

APPENDIX D:
TRAFFIC FORECASTING MEMORANDUM

To: Tracy Lovell, PE
 KYTC District 5

From: Mark Butler, AICP
 Stantec Consulting Services Inc.

File: Item No. 5-80003: Plantside Drive Extension Study

Date: February 15, 2024

Reference: Plantside Drive Extension: KIPDA Model Population and Employment Revisions

On February 8, 2024, Stantec and the KYTC project team met via web conference with members of the Louisville Metro Public Works and Planning to discuss potential revisions to the Kentuckiana Regional Planning and Development Agency (KIPDA) travel demand model for use in preparing traffic forecasts for the subject study. Based on that discussion, this memorandum presents the proposed division of the primary Traffic Analysis Zone (TAZ 516) affected by this analysis, as well as changes in household population and employment for TAZ 515 directly to the north.

TAZ Boundaries

Travel demand models generate and distribute trips using TAZs, whose boundaries are conventionally determined by a combination of the presence of significant roadways, geographic barriers, land uses, and overall density. As such, rural zones are typically larger than urban zones and must be redefined as they convert to higher density development. The current TAZ 516, shown on **Figure 1**, is approximately one square mile and bounded by **Rehl Road** to the north, **I-265 (Gene Snyder Expressway)** to the east, **KY 155 (Taylorsville Road)** to the south, and **Tucker Station Road** to the west. Currently all non-residential development in TAZ 516 loads onto Taylorsville Road. The two large residential subdivision developments in the TAZ load onto Tucker Station and Rehl Road respectively and are divided by a rail line that bisects the TAZ from northwest to east.

To accurately distribute trips onto the roadway network in 2050 with projected development and the Plantside Drive Extension in use, Stantec proposes subdividing TAZ 516 into five new TAZs. These zones include two new TAZs (**785** and **786**) for the major residential zones in the north and west (bifurcated by the rail line), a new TAZ (**787**) between the new Plantside Drive extension and I-265 to serve the new commercial and light industrial “Planned Employment Center” (PEC) zoning along the corridor, and a smaller revised TAZ **516** and new TAZ **788** directly serving Taylorsville Road and Tucker Station Road. **Figure 2** presents the boundaries of these new zones.



Figure 1. Original KIPDA Model TAZ Map

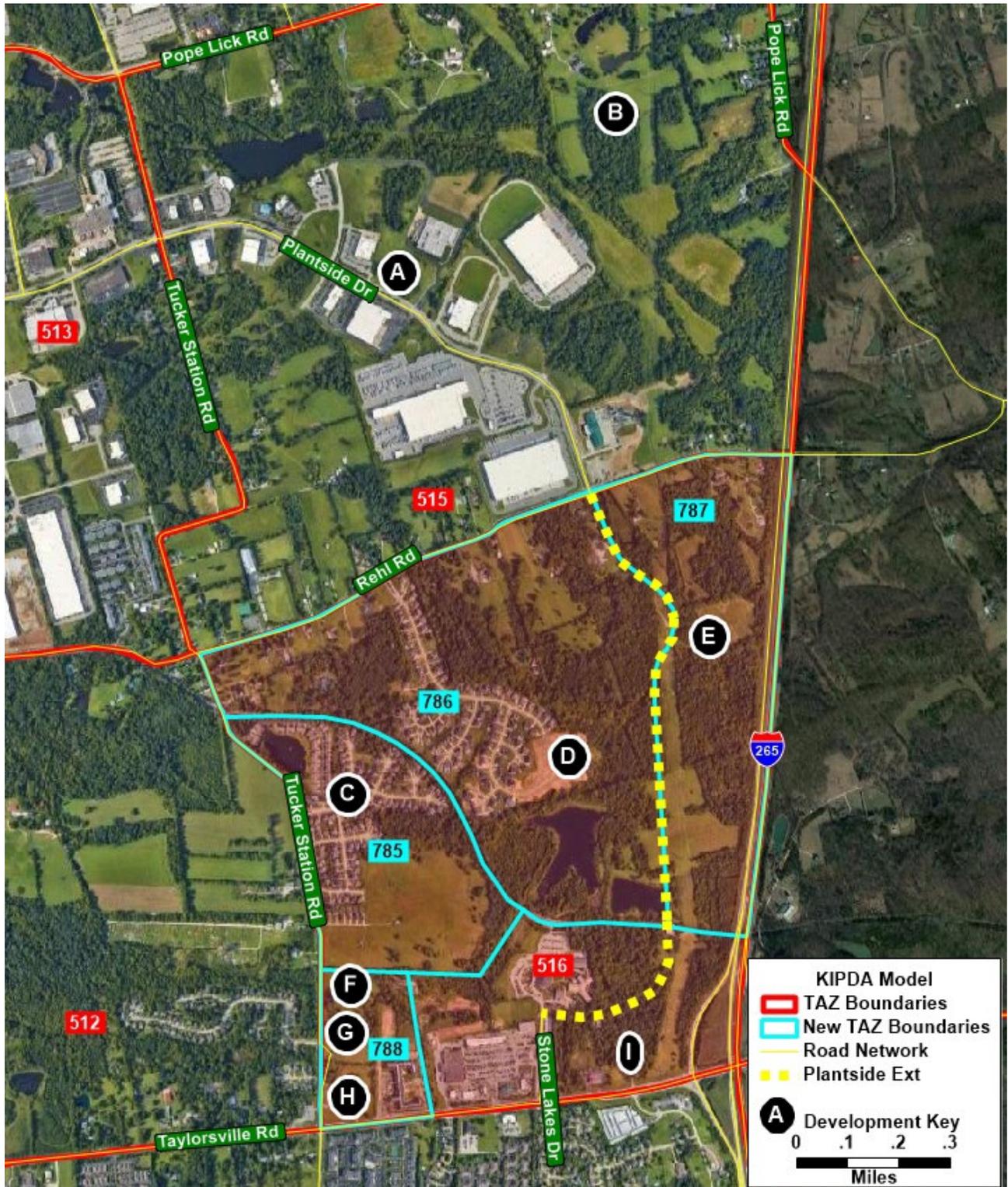


Figure 2. Revised KIPDA Model TAZ Map

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Figure 2 also shows most of TAZ 515, which is directly north of existing TAZ 516. TAZ 515 contains the adjacent section of Plantside Drive north of Rehl Road and east of Tucker Station Road. This TAZ contains PEC development similar to what is anticipated along the northern section of the proposed Plantside Drive extension. The northeast portion of TAZ 515, accessible from Pope Lick Road, currently contains rural residential and agricultural land uses. While no changes are proposed for the boundary of TAZ 515, updated population and employment estimates for 2050 are proposed.

Household Population Updates

The current projected number of households for existing TAZ 516 in the KIPDA 2050 model data is 349, compared to the 2020 Census estimate of 249 households. Additional residential development is anticipated in new TAZs 785, 786, and 788. Based on existing development and development plans confirmed by Louisville Metro planning staff during the meeting, Stantec proposes to revise household estimates for the existing TAZ 516 and apportion them to the new TAZs, as described in **Table 1** and shown in **Figure 2**. **Table 1** and **Figure 2** also present revised household estimates for expected residential development in TAZ 515.

Total 2050 households will increase from 106 to 600 in TAZ 515 and from 349 to 810 in TAZ 516.

Table 1. Revised KIPDA 2050 TAZ Household and Total Employment

Key	Description	TAZ	Households	Employment
A	Plantside Dr. PEC zone	515	600	2,175
B	Existing and new residential development			
C	Existing residential development	785	150	0
D	Existing single family and new multi-family residential	786	600	0
E	Plantside Dr. Ext. PEC development	787	0	850
F	New residential development	788	60	200
G	New residential development			
H	Existing service and new retail development			
I	Existing and new interchange development	516	0	575

Employment Updates

The current projected total employment for existing TAZ 516 in the KIPDA 2050 model data file is 556 jobs, compared to the 2019 model estimate of 639 jobs. Existing employment in the TAZ is focused on development accessible via Taylorsville Road and consists of retail, school/church, and assisted living. By 2050, the following new employment centers are anticipated:

- new PEC-related development along the northern portion of the conceptual Plantside Drive extension;
- a new retail development at the northeast corner of Tucker Station Road and Taylorsville Road; and
- new highway interchange development at the northwest corner of I-265 and Taylorsville Road

Stantec proposes to revise and apportion year 2050 employment according to the new split TAZ boundaries. **Table 1** presents revised 2050 employment estimates for each of the new TAZs. **Table 1** also presents a revised 2050 employment estimate for TAZ 515, shaded in gray, based on the anticipation of full build-out of remaining PEC land. Total employment estimates are based on a proportional factoring of the existing KIPDA model’s allocation of employment in TAZ 515 on currently developed PEC land. The same proportional factor

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was used to estimate the PEC employment potential in new TAZ 787. Employment in new TAZ 788 and revised TAZ 516 is a reapportionment of the model's existing 2019 employment estimate for TAZ 516 with additional employment allocated to reflect the development of new interchange-oriented development (hotel, casual restaurant, gas station) at the northwest corner of the I-265 and Taylorsville Road interchange.

Total 2050 employment will increase from 1,177 to 2,175 in TAZ 515 and from 556 to 1,625 in TAZ 516.

Respectfully,

A handwritten signature in blue ink, appearing to read 'M Butler'.

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