

Bypass Traffic [Mis-]Projections

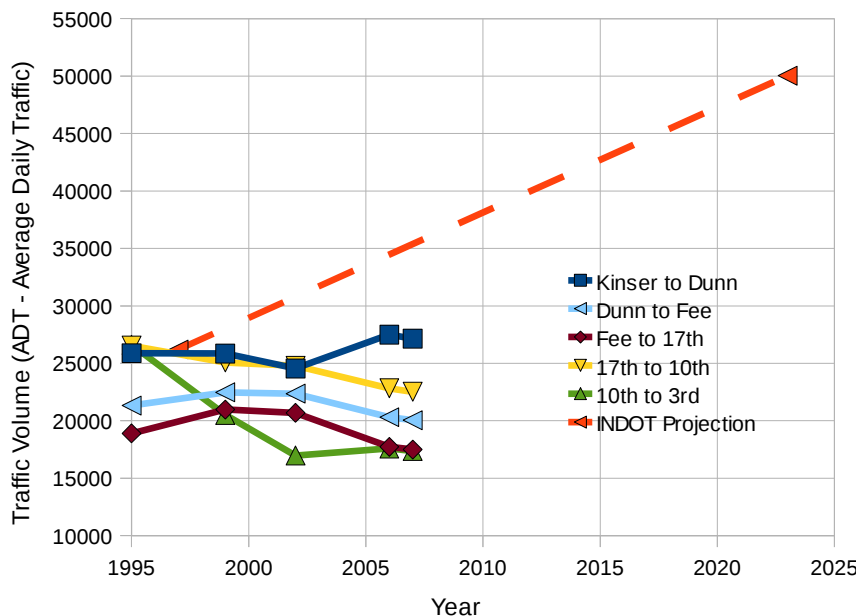
In the 1980s and 1990s, the traffic on the 45/46 bypass was steadily increasing. The College Mall was the regional retail destination and much of the residential growth was on the east side of town as well. As a result, projections for the future traffic demand were quite high. The projections are noted in the project drawing’s first page. These are the criteria to which the project was designed.

TRAFFIC DATA	
A.A.D.T. (1997)	26200 V.P.D.
A.A.D.T. (2023)	50040 V.P.D.
D.H.V (2023)	4250 V.P.H.
DIRECTIONAL DISTRIBUTION 50 %	
TRUCKS	8.5 A.A.D.T.
	11 D.H.V.
DESIGN DATA	
DESIGN SPEED	70 M.P.H.
PROJECT DESIGN CRITERIA	RECONSTRUCTION (NON-FREEWAY)
FUNCTIONAL CLASSIFICATION	PRINCIPAL ARTERIAL
RURAL/URBAN	URBAN (INTERMEDIATE)
TERRAIN	LEVEL
ACCESS CONTROL	PARTIAL

The 1997 traffic was 26200 VPD (Vehicles/day), and the 2023 projection was about twice that, at 50040 VPD (see red line on graph below). This is an average annual growth rate of about 3.5%. This is a very high growth rate, and was predicated on historic and sustained development growth to the east.

However, this growth did not continue. About that same time (late 1990s) the city’s Comprehensive Plans suggested growing the city to the west and curtailing growth to the east to protect lake watershed and to grow where road infrastructure already existed. As a result, the growth in retail and industry has all been to the west. Recent planning studies have also shown a significant amount of the county’s greenspace and contiguous tree-cover are in the southeast quadrant of the county, so avoiding growth to the east continues to rise in priority to city and county officials. Thus, bypass traffic east of Dunn St has actually declined at an average annual rate of -1.5%.¹

INDOT Traffic Counts for SR 45/46 (1995-2007)



The actual counts do not come close to INDOT’s projections. The projections are completely incorrect.

¹ INDOT traffic count websites: <http://www.in.gov/indot/2339.htm>, <http://dotmaps.indot.in.gov/apps/trafficcounts/Default.aspx>

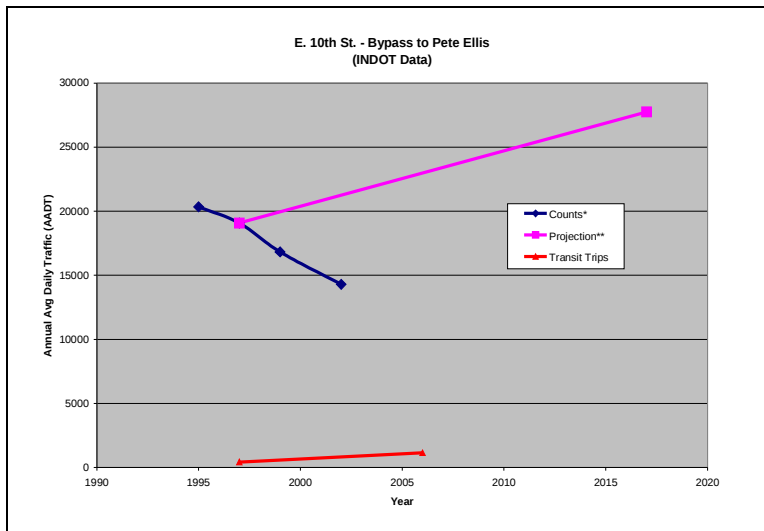
Design & Design Speed (70mph)?

You will notice on the design criteria marquee (above), the design speed for this road is 70 mph.² This design criteria sets up a facility that drivers feel is a highway for high speeds: wide lanes, long turn lanes, and large turning radii all meet the driver's expectation for a high-speed road. However, the road has changed significantly along this corridor since 1997; most notable are:

- the development of 10th and the bypass:
 - retail to the southeast
 - IU facilities development to the northeast
- The development of 3rd and the bypass:
 - significant new retail to the northeast
- 10th Street as a transit corridor (see graph below):
 - while auto trips on 10th have also declined,
 - transit trips have tripled over the last 10 years,
 - transit trips now represent 7% of all person-trips on this corridor.

10th Street

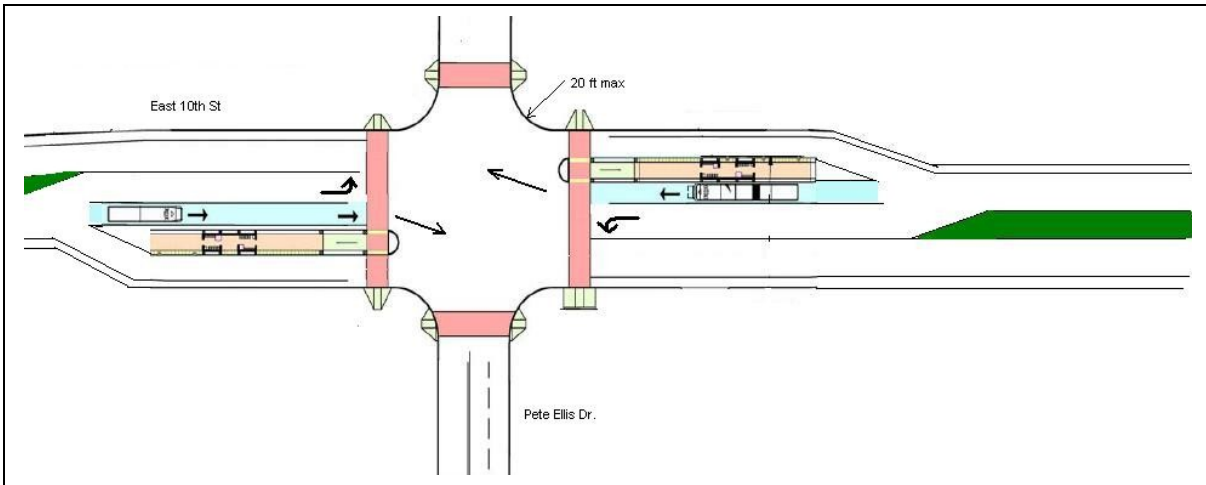
In the graph below, INDOT again projected significant growth in traffic along the 10th street corridor (pink line), when in fact, it has declined (blue line). Meanwhile, Bloomington Transit's Route 6 along this corridor added trip frequency and has witnessed significant growth (red line) that, as noted earlier, represents 7% of person-trips on 10th.



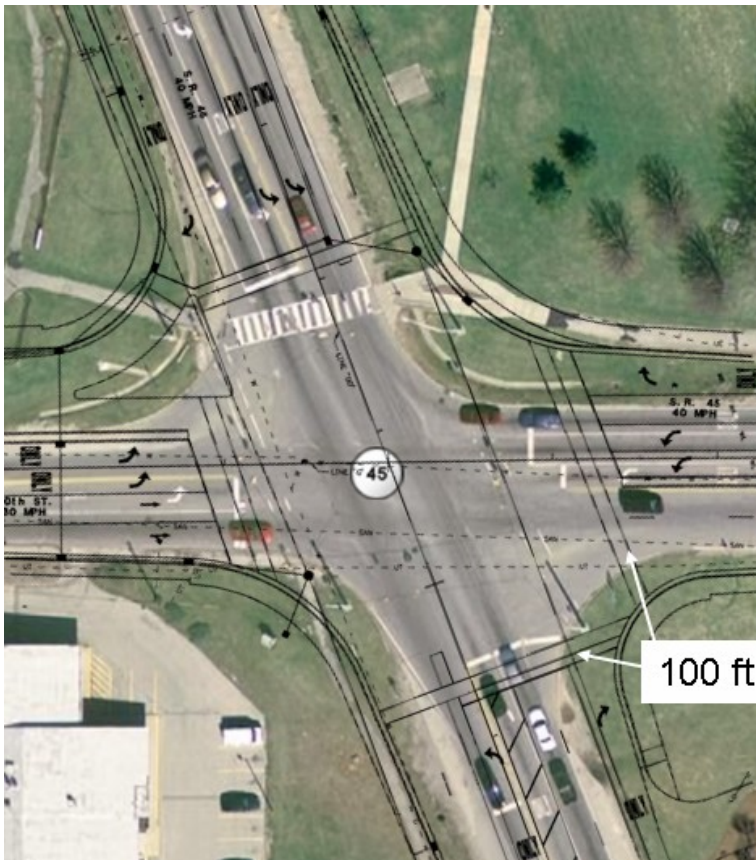
The 10th Street corridor continues to move toward a transit-oriented corridor. This is a high-density corridor with many high-density, multi-family developments with both student and elderly populations who use transit. This corridor goes directly to campus and downtown with 10 to 20 minute headways, and thus provides the perfect situation for

transit growth and Transit Oriented Development (TOD). TOD/Bus Rapid Transit (BRT) designs were suggested and contemplated by community members for 10th Street. Below is a rendering of median bus platforms with bus-only lanes suggested at the intersection of Pete Ellis and 10th St.

² INDOT and FHWA-IN have recently claimed that this is supposed to be 70 kph. 70 kph is only 43 mph, and no engineer would have a design speed lower than the planned posted speed (45 mph). The general practice is to keep it 5-10 mph faster than the posted speed.



Also, IU has increased the employment and classroom space on the 10th and Bypass location. Many students and employees will need transit access to this area, which requires safe pedestrian access to make it work. To continue this desirable trend of transit growth, it is imperative that this area not become so car-oriented and pedestrian-hostile that the trend cannot continue.



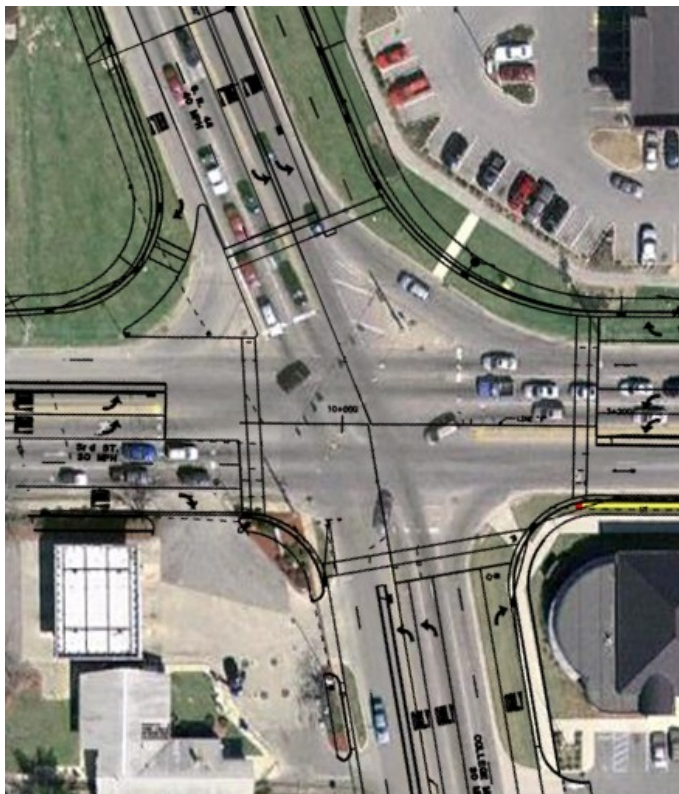
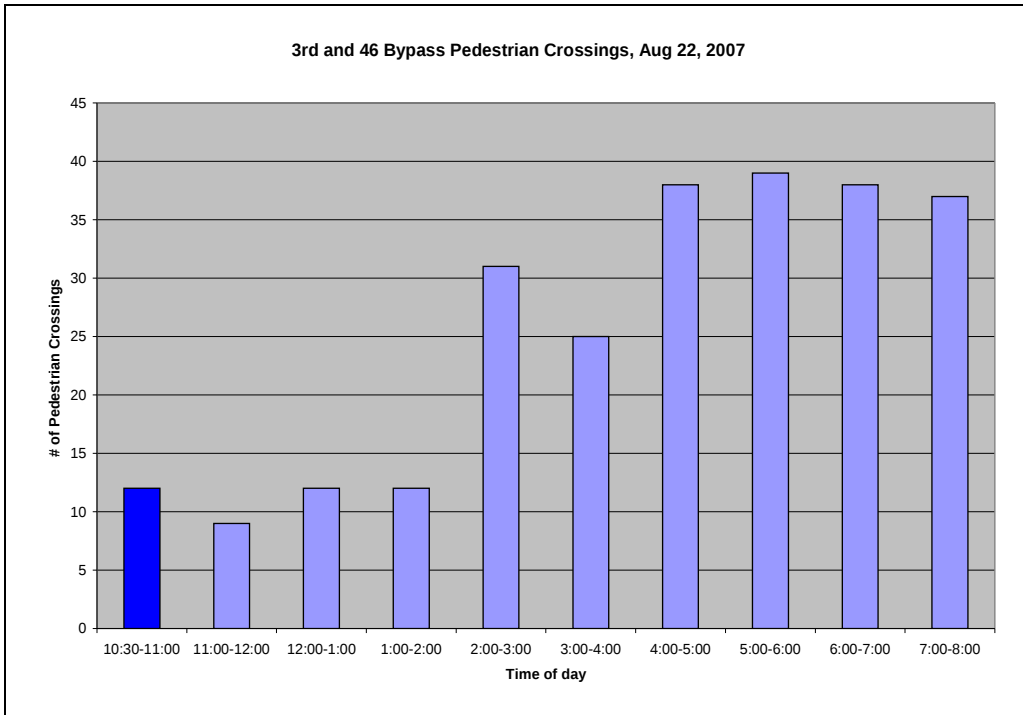
This intersection design and the resulting travel speeds will make this intersection significantly more dangerous than it currently is. To the north, there will be 3 more lanes and conflict points to cross, and 2 additional lanes and conflict points to cross at all the other intersection legs. Speeds will be higher and traffic will be higher from induced demand.

People will feel compelled to drive because walking across this high-speed, pedestrian-hostile street will be too intimidating and dangerous. Thus, transit and walking will decline, while under current conditions they are increasing.

This is an undesired result.

3rd Street

For 3rd and the Bypass, likewise, the growth of retail to the northwest has encouraged significant pedestrian traffic. A pedestrian study showed there were 253 crossings in a 9 ½ hour period. Extrapolation suggests about 400 pedestrian crossings per day at the intersection.



These are very urban environments, but the design actively stifles local traffic. This intersection also increases the crossing distances and conflict points by 2 lanes every direction. There will be a tremendous disincentive to walk, even though many people live within a mile of shopping and employment opportunities in this area.

Both of these intersections have double left turns. Not only are these intimidating to pedestrians, but downstream infrastructure is not designed to handle it. To the east, 10th St was to be widened to handle double left-turns, but

that project has been indefinitely postponed. The receiving lanes will immediately be reduced to 1 lane. A scenario likely to lead to unforeseen and undesirable circumstances.

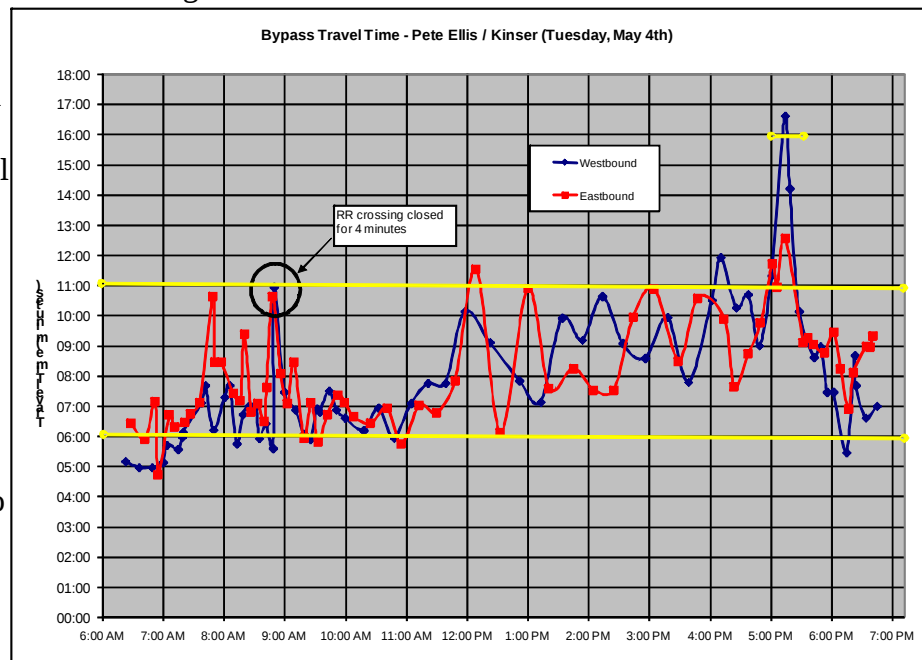


Even the small roads along the bypass are designed for only vehicle convenience. The new 7th street intersection to the east of the bypass, which has only 3 lanes to cross, is massive. The crossing could be only 36 ft in length with 12 ft lanes, but the turning radii are so large they allow cars to turn at high speeds and the crossing approaches 100 ft, putting pedestrians in significant and unnecessary peril.

Actual Traffic Delay

The benefit that is expected from this \$24 to \$40 million dollar effort is minimal. To this point, we have focused on the disbenefits this project’s design brings to the communities transportation and sprawl-reduction goals. However, INDOT tends to believe that delaying cars and trucks is a travesty to our economy, and that millions of dollars are justified to reduce driving time by even a few minutes, in spite of the known fact that this induces sprawl and additional driving.

On Tuesday, May 4th, while IU and the local school district were still in session, a travel time study was done to test the actual delays that occurred. Drivers timed the travel time between each intersection going the 3.2 miles from one end of the construction project to the other (Pete Ellis Drive to Kinser Pike). Although many users of the road claim 30 minute travel times when congested, it appears our impatience and expectations tend to taint our perception of time.



When there is virtually no traffic and the lights are green, the travel time is between 5 and 6 minutes. All day the travel times average around 9 minutes with only rare peaks going to 11 minutes at standard commute and lunch times. Only for a very brief time at about 5:15pm is there a single spike over 16 minutes in the westbound direction; the eastbound goes briefly above 12 minutes. This is hardly the catastrophe that is often claimed.

These travel times will hardly change as a result of widening. Cross traffic will still exist and other signal delays as a result of widening will exist. Two new intersections at 7th and 14th are planned. 17th St will need a light for safe and efficient left turns, and Dunn and Fee currently have no left-turn arrow, which will be needed once widened, thus reducing bypass green time.

Conclusion

The design criteria (projected traffic, design, and design speed) were incorrect. The expected traffic did not materialize and trends show it will not materialize, and may continue to decline. To a large degree, the project is simply not needed. If the project moves forward as designed – for high speed and large traffic volumes – it will be detrimental to other community goals of encouraging walking, biking and transit use. It will also discourage almost all forms of commercial development near the bypass, with the exception of one form: the strip mall. It will have the effect of inducing car traffic while decreasing the use of the modes desired, while the current infrastructure is growing these desired modes. INDOT, in the design, has failed to consider the context which exists now and is desired by the community.

Never have our FHWA headquarters and USDOT Commissioner been more attuned to these important issues than now. The concern for livability as well as the interest in Complete Streets and Context Sensitive Solutions implore state DOTs to consider the context, consider walkability, consider community goals and public participation throughout the design. This design and process fails at every level. A city that is ready to move toward sustainability and walkability should absolutely not accept this project as currently designed.

At the least, this project should be delayed and redesigned. We know it was developed based on traffic criteria that will never exist, so design changes should be considered at a minimum so that the community can meet the goals stated in such documents as the Bloomington Growth Policies Plan and the Monroe County MPO's Complete Streets policy. The design needs to encourage travel speeds which are appropriate to the level of urban density which surrounds the bypass.