



**METROPOLITAN
TRANSPORTATION
COMMISSION**

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Memorandum

TO: Regional Bicycle Working Group and Regional
Pedestrian Committee

DATE: December 8, 2008

FR: Sean Co

W.I.:

RE: Regional Bicycle and Pedestrian Counts

Attendees:

Lindsay Arnold - UC Berkeley Traffic Safety Center
Celia Chung - ACTIA
Jennifer Donlon – Alta Planning
Kelsey Finch - SFMTA
Heath Maddox – SFMTA
Cristina Olea – SFMTA
Jason Patton – City of Oakland
Bob Schneider – UC Berkeley Traffic Safety Center
Rochelle Wheeler - ACTIA

Background

On November 4, 2008 agency staff listed above met to discuss the possibility of conducting bicycle and pedestrian counts with a uniform methodology that will assist agencies and MTC to gauge bicycle and pedestrian use, mode share and exposure rates.

Status of Counts

Many agencies in the Bay Area conduct bicycle and pedestrian counts, but do so with different methodologies and formats that make it difficult to compare results across cities and counties. The hours of the counts also differ depending upon the agency; some are set hours while others attempt to capture the peak hours. Counts are often collected for traffic impact, planning and other studies, and do not follow the same format as counts that are conducted on a regular basis.

The group discussed goals for a future counting project:

Goals

- Standardize counting methods and forms
- Compare counts between areas to show trends at the regional level
- Track changes over time

- Examine how facility improvements affect bicycle and pedestrian use
- Determine exposure rates for crash analysis
- Monitor mode splits
- Input data into travel models

Current and Past Efforts

MTC:

In 2002, MTC undertook a project to identify 50 count locations and provide a standard methodology to conduct the counts. The “Handbook for Bicyclist and Pedestrian Counts” was developed which provided data entry forms and a standard methodology. Additional counts were conducted by MTC in 2003 and 2004.

Alameda County:

The CMA requests that cities in Alameda County conduct voluntary counts every year at the same locations. Counters are advised to use the MTC methodology. UC Berkeley Traffic Safety Center has been counting 50 locations in the county and using a combination of hand counts and automated counters these counts will be extrapolated to 7,500 intersections in the county.

SFMTA: San Francisco Municipal Transportation Administration conducts bicycle counts at select locations throughout the city every year. Pedestrian counts are only conducted for 15 minutes at varying locations.

Other Cities & Counties:

Other agencies conduct counts only when needed or required by projects and don't have a systematic method to compare these counts to monitor changes over time.

Next Steps

Volunteers are requested to participate in a subcommittee to develop a standard protocol for bicycle and pedestrian counts. Meetings can be held after the Regional Bicycle Working Group Meetings. The subcommittee will work to:

1. Clearly articulate the goals for establishing a regional counting program and document the desired uses for count data
2. Establish regional count locations
 - Set regional locations can be used to monitor changes over time
 - MTC selected 50 locations with three years of data, these locations can be updated
 - Local counts can be used to supplement regional locations
3. Create a repository for count data
 - Data can be submitted for ITE/Alta project
 - MTC can gather and submit data
 - Data needs to be accessible with queries for temporal and special component
4. Standardize methodology – forms, count times and peak hour period
 - Variety of count forms exist – MTC, ACTIA/TSC and Alta/ITE
 - Different count times and peak period times
 - Standard methodology agreed to or new methodology adopted

| Alta will be revising the ITE data gathering form and setting up a database. The committee should keep Alta informed of its progress so that the ITE product can reflect the needs of local and regional agencies most likely to generate count data.

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	MTC/WS	ACTIA/TSC	Alta/ITE	ACCMA	Albuquerque	DC	NYMTC
Users Counted	Pedestrians and/or Bicyclists	Pedestrian and Bicycle	Pedestrian and/or Bicycle	Bicycle	Pedestrian and Bicycle	Pedestrian	Pedestrian, Bicycle and In-line skater
Count Frequency	Annual (2002, 2003, 2004, 2005?)	Started in 2008, likely to be Annual	Annual, quarterly is optional (2005, 2006, 2007, 2008)	2002, 2004, 2006, 2008	Rotate intersections on a rolling basis since 2002	Rotate intersections on a rolling basis since 1980s (may do same intersection every 5-10 years)	Annual (2002, 2003, 2004...?)
Count Time of Year	September through October	April through June	Second week of September	April through June	Any time of year	Any time of year	Summer/Fall
Weather Notes	No counting during "weather events" (forecasts were consulted)	All weather OK; adjustment factors calculated from automated counters	All weather OK; adjustment factors to be calculated at future time	No mention of weather	All weather OK, but no adjustment factors calculated	All weather OK, but no adjustment factors calculated	No counts during rain or hot and humid conditions
Count Duration	4 hours total (some are 6 hrs.)	2 hours weekday, 2 hours weekend	4 hours total, 12 hours is optional	3 hours total (generally)	9 hours total	10 hours total	9 hours total
Subperiod Duration	15 minutes	15 minutes	15 minutes	Depends on local agency	15 minutes	15 minutes	Each user is a single record, but they are compiled at 15-minute intervals
Count Period(s)	Tu,W,orTh: 7-9 and 4-6 (added 2-4 near schools)	Tu,W,orTh: 12-2 or 3-5 Sa: 9-11, 12-2, or 3-5	Tu,W,orTh: 7-9 and 4-6 Actual time depends on local agency	Tu,W,orTh: 3-6 (some were 4-6)	Weekdays: 6:45-9:45, 11-2, and 3-6	M,Tu,W,orTh: 7-12 and 1-6	Weekdays: 7-9, 10-2, and 4-7 Weekends: 10-2
Count Site	Intersection	Intersection	Mid-block (trail, bike lane, or sidewalk)	Intersection	Intersection	Intersection	Mid-block (trail, bike lane, or sidewalk)
Pedestrian Count Description	Pedestrians are counted every time they cross a leg of the intersection.	Pedestrians are counted every time they cross a leg of the intersection. Pedestrians within 50 feet of the crosswalk are counted.	Pedestrians are counted every time they pass a specific location on the sidewalk or trail.		Pedestrians are counted when they cross in any of the 4 directions. Pedestrians are not counted if they do not cross the street.	Pedestrians are counted every time they cross a leg of the intersection.	Pedestrians are counted every time they pass a specific location on the sidewalk or trail.
Pedestrian Data Created	Number of pedestrian crossings per intersection leg per 15-minute period	Number of pedestrian crossings per intersection leg per 15-minute period	Number of pedestrians per direction per 15-minute period		Number of pedestrian crossings per direction per 15-minute period	Number of pedestrians crossings per intersection leg per 15-minute period	Number of pedestrians per direction per 15-minute period
Bicycle Count Description	Bicyclists are counted every time they enter the	Bicyclists are counted every time they go straight, turn	Bicyclists are counted every time they pass a specific	Bicyclists are usually counted every time they pass	Bicyclist crossings from any of the 4 directions.		Bicyclists are counted every time they pass a specific

	intersection from a particular intersection leg.	left, or turn right. Bicyclists in the roadway and on the sidewalk are counted.	location on a trail or bike lane (both bike lane directions are counted)	through the intersection (depends on local agency)	Bicyclists are counted on the intersection leg that they enter the intersection from (right-turning bicyclists are not counted)		location on a trail or bike lane (both bike lane directions are counted)
Bicycle Data Created	Number of bicyclists coming from each intersection leg per 15-minute period	Number of bicyclist turning movements (12 possible movements) per 15-minute period	Number of bicyclists per direction (2 directions) per 15-minute period	Number of bicyclists at the intersection per 3-hour period	Number of bicyclists per direction (4 directions) per 15-minute period		Number of bicyclists per direction (2 directions) per 15-minute period
Other Data Collected	Site characteristics (bicycle facilities, nearby transit, schools, and activity centers)	Gender, site characteristics (sidewalk coverage, bicycle facilities, intersection characteristics, traffic information, transit, schools, commercial properties, population & employment density, etc.)	Guidelines suggest that agencies provide descriptions of surrounding land uses and traffic conditions. Some agencies provide this information.				Gender, age (adult/child). Bicyclist helmet use direction, and traffic law compliance. Pedestrian using wheelchair or stroller, walking dog.
Number of Locations	99	50 (20 funded by ACTIA)	More than 60 different agencies?	12	4 to 8 per week, rotated among intersections	100 per year, rotated among intersections	200
Other Notes	Direction of crossing was not counted.	For 3-leg intersections, the 4 th "sidewalk" leg is counted as if it were a crossing. Direction of crossing (e.g., north to south or south to north) is also collected				Pedestrians are counted as a part of manual motor vehicle intersection turning counts.	

SF Bay Area Metropolitan Transportation Commission/Wilbur Smith (MTC/WS), Alameda County Transportation Improvement Authority/UC-Berkeley Traffic Safety Center (ACTIA/TSC), Alta Planning & Design/Institute of Transportation Engineers (Alta/ITE), the Alameda County Congestion Management Agency (ACCMA), City of Albuquerque (Albuquerque), District of Columbia (DC), and New York Metropolitan Transportation Commission (NYMTC). Other examples: were documented in the FHWA Pedestrian and Bicycle Data Collection in US Communities report, http://www.pedbikeinfo.org/pdf/casestudies/PBIC_Data_Collection_Case_Studies.pdf