

File: 800.12.4.9.12

SHEET 10 LTPP TRAFFIC DATA TRAFFIC VOLUME AND LOAD ESTIMATE UPDATE-NO SITE COUNT	*STATE ASSIGNED ID	[117]
	*STATE CODE	[08]
	*SHRP SECTION ID	[0200]

INTERSTATE 76, EB, MP 18.4

1. ANNUAL TRAFFIC ESTIMATES

*YEAR	ESTIMATED TOTAL VEHICLES AADT (TWO-WAY)	ESTIMATED TOTAL TRUCK AADT (TWO-WAY)	ESTIMATED TOTAL VEHICLES AADT LTPP LANE	*ESTIMATED TOTAL TRUCKS AADT LTPP LANE	*ESTIMATED ESAL'S/YR LTPP LANE (1000'S)
2008	30400	6410	13680	2885	2821

2. METHOD FOR ESTIMATING TOTAL VEHICLE AADT (TWO-WAY)

- ☐ Growth factored last year's estimate. (6)
☒ Estimated based on volume counts at nearby locations. (3)
☐ Used computerized network analyses. (4)
☐ Factored a single count taken this year at the LTPP site. (1)
☐ Average multiple counts taken this year at the LTPP site. (2)
☐ Average and factored multiple count taken this year at the LTPP site. (5)
☐ Used flow maps. (7)
☐ Other: (8)

3. METHOD FOR ESTIMATING TOTAL TRUCK AADT (TWO-WAY)

- ☐ Used system averages from counts taken this year. (6)
☒ Used count data from nearby sites. (3)
☐ Used count data from previous years at the LTPP site. (7)
☐ Used system averages from previous years. (9)
☐ Used computerized network analyses. (4)
☐ Used a single count taken this year at the LTPP site. (5)
☐ Factored a single count taken this year at the LTPP site. (4)
☐ Averaged multiple counts taken this year at the LTPP site. (2)
☐ Other: (9)

4. METHOD FOR ESTIMATING TOTAL VEHICLES LTPP LANE AADT

- ☒ System distribution factors. (2)
☐ Based on actual lane count data. (1)
☐ Other: (3)

*5. METHOD FOR ESTIMATING TOTAL TRUCKS, LTPP LANE, AADT

- ☒ System distribution factors. (2)
☐ Based on actual lane data count. (1)
☐ Other: (3)

*6. METHOD FOR ESTIMATING ESAL//YEAR IN LTPP LANE

- ☐ ESAL/Truck factor (1)
☒ ESAL/Vehicle class. (2) (No. of classes) 3
☐ ESAL/Axle(3) Sing Tand Tri
☐ Other: (4)

7. ESAL ESTIMATES - SOURCE OF DATA

- ☐ Weight data collected at LTPP site prior years. (2)
☐ Weight data from system averages this year. (3)
☐ Weight data from system averages prior years. (4)
☒ Weight data from historic W-4 Tables used. (5)
☐ Other: (6)

8. WEIGHT SCALE TYPE

- ☐ WIM scale. (1)
☐ Static scale used for enforcement. (2)
☒ Static scale not used for enforcement. (3)
☐ Other: (4)

NAME OF PREPARER: <u>Leo Livecchi</u>	PHONE # <u>(303) 757-9498</u>
DATE PREPARED: <u>June 18, 2009</u>	rev. <u>March 12, 2001</u>

DO NOT ENTER - ACTIVE SITE 06/17/09 HZ

SHEET 16
LTPP MONITORED TRAFFIC DATA
SITE CALIBRATION SUMMARY

*STATE ASSIGNED ID []
*STATE CODE [08]
*SHRP SECTION ID [0200]

File 800.12.4.9.12
080200

SITE CALIBRATION INFORMATION

1. * DATE OF CALIBRATION (MONTH/DAY/YEAR) [4/30/2008]
2. * TYPE OF EQUIPMENT CALIBRATED WIM CLASSIFIER X BOTH
3. * REASON FOR CALIBRATION
 REGULARLY SCHEDULED SITE VISIT RESEARCH
 EQUIPMENT REPLACEMENT TRAINING
 DATA TRIGGERED SYSTEM REVISION NEW EQUIPMENT INSTALLATION
 X OTHER (SPECIFY) LTPP Validation
4. * SENSORS INSTALLED IN LTPP LANE AT THIS SITE (CHECK ALL THAT APPLY):
 BARE ROUND PIEZO CERAMIC BARE FLAT PIEZO X BENDING PLATES
 CHANNELIZED ROUND PIEZO LOAD CELLS QUARTZ PIEZO
 CHANNELIZED FLAT PIEZO X INDUCTANCE LOOPS CAPACITANCE PADS
 OTHER (SPECIFY)
5. EQUIPMENT MANUFACTURER IRD/ PAT Traffic

WIM SYSTEM CALIBRATION SPECIFICS**

- 6.**CALIBRATION TECHNIQUE USED:
 TRAFFIC STREAM -- STATIC SCALE (Y/N) X TEST TRUCKS
 NUMBER OF TRUCKS COMPARED 2 NUMBER OF TEST TRUCKS USED
 20 PASSES PER TRUCK
- | TRUCK | TYPE | SUSPENSION |
|-------|------|------------|
| 1 | 9 | 1 |
| 2 | 9 | 1 |
| 3 | | |
- TYPE PER FHWA 13 BIN SYSTEM
SUSPENSION: 1 - AIR; 2 - LEAF SPRING
3 - OTHER (DESCRIBE)
7. SUMMARY CALIBRATION RESULTS (EXPRESSED AS A PERCENT)
MEAN DIFFERENCE BETWEEN ---
DYNAMIC AND STATIC GVW -0.9 STANDARD DEVIATION 1.6
DYNAMIC AND STATIC SINGLE AXLES -5.0 STANDARD DEVIATION 2.9
DYNAMIC AND STATIC DOUBLE AXLES -0.1 STANDARD DEVIATION 2.0
8. 3 NUMBER OF SPEEDS AT WHICH CALIBRATION WAS PERFORMED
9. DEFINE THE SPEED RANGES USED (MPH) 65 70 75
10. CALIBRATION FACTOR (AT EXPECTED FREE FLOW SPEED) 3419/3306
- 11.** IS AUTO-CALIBRATION USED AT THIS SITE? (Y/N) N
IF YES, LIST AND DEFINE AUTO-CALIBRATION VALUE:

CLASSIFIER TEST SPECIFICS***

- 12.*** METHOD FOR COLLECTING INDEPENDENT VOLUME MEASUREMENT BY VEHICLE CLASS:
 VIDEO X MANUAL PARALLEL CLASSIFIERS
13. METHOD TO DETERMINE LENGTH OF COUNT TIME 2 NUMBER OF TRUCKS
14. MEAN DIFFERENCE IN VOLUMES BY VEHICLES CLASSIFICATION:
*** FHWA CLASS 9 -4 FHWA CLASS 5 -22
*** FHWA CLASS 8 0 FHWA CLASS
FHWA CLASS
FHWA CLASS
*** PERCENT "UNCLASSIFIED" VEHICLES: 5.0

PERSON LEADING CALIBRATION EFFORT: Dean J. Wolf, MACTEC
CONTACT INFORMATION: 301-210-5105 rev. November 9, 1999

*STATE ASSIGNED ID [_____]
 *STATE CODE [08]
 *SHRP SECTION ID [0200]

SITE CALIBRATION INFORMATION

1. * DATE OF CALIBRATION (MONTH/DAY/YEAR) [4/29/2008]
2. * TYPE OF EQUIPMENT CALIBRATED WIM CLASSIFIER X BOTH
3. * REASON FOR CALIBRATION
- | | |
|---------------------------------------|-----------------------------------|
| <u>REGULARLY SCHEDULED SITE VISIT</u> | <u>RESEARCH</u> |
| <u>EQUIPMENT REPLACEMENT</u> | <u>TRAINING</u> |
| <u>DATA TRIGGERED SYSTEM REVISION</u> | <u>NEW EQUIPMENT INSTALLATION</u> |
| <u>X</u> LTPP VALIDATION | <u>LTPP ASSESSMENT</u> |
| <u>OTHER (SPECIFY) _____</u> | |
4. * SENSORS INSTALLED IN LTPP LANE AT THIS SITE (CHECK ALL THAT APPLY):
- | | | |
|---------------------------------|---------------------------|-------------------------|
| <u>BARE ROUND PIEZO CERAMIC</u> | <u>BARE FLAT PIEZO</u> | <u>X</u> BENDING PLATES |
| <u>CHANNELIZED ROUND PIEZO</u> | <u>LOAD CELLS</u> | <u>QUARTZ PIEZO</u> |
| <u>CHANNELIZED FLAT PIEZO</u> | <u>X</u> INDUCTANCE LOOPS | <u>CAPACITANCE PADS</u> |
| <u>OTHER (SPECIFY) _____</u> | | |
5. EQUIPMENT MANUFACTURER IRD/ PAT Traffic

WIM SYSTEM CALIBRATION SPECIFICS**

- 6.**CALIBRATION TECHNIQUE USED:
 PROTOCOL: a. SOURCE LTPP SPS WIM
 NUMBER OF TRUCKS COMPARED
 b. BASIC METHOD LTPP SPS WIM
 2 NUMBER OF TEST TRUCKS USED
 20 PASSES PER TRUCK
 TYPE PER FHWA 13 BIN SYSTEM
 SUSPENSION: 1 - AIR; 2 - LEAF SPRING
 3 - OTHER (DESCRIBE)
 TRUCK TYPE SUSPENSION
 1 9 1
 2 9 1
 3
7. SUMMARY CALIBRATION RESULTS (EXPRESSED AS A PERCENT)
 MEAN DIFFERENCE BETWEEN ---
 DYNAMIC AND STATIC GVW 3.5 STANDARD DEVIATION 1.7
 DYNAMIC AND STATIC SINGLE AXLES -0.1 STANDARD DEVIATION 1.6
 DYNAMIC AND STATIC DOUBLE AXLES 4.2 STANDARD DEVIATION 2.4
8. 3 NUMBER OF SPEEDS AT WHICH CALIBRATION WAS PERFORMED
9. DEFINE THE SPEED RANGES USED (MPH) 65 70 75
10. CALIBRATION FACTOR (AT EXPECTED FREE FLOW SPEED) 3601/3566
- 11.** IS AUTO-CALIBRATION USED AT THIS SITE? (Y/N) N
 IF YES, LIST AND DEFINE AUTO-CALIBRATION VALUE:

CLASSIFIER TEST SPECIFICS***

- 12.*** METHOD FOR COLLECTING INDEPENDENT VOLUME MEASUREMENT BY VEHICLE CLASS:
 ___ VIDEO X MANUAL ___ PARALLEL CLASSIFIERS
13. METHOD TO DETERMINE LENGTH OF COUNT ___ TIME X NUMBER OF TRUCKS
14. MEAN DIFFERENCE IN VOLUMES BY VEHICLES CLASSIFICATION:
 *** TMG CLASS 9 0 TMG CLASS 5 0
 TMG CLASS TMG CLASS
 TMG CLASS TMG CLASS
- *** PERCENT "UNCLASSIFIED" VEHICLES: 0.0

PERSON LEADING CALIBRATION EFFORT: Dean J. Wolf, MACTEC rev. 5/29/2009 bko
CONTACT INFORMATION: 301-210-5105 rev. March 24, 2009

```
*STATE ASSIGNED ID  [  _ _ _ _ ]
*STATE CODE          [  08  ]
*SHRP SECTION ID     [ 0200 ]
```

1. * DATE OF CALIBRATION (MONTH/DAY/YEAR) [4/29/2008]

2. * TYPE OF EQUIPMENT CALIBRATED _____ WIM _____ CLASSIFIER X BOTH

3. * REASON FOR CALIBRATION
_____ REGULARLY SCHEDULED SITE VISIT _____ RESEARCH
_____ EQUIPMENT REPLACEMENT _____ TRAINING
_____ DATA TRIGGERED SYSTEM REVISION _____ NEW EQUIPMENT INSTALLATION
 X OTHER (SPECIFY) LTPP Validation

4. * SENSORS INSTALLED IN LTPP LANE AT THIS SITE (CHECK ALL THAT APPLY):
_____ BARE ROUND PIEZO CERAMIC _____ BARE FLAT PIEZO X BENDING PLATES
_____ CHANNELIZED ROUND PIEZO _____ LOAD CELLS _____ QUARTZ PIEZO
_____ CHANNELIZED FLAT PIEZO X INDUCTANCE LOOPS _____ CAPACITANCE PADS
_____ OTHER (SPECIFY) _____

5. EQUIPMENT MANUFACTURER IRD/ PAT Traffic

6.** CALIBRATION TECHNIQUE USED: _____

TRAFFIC STREAM -- STATIC SCALE (Y/N) X TEST TRUCKS

NUMBER OF TRUCKS COMPARED _____ 2 NUMBER OF TEST TRUCKS USED

20 PASSES PER TRUCK

TRUCK	TYPE	SUSPENSION
1	<u>9</u>	<u>1</u>
2	<u>9</u>	<u>1</u>
3	_____	_____

TYPE PER FHWA 13 BIN SYSTEM
SUSPENSION: 1 - AIR; 2 - LEAF SPRING
3 - OTHER (DESCRIBE)

7. SUMMARY CALIBRATION RESULTS (EXPRESSED AS A PERCENT)

MEAN DIFFERENCE BETWEEN ---

DYNAMIC AND STATIC GVW	<u>3.5</u>	STANDARD DEVIATION	<u>1.7</u>
DYNAMIC AND STATIC SINGLE AXLES	<u>-0.1</u>	STANDARD DEVIATION	<u>1.6</u>
DYNAMIC AND STATIC DOUBLE AXLES	<u>4.2</u>	STANDARD DEVIATION	<u>2.4</u>

8. 3 NUMBER OF SPEEDS AT WHICH CALIBRATION WAS PERFORMED

9. DEFINE THE SPEED RANGES USED (MPH) 65 70 75 _____

10. CALIBRATION FACTOR (AT EXPECTED FREE FLOW SPEED) 3601/3566

11.** IS AUTO-CALIBRATION USED AT THIS SITE? (Y/N) N
IF YES, LIST AND DEFINE AUTO-CALIBRATION VALUE: _____

12.*** METHOD FOR COLLECTING INDEPENDENT VOLUME MEASUREMENT BY VEHICLE CLASS:
 ____ VIDEO X MANUAL ____ PARALLEL CLASSIFIERS

13. METHOD TO DETERMINE LENGTH OF COUNT ____ TIME X NUMBER OF TRUCKS

14. MEAN DIFFERENCE IN VOLUMES BY VEHICLES CLASSIFICATION:

*** FHWA CLASS 9	____ <u>0</u>	FHWA CLASS	<u>5</u>	_____ <u>0</u>
*** FHWA CLASS 8	____ <u>300</u>	FHWA CLASS	____	_____
		FHWA CLASS	____	_____
		FHWA CLASS	____	_____

*** PERCENT "UNCLASSIFIED" VEHICLES: ____ 0.0

Document 1