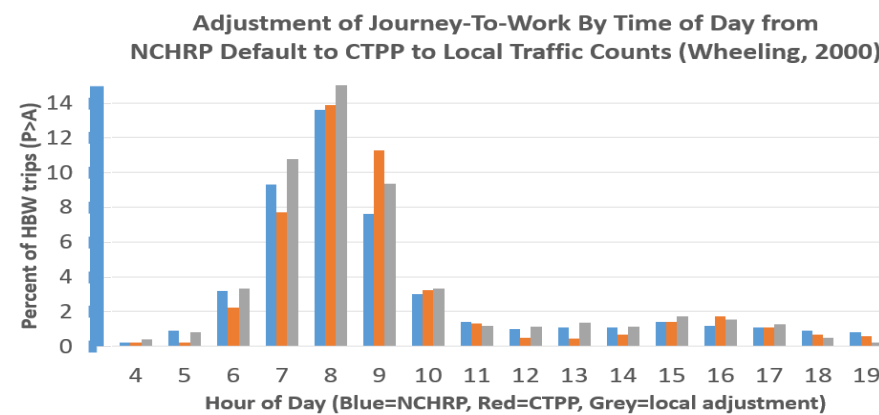


## How was this data used initially? (Area-wide)

A “default” set of trip percentages by hour of day (and direction) has always been incorporated into the series of NCHRP reports on Transferable Parameters for travel models (table from the latest report shown below). The author has historically used the Time of Arrival figures from the Census to provide the initial local area update for the first column (Home-Based Work - From Home), and then used local traffic counts (both area-wide and location-specific) to provide final adjustments. (Both the CTPP’s figures and the local traffic counts can be used to make zone-specific adjustments as well as region-wide average values.)

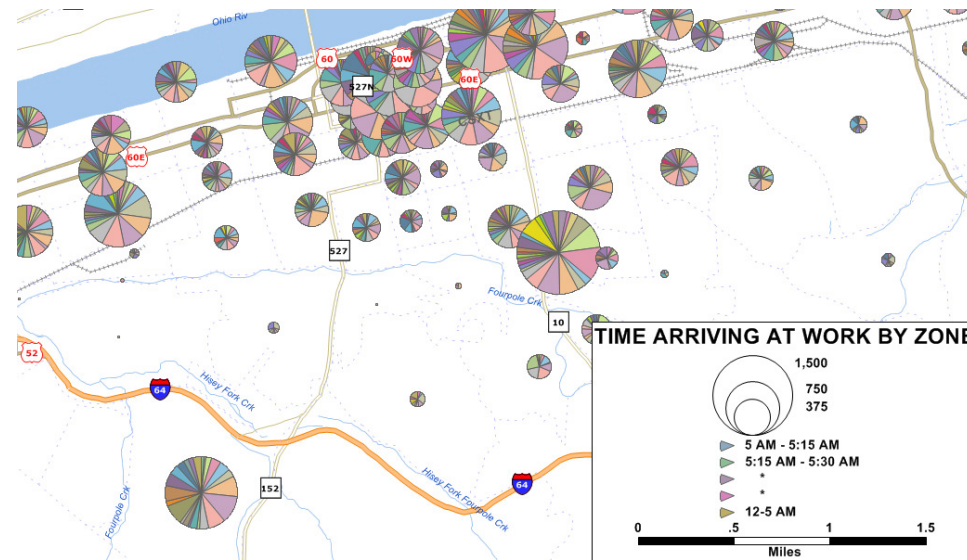
Hour Ending	Home-Based Work		Home-Based Nonwork		Home-Based School		Home-Based Other		Nonhome-Based	All Trips
	From Home	To Home	From Home	To Home	From Home	To Home	From Home	To Home		
1:00 AM	0.1%	0.5%	0.0%	0.3%	0.0%	0.0%	0.0%	0.4%	0.2%	0.3%
2:00 AM	0.0%	0.2%	0.0%	0.2%	0.0%	0.0%	0.0%	0.2%	0.1%	0.1%
3:00 AM	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%
4:00 AM	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
5:00 AM	1.5%	0.0%	0.2%	0.0%	0.0%	0.0%	0.2%	0.0%	0.4%	0.4%
6:00 AM	5.4%	0.0%	0.6%	0.1%	0.2%	0.0%	0.7%	0.1%	0.5%	1.4%
7:00 AM	11.7%	0.0%	1.9%	0.3%	4.0%	0.0%	1.7%	0.3%	1.6%	3.5%
8:00 AM	14.3%	0.1%	6.5%	1.0%	30.6%	0.1%	4.4%	1.1%	4.9%	7.7%
9:00 AM	7.5%	0.1%	4.6%	1.2%	12.8%	0.2%	3.9%	1.3%	5.1%	5.9%
10:00 AM	2.7%	0.3%	3.6%	1.4%	2.2%	0.4%	3.7%	1.5%	5.1%	4.7%
11:00 AM	1.3%	0.3%	3.2%	1.9%	1.2%	0.6%	3.4%	2.1%	6.5%	5.1%
Noon	1.0%	1.0%	2.7%	2.5%	1.0%	1.3%	2.8%	2.6%	9.4%	6.0%
1:00 PM	1.5%	1.8%	2.4%	3.1%	0.9%	2.5%	2.6%	3.1%	10.6%	6.8%
2:00 PM	1.7%	1.4%	2.7%	2.8%	0.5%	2.2%	2.8%	2.9%	8.7%	6.1%
3:00 PM	1.7%	2.7%	2.8%	4.0%	0.5%	8.8%	3.0%	3.5%	8.5%	6.9%
4:00 PM	1.1%	6.3%	2.6%	5.3%	0.7%	12.2%	2.8%	4.7%	9.2%	8.3%
5:00 PM	1.0%	8.9%	3.2%	4.8%	1.0%	4.5%	3.3%	4.9%	8.4%	8.4%
6:00 PM	0.5%	10.6%	3.7%	5.1%	1.3%	3.7%	3.9%	5.2%	7.4%	8.7%
7:00 PM	0.3%	4.4%	4.2%	4.1%	0.7%	1.5%	4.5%	4.3%	5.0%	6.7%
8:00 PM	0.2%	1.9%	2.3%	4.0%	0.1%	1.2%	2.5%	4.2%	3.8%	4.8%
9:00 PM	0.2%	1.2%	1.0%	4.0%	0.0%	1.1%	1.1%	4.3%	2.2%	3.5%
10:00 PM	0.2%	1.3%	0.5%	2.8%	0.2%	1.4%	0.5%	2.9%	1.4%	2.4%
11:00 PM	0.3%	1.3%	0.2%	1.4%	0.0%	0.6%	0.3%	1.5%	0.8%	1.4%
Midnight	0.2%	1.3%	0.2%	0.7%	0.0%	0.0%	0.2%	0.8%	0.3%	0.8%
Total	54.4%	45.6%	49.0%	51.0%	57.7%	42.4%	48.2%	51.8%	100.0%	100.0%

From: NCHRP 716: Travel Demand Forecasting: Parameters and Techniques, TRB, Wash DC, 2012



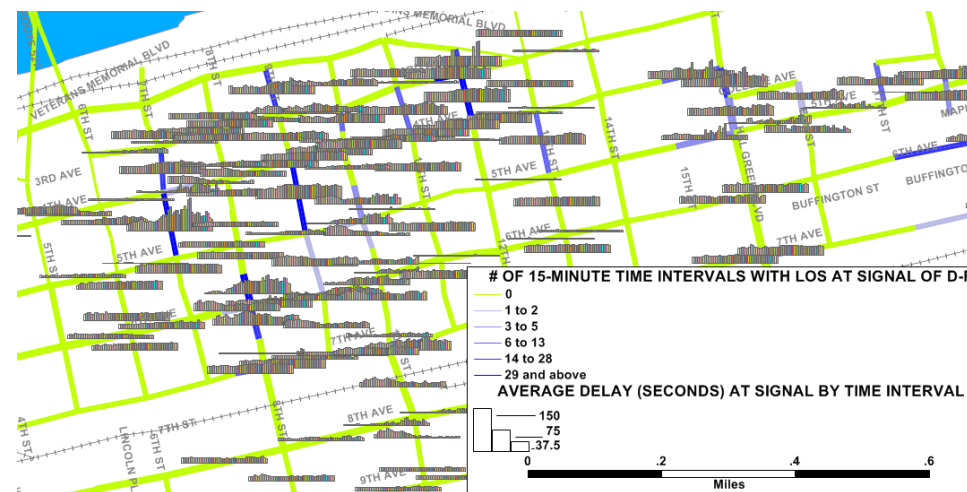
## How are differences at the zone level being used?

The GIS Map below shows time of arrival at work by zone in the Huntington MPO area in 15 and 60 minute intervals. These figures were aggregated to hourly level and used to place zones into different “groups” for hour-of-day rates for work-related trip purposes. (Based on the **number** of workers arriving in that zone during the area-wide peak hour compared to the average rate.)



## The end product for this application:

Estimation for planning purposes of how both the duration as well as the extent of congestion in the region might change in the future, as land use changes and capacity or operations-level projects may or may not be implemented to manage this change.



## The future of this data item in the Census ACS and the CTPP?

Recent controversy over the Census ACS will likely lead to a change in question wording to “when do you arrive at work?” As this more directly gets to the data need described here, answers may be more accurate than before, as there will be fewer opportunities for the respondent to leave a question unanswered or incorrect.

## (What can the PUMS data tell us that the CTPP cannot?)

- 1--Estimate the percent of responses that are “imputed” by the Census Bureau (In Ohio in 2000, this was 14% for Time Leaving for Work, 11% for Travel Time to Work, and 15 ½ % for either one or the other of these questions.)
- 2—Compare to a wide variety of data not in the CTPP (or not as detailed). (Example: Time leaving for work as a function of industry? Weakly correlated – plus at least some travel model software needs this info at zone level instead.)

