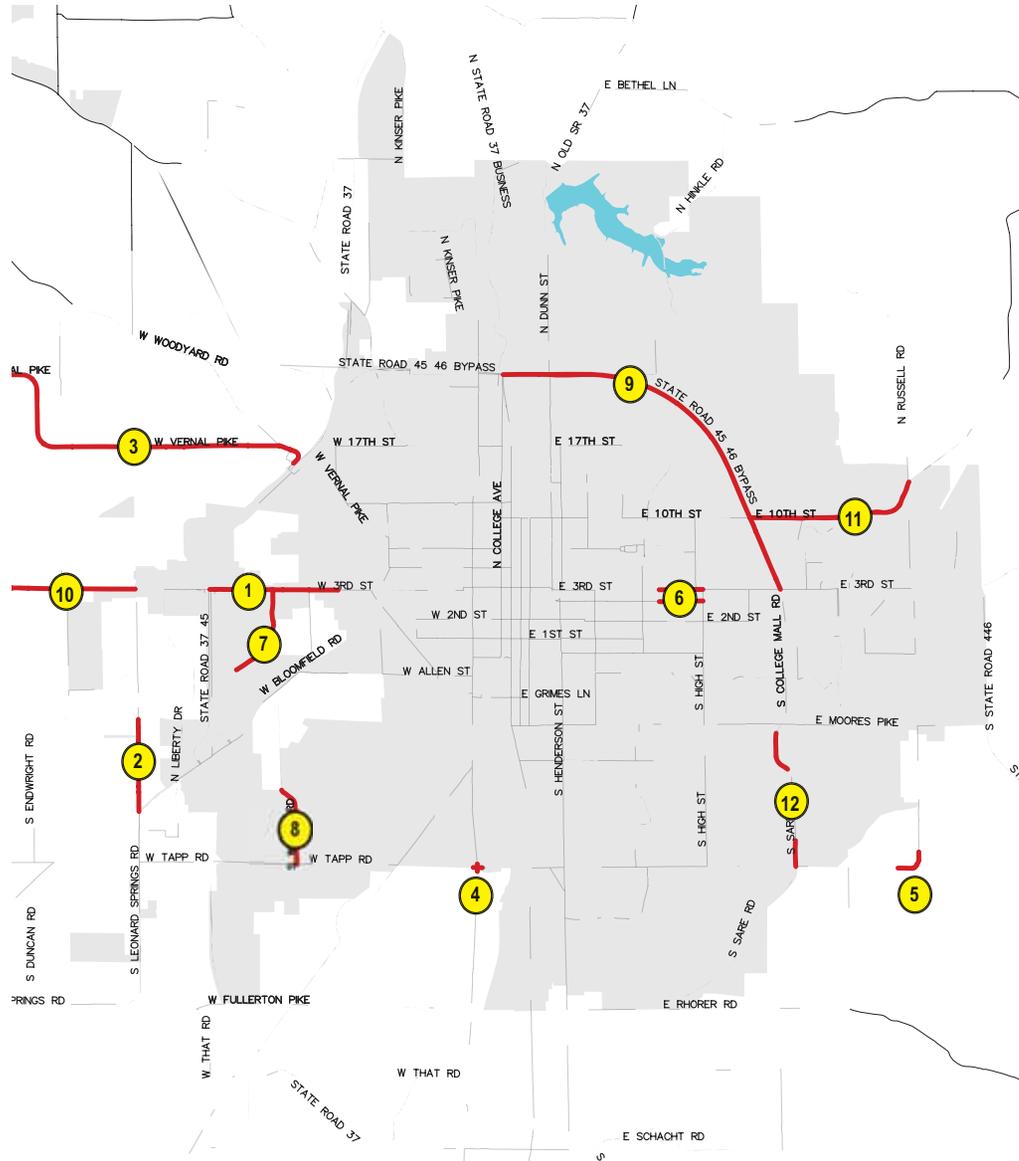
- Calls for funding for bicycle and pedestrian projects;
- Includes bicycle and pedestrian facilities as a part of roadway investment projects in the City of Bloomington and Monroe County;
- Outlines major trail projects needed to provide commuting, recreational, and short-range trip opportunities; and
- Incorporates projects outlined in the City of Bloomington's Alternative Transportation and Greenways System Plan and the soon to be adopted Monroe County Alternative Transportation and Greenways System Plan.

The Transportation Needs Plan appears in Figures 1-2 and 1-3, and Tables 1-2, 1-3, 1-4, and 1-5. The Transportation Needs Plan also recommends transportation system management (TSM) actions to address a few lingering congestion problems where major transportation investments are not proposed.

The Winslow Road corridor is an example of an area where growing congestion and infrastructure conditions merit future improvements.



**FIGURE 1-1: COMMITTED PROJECTS**



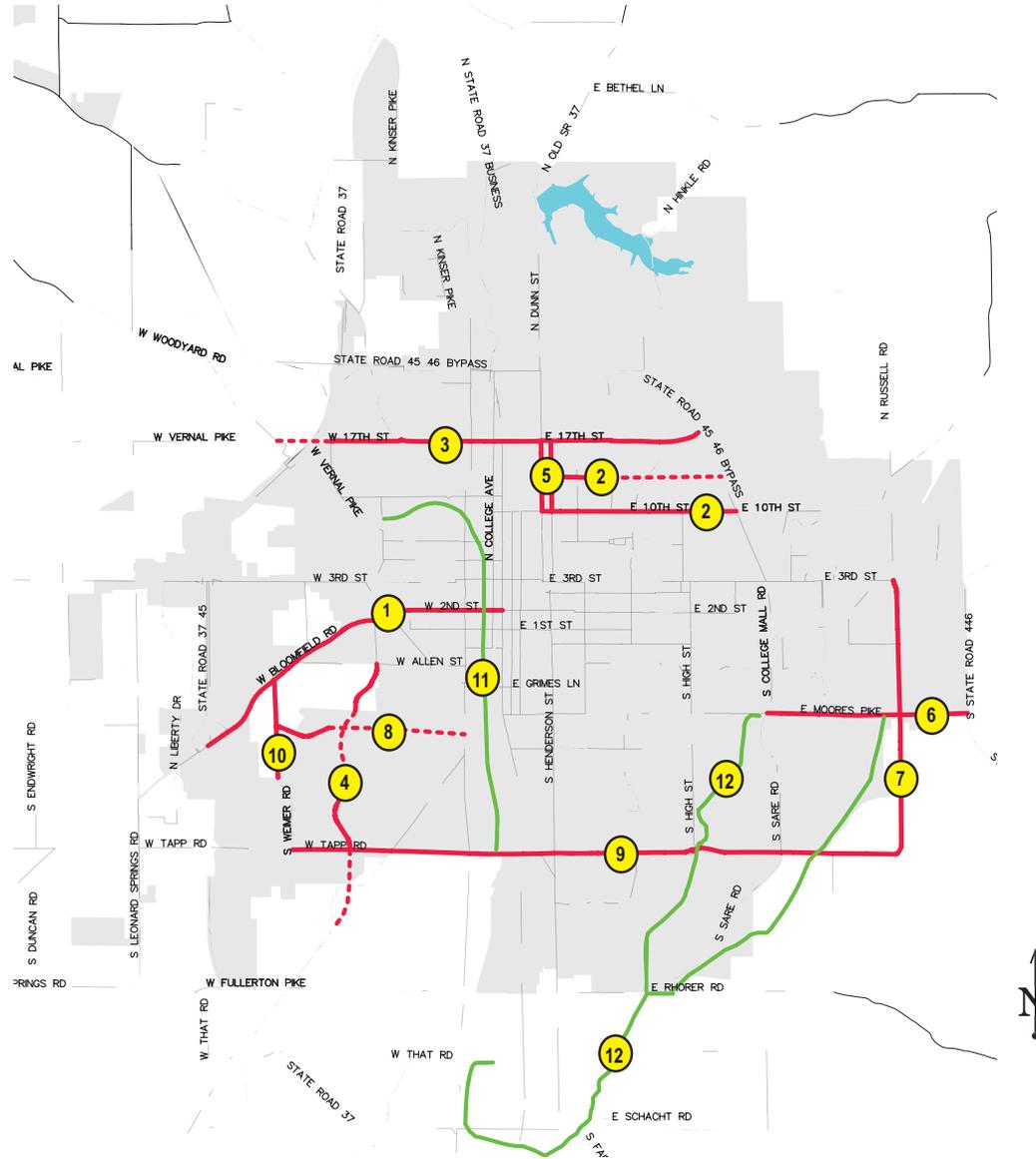
### LEGEND

Map Features:

- Road Improvement Project
- Multi-Use Trail Project
- Lake
- Urbanized Area

- 1** West 3<sup>rd</sup> Street Phase II – from Landmark Avenue to SR 37
- 2** Curry Pike – from SR 45 to Constitution Avenue
- 3** Vernal Pike Phase I and II – from SR 37 to Hartstrait Road
- 4** Country Club Drive/Rogers Street Intersection
- 5** Rogers Road/Smith Road Intersection
- 6** 3<sup>rd</sup> Street/Atwater Avenue – from Mitchell Street to High Street
- 7** Basswood Drive – from end of Basswood Drive to West 3<sup>rd</sup> Street
- 8** Weimer Road – from Tapp Road to Wapahani Road
- 9** State Road 45/46 Bypass – from Walnut Street to 3<sup>rd</sup> Street
- 10** State Road 48 – from Curry Pike to Hartstrait Road
- 11** State Road 45 – SR45/46 Bypass to Russell Road
- 12** Sare Road Phase I and II – from Rogers Road to David Drive and from McCartney Lane to Moores Pike

FIGURE 1-2: CITY OF BLOOMINGTON/INDIANA UNIVERSITY TRANSPORTATION PROJECTS



### LEGEND

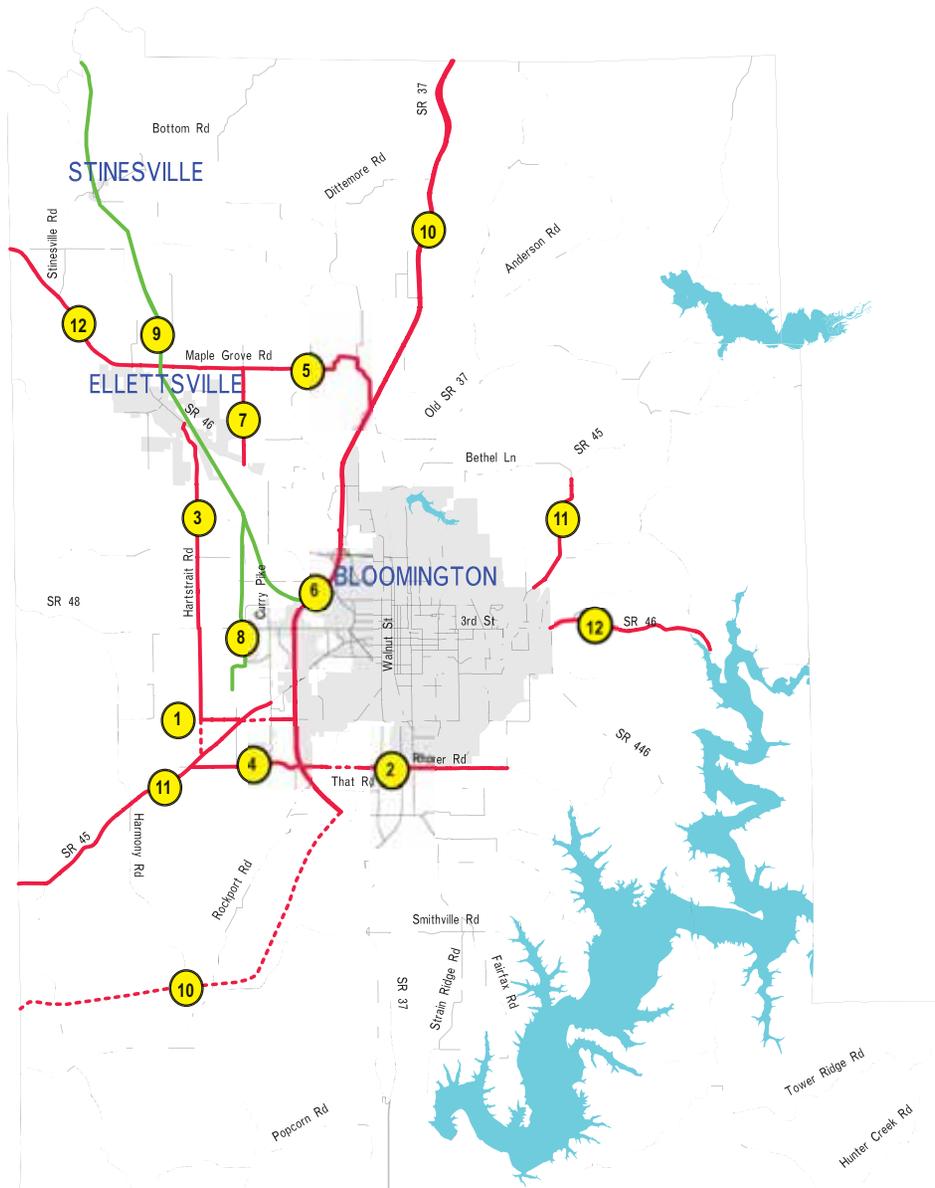
Map Features:

- Road Improvement Project (dashed line are proposed connections)
- Multi-Use Trail Project
- Lake
- Urbanized Area

- 1 2<sup>nd</sup> Street/Bloomfield Road
- 2 10<sup>th</sup> Street/14<sup>th</sup> Street
- 3 17<sup>th</sup> Street
- 4 Adams Street
- 5 Dunn Street
- 6 Moores Pike
- 7 Smith Road
- 8 Sudbury Drive
- 9 Tapp Road/Country Club Drive/Winslow Road/Rogers Road
- 10 Weimer Road
- 11 CSX Corridor Trail
- 12 Jackson Creek Trail

\*For project information please reference Appendix F

**FIGURE 1-3: MONROE COUNTY/INDOT TRANSPORTATION PROJECTS**



### LEGEND

Map Features:

- Road Improvement Project (dashed line are proposed connections)
- Multi-Use Trail Project
- Lake
- Urbanized Area
- 1 Airport Road/Tapp Road
- 2 Fullerton Pike/Gordon Pike/Rhorer Road
- 3 Kirby Road/Hartstrait Road
- 4 Leonard Springs Road/Fullerton Pike
- 5 Maple Grove Road/Bottom Road
- 6 SR 37 West Frontage Road
- 7 Union Valley Road
- 8 Karst Farm Trail
- 9 Stinesville-Ellettsville Greenway
- 10 Interstate 69
- 11 State Road 45 (East and West)
- 12 State Road 46 (East and West)

\*For project information please reference Appendix F

**TABLE 1-3: PHASING OF HIGHWAY CAPITAL IMPROVEMENT PROJECTS FOR MONROE COUNTY & ELLETTSVILLE**

Project	Total Project Cost	Federal	Local Match	Other Funds	Project Total Funds	Cumulative Amounts
<b>Short-Term Projects (2009-2019)</b>						
Airport Road/Tapp Road	\$6,740,745	\$5,392,596	\$1,348,149	\$0	\$6,740,745	\$6,740,745
Fullerton Pike/Gordon Pike/Rhorer Road (Phase I)	\$11,666,899	\$9,333,519	\$2,333,380	\$0	\$11,666,899	\$18,407,644
Fullerton Pike/Gordon Pike/Rhorer Road (Phase II)	\$886,005	\$708,804	\$177,201	\$0	\$886,005	\$19,293,649
Fullerton Pike/Gordon Pike/Rhorer Road (Phase III)	\$3,345,705	\$2,676,564	\$669,141	\$0	\$3,345,705	\$22,639,354
SR 37 West Frontage Road	\$10,609,362	\$8,487,490	\$2,121,872	\$0	\$10,609,362	\$33,248,716
Union Valley Road	\$4,919,289	\$3,935,431	\$983,858	\$0	\$4,919,289	\$38,168,005
<b>Fiscal Years 2009-2019 (totals)</b>	\$38,168,005	\$30,534,404	\$7,633,601	\$0	\$38,168,005	
<b>Long-Term Illustrative Projects (2020-2030)</b>						
Fullerton Pike/Gordon Pike/Rhorer Road (Phase IV)	\$4,301,621	\$3,441,297	\$860,324	\$0	\$4,301,621	\$4,301,621
Kirby Road/Hartstrait Road	\$35,203,539	\$28,162,831	\$7,040,708	\$0	\$35,203,539	\$39,505,160
Leonard Springs Road/Fullerton Pike	\$9,704,612	\$7,763,690	\$1,940,922	\$0	\$9,704,612	\$49,209,772
Maple Grove Road/Bottom Road	\$10,102,054	\$8,081,643	\$2,020,411	\$0	\$10,102,054	\$59,311,826
<b>Fiscal Years 2020-2030 (totals)</b>	\$59,311,826	\$47,449,461	\$11,862,365	\$0	\$59,311,826	

**TABLE 1-4: PHASING OF HIGHWAY CAPITAL IMPROVEMENT PROJECTS FOR THE STATE OF INDIANA IN MONROE COUNTY**

Project	Total Project Cost	Federal	Local Match	Other Funds	Project Total Funds	Cumulative Amounts
<b>Short-Term Projects (2009-2019)</b>						
Interstate 69	\$274,653,666	\$219,722,933	\$54,930,733	\$0	\$274,653,666	\$274,653,666
<b>Fiscal Years 2009-2019 (totals)</b>	\$274,653,666	\$219,722,933	\$54,930,733	\$0	\$274,653,666	
<b>Long-Term Projects (2020-2030)</b>						
SR 46 (East)	\$46,179,800	\$36,943,840	\$9,235,960	\$0	\$46,179,800	\$46,179,800
<b>Fiscal Years 2020-2030 (totals)</b>	\$46,179,800	\$36,943,840	\$9,235,960	\$0	\$46,179,800	

## COST FEASIBLE PLAN (CONT.)

**TABLE 1-5: PHASING OF MULTI-USE TRAIL PROJECTS FOR THE CITY OF BLOOMINGTON, MONROE COUNTY, AND ELLETTSVILLE**

Project	Total Project Cost	Federal	Local Match	Other Funds	Project Total Funds	Cumulative Amounts
<b>Short-Term Projects (2009-2019)</b>						
CSX Corridor Trail (Phase III) - Adams Street to Country Club Drive	\$5,428,386	\$4,342,709	\$1,085,677	\$0	\$5,428,386	\$5,428,386
Jackson Creek Trail (Phase I) - Rhorer Road to Child's School	\$1,654,670	\$1,323,736	\$330,934	\$0	\$1,654,670	\$7,083,056
Jackson Creek Trail (Phase II) - Rhorer Road to Fairfax Road	\$1,477,081	\$1,181,665	\$295,416	\$0	\$1,477,081	\$8,560,137
Jackson Creek Trail (Phase III) - Rhorer Road to Schmalz Park	\$1,184,058	\$947,246	\$236,812	\$0	\$1,184,058	\$9,744,195
Karst Farm Trail (Phase I) - Karst Farm Park to Vernal Pike	\$1,641,000	\$1,312,800	\$328,200	\$0	\$1,641,000	\$11,385,195
Karst Farm Trail (Phase II) - Vernal Pike to Stinesville-Ellettsville Trail	\$351,648	\$281,318	\$70,330	\$0	\$351,648	\$11,736,843
<b>Fiscal Years 2009-2019 (totals)</b>	\$11,736,843	\$9,389,474	\$2,347,369	\$0	\$11,736,843	
<b>Long-Term Projects (2020-2030)</b>						
Jackson Creek Trail (Phase IV) - Child's School to Southeast Park	\$955,894	\$764,715	\$191,179	\$0	\$955,894	\$955,894
Jackson Creek Trail (Phase V) - Schmalz Park to SR 446/Moores Pike	\$1,227,297	\$981,838	\$245,459	\$0	\$1,227,297	\$2,183,191
Jackson Creek Trail (Phase VI) - Sare Road to SR 446/Moores Pike	\$1,946,921	\$1,557,537	\$389,384	\$0	\$1,946,921	\$4,130,112
Jackson Creek Trail (Phase VII) - Fairfax Road to Clear Creek Trailhead	\$2,773,098	\$2,218,478	\$554,620	\$0	\$2,773,098	\$6,903,210
Stinesville-Ellettsville Greenway (Monroe County)	\$5,942,695	\$4,754,156	\$1,188,539	\$0	\$5,942,695	\$12,845,905
<b>Fiscal Years 2020-2030 (totals)</b>	\$12,845,905	\$10,276,724	\$2,569,181	\$0	\$12,845,905	

The six Alternatives analyzed for the 2030 Plan produced a wide range of results, primarily defined by the relative level of congestion produced on various road facilities. In addition to congestion, several other factors were used to evaluate the overall performance of each alternative. The results in Table C-1 highlight other measurements that were used in the evaluation process. These results indicate trade-offs or mixed performance results between the alternatives, which is often the case when utilizing multiple performance measurements.

The previous section focused on the performance of congested facilities on the roadway network. Roads determined to be congested included rural roads with Level of Service D, E, or F and urban roads with Level of Service E or F. This variable is the most useful in determining the preferred alternative because it has a direct relationship to tangible problems within the structure of the transportation system. Other performance values measure factors that have more indirect relationship to the performance of the network, including economic variables, mileage variables, and ratios and indexes. These are helpful to evaluate qualitative values, but are best used as a check and balance when selecting a preferred alternative. For example, if an alternative performs well for congested facilities but has less than desirable social, political, and/or fiscal results for the other measurements, then the alternative should not be considered feasible. But if it does perform well for congested facilities and no fatal flaws are exhibited with the other results, then the alternative should be selected as the preferred alternative.

This is the case for Alternative 5, which includes the modified 2025 Plan Projects with the I-69 corridor improvements. No fatal flaws were exhibited from the performance results for this Alternative. This network is the preferred network for the 2030 Future Transportation Needs Plan. The following list details the improvement projects included with Alternative 5.

### **CITY OF BLOOMINGTON / INDIANA UNIVERSITY PROJECTS**

- Weimer Road: Reconstruction of Weimer Road for two lanes between Bloomfield Road and Wapehani Road
- 2<sup>nd</sup> Street/Bloomfield Road: Road widening to four lanes from SR 37 to Walnut Street (four-lane divided west of Adams Street, five-lane with continuous center turn-lane east of Adams Street)
  - Bike lanes on both sides of the corridor with complete/modernization of the sidewalk network; or
  - Upgrade a sidewalk facility to a separated multi-use path on one side of the road with a sidewalk on the other side of the road
- Tapp Road/Country Club Drive/Winslow Road/Rogers Road: Road widening and upgrade from Weimer Road to Smith Road (four-lane divided except two-lane divided from Weimer Road to Rogers Street and from Henderson Street to Smith Road)
  - Separated multi-use path and complete/modernization of the sidewalk network

**ALTERNATIVES ANALYSIS: RESULTS (CONT.)**

- Adams Street: Construction of new two lane road connection between Allen Street and Rockport Road to be implemented from future development approvals
  - Separated multi-use path and completion/modernization of the sidewalk network
- Moores Pike: Road widening to three lanes from College Mall Road to State Road 446
  - Bike lanes on both sides of the corridor with completion/modernization of the sidewalk network; or
  - Upgrade a sidewalk facility to a separated multi-use path on one side of the road with a sidewalk on the other side of the road
- Smith Road: Road widening to three lanes from Rogers Road to 3<sup>rd</sup> Street
  - Separated multi-use path and completion/modernization of the sidewalk network
- 17<sup>th</sup> Street: Construction of new two lane road connection from State Road 37 to Vernal Pike and 8 intersection modernizations/improvements from State Road 37 to the State Road 45/46 Bypass
  - Bike lanes on both sides of the corridor with complete/modernization of the sidewalk network; or
  - Upgrade a sidewalk facility to a separated multi-use path on one side of the road with a sidewalk on the other side of the road
  - Provide exclusive bicycle and pedestrian crossings across State Road 37/Interstate 69
- Sudbury Drive: Construction of new two lane road connection from Weimer Road to Rogers Street
  - Upgrade a sidewalk facility to a separated multi-use path on one side of the road with a sidewalk on the other side of the road
- Dunn Street: Construction of new three lane road connection from 12<sup>th</sup> Street to 13<sup>th</sup> Street with a railroad underpass and extending the Dunn/Indiana one-way pair to 17<sup>th</sup> Street
- 10<sup>th</sup> Street/14<sup>th</sup> Street: Road reconstruction for two lanes from Indiana Avenue to State Road 45/46 Bypass; Creation of one-way pair
  - Bike lanes on 10<sup>th</sup> Street/14<sup>th</sup> Street and complete/modernize the sidewalk network

### MONROE COUNTY / TOWN OF ELLETTSVILLE PROJECTS

- Airport Road/Tapp Road: Road reconstruction for two lanes from Kirby Road to State Road 45; Construction of new two lane road connection from State Road 45 to Leonard Springs Road; Road reconstruction for two lanes from Leonard Springs Road to State Road 37
  - Bike lanes on both sides of the corridor with complete/modernization of the sidewalk network; or
  - Upgrade a sidewalk facility to a separated multi-use path on one side of the road with a sidewalk on the other side of the road
- Fullerton Pike/Gordon Pike/Rhorer Road: Road widening to four lanes from State Road 37 to Walnut Street, three lanes from Walnut Street to Walnut Street Pike and two lanes from Walnut Street Pike to Snoddy Road
  - Bike lanes on both sides of the corridor with complete/modernization of the sidewalk network; or
  - Upgrade a sidewalk facility to a separated multi-use path on one side of the road with a sidewalk on the other side of the road
- Kirby Road/Hartstrait Road: Road widening to four lanes (divided) road from State Road 45 to State Road 46
  - Bike lanes on both sides of the corridor with complete/modernization of the sidewalk network; or
  - Upgrade a sidewalk facility to a separated multi-use path on one side of the road with a sidewalk on the other side of the road
- Maple Grove Road/Bottom Road: Road reconstruction for two lanes between State Road 46 and State Road 37
- Leonard Springs Road/Fullerton Pike: Road widening to four lanes (divided) from State Road 45 to State Road 37
- Union Valley Road: Road reconstruction for two lanes from State Road 46 to Maple Grove Road
- State Road 37 West Frontage Road: Construction of new two lane road connection between State Road 48 and State Road 46

**STATE OF INDIANA PROJECTS**

- State Road 46: Road widening to four lanes from State Road 446 to 4 miles east of State Road 446
- State Road 46: Road widening to four lanes from Red Hill Road to Owen County Line
  - Bike lanes on both sides of the corridor with complete/modernization of the sidewalk network; or
  - Upgrade a sidewalk facility to a separated multi-use path on one side of the road with a sidewalk on the other side of the road
- State Road 45: Road widening to three lanes from Russell Road to Bethel Lane
  - Bike lanes on both sides of the corridor with complete/modernization of the sidewalk network; or
  - Upgrade a sidewalk facility to a separated multi-use path on one side of the road with a sidewalk on the other side of the road
- State Road 45: Road widening to four lanes from Curry Pike to Greene County Line
  - Bike lanes on both sides of the corridor with complete/modernization of the sidewalk network; or
  - Upgrade a sidewalk facility to a separated multi-use path on one side of the road with a sidewalk on the other side of the road

**I-69 Corridor**

The following list details the specific improvements included with the I-69 Corridor improvements through Monroe County. The interchange/overpass/access treatments listed here are those recommended by the MPO, not necessarily the final design treatments endorsed by INDOT. The proposed route for I-69 follows SR 37 south from the Morgan County line, and breaks west onto a new terrain corridor just south of Rockport Road, exiting Monroe County at the Greene County line. South of the new terrain split, no further corridor improvements to SR 37 are recommended.

- I-69 Corridor: Road widening and new road construction for a limited access highway between the Morgan County and Green County lines, including a four lane profile in rural areas and a six lane profile in urbanized areas
  - Separated multi-use path along Interstate 69 from Morgan County to Greene County (I-69)
  - Exclusive east/west bicycle and pedestrian crossings at Fullerton Pike, 2<sup>nd</sup> Street, 3<sup>rd</sup> Street and Vernal Pike (and other locations where appropriate/feasible)
- Bryant’s Creek Road: Grade separation with overpass (no highway access)
- Chambers Pike: Grade separation with interchange and a north-south frontage road network

- Sample Road: Grade separation with interchange, include north-south frontage road from Chambers Pike to Walnut Street/College Avenue
- Walnut Street/College Avenue: Grade separation with overpass (no highway access)
- Kinser Pike: Grade separation with interchange and improved connections to Walnut Street and Bottom Road
- Acuff Road: Grade separation with overpass (no highway access)
- Arlington Road: Maintain existing overpass (no highway access)
- State Road 46: Maintain existing interchange
- Vernal Pike/17<sup>th</sup> Street: Grade separation with underpass (no highway access)
- Whitehall Crossing Boulevard: Right-in/Right-out access point from highway corridor removed (no highway access)
- State Road 48/3<sup>rd</sup> Street: Upgrade existing interchange to single point interchange
- State Road 45/Bloomfield Road/2<sup>nd</sup> Street: Maintain existing interchange
- Tapp Road: Grade separation with overpass (no highway access)
- Fullerton Pike: Grade separation with interchange
- Rockport Road: Grade separation with overpass (no highway access), provide north-south frontage road connection to Fullerton Pike
- That Road: Access closed with no overpass, provide north-south frontage road connection to Fullerton pike
- New Terrain Interchange: Grade separation with interchange to split new terrain I-69 from continuation of SR 37 to the south
- Bolin Lane (New Terrain Corridor): Grade separation with overpass (no highway access)
- Tramway Road (New Terrain Corridor): Grade separation with overpass (no highway access)
- Lodge Road (New Terrain Corridor): Grade separation with overpass (no highway access)
- Rockport Road (New Terrain Corridor): Grade separation with overpass (no highway access)
- Harmony Road (New Terrain Corridor): Grade separation with overpass (no highway access)
- Evans Lane (New Terrain Corridor): Grade separation with overpass (no highway access)
- Burch Road (New Terrain Corridor): Grade separation with overpass (no highway access)
- Breeden Road (New Terrain Corridor): Grade separation with interchange
- Carter Road (New Terrain Corridor): Grade separation with overpass (no highway access)

**ALTERNATIVES ANALYSIS: RESULTS (CONT.)**

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- Carmichael Road (New Terrain Corridor): Grade separation with overpass (no highway access)
- Victor Pike: (South of New Terrain Interchange) Maintain existing local access to SR 37