



CTPP Status Report

December 2008

U.S. Department of Transportation
Federal Highway Administration
Bureau of Transportation Statistics
Federal Transit Administration
AASHTO Standing Committee on Planning
In cooperation with the TRB Census Subcommittee

Census Transportation Planning Products (CTPP) Consolidated Purchase

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There has been considerable activity over the last few months to clarify 3-year CTPP data needs and priorities. In addition, the new AASHTO CTPP Oversight Board held their first meeting in August to review and approve work program goals and tasks. Mary Lynn Tischer from the Virginia Department of Transportation is now the chair the CTPP Oversight Board. Additional members include state departments of transportation, metropolitan planning organizations and other partners and representatives from the broader transportation planning community.

Much of the work over the summer and fall has involved working with the Census Bureau to understand the impacts of new Disclosure Review Board rules and requirements. In February 2008, the AASHTO Census Data Technical Workgroup submitted a list of priority tables for the CTPP to use the first 3 years of the American Community Survey. Between February and September, there were many discussions with the Census Bureau to determine how AASHTO's list of priority data tables fit with new Census Bureau Disclosure Review Board requirements. These requirements specify that tables with a cross-tabulation using the variable "means of transportation to work" need to have 3 or more unweighted records for each category of travel mode, else the table would be suppressed.

It became clear that applying the new disclosure requirements to the original list of data table priorities would result in the suppression of data for a significant number of geographic units meeting the population threshold of 20,000. AASHTO appealed to the Census Bureau Data Stewardship Executive Policy (DSEP) Committee in August to reconsider the disclosure requirements. DSEP upheld earlier decisions and noted that because the CTPP had many tables cross tabulated using the variable "Means of Transportation to work" that a pseudo-microdata could be created from the tabular results, and there was some small probability that a record could then be matched to an ACS Public User Microdata Sample record. Thus, an individual record could be tied to a geographic unit (e.g. County or Place) with 20,000 population threshold, rather than a unit with a 100,000 population threshold, and thus, increasing the risk of disclosing an individual.

Because of this final determination, AASHTO has re-convened the table subgroup that put together the original list of table priorities submitted in February. Instead of trying to re-submit a new list of 3-year CTPP data tabulation priorities using ACS 2005 through 2007 by the Thanksgiving deadline, the table subgroup and the AASHTO CTPP Oversight Board have agreed to wait and take advantage of the ACS 2006 through 2008 data. One advantage of waiting for 2006 through 2008 is that all three of these survey years include population in group quarters. (Note: Group Quarters were not included in 2005 ACS).

TAZ delineation for CTPP postponed until 2011

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In early 2008, State DOTs and MPOs were advised to plan for TAZ delineation for inclusion in the Census Bureau's TIGER files database in calendar 2009.

A decision by the CTPP Oversight Board was made on November 3, 2008 to delay the effort until 2011. The new schedule now is:

Software development, testing	Completed by Early 2011
Distribution of materials (software, TIGER files)	Spring 2011
State DOTs and MPOs submit TAZs to CB	Summer 2011
CB verification	Fall 2011

Over the past few months, in discussion with the Census Bureau, completing this work in 2009 using current information contained within the Census Bureau's TIGER database became increasingly complex and expensive. Therefore, the CTPP Oversight Board decided to use an alternative approach using 2010 census block equivalencies with a post-2010 TIGER file. A block equivalency approach was used for the 1990 CTPP. We plan to use a GIS-based system that would not require any additional licensing on the part of local agencies.

The advantages of waiting to delineate new TAZs until 2011 are:

CTPP Staff Changes

The CTPP Technical Support position at FHWA was filled in July by **Liang Long** of Cambridge Systematics Inc. She joined Cambridge Systematics in August 2007 as a Travel Demand Forecaster with experience in the areas of household travel survey data, travel demand modeling and forecasting, market research, and transportation planning. Prior to working at Cambridge Systematics, Liang completed her PhD at the University of Illinois, Chicago, where she conducted research on transferability of household travel survey data in calibrating and validating travel demand models. She may be reached at 202-366-6971, Liang.long@dot.gov

1. small area (like tracts and TAZs) tabulations for CTPP are not expected until 2012, with the plan to use 5 years of ACS records from 2006 through 2010. By waiting until 2011, the tabulations can include 2010 Census geographic units like census tracts and block groups, and can include 2010 Census population counts at the block level, and we hope it also means that 2010 Census results will be used in the ACS weights.
2. Since MPOs and State DOTs update their TAZs at different times, waiting until 2011 allows TAZ delineation for CTPP the greatest opportunity for incorporating local changes to the time of CTPP data delivery.
3. The CB Geography Division says that defining TAZs using block equivalencies is a simpler and more efficient methodology than defining based on features in the TIGER database. This results in lower software costs, and especially, less staff time necessary for verification and inclusion into TIGER.

The downside is that local areas will have less flexibility in defining TAZ boundaries, but we think the trade-off is worthwhile.

First 3-year data from ACS released on December 9, 2008

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On December 9, 2008, the Census Bureau released the first 3-year summary data using the American Community Survey (ACS) <http://factfinder.census.gov>. Earlier in 2007, the Census Bureau released the 2007 ACS 1-year data. The ACS 1-year data is limited to geographic units with 65,000 population or more. The ACS 3-year data is limited to geographic units with 20,000 population or more.

Approximately 60 percent of counties are included in the ACS 3-year tabulations.

At the national level, it is best to use the ACS 1-year data. But for geographic units with less than 65,000 population, the data will only be available as 3-year summaries. For areas with population between 20,000 and 65,000, this data release will be the first new general purpose demographic data from the Census Bureau since the Census 2000. The tables below are examples of how the 1-year ACS and the 3-year ACS may differ.

Between the 2005 1-year ACS and the 2007 1-year ACS data, some overall findings are:

- Driving alone to work has decreased from 77 percent to 76 percent. This is the first time driving alone has declined, since the journey-to-work data was first collected in the 1960 Census.
- The share of carpooling has remained the same at about 10.5 percent.
- The share of transit commuters has remained the same at about 5 percent.
- The share of working at home has increased and now exceeds the proportion of people who walk to work.
- The number of vehicles available to households continued to increase. In 2007, the average number of vehicles per household was 1.77.

Table 1: Detailed Means of Transportation to Work: 2000, 2005-2007, and 2007

Mode to Work, U.S. Total	Census 2000 United States		2005-2007 ACS United States		2007 ACS United States	
	Estimate	Margin of Error(+/-)	Estimate	Margin of Error(+/-)	Estimate	Margin of Error(+/-)
Total:	128,279,228	39,952	136,926,294	76,745	139,259,684	109,445
Car, truck, or van:	112,736,101	39,308	118,714,472	85,835	120,442,188	131,847
Drove alone	97,102,050	38,134	104,188,550	92,921	105,954,656	121,899
Carpooled:	15,634,051	18,375	14,525,922	42,858	14,487,532	73,169
Public transportation (excluding taxicab):	6,067,703	11,651	6,638,872	25,757	6,800,512	44,190
Bus or trolley bus	3,206,682	8,514	3,648,824	21,480	3,716,517	38,696
Streetcar or trolley car (carro publico in Puerto Rico)	72,713	1,289	85,605	3,385	81,131	4,888
Subway or elevated	1,885,961	6,545	2,152,844	15,292	2,231,851	23,736
Railroad	658,097	3,875	709,630	8,131	731,124	14,626
Ferryboat	44,106	1,004	41,969	2,195	39,889	3,275
Bicycle	488,497	3,339	617,708	9,457	664,859	15,937
Walked	3,758,982	9,209	3,906,520	24,296	3,954,210	33,372
Taxicab, motorcycle, or other means	1,243,866	5,321	1,680,646	15,070	1,721,293	28,054
Worked at home	4,184,223	9,708	5,368,076	25,859	5,676,622	42,988

Table 2: Summary Table of Means of Transportation to Work: 1990, 2000, 2005, 2005-2007, and 2007

Mode to Work	1990 Census	2000 Census	2000 ACS: C2SS	2005 ACS	2005- 2007 ACS	2007 ACS
U.S. Total						
Total Workers (in millions)	115.1	128.3	127.7	133.1	136.9	139.3
Drove alone	73.2%	75.7%	76.3%	77.0%	76.1%	76.1%
Carpool	13.4%	12.2%	11.2%	10.7%	10.6%	10.4%
Transit	5.1%	4.7%	5.0%	4.8%	4.8%	4.9%
Work at Home	3.0%	3.3%	3.2%	3.6%	3.9%	4.1%
Other	5.2%	4.2%	4.3%	4.1%	4.5%	4.5%
Travel Time in minutes (average)	23.4	25.5	24.4	25.1	25.1	25.3
Group Quarters included?	Yes	Yes	No	No	Partly	Yes

Sources:

1990 Census “long form” was a 1:6 sample nationwide.

2000 Census “long form” was a 1:6 sample nationwide.

2000 ACS: C2SS was a sample of 500,000 housing unit addresses, in approximately one-third of all counties, does not include population in group quarters.

2005 ACS: This is a sample of 3 million housing unit addresses, in all counties of the U.S.

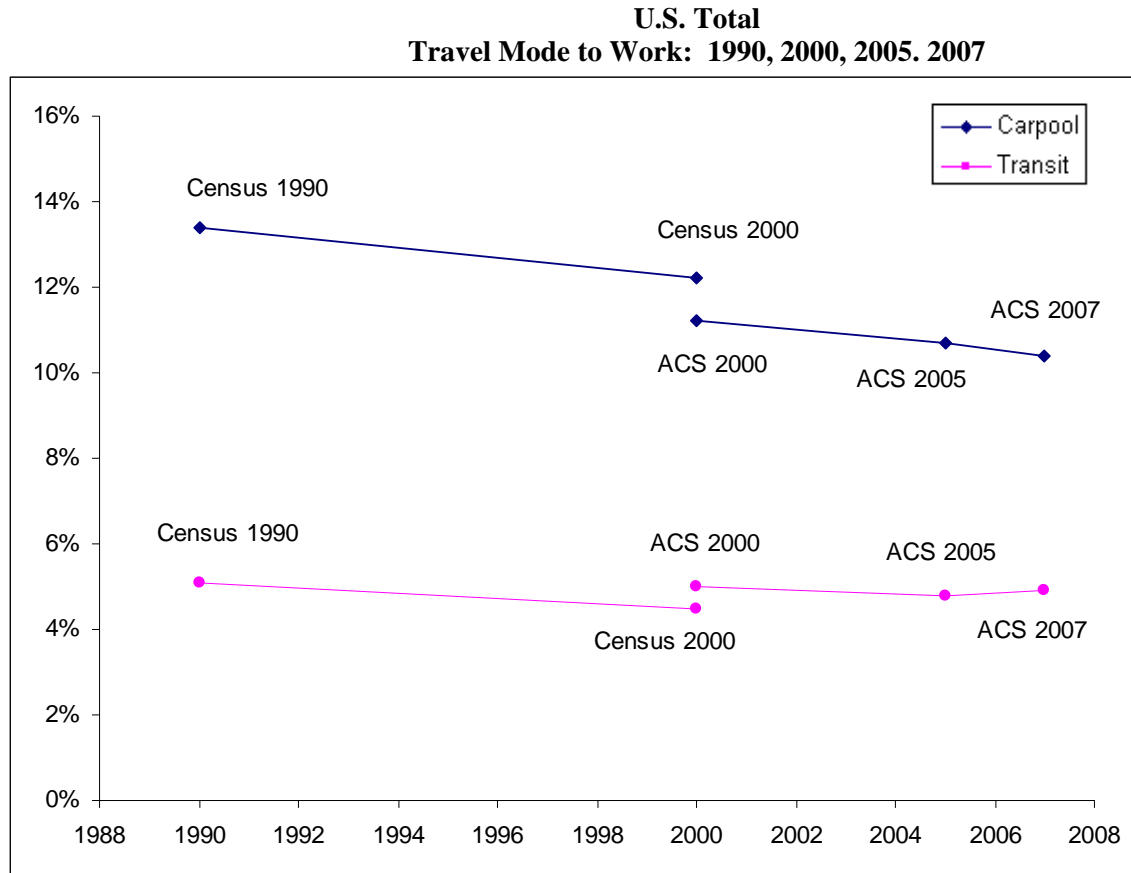
2007 ACS: This is a sample of 3 million housing unit addresses, in all counties of the U.S.

2005-2007 ACS: This is an accumulation of 36 months of ACS data. The population in group quarters was included in 2006 and 2007 and the weights are adjusted as if group quarters were sampled in all three years.

One difficulty in comparing these sources is whether or not population in Group Quarters is included. In 2000, about 7.8 million people were living in Group Quarters, of which 1 million were workers. Group Quarters include such places as college residence halls, residential treatment centers, skilled nursing facilities, group homes, military barracks, correctional facilities, workers’ dormitories, and facilities for people experiencing homelessness.

Total workers

Between 2000 and 2007, the U.S. saw an increase of 11 million workers, with over 139 million workers at work in 2007. For these tables “workers **at work**” are used. This number is lower than the total count of employed persons, since vacations, illnesses, and other reasons reduce this number.

Figure 1. Travel Mode to Work

Driving Alone and Carpooling

2005 reflects a peak in driving alone with 77 percent mode share. But after 2005, there has been a decline of about 1 percent in mode share of 77 percent to 76 percent between 2005 and 2007. Between 2000 and 2005, driving alone continued to increase slightly and carpooling continued to decrease slightly. Between 2005 and 2007, carpooling was stable at about 10.5 percent.

Transit commuters

The estimated total of workers using transit as their usual mode for commuting in 2007 was 6.8 million workers. Between 2005 and 2007, transit shares stayed about the same at nearly 5 percent. However, because the total number of workers has increased, the change between 2000 and 2007 is an estimated increase of about 700,000 workers who usually ride transit.

High gasoline prices are contributing to consumers' decision for their travel mode to work. Gasoline prices have been very volatile in 2008 and evidenced considerable variation between 2005 and 2007 as well, with a low of \$1.78 per gallon in January 2005, to a high of \$3.15 per gallon in November 2007. Historic gasoline prices over the three year ACS period are available from the Energy Information Administration.

http://www.eia.doe.gov/oil_gas/petroleum/data_publications/wrgp/mogas_home_page.html

The American Public Transportation Association (APTA) has reported increases in transit ridership in 2006, 2007, and 2008. (<http://www.apta.com/research/stats/ridership/>)

Counts of unlinked passenger trips shown below include all trip purposes, and each link with a transfer is counted separately. Calendar 2008 totals are not yet available.

Table 3. Unlinked passenger transit trips: 2000, 2005, 2006, 2007
American Public Transportation Association

	2000	2005	2006	2007
Annual Unlinked passengers trip (in millions)	9.4	9.7	10.1	10.2

Working from Home

Working from Home has increased from 3 percent in 1990, to 3.3 percent in 2000, now 4.1 percent in 2007. In absolute terms those working from home amounted to 4.2 million workers in 2000 and increased to nearly 5.7 million workers in 2007. Working from Home now exceeds the number of workers who walk to work.

Vehicle availability

The proportion of households without any vehicle declined to about 9 percent in 2007, compared with over 10 percent in 2000. The proportion of households with 3 or more vehicles increased between 2000 and 2007, from 17 percent to nearly 20 percent. Overall, the number of vehicles per household in 2007 was 1.77 vehicles per household.

Table 4: Vehicle Availability in Households: 1990, 2000, 2005-2007, 2007

	1990 Census	2000 Census	2005-2007 ACS	2007 ACS
Total households (in millions)	92.0	105.5	111.6	112.4
0-vehicles	11.5	10.2	9.4	8.9
1 vehicles	33.7	34.1	33.8	33.1
2 vehicles	37.4	38.5	38.5	38.2
3+ vehicles	17.3	17.2	18.3	19.8
Avg veh per hhld	1.66	1.69	1.77	1.77

Census Related Projects at NCHRP

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Two active projects related to Census issues of importance to the transportation community are currently underway at NCHRP.

NCHRP 08-36/Task 71

Disclosure Avoidance Techniques to Improve ACS Data Availability

The objective of this research is to provide methods and techniques to develop a high quality synthetic database for potential use as a special product from the American Community Survey (ACS).

An interim report was submitted to NCHRP in March 2008. The Principal Investigator is Kevin Tierney from Cambridge Systematics, Inc. The completion date is December 31, 2008, but will likely be slightly delayed.

Project Website: <http://www.trb.org/TRBNet/ProjectDisplay.asp?ProjectID=2391>

NCHRP 08-36/Task 81

Enhancing the American Community Survey Data as a Source for Home-to-Work Flows

A Guidebook for Using ACS data for Transportation Planning

NCHRP Report 588 "A Guidebook Using American Community Survey Data for Transportation Planning" evaluates ACS data and products and demonstrates their uses within a wide range of transportation planning applications. The Web Site (for PDF Version): <http://www.trb.org/TRBNet/ProjectDisplay.asp?ProjectID=924>.

A Compass for Understanding And Using ACS Data

The Census Bureau released a series of handbooks, a set of presentations, and an e-learning tutorial to provide guidance to users on how to understand and best use ACS data. The Web Site http://www.census.gov/acs/www/UseData/Compass/compass_series.html

The purpose of this research is to examine the data and methods for merging the ACS and LEHD data. To accomplish any merger a first step is to examine the home and work combinations in both the ACS and LEHD at an aggregate level to see how they compare. The second step is to identify the individual records from ACS that are in LEHD and see what, if any, differences there are in the individual residential and workplace addresses. Much of the second step will be conducted by Census Bureau staff.

The Principal Investigator is Krishnan Viswanathan from Cambridge Systematics, Inc. The expected completion date is May 1, 2009.

Project website:

<http://www.trb.org/TRBNet/ProjectDisplay.asp?ProjectID=2403>

TRB Census Subcommittee meeting at TRB, January 13, 2009

Kristen Rohanna, Subcommittee co-chair kroh@sandag.org

The Transportation Research Board (TRB) will hold its annual meeting from January 11 - 15 in Washington D.C. The Census for Transportation Planning Subcommittee, a subcommittee of the Urban Transportation Data and Information Systems Committee (ABJ30), will hold its meeting from 3:45 p.m. to 5:30 p.m. on Tuesday January 13th at the Hilton. Clara Reschovsky (creschovsky@mwkog.org) and I now chair the subcommittee.

The meeting will focus on several Census data related topics. A representative from the Census Bureau will discuss the application of the three-year (2005 through 2007) American Community Survey (ACS) data, which were released on December 9. Additionally, the meeting will discuss issues facing the Census for Transportation Planning Products (CTPP) and the creation of Traffic Analysis Zones (TAZs) for CTPP data.

CTPP Hotline – 202/366-5000**Email: ctpp@dot.gov****CTPP Listserve:** <http://www.chrispy.net/mailman/listinfo/ctpp-news>CTPP Website: <http://www.dot.gov/ctpp>FHWA Website for Census issues: <http://www.fhwa.dot.gov/planning/census>CTPP 2000 Profiles: <http://ctpp.transportation.org>1990 and 2000 CTPP downloadable via Transtats: <http://transtats.bts.gov/>TRB Subcommittee on census data: <http://www.trbcensus.com>**AASHTO**

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The CTPP Listserve serves as a web-forum for posting questions, and sharing information on Census and ACS. Currently, over 700 users are subscribed to the listserv. To subscribe, please register by completing a form posted at: <http://www.chrispy.net/mailman/listinfo/ctpp-news>

On the form, you can indicate if you want e-mails to be batched in a daily digest. The website also includes an archive of past e-mails posted to the listserv.