

SHEET 1
LTPP TRAFFIC DATA
SUMMARY TRANSMITTAL FORM

*STATE ASSIGNED ID [4 0 1 1]
*STATE CODE [2 9]
*SHRP SECTION ID [4 0 3 6]

STATE OR PROVINCE Missouri COUNTY Clay
HIGHWAY ROUTE NO. I-435 MILEPOST# _____
NEAREST CITY/TOWN 0.15 mi. n/o 108th St. 0.85 mi. s/o
in Kansas City NEAREST INTERSECTION Rte. 291
FUNCTIONAL CLASS 11 NO. LANES EACH DIRECTION 2 TOTAL NO. LANES 4
DIRECTION OF TRAVEL GPS LANE N DATE OPENED TO TRAF. 8-16-83
FIPS COUNTY CODE 047 FHWA STATION IDENTIFICATION NO. _____
HPMS SAMPLE NO. 024435026692 HPMS SUBDIVISION NO. 0
TYPE OF PAVEMENT: AC _____ PCC X OTHER _____
CONTROL OF ACCESS: YES X NO _____ MEDIAN: YES X NO _____
CURRENT SURROUNDING DEVELOPMENT:
URBAN _____ SUBURBAN X RURAL _____
HAS INTENSITY OF ROADSIDE DEVELOPMENT INCREASED OVER PAST 10 YEARS?
YES X NO _____
IF YES, DESCRIBE CHANGES Area has changed from rural to suburban/
residential.

The Federal Highway Administration has been provided the No. 7 format truck weight records.

NOTE: ATTACH ALL RELATED FORMS AND COUNT DATA AND SUBMIT TO THE
SHRP REGIONAL OFFICE. ATTACH MAP INDICATING THE LOCATION OF
EACH TRAFFIC COUNT, VEHICLE CLASSIFICATION COUNT, OR WEIGHT
STATION RELATIVE TO THIS GPS TEST SECTION.

Sheets included: 1, 2, 3, 4, 5

NAME OF PREPARER John Rankin PHONE # (314) 751-3980
DATE PREPARED 10-90

SHEET 2 LTPP TRAFFIC DATA TRAFFIC VOLUMES AND LOAD ESTIMATES	*STATE ASSIGNED ID [4 0 1 1] *STATE CODE [2 2] *SHRP SECTION ID [4 0 3 6]
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YEAR	1. ESTIMATED TOTAL VEHICLES AADT (TWO-WAY)	2. ESTIMATED TOTAL TRUCK AADT (TWO-WAY)	3. ESTIMATED TOTAL VEHICLES AADT GPS LANE	4. ESTIMATED TOTAL TRUCKS AADT GPS LANE	5. ESTIMATED ESAL'S / YR GPS LANE (1000's)
1989	14,450	1,960	5,994	848	728
1988	16,310	2,210	6,770	954	819
1987	16,026	2,160	6,882	932	800
1986	11,240	1,215	4,945	535	459
1985	5,750	620	2,702	295	253
1984	5,200	560	2,444	266	228
1983	4,700	510	2,209	242	208
1982					
1981					
1980					
1979					
1978					
1977					
1976					
1975					
1974					
1973					
1972					
1971					
1970					
1969					
1968					
1967					
1966					
1965					

NAME OF PREPARER <u>John Rankin</u>	PHONE # <u>(314) 751-3980</u>
DATE PREPARED <u>10-90</u>	

SHEET 3**LTPP TRAFFIC DATA
PROCEDURES FOR ESTIMATING
ANNUAL AVERAGE VOLUMES AND
TOTAL ANNUAL ESALS**

*STATE ASSIGNED ID [4 0 1 1]

*STATE CODE [2 9]

*SHRP SECTION ID [4 0 3 6]

1. Year Applicable 1983-1986**2. METHOD FOR ESTIMATING AADT**

- ☐ Factored a single count taken this year at the GPS site.
- ☐ Averaged multiple counts taken this year at the GPS site.
- ☐ Averaged and factored multiple counts taken this year at the GPS site.
- ☒ Growth factored last year's estimate.
- ☐ Estimated based on volume counts at nearby locations.
- ☐ Used flow maps.
- ☐ Used computerized network analyses.
- ☐ Other: _____

**3. METHOD FOR ESTIMATING TRUCK
VOLUMES OR PERCENTAGES**

- ☐ Used a single count taken this year at the GPS site.
- ☐ Factored a single count taken this year at the GPS site.
- ☐ Averaged multiple counts taken this year at the GPS site.
- ☒ Used system averages from counts taken this year.
- ☐ Used count data from nearby sites.
- ☐ Used count data taken in earlier years at the GPS site.
- ☐ Used system averages taken in earlier years at the GPS site.
- ☐ Used computerized network analyses.
- ☐ Other: _____

**4. METHOD FOR ESTIMATING AADT
BY GPS LANE**

- ☐ Based on actual lane count data.
- ☒ System distribution factors.
- ☐ Other: _____

**5. METHOD FOR ESTIMATING TRUCK AADT
IN GPS LANES**

- ☐ Based on actual lane count data.
- ☒ System distribution factors.
- ☐ Other: _____

6. METHOD FOR ESTIMATING ESAL/VEHICLE

- ☐ ESAL/Truck.
- ☒ ESAL/Vehicle class. (no. of classes) 13
- ☐ Other: _____

7. ESAL ESTIMATES**(A) Source of Data**

- ☐ Weight data collected at GPS site this year.
- ☐ Weight data collected at GPS site prior years.
- ☐ Weight data from system averages this year.
- ☐ Weight data from system averages prior years.
- ☐ Weight data from historic W-4 Tables used.
- ☒ Other: WIM at site 1989

(B) Weight Scale Type

- ☒ WIM scale.
- ☐ Static scale used for enforcement.
- ☐ Static scale not used for enforcement.
- ☐ Other: _____

NAME OF PREPARER John RankinPHONE # (314) 751-3980DATE PREPARED 10-90

SHEET 3

LTPP TRAFFIC DATA PROCEDURES FOR ESTIMATING ANNUAL AVERAGE VOLUMES AND TOTAL ANNUAL ESALS

*STATE ASSIGNED ID [4 0 1 1]

*STATE CODE [2 9]

*SHRP SECTION ID [4 0 3 6]

1. Year Applicable 1987

2. METHOD FOR ESTIMATING AADT

- ☒ Factored a single count taken this year at the GPS site.
☐ Averaged multiple counts taken this year at the GPS site.
☐ Averaged and factored multiple counts taken this year at the GPS site.
☐ Growth factored last year's estimate.
☐ Estimated based on volume counts at nearby locations.
☐ Used flow maps.
☐ Used computerized network analyses.
☐ Other: _____

3. METHOD FOR ESTIMATING TRUCK VOLUMES OR PERCENTAGES

- ☐ Used a single count taken this year at the GPS site.
☐ Factored a single count taken this year at the GPS site.
☐ Averaged multiple counts taken this year at the GPS site.
☐ Used system averages from counts taken this year.
☐ Used count data from nearby sites.
☐ Used count data taken in earlier years at the GPS site.
☐ Used system averages taken in earlier years at the GPS site.
☐ Used computerized network analyses.
☒ Other: AVC at site 1989

4. METHOD FOR ESTIMATING AADT BY GPS LANE

- ☐ Based on actual lane count data.
☒ System distribution factors.
☐ Other: _____

5. METHOD FOR ESTIMATING TRUCK AADT IN GPS LANES

- ☐ Based on actual lane count data.
☒ System distribution factors.
☐ Other: _____

6. METHOD FOR ESTIMATING ESAL/VEHICLE

- ☐ ESAL/Truck.
☒ ESAL/Vehicle class. (no. of classes) 13
☐ Other: _____

7. ESAL ESTIMATES

(A) Source of Data

- ☐ Weight data collected at GPS site this year.
☐ Weight data collected at GPS site prior years.
☐ Weight data from system averages this year.
☐ Weight data from system averages prior years.
☐ Weight data from historic W-4 Tables used.
☒ Other: WIM at site 1989

(B) Weight Scale Type

- ☒ WIM scale.
☐ Static scale used for enforcement.
☐ Static scale not used for enforcement.
☐ Other: _____

NAME OF PREPARER John RankinPHONE # (314) 751-3980DATE PREPARED 10-90

SHEET 3**LTPP TRAFFIC DATA
PROCEDURES FOR ESTIMATING
ANNUAL AVERAGE VOLUMES AND
TOTAL ANNUAL ESALS**

*STATE ASSIGNED ID [4 0 1 1]

*STATE CODE [2 9]

*SHRP SECTION ID [4 0 3 6]

1. Year Applicable 1988**2. METHOD FOR ESTIMATING AADT**

- ☐ Factored a single count taken this year at the GPS site.
- ☐ Averaged multiple counts taken this year at the GPS site.
- ☐ Averaged and factored multiple counts taken this year at the GPS site.
- ☒ Growth factored last year's estimate.
- ☐ Estimated based on volume counts at nearby locations.
- ☐ Used flow maps.
- ☐ Used computerized network analyses.
- ☐ Other: _____

**3. METHOD FOR ESTIMATING TRUCK
VOLUMES OR PERCENTAGES**

- ☐ Used a single count taken this year at the GPS site.
- ☐ Factored a single count taken this year at the GPS site.
- ☐ Averaged multiple counts taken this year at the GPS site.
- ☐ Used system averages from counts taken this year.
- ☐ Used count data from nearby sites.
- ☐ Used count data taken in earlier years at the GPS site.
- ☐ Used system averages taken in earlier years at the GPS site.
- ☐ Used computerized network analyses.
- ☒ Other: AVC at site 1989

**4. METHOD FOR ESTIMATING AADT
BY GPS LANE**

- ☐ Based on actual lane count data.
- ☒ System distribution factors.
- ☐ Other: _____

**5. METHOD FOR ESTIMATING TRUCK AADT
IN GPS LANES**

- ☐ Based on actual lane count data.
- ☒ System distribution factors.
- ☐ Other: _____

6. METHOD FOR ESTIMATING ESAL/VEHICLE

- ☐ ESAL/Truck.
- ☒ ESAL/Vehicle class. (no. of classes) 13
- ☐ Other: _____

7. ESAL ESTIMATES**(A) Source of Data**

- ☐ Weight data collected at GPS site this year.
- ☐ Weight data collected at GPS site prior years.
- ☐ Weight data from system averages this year.
- ☐ Weight data from system averages prior years.
- ☐ Weight data from historic W-4 Tables used.
- ☒ Other: WIM at site 1989

(B) Weight Scale Type

- ☒ WIM scale.
- ☐ Static scale used for enforcement.
- ☐ Static scale not used for enforcement.
- ☐ Other: _____

NAME OF PREPARER John RankinPHONE # (314) 751-3980DATE PREPARED 10-90

SHEET 3

LTPP TRAFFIC DATA
PROCEDURES FOR ESTIMATING
ANNUAL AVERAGE VOLUMES AND
TOTAL ANNUAL ESALS

*STATE ASSIGNED ID [4 0 1 1]

*STATE CODE [2 9]

*SHRP SECTION ID [4 0 3 6]

1. Year Applicable 1989

2. METHOD FOR ESTIMATING AADT

- ☒ Factored a single count taken this year at the GPS site.
- ☐ Averaged multiple counts taken this year at the GPS site.
- ☐ Averaged and factored multiple counts taken this year at the GPS site.
- ☐ Growth factored last year's estimate.
- ☐ Estimated based on volume counts at nearby locations.
- ☐ Used flow maps.
- ☐ Used computerized network analyses.
- ☐ Other: _____

3. METHOD FOR ESTIMATING TRUCK VOLUMES OR PERCENTAGES

- ☒ Used a single count taken this year at the GPS site.
- ☐ Factored a single count taken this year at the GPS site.
- ☐ Averaged multiple counts taken this year at the GPS site.
- ☐ Used system averages from counts taken this year.
- ☐ Used count data from nearby sites.
- ☐ Used count data taken in earlier years at the GPS site.
- ☐ Used system averages taken in earlier years at the GPS site.
- ☐ Used computerized network analyses.
- ☐ Other: _____

4. METHOD FOR ESTIMATING AADT BY GPS LANE

- ☐ Based on actual lane count data.
- ☒ System distribution factors.
- ☐ Other: _____

5. METHOD FOR ESTIMATING TRUCK AADT IN GPS LANES

- ☐ Based on actual lane count data.
- ☒ System distribution factors.
- ☐ Other: _____

6. METHOD FOR ESTIMATING ESAL/VEHICLE

- ☐ ESAL/Truck.
- ☒ ESAL/Vehicle class. (no. of classes) 13
- ☐ Other: _____

7. ESAL ESTIMATES

(A) Source of Data

- ☒ Weight data collected at GPS site this year.
- ☐ Weight data collected at GPS site prior years.
- ☐ Weight data from system averages this year.
- ☐ Weight data from system averages prior years.
- ☐ Weight data from historic W-4 Tables used.
- ☐ Other: _____

(B) Weight Scale Type

- ☒ WIM scale.
- ☐ Static scale used for enforcement.
- ☐ Static scale not used for enforcement.
- ☐ Other: _____

NAME OF PREPARER John RankinPHONE # (314) 751-3980DATE PREPARED 10-90

SHEET 4 LTPP TRAFFIC DATA TRAFFIC VOLUME COUNTS	*STATE ASSIGNED ID [4 0 1 1] *STATE CODE [2 2] *SHRP SECTION ID [4 0 3 6]
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HIGHWAY ROUTE NO. (THIS COUNT) I-435
 MILEPOST# OR LOCATION (THIS COUNT) s/o Rte. 291
 BEGINNING DATE 5-19-87 ENDING DATE 5-21-87
 BEGINNING TIME _____ ENDING TIME _____
 COUNT DURATION _____ [] HOURS [2] DAYS [] MONTHS
 TYPE OF COUNTER Streeter NAME/MODEL # 241
 TYPE OF COUNT: TWO-WAY _____ ONE DIRECTION ONLY x GPS TEST LANE ONLY _____

ACTUAL COUNTS	
ITEM	UNITS
1. TOTAL NO. OF VEHICLES (RAW COUNT)	<u>18,104</u>
2. ADJUSTMENT FACTORS (FILL IN AS APPLICABLE):	
A. ADJUSTMENT TO 24-HOUR COUNT	<u>.50</u>
B. AXLE CORRECTION FACTOR	<u>.935</u>
C. DAY OF WEEK FACTOR	<u>1.013</u> & .997
D. MONTH FACTOR	<u>.975</u>
E. OTHER FACTOR (<u>2-way</u>)	<u>2.00</u>
3. ANNUAL AVERAGE DAILY TRAFFIC (AADT) (TWO-WAY)	<u>16,026</u>
4. DIRECTIONAL DISTRIBUTION FACTOR	<u>.517</u>
5. GPS LANE DISTRIBUTION FACTOR	<u>.844</u>
6. AADT GPS LANE	<u>6,995</u>

NOTE: COMPLETE ONE SHEET FOR EACH COUNTING SESSION.

NAME OF PREPARER <u>John Rankin</u>	PHONE # <u>(314) 751-3980</u>
DATE PREPARED <u>10-90</u>	

SHEET 4 LTPP TRAFFIC DATA TRAFFIC VOLUME COUNTS	*STATE ASSIGNED ID [4 0 1 1] *STATE CODE [2 2] *SHRP SECTION ID [4 0 3 6]
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HIGHWAY ROUTE NO. (THIS COUNT) I-435

MILEPOST# OR LOCATION (THIS COUNT) s/o Rte. 291

BEGINNING DATE 9-18-89 ENDING DATE 9-20-89

BEGINNING TIME 4:00 p.m. ENDING TIME 4:00 p.m.

COUNT DURATION 2 [] HOURS [x] DAYS [] MONTHS

TYPE OF COUNTER Streeter NAME/MODEL # 241

TYPE OF COUNT: TWO-WAY ONE DIRECTION ONLY x GPS TEST LANE ONLY

ITEM	ACTUAL COUNTS	UNITS
1. TOTAL NO. OF VEHICLES (RAW COUNT)	<u>15,522</u>	
2. ADJUSTMENT FACTORS (FILL IN AS APPLICABLE):		
A. ADJUSTMENT TO 24-HOUR COUNT	<u>.50</u>	
B. AXLE CORRECTION FACTOR	<u>.886</u>	
C. DAY OF WEEK FACTOR	<u>1.102</u> & 1.018	
D. MONTH FACTOR	<u>.986</u>	
E. OTHER FACTOR (<u>2-way</u>)	<u>2.00</u>	
3. ANNUAL AVERAGE DAILY TRAFFIC (AADT) (TWO-WAY)	<u>14,450</u>	
4. DIRECTIONAL DISTRIBUTION FACTOR	<u>.497</u>	
5. GPS LANE DISTRIBUTION FACTOR	<u>.835</u>	
6. AADT GPS LANE	<u>5,994</u>	

NOTE: COMPLETE ONE SHEET FOR EACH COUNTING SESSION.

NAME OF PREPARER <u>John Rankin</u>	PHONE # <u>(314) 751-3980</u>
DATE PREPARED <u>10-90</u>	

SHEET 14 LTPP TRAFFIC DATA EQUIPMENT INSTALLATION LOG	*STATE ASSIGNED ID	10420	LOCATION B 4351.0 mi. N/O 108 th St.
	*STATE CODE	129	
	*SHRP SECTION ID	4036	
			INSTALLATION DATE _____

	TYPE	BRAND NAME	SERIAL NUMBER
Control Unit(s) and peripheral equipment	IRP mode/1067 WIM	I.R.D.	9906-5715
Control Unit	IRP mode/1067 WIM	I.R.D.	9906-5715
Interface	-	-	
Modem	56K V.92	U.S. Robotics	
Loop Amplifiers	N/A		
Other _____	N/A		
Sensor(s) / Platform(s)	PIEZO	Measurement Specialties	
LTPP Lane Sensor	PIEZO Class 1	Measurement Specialties	
Sensor Next Adjacent Lane (1)	PIEZO Class 2	Measurement Specialties	
Sensor Next Adjacent Lane (2)	-		
Sensor Next Adjacent Lane (3)	-		
Diagonal Sensor	N/A		
Offscale Sensor	N/A		
Right Platform	N/A		
Left Platform	N/A		
Other _____	N/A		
Software	IRP. R 7.50	I.R.D. Software	
Complete Package	-		
Axle Spacing Algorithm Only	72 inches		
Other _____	-		
Loops	Electro-Magnetic	18ga. Wire 4turn 6'x6'	
Upstream - Lane 1	Electro-Magnetic	18ga. Wire 4turn 6'x6'	
Downstream - Lane 1	-		
Upstream - Other Lanes	Electro-magnetic	18ga Wire 4turn 6'x6'	
Downstream - Other Lanes	Electro-magnetic	18ga Wire 4turn 6'x6'	

revised November 11, 1999

SHEET 15 LTPP TRAFFIC DATA LOG OF CHANGE AT LTPP TEST LOCATIONS WITH PERM. AVC OR WIM	*STATE ASSIGNED ID	0420	NB
	*STATE CODE	29	
	*SHRP SECTION ID	4036	

LOCATION IS 435 TYPE EQUIP. TRD
 MP# 6.38 MODEL # 1067

DATE OF CHANGE	TIME OF CHANGE	DESCRIPTION OF CHANGE	PERSON MAKING CHANGE	PHONE #	NEW EQUIP. SERIAL #
		No Class or Volume	Field Acquisition Crew		
		Data for Dates Below. Equipment Failure			
		1/1 - 1/7, 1/14, 2/4, 2/13, 2/14,			
		3/25, 4/19, 5/5 thru 5/12,			
		5/15 thru 5/24, 5/27 thru			
		5/31, 6/1, 6/19 thru 6/28			
		7/10 thru 7/12, 7/22 thru 7/28			
		8/20, 8/23 thru 8/31,			
		9/1 thru 9/21, 10/4 thru			
		10/6, 11/1, 12/30, 12/31			

revised November 11, 1999

SHEET 15 LTPP TRAFFIC DATA LOG OF CHANGE AT LTPP TEST LOCATIONS WITH PERM. AVC OR WIM	*STATE ASSIGNED ID	[0420]
	*STATE CODE	[29]
	*SHRP SECTION ID	[4036]

LOCATION IS 435 1.0 mile N of 108th ST TYPE EQUIP. IRD
 MP# _____ MODEL # 1067

DATE OF CHANGE	TIME OF CHANGE	DESCRIPTION OF CHANGE	PERSON MAKING CHANGE	PHONE #	NEW EQUIP. SERIAL #
4/15-27		No claus/Equipment Problems	Field Acquisition Crew		
6/4, 11					
7/20-21					
10/7, 9-14					
10/17-18, 23-24					
10/27					

revised November 11, 1999

SHEET 15 LTPP TRAFFIC DATA LOG OF CHANGE AT LTPP TEST LOCATIONS WITH PERM. AVC OR WIM	*STATE ASSIGNED ID	[0430] nb
	*STATE CODE	[29]
	*SHRP SECTION ID	[4036]

LOCATION IS 435 1 mile n/w 108th St. TYPE EQUIP. IRD
 MP# 10.38 MODEL # 1007

DATE OF CHANGE	TIME OF CHANGE	DESCRIPTION OF CHANGE	PERSON MAKING CHANGE	PHONE #	NEW EQUIP. SERIAL #
		no days missing for 2000			

revised November 11, 1999

SHEET 15 LTPP TRAFFIC DATA LOG OF CHANGE AT LTPP TEST LOCATIONS WITH PERM. AVC OR WIM	*STATE ASSIGNED ID	[0420] nb
	*STATE CODE	[09]
	*SHRP SECTION ID	[4036]

LOCATION IS 435 1 mile n/b 108th St TYPE EQUIP. IRD
 MP# 0-38 MODEL # 1067

DATE OF CHANGE	TIME OF CHANGE	DESCRIPTION OF CHANGE	PERSON MAKING CHANGE	PHONE #	NEW EQUIP. SERIAL #
1/15-21	all day	no class/wim, equipment	Field Acquisition crew		
3/25	↓	problems	↓		
4/26-29	↓	↓	↓		
5/16	↓	↓	↓		
7/10-18	↓	↓	↓		
9/18, 20-26	↓	↓	↓		
10/1, 7-8	↓	↓	↓		
12/12-15	↓	↓	↓		

revised November 11, 1999

SHEET 15 LTPP TRAFFIC DATA LOG OF CHANGE AT LTPP TEST LOCATIONS WITH PERM. AVC OR WIM	*STATE ASSIGNED ID	[0420]
	*STATE CODE	[29]
	*SHRP SECTION ID	[4036]

LOCATION IS 435 TYPE EQUIP. IRD
 MP# 6.38 MODEL # 1067

DATE OF CHANGE	TIME OF CHANGE	DESCRIPTION OF CHANGE	PERSON MAKING CHANGE	PHONE #	NEW EQUIP. SERIAL #
		EQUIPMENT FAILURE	FIELD ACQ CREW		
		NO VOLUME OR CLASS			
		1/3, 1/27, 1/28, 2/1 - 2/14,			
		2/23 - 2/28, 3/1, 3/24,			
		4/4 - 4/6, 10/20 - 10/31			
		11/1 - 11/7.			
		NO CLASS DATA ONLY:			
		Ø			

revised November 11, 1999

SHEET 15 LTPP TRAFFIC DATA LOG OF CHANGE AT LTPP TEST LOCATIONS WITH PERM. AVC OR WIM	**STATE ASSIGNED ID	[0420]
	*STATE CODE	[29]
	*SHRP SECTION ID	[4036]

LOCATION IS 435 TYPE EQUIP. IRD
 MP# 6.38 MODEL # 1067

DATE OF CHANGE	TIME OF CHANGE	DESCRIPTION OF CHANGE	PERSON MAKING CHANGE	PHONE #	NEW EQUIP. SERIAL #
		<i>No volume and class:</i>			
		<i>2/13, 5/14 to 5/16, 12/1</i>			

revised November 11, 1999