

WIM System Field Calibration and Validation Handout Guide

Colorado, SPS-8
SHRP ID – 080200

Validation Date: March 16, 2011



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1 Site Information

Site ID:	080200	State:	Colorado
LTPP Region:	Western	Configuration:	Loop-2 Bending Plates-Loop
Controller Type:	iSINC	Sensor Type:	Bending Plate
Power:	AC	Communication:	Landline
Class Scheme:	LTPP Mar 06	CPU type/setup:	iSINC

2 Contact Information

Agency	Contact	Position	Phone	E-Mail
FHWA	Debbie Walker	COTR	202 493-3068	deborah.walker@dot.gov
FHWA	Donna Harmelink	FHWA Division	720-963-3021	donna.harmelink@dot.gov
RSC	Kevin Senn	Project Manager	775-329-4955	KSenn@nce.reno.nv.us
CO DOT	Roberto E. de Dios	LTPP Coordinator	303-757-9975	roberto.dedios@dot.state.co.us
CO DOT	Elizabeth Stolz	Traffic Contact	303-757-9492	elizabeth.stolz@dot.state.co.us
CO DOT	Leo Livecchi	Traffic Contact	303-757-9498	leo.livecchi@dot.state.co.us
CO DOT	Skip Outcalt	Traffic Contact	303-757-9984	skip.outcalt@dot.state.co.us
ARA	Dean Wolf	Task Leader	717-512-6638	dwolf@ara.com
ARA	Olga Selezneva	Project Manager	410-540-9949	oselezneva@ara.com

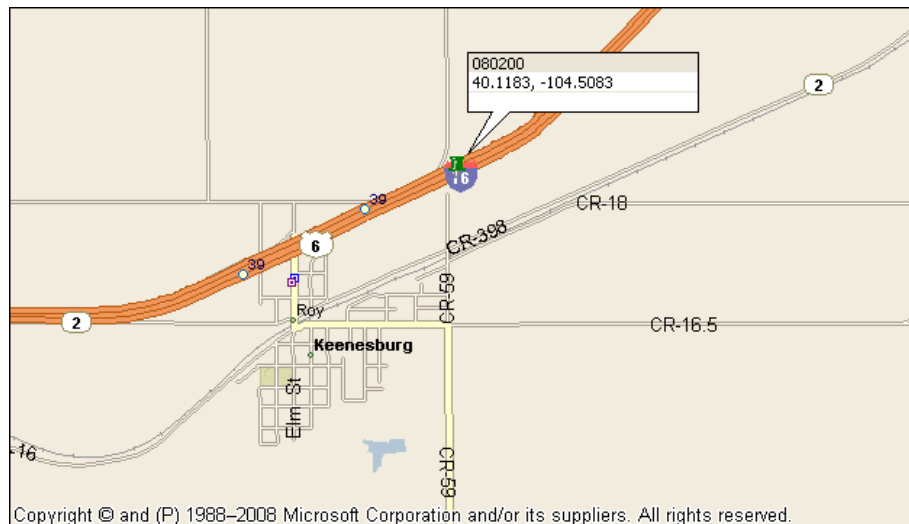
3 Schedule of Events

Date	Event	Location	Start Time
3/15/11	Travel	Brighton, CO	TBD
3/16/11	Test Truck Weigh/Measure/Inspection	Love's Country Store	6:30 am
3/16/11	Equipment Assessment	WIM Site	7:30 am
3/16/11	Initial Performance Evaluation	WIM Site	8:00 am
3/16/11	System Test/Class and Speed Study	WIM Site	TBD
3/17/11	Test Truck Weigh/Measure/Inspection	Pilot Travel Center	6:30 am
3/17/11	Calibration/Validation	WIM Site	7:30 am
3/17/11	Validation (cont.)	WIM Site	TBD
3/18/11	Travel	Camp Hill, PA	TBD

4 Maps

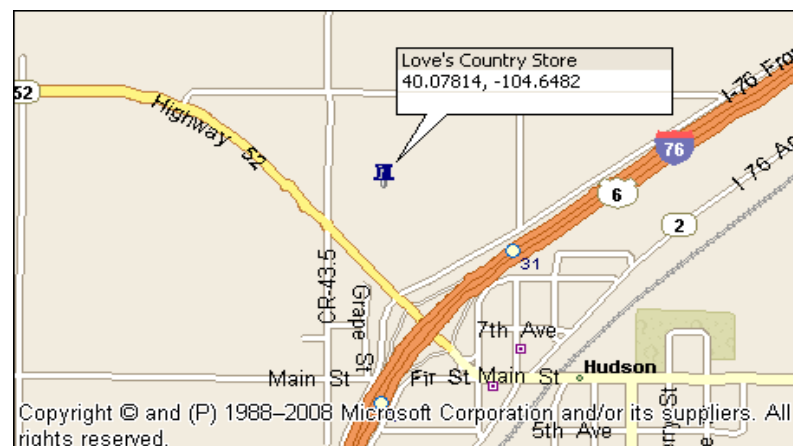
4.1 Site Location

Location:	I-76 East at M.P. 39.7 .75 miles east of Market Street interchange		Dir:	EB
Latitude:	40.11830°	Longitude:	-104.50830°	



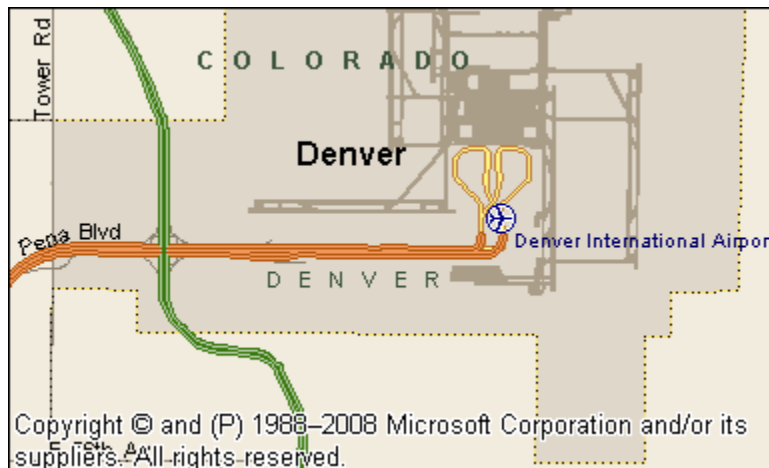
4.2 Truck Scale Location

Name:	Love's Country Store	Location:	I-76/CO HWY 52 Exit 31
Latitude:	40.07814°	Longitude:	-104.64816°



4.3 Airport Location

Name:	Denver International Airport	Location:	Pena Blvd, Denver, CO
Latitude:	39.8360°	Longitude:	-104.6717°



4.4 Hospital Location

Name:	Platte Valley Med Center		
Phone:	(303) 498-1600	Location:	1600 Prairie Center Parkway, Brighton



5 Occupational Health and Safety Plan

All fieldwork in the right-of-way will be carried out when the ground visibility is more than 3 km, and when there is no accumulation of water, snow, or ice is on the pavement.

To the extent possible, inspection work during extremely high and low temperatures will be avoided. If the work becomes necessary, workers will be reminded to make appropriate precautions (wear protective clothing, drink fluids, and avoid prolonged exposure to severe weather conditions).

All personnel present on the right-of-way will wear approved safety gear (boots, reflective safety vest, and helmet).

The following items will be available at the site: a standard first-aid kit, a cell phone, and the location of nearby hospital(s).

6 Contingency Plan

If inclement weather is forecasted prior to mobilizing to the site, the Project Manager will make the final decision to postpone the Validation visit. The Task Leader is responsible for contacting all parties involved to inform them of the postponement. He is also responsible for rearranging travel.

Once the Validation team is on-site, the On-Site Task Leader is responsible for making decisions to delay or postpone the Validation. He will contact the Project Manager to make recommendations for completing the Validation, and the Project Manager will make the final decision to cancel or postpone. The On-Site Task Leader is responsible for contacting the COTR and all other participating parties to inform them of the delay or postponement.

Traffic Sheet 17 LTPP MONITORED TRAFFIC DATA WIM SITE INVENTORY	STATE CODE: 08 SPS WIM ID: 080200 DATE (mm/dd/yyyy) 3/16/2011
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10. CABINET LOCATION

Same side of road as LTPP lane: Y
Distance from edge of traveled lane: 45 ft
distance from system: 55 ft
type: M

Cabinet access controlled by: Agency and LTPP

Contact name: David Price Phone # 303-757-9976
Alternate name: Liz Stoltz Phone # 303-757-9495

11. POWER

Distance to cabinet from drop: 287 ft
Type: AC
AC in cabinet? Y
Service provider: _____ Phone # _____

12. TELEPHONE

Distance to cabinet from drop: 228 ft
Type: landline
Service provider: _____ Phone # _____

13. SYSTEM

Software and version no. _____
Computer connection: RS-232

14. TEST TRUCK TURNAROUND TIME

Duration: 25 minutes Distance: 28 miles

15. PHOTOS

Filename

Power source: 080200_power_service_box_03_16_11.jpg
Phone source: 080200_telephone_pedestal_03_16_11.jpg
Cabinet exterior: 080200_cabinet_exterior_03_16_11.jpg
Cabinet interior: 080200_cabinet_interior_front_03_16_11.jpg
Weight sensors: 080200_leading_WIM_sensor_03_16_11.jpg
080200_trailing_WIM_sensor_03_16_11.jpg
Other sensors: 080200_leading_loop_sensor_03_16_11.jpg
080200_trailing_loop_sensor_03_16_11.jpg
Downstream from sensors on LTPP lane: 080200_downstream_03_16_11.jpg
Upstream from sensors on LTPP lane: 080200_upstream_03_16_11.jpg

Traffic Sheet 18 LTPP MONITORED TRAFFIC DATA WIM SITE COORDINATION	STATE CODE: 08 SPS WIM ID: 080200 DATE (mm/dd/yyyy) 3/16/2011
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1. DATA PROCESSING

- a. Download: LTPP download
- b. Data review: LTPP
If state, how often?
- c. Data submission LTPP
If state how often?

2. EQUIPMENT

- a. Purchase LTPP
- b. Installation Included with purchase
- c. Maintenance Contract with purchase
Expiration Date
- d. Calibration LTPP
- e. Manuals and software control: LTPP
- f. Power
i. Type Underground ii. Payment State
- g. Communication
i. Type Landline ii. Payment State

3. PAVEMENT

- a. Type Portland Concrete Cement
- b. Allowable Rehabilitation activities Maintenance only
- c. Profile Site Markings Temporary

Traffic Sheet 18 LTPP MONITORED TRAFFIC DATA WIM SITE COORDINATION	STATE CODE: 08 SPS WIM ID: 080200 DATE (mm/dd/yyyy) 3/16/2011
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4. Onsite Activities

- a. WIM Validation Check advance notice required

_____ Days 2 Weeks

- b. Notice for straightedge and grinding check

_____ Days 2 Weeks

i. On site lead LTPP

ii. Accept grinding LTPP

- c. Authorization to calibrate site LTPP

- d. Calibration routine LTPP annually
Other: _____

- e. Test Vehicle Responsibilities

- i. Trucks

1st- Air suspension 3S2 LTPP

2nd- Air Suspension 3S2 LTPP

3rd- _____

4th- _____

- ii. Loads LTPP

- iii. Drivers LTPP

- f. Contractor(s) with prior experience in wim calibration in state:

- g. Access to cabinet Joint

- h. State personel required on site No

- i. Traffic control required No

- J. Enforcement coordination required No

Traffic Sheet 18 LTPP MONITORED TRAFFIC DATA WIM SITE COORDINATION	STATE CODE: 08 SPS WIM ID: 080200 DATE (mm/dd/yyyy) 3/16/2011
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5. SITE SPECIFIC CONDITIONS

- a. Funds and accountability: _____
- b. Reports: _____
- c. Other: _____
- c. Special Conditions _____

6. CONTACTS

- a. Equipment (operational status, access, etc.)
Name Roy Czinku Phone # 306-653-6627
Agency IRD
- b. Maintenance (equipment)
Name Roy Czinku Phone # 306-653-6627
Agency IRD
- c. Data Processing and pre-visit data
Name Roy Czinku Phone # 306-653-6627
Agency IRD
- d. Construction schedule and verification
Name _____ Phone # _____
Agency _____
- e. Test Vehicles (trucks, loads, drivers)
Name Jim Sweetman Phone # 303-289-2152
Agency Sweetman Enterprises
- f. Traffic control
Name _____ Phone # _____
Agency _____
- g. Enforcement coordination
Name _____ Phone # _____
Agency _____
- h. Nearest static scale
Name Love's Country Store Location: I-76, exit 31
Phone: _____

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # 1	STATE CODE: 08
	SPS WIM ID: 080200
	DATE (mm/dd/yyyy) 3/16/2011

CALIBRATION TEST TRUCK - Primary

PART A

1. FHWA CLASS: 9 2. Number of axles: 5

3. AXLE WEIGHTS (lbs)

	a. Empty Truck Avg. Axle Weight	b. Pre-test Average Axle Weight	c. Post-Test Avg. Axle Weight	d. Direct or Calculated?
A		10460	10110	Direct
B		16730	16485	Direct
C		16730	16485	Direct
D		16810	16815	Direct
E		16810	16815	Direct
F				

4. GVW (same units as axles)

a. Empty GVW: _____
b. Average Pre-Test Loaded weight: 77540
c. Post Test Loaded Weight: 76710
d. Difference Post Test - Pre-Tests: 830

5. TRUCK DESCRIPTION

a. Tractor Cab Style: _____ Sleeper Cab: _____
photo: ☒

b. Make: _____
c. Model: _____

d. Trailer Load Distribution Description:

photo: ☒

e. Tractor Tare weight - _____ - _____
f. Trailer Tare weight - _____ - _____
g. Axle Spacing - _____

A to B 18.0 B to C 4.3 C to D 25.2 D to E 4.0 E to F _____

h. Wheelbase - ☐ Measured _____ ☒ Computed 51.5
i. Kingpin offset from Axle B (units) 1.75 photo: ☐
j. Overall Length - ☒ Measured 56

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # <u>1</u>	STATE CODE: 08 SPS WIM ID: 080200 DATE (mm/dd/yyyy) 3/16/2011
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CALIBRATION TEST TRUCK - Primary

6. SUSPENSION

	a. Tire size	b.Suspension description (leaf, air # of leaves, taper or flat leaf, etc.)	c. photo
A		steel spring	☒
B		air	☒
C		air	☒
D		air	☒
E		air	☒
F			☐

d. Cold Tire Pressures (psi)- from right to left

Steering Axle	Axle B	Axle C	Axle D	Axle E	Axle F

PART B

Table 1 - Raw Measurements -Platform Scale

Axes	Meas.	Pre-test Weight	Instance	Instance	Post-test weight
A	I				
A+B	II				
A+B+C	III				
A+B+C+D	IV				
A+B+C+D+E(1)	V				
A+B+C+D+E+(F)(1)	VI				
B+C+D+E+(F)	VII				
C+D+E+(F)	VIII				
D+E+(F)	IX				
E+(F)	X				
(F)	XI				
A+B+C+D+E+(F)(2)	XII				

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # <u>1</u>	STATE CODE: 08 SPS WIM ID: 080200 DATE (mm/dd/yyyy) 3/16/2011
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CALIBRATION TEST TRUCK - Primary

Table 2 - Axle and GVW Computations -Platform Scale Pre-test

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Table 3- Axle and GVW Computations - Platform Scale - Instance -

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Table 4- Axle and GVW Computations - Platform Scale - Instance -

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Table 5- Axle and GVW Computations - Platform Scale Post-Test

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # <u>1</u>	STATE CODE: 08 SPS WIM ID: 080200 DATE (mm/dd/yyyy) 3/16/2011
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CALIBRATION TEST TRUCK - Primary

Table 6 - Raw Data -Axle Scales - Pre-test

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
1	10480	16720	16720	16810	16810		77540
2	10440	16740	16740	16810	16810		77540
Avg.	10460	16730	16730	16810	16810		77540

Table 7- Raw Data- Axle scales -

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
Avg.							

Table 8- Raw Data- Axle scales -

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
Avg.							

Table 9 - Raw Data -Axle Scales - Post-test

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
1	10140	16460	16460	16820	16820		76700
2	10080	16510	16510	16810	16810		76720
Avg.	10110	16485	16485	16815	16815		76710

Validation Test Truck Run Set - Pre

Measured By: Kevin Trousdale

Verified By: _____

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # 2	STATE CODE: 08
	SPS WIM ID: 080200
	DATE (mm/dd/yyyy) 3/16/2011

CALIBRATION TEST TRUCK - Secondary

PART A

1. FHWA CLASS: 9 2. Number of axles: 5

3. AXLE WEIGHTS (lbs)

	a. Empty Truck Avg. Axle Weight	b. Pre-test Average Axle Weight	c. Post-Test Avg. Axle Weight	d. Direct or Calculated?
A		9850	9490	Direct
B		14070	13900	Direct
C		14070	13900	Direct
D		14850	14835	Direct
E		14850	14835	Direct
F				

4. GVW (same units as axles)

a. Empty GVW: _____
b. Average Pre-Test Loaded weight: 67690
c. Post Test Loaded Weight: 66960
d. Difference Post Test - Pre-Tests: 730

5. TRUCK DESCRIPTION

a. Tractor Cab Style: _____ Sleeper Cab: _____
photo: ☒

b. Make: _____
c. Model: _____

d. Trailer Load Distribution Description:

photo: ☒

e. Tractor Tare weight - _____ - _____
f. Trailer Tare weight - _____ - _____
g. Axle Spacing - _____

A to B 17.8 B to C 4.3 C to D 25.0 D to E 3.9 E to F _____

h. Wheelbase - ☐ Measured _____ ☒ Computed 51.0
i. Kingpin offset from Axle B (units) 2.25 photo: ☐
j. Overall Length - ☒ Measured 56.25

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # <u>2</u>	STATE CODE: 08 SPS WIM ID: 080200 DATE (mm/dd/yyyy) 3/16/2011
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CALIBRATION TEST TRUCK - Secondary

6. SUSPENSION

	a. Tire size	b.Suspension description (leaf, air # of leaves, taper or flat leaf, etc.)	c. photo
A		steel spring	☒
B		air	☒
C		air	☒
D		air	☒
E		air	☒
F			☐

d. Cold Tire Pressures (psi)- from right to left

Steering Axle	Axle B	Axle C	Axle D	Axle E	Axle F

PART B

Table 1 - Raw Measurements -Platform Scale

Axes	Meas.	Pre-test Weight	Instance	Instance	Post-test weight
A	I				
A+B	II				
A+B+C	III				
A+B+C+D	IV				
A+B+C+D+E(1)	V				
A+B+C+D+E+(F)(1)	VI				
B+C+D+E+(F)	VII				
C+D+E+(F)	VIII				
D+E+(F)	IX				
E+(F)	X				
(F)	XI				
A+B+C+D+E+(F)(2)	XII				

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # 2	STATE CODE: 08 SPS WIM ID: 080200 DATE (mm/dd/yyyy) 3/16/2011
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CALIBRATION TEST TRUCK - Secondary

Table 2 - Axle and GVW Computations -Platform Scale Pre-test

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Table 3- Axle and GVW Computations - Platform Scale - Instance -

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Table 4- Axle and GVW Computations - Platform Scale - Instance -

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Table 5- Axle and GVW Computations - Platform Scale Post-Test

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # 2	STATE CODE: 08 SPS WIM ID: 080200 DATE (mm/dd/yyyy) 3/16/2011
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CALIBRATION TEST TRUCK - Secondary

Table 6 - Raw Data -Axle Scales - Pre-test

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
1	9860	14060	14060	14850	14850		67680
2	9840	14080	14080	14850	14850		67700
Avg.	9850	14070	14070	14850	14850		67690

Table 7- Raw Data- Axle scales -

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
Avg.							

Table 8- Raw Data- Axle scales -

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
Avg.							

Table 9 - Raw Data -Axle Scales - Post-test

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
1	9460	13940	13940	14820	14820		66980
2	9520	13860	13860	14850	14850		66940
Avg.	9490	13900	13900	14835	14835		66960

Validation Test Truck Run Set - Pre

Measured By: Kevin Trousdale

Verified By: _____

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # 1	STATE CODE: 08
	SPS WIM ID: 080200
	DATE (mm/dd/yyyy) 3/17/2011

CALIBRATION TEST TRUCK - Primary

PART A

1. FHWA CLASS: 9 2. Number of axles: 5

3. AXLE WEIGHTS (lbs)

	a. Empty Truck Avg. Axle Weight	b. Pre-test Average Axle Weight	c. Post-Test Avg. Axle Weight	d. Direct or Calculated?
A		10480	0	Direct
B		16710	0	Direct
C		16710	0	Direct
D		16815	0	Direct
E		16815	0	Direct
F				

4. GVW (same units as axles)

a. Empty GVW: _____
b. Average Pre-Test Loaded weight: 77530
c. Post Test Loaded Weight: 0
d. Difference Post Test - Pre-Tests: 77530

5. TRUCK DESCRIPTION

a. Tractor Cab Style: _____ Sleeper Cab: _____
photo: ☒

b. Make: _____
c. Model: _____

d. Trailer Load Distribution Description:

photo: ☒

e. Tractor Tare weight - _____ - _____
f. Trailer Tare weight - _____ - _____
g. Axle Spacing - _____

A to B 18.0 B to C 4.3 C to D 25.2 D to E 4.0 E to F _____

h. Wheelbase - ☐ Measured _____ ☒ Computed 51.5
i. Kingpin offset from Axle B (units) 1.75 photo: ☐
j. Overall Length - ☒ Measured 56

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # <u>1</u>	STATE CODE: 08 SPS WIM ID: 080200 DATE (mm/dd/yyyy) 3/17/2011
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CALIBRATION TEST TRUCK - Primary

6. SUSPENSION

	a. Tire size	b.Suspension description (leaf, air # of leaves, taper or flat leaf, etc.)	c. photo
A		steel spring	☒
B		air	☒
C		air	☒
D		air	☒
E		air	☒
F			☐

d. Cold Tire Pressures (psi)- from right to left

Steering Axle	Axle B	Axle C	Axle D	Axle E	Axle F

PART B

Table 1 - Raw Measurements -Platform Scale

Axes	Meas.	Pre-test Weight	Instance	Instance	Post-test weight
A	I				
A+B	II				
A+B+C	III				
A+B+C+D	IV				
A+B+C+D+E(1)	V				
A+B+C+D+E+(F)(1)	VI				
B+C+D+E+(F)	VII				
C+D+E+(F)	VIII				
D+E+(F)	IX				
E+(F)	X				
(F)	XI				
A+B+C+D+E+(F)(2)	XII				

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # <u>1</u>	STATE CODE: 08 SPS WIM ID: 080200 DATE (mm/dd/yyyy) 3/17/2011
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CALIBRATION TEST TRUCK - Primary

Table 2 - Axle and GVW Computations -Platform Scale Pre-test

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Table 3- Axle and GVW Computations - Platform Scale - Instance -

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Table 4- Axle and GVW Computations - Platform Scale - Instance -

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Table 5- Axle and GVW Computations - Platform Scale Post-Test

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # <u>1</u>	STATE CODE: 08 SPS WIM ID: 080200 DATE (mm/dd/yyyy) 3/17/2011
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CALIBRATION TEST TRUCK - Primary

Table 6 - Raw Data -Axle Scales - Pre-test

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
1	10480	16720	16720	16810	16810		77540
2	10480	16700	16700	16820	16820		77520
Avg.	10480	16710	16710	16815	16815		77530

Table 7- Raw Data- Axle scales -

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
Avg.							

Table 8- Raw Data- Axle scales -

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
Avg.							

Table 9 - Raw Data -Axle Scales - Post-test

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
Avg.							

Validation Test Truck Run Set - Cal 1

Measured By: Kevin Trousdale

Verified By: _____

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # 2	STATE CODE: 08
	SPS WIM ID: 080200
	DATE (mm/dd/yyyy) 3/17/2011

CALIBRATION TEST TRUCK - Secondary

PART A

1. FHWA CLASS: 9 2. Number of axles: 5
3. AXLE WEIGHTS (lbs)

	a. Empty Truck Avg. Axle Weight	b. Pre-test Average Axle Weight	c. Post-Test Avg. Axle Weight	d. Direct or Calculated?
A		9860	0	Direct
B		14045	0	Direct
C		14045	0	Direct
D		14845	0	Direct
E		14845	0	Direct
F				

4. GVW (same units as axles)

- a. Empty GVW: _____
- b. Average Pre-Test Loaded weight: 67640
- c. Post Test Loaded Weight: 0
- d. Difference Post Test - Pre-Tests: 67640

5. TRUCK DESCRIPTION

- a. Tractor Cab Style: _____ Sleeper Cab: _____
photo: ☒

- b. Make: _____
- c. Model: _____

d. Trailer Load Distribution Description:

photo: ☒

- e. Tractor Tare weight - _____ - _____
- f. Trailer Tare weight - _____ - _____
- g. Axle Spacing - _____

A to B 17.8 B to C 4.3 C to D 25.0 D to E 3.9 E to F _____

- h. Wheelbase - ☐ Measured _____ ☒ Computed 51.0
- i. Kingpin offset from Axle B (units) 2.25 photo: ☐
- j. Overall Length - ☒ Measured 56.25

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # <u>2</u>	STATE CODE: 08 SPS WIM ID: 080200 DATE (mm/dd/yyyy) 3/17/2011
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CALIBRATION TEST TRUCK - Secondary

6. SUSPENSION

	a. Tire size	b.Suspension description (leaf, air # of leaves, taper or flat leaf, etc.)	c. photo
A		steel spring	☒
B		air	☒
C		air	☒
D		air	☒
E		air	☒
F			☐

d. Cold Tire Pressures (psi)- from right to left

Steering Axle	Axle B	Axle C	Axle D	Axle E	Axle F

PART B

Table 1 - Raw Measurements -Platform Scale

Axes	Meas.	Pre-test Weight	Instance	Instance	Post-test weight
A	I				
A+B	II				
A+B+C	III				
A+B+C+D	IV				
A+B+C+D+E(1)	V				
A+B+C+D+E+(F)(1)	VI				
B+C+D+E+(F)	VII				
C+D+E+(F)	VIII				
D+E+(F)	IX				
E+(F)	X				
(F)	XI				
A+B+C+D+E+(F)(2)	XII				

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # 2	STATE CODE: 08 SPS WIM ID: 080200 DATE (mm/dd/yyyy) 3/17/2011
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CALIBRATION TEST TRUCK - Secondary

Table 2 - Axle and GVW Computations -Platform Scale Pre-test

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Table 3- Axle and GVW Computations - Platform Scale - Instance -

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Table 4- Axle and GVW Computations - Platform Scale - Instance -

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Table 5- Axle and GVW Computations - Platform Scale Post-Test

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # <u>2</u>	STATE CODE: 08 SPS WIM ID: 080200 DATE (mm/dd/yyyy) 3/17/2011
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CALIBRATION TEST TRUCK - Secondary

Table 6 - Raw Data -Axle Scales - Pre-test

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
1	9880	14040	14040	14840	14840		67640
2	9840	14050	14050	14850	14850		67640
Avg.	9860	14045	14045	14845	14845		67640

Table 7- Raw Data- Axle scales -

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
Avg.							

Table 8- Raw Data- Axle scales -

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
Avg.							

Table 9 - Raw Data -Axle Scales - Post-test

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
Avg.							

Validation Test Truck Run Set - Cal 1

Measured By: Kevin Trousdale

Verified By: _____

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # 1	STATE CODE: 08
	SPS WIM ID: 080200
	DATE (mm/dd/yyyy) 3/17/2011

CALIBRATION TEST TRUCK - Primary

PART A

1. FHWA CLASS: 9 2. Number of axles: 5
3. AXLE WEIGHTS (lbs)

	a. Empty Truck Avg. Axle Weight	b. Pre-test Average Axle Weight	c. Post-Test Avg. Axle Weight	d. Direct or Calculated?
A		10480	10110	Direct
B		16710	16485	Direct
C		16710	16485	Direct
D		16815	16800	Direct
E		16815	16800	Direct
F				

4. GVW (same units as axles)

- a. Empty GVW: _____
- b. Average Pre-Test Loaded weight: 77530
- c. Post Test Loaded Weight: 76680
- d. Difference Post Test - Pre-Tests: 850

5. TRUCK DESCRIPTION

- a. Tractor Cab Style: _____ Sleeper Cab: _____
photo: ☒

- b. Make: _____
- c. Model: _____

d. Trailer Load Distribution Description:

stone

photo: ☒

- e. Tractor Tare weight - _____ - _____
- f. Trailer Tare weight - _____ - _____
- g. Axle Spacing - _____

A to B 18.0 B to C 4.3 C to D 25.2 D to E 4.0 E to F _____

- h. Wheelbase - ☐ Measured _____ ☒ Computed 51.5
- i. Kingpin offset from Axle B (units) 1.75 photo: ☐
- j. Overall Length - ☒ Measured 56

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # <u>1</u>	STATE CODE: 08 SPS WIM ID: 080200 DATE (mm/dd/yyyy) 3/17/2011
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CALIBRATION TEST TRUCK - Primary

6. SUSPENSION

	a. Tire size	b.Suspension description (leaf, air # of leaves, taper or flat leaf, etc.)	c. photo
A		steel spring	☒
B		air	☒
C		air	☒
D		air	☒
E		air	☒
F			☐

d. Cold Tire Pressures (psi)- from right to left

Steering Axle	Axle B	Axle C	Axle D	Axle E	Axle F

PART B

Table 1 - Raw Measurements -Platform Scale

Axes	Meas.	Pre-test Weight	Instance	Instance	Post-test weight
A	I				
A+B	II				
A+B+C	III				
A+B+C+D	IV				
A+B+C+D+E(1)	V				
A+B+C+D+E+(F)(1)	VI				
B+C+D+E+(F)	VII				
C+D+E+(F)	VIII				
D+E+(F)	IX				
E+(F)	X				
(F)	XI				
A+B+C+D+E+(F)(2)	XII				

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # <u>1</u>	STATE CODE: 08 SPS WIM ID: 080200 DATE (mm/dd/yyyy) 3/17/2011
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CALIBRATION TEST TRUCK - Primary

Table 2 - Axle and GVW Computations -Platform Scale Pre-test

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Table 3- Axle and GVW Computations - Platform Scale - Instance -

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Table 4- Axle and GVW Computations - Platform Scale - Instance -

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Table 5- Axle and GVW Computations - Platform Scale Post-Test

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # <u>1</u>	STATE CODE: 08 SPS WIM ID: 080200 DATE (mm/dd/yyyy) 3/17/2011
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CALIBRATION TEST TRUCK - Primary

Table 6 - Raw Data -Axle Scales - Pre-test

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
1	10480	16720	16720	16810	16810		77540
2	10480	16700	16700	16820	16820		77520
Avg.	10480	16710	16710	16815	16815		77530

Table 7- Raw Data- Axle scales -

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
Avg.							

Table 8- Raw Data- Axle scales -

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
Avg.							

Table 9 - Raw Data -Axle Scales - Post-test

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
1	10080	16490	16490	16800	16800		76660
2	10140	16480	16480	16800	16800		76700
Avg.	10110	16485	16485	16800	16800		76680

Validation Test Truck Run Set - Post

Measured By: Kevin Trousdale

Verified By: _____

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # 2	STATE CODE: 08
	SPS WIM ID: 080200
	DATE (mm/dd/yyyy) 3/17/2011

CALIBRATION TEST TRUCK - Secondary

PART A

1. FHWA CLASS: 9 2. Number of axles: 5

3. AXLE WEIGHTS (lbs)

	a. Empty Truck Avg. Axle Weight	b. Pre-test Average Axle Weight	c. Post-Test Avg. Axle Weight	d. Direct or Calculated?
A		9860	9530	Direct
B		14045	13885	Direct
C		14045	13885	Direct
D		14845	14825	Direct
E		14845	14825	Direct
F				

4. GVW (same units as axles)

a. Empty GVW: _____
b. Average Pre-Test Loaded weight: 67640
c. Post Test Loaded Weight: 66950
d. Difference Post Test - Pre-Tests: 690

5. TRUCK DESCRIPTION

a. Tractor Cab Style: _____ Sleeper Cab: _____
photo: ☒

b. Make: _____
c. Model: _____

d. Trailer Load Distribution Description:

stone

photo: ☒

e. Tractor Tare weight - _____ - _____
f. Trailer Tare weight - _____ - _____
g. Axle Spacing - _____

A to B 17.8 B to C 4.3 C to D 25.0 D to E 3.9 E to F _____

h. Wheelbase - ☐ Measured _____ ☒ Computed 51.0
i. Kingpin offset from Axle B (units) 2.25 photo: ☐
j. Overall Length - ☒ Measured 56.25

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # <u>2</u>	STATE CODE: 08 SPS WIM ID: 080200 DATE (mm/dd/yyyy) 3/17/2011
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CALIBRATION TEST TRUCK - Secondary

6. SUSPENSION

	a. Tire size	b.Suspension description (leaf, air # of leaves, taper or flat leaf, etc.)	c. photo
A		steel spring	☒
B		air	☒
C		air	☒
D		air	☒
E		air	☒
F			☐

d. Cold Tire Pressures (psi)- from right to left

Steering Axle	Axle B	Axle C	Axle D	Axle E	Axle F

PART B

Table 1 - Raw Measurements -Platform Scale

Axes	Meas.	Pre-test Weight	Instance	Instance	Post-test weight
A	I				
A+B	II				
A+B+C	III				
A+B+C+D	IV				
A+B+C+D+E(1)	V				
A+B+C+D+E+(F)(1)	VI				
B+C+D+E+(F)	VII				
C+D+E+(F)	VIII				
D+E+(F)	IX				
E+(F)	X				
(F)	XI				
A+B+C+D+E+(F)(2)	XII				

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # 2	STATE CODE: 08 SPS WIM ID: 080200 DATE (mm/dd/yyyy) 3/17/2011
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CALIBRATION TEST TRUCK - Secondary

Table 2 - Axle and GVW Computations -Platform Scale Pre-test

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Table 3- Axle and GVW Computations - Platform Scale - Instance -

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Table 4- Axle and GVW Computations - Platform Scale - Instance -

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Table 5- Axle and GVW Computations - Platform Scale Post-Test

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # 2	STATE CODE: 08 SPS WIM ID: 080200 DATE (mm/dd/yyyy) 3/17/2011
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CALIBRATION TEST TRUCK - Secondary

Table 6 - Raw Data -Axle Scales - Pre-test

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
1	9880	14040	14040	14840	14840		67640
2	9840	14050	14050	14850	14850		67640
Avg.	9860	14045	14045	14845	14845		67640

Table 7- Raw Data- Axle scales -

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
Avg.							

Table 8- Raw Data- Axle scales -

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
Avg.							

Table 9 - Raw Data -Axle Scales - Post-test

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
1	9600	13860	13860	14840	14840		67000
2	9460	13910	13910	14810	14810		66900
Avg.	9530	13885	13885	14825	14825		66950

Validation Test Truck Run Set - Post

Measured By: Kevin Trousdale

Verified By: _____

Traffic Sheet 21 (Wheel Load) LTPP MONITORED TRAFFIC DATA WIM SYSTEM TRUCK RECORDS										STATE CODE: 08 SPS WIM ID: 080200 DATE: (mm/dd/yyyy): 3/16/2011									
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Pvmt Temp	Radar speed	Truck	Pass	Time	Record No.	WIM Speed	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW	A-B space	B-C space	C-D space	D - E space	E - F space	Axle Length	Overall Length
32.6	64	1	1	7:21:43	2535	64.0	10.1	16.3	16.0	16.4	15.3		74.0	17.8	4.3	25.1	4.0		51.2	59.0
32.6	65	2	1	7:21:55	2536	64.0	9.4	13.6	13.6	14.1	13.7		64.4	17.8	4.3	24.9	3.9		50.9	58.0
36.7	71	1	2	7:47:07	2573	69.0	9.7	16.3	15.9	16.6	16.5		75.0	17.7	4.3	25.0	3.9		50.9	59.0
36.7	71	2	2	7:47:17	2575	68.0	9.3	13.6	13.8	14.4	13.6		64.7	17.8	4.3	25.0	3.9		51.0	59.0
40.8	66	1	3	8:30:55	2656	66.0	9.9	16.2	15.9	16.3	16.2		74.9	17.8	4.3	25.1	3.9		51.1	59.0
40.8	66	2	3	8:31:00	2657	67.0	9.1	13.8	14.1	14.7	13.9		65.7	17.8	4.3	25.0	3.9		51.0	59.0
44.0	71	1	4	8:48:14	2693	68.0	9.5	16.7	17.0	17.1	15.6		76.0	17.7	4.3	25.1	4.0		51.1	58.0
44.0	71	2	4	8:48:21	2694	70.0	8.6	13.8	13.8	14.7	14.4		65.4	17.7	4.3	24.9	3.9		50.8	58.0
45.6	74	1	5	9:13:04	2739	74.0	9.4	16.1	15.5	15.6	16.9		73.4	17.7	4.3	25.1	3.9		51.0	59.0
45.6	73	2	5	9:13:17	2740	73.0	8.9	13.5	13.4	14.9	14.8		65.5	17.7	4.3	24.8	3.9		50.7	59.0
49.8	67	1	6	9:30:19	2781	67.0	9.6	16.4	16.0	16.3	17.2		75.7	17.7	4.3	25.1	3.9		51.0	58.0
49.8	64	2	6	9:30:31	2782	62.0	9.5	13.8	13.6	14.6	13.7		65.3	17.8	4.3	24.9	3.9		50.9	58.0
52.4	67	1	7	10:14:39	2901	68.0	9.4	16.3	16.0	16.9	15.8		74.4	17.7	4.3	25.2	3.9		51.1	59.0
52.4	66	2	7	10:14:43	2902	68.0	9.0	13.7	14.0	14.5	14.1		65.5	17.8	4.3	24.9	3.9		50.9	59.0
51.9	69	1	8	10:39:26	2954	69.0	9.5	16.6	16.4	17.3	17.5		77.4	17.7	4.3	25.1	3.9		51.0	58.0
51.9	69	2	8	10:39:28	2955	72.0	9.1	13.2	13.4	14.7	15.1		65.4	17.7	4.3	24.8	3.9		50.7	58.0
52.7	65	1	9	10:56:42	2986	65.0	9.8	16.4	16.3	17.0	16.2		75.8	17.7	4.3	25.1	3.9		51.0	59.0
52.7	67	2	9	10:56:47	2987	65.0	9.4	13.7	13.6	14.9	13.9		65.5	17.8	4.3	24.9	3.9		50.9	59.0
53.4	69	1	10	11:13:56	3020	68.0	9.5	16.8	16.4	16.6	16.9		76.1	17.7	4.3	25.1	3.9		51.0	58.0
53.4	69	2	10	11:13:59	3021	69.0	9.2	13.7	13.6	14.8	14.7		65.8	17.8	4.3	24.9	3.9		50.9	59.0
53.8	75	1	11	11:40:19	3084	73.0	9.4	16.2	16.1	15.8	16.2		73.8	17.7	4.3	25.0	3.9		50.9	58.0
53.8	73	2	11	11:40:24	3085	73.0	8.9	13.3	13.4	15.2	14.4		65.1	17.8	4.3	24.9	4.0		51.0	58.0
54.4	66	1	12	11:57:52	3122	65.0	9.3	16.3	15.9	15.4	15.2		72.2	17.7	4.3	25.1	3.9		51.0	59.0
54.4	70	2	12	11:57:57	3123	69.0	9.0	13.8	14.0	14.6	14.1		65.4	17.7	4.3	24.9	3.9		50.8	59.0

Recorded By: _____ ar _____	Verified By: _____ dw _____	Run Set _____ Pre _____
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Traffic Sheet 21 (Wheel Load) LTTP MONITORED TRAFFIC DATA WIM SYSTEM TRUCK RECORDS										STATE CODE: 08 SPS WIM ID: 080200 DATE: (mm/dd/yyyy): 3/16/2011									
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Pvmt Temp	Radar speed	Truck	Pass	Time	Record No.	WIM Speed	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW	A-B space	B-C space	C-D space	D - E space	E - F space	Axle Length	Overall Length
63.4	69	1	13	13:18:33	3282	68.0	9.4	16.3	16.5	16.1	17.3		75.6	17.7	4.3	25.1	3.9		51.0	59.0
63.4	69	2	13	13:18:40	3283	68.0	8.7	13.7	13.7	14.3	13.9		64.3	17.8	4.3	25.0	3.9		51.0	59.0
66.4	74	1	14	13:43:21	3334	74.0	9.1	16.3	15.5	16.6	16.1		73.5	17.7	4.3	25.0	3.9		50.9	58.0
66.4	73	2	14	13:43:24	3335	73.0	8.8	13.6	13.1	15.3	15.3		66.1	17.8	4.3	24.9	3.9		50.9	59.0
67.7	66	1	15	14:00:38	3366	65.0	9.6	16.4	16.8	17.3	17.1		77.0	17.7	4.3	25.0	3.9		50.9	58.0
67.7	65	2	15	14:00:42	3367	64.0	8.8	13.4	14.0	13.6	14.1		63.9	17.7	4.3	24.9	3.9		50.8	58.0
67.0	70	1	16	14:17:54	3393	69.0	9.4	16.3	16.3	17.0	16.8		75.8	17.7	4.3	25.2	3.9		51.1	59.0
67.0	70	2	16	14:18:02	3394	69.0	9.0	13.7	13.8	15.7	14.9		66.6	17.7	4.3	24.9	4.0		50.9	59.0
72.7	68	1	17	15:01:41	3481	67.0	9.5	16.4	16.5	17.6	16.0		75.9	17.7	4.3	25.0	3.9		50.9	58.0
72.7	65	2	17	15:01:49	3482	65.0	9.3	13.4	13.8	14.1	14.1		64.6	17.8	4.3	24.9	3.9		50.9	58.0
73.2	71	1	18	15:18:53	3520	68.0	9.3	16.3	16.2	16.9	16.8		75.6	17.7	4.4	25.1	3.9		51.1	59.0
73.2	70	2	18	15:19:11	3522	68.0	8.9	13.6	13.6	15.3	14.0		65.5	17.7	4.3	24.8	3.9		50.7	58.0
74.3	75	1	19	15:44:31	3591	74.0	9.4	16.3	15.9	16.3	17.1		75.2	17.7	4.3	25.0	3.9		50.9	58.0
74.3	74	2	19	15:44:40	3593	73.0	8.7	13.5	13.4	14.1	14.7		64.4	17.7	4.3	24.9	3.9		50.8	58.0
69.5	74	1	20	16:08:58	3632	73.0	9.2	16.4	16.1	16.2	15.5		73.4	17.7	4.3	25.0	3.9		50.9	59.0
69.5	74	2	20	16:09:03	3633	73.0	8.7	#VALUE!	12.9	14.7	14.4		63.8	17.8	4.3	24.8	3.9		50.8	58.0

Recorded By: _____ ar _____	Verified By: _____ dw _____	Run Set _____ Pre _____
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Traffic Sheet 21 (Wheel Load) LTPP MONITORED TRAFFIC DATA WIM SYSTEM TRUCK RECORDS	STATE CODE:	08
	SPS WIM ID:	080200
	DATE: (mm/dd/yyyy):	3/17/2011

[illegible]

Recorded By: _____ ar _____

Verified By: dw

Run Set Cal 1

Traffic Sheet 21 (Wheel Load) LTPP MONITORED TRAFFIC DATA WIM SYSTEM TRUCK RECORDS										STATE CODE: 08 SPS WIM ID: 080200 DATE: (mm/dd/yyyy): 3/17/2011									
---	--	--	--	--	--	--	--	--	--	---	--	--	--	--	--	--	--	--	--

Pvmt Temp	Radar speed	Truck	Pass	Time	Record No.	WIM Speed	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW	A-B space	B-C space	C-D space	D - E space	E - F space	Axle Length	Overall Length
35.0	63	1	2	7:47:51	5528	66.0	10.3	16.9	16.4	16.2	16.7		76.6	17.8	4.3	25.2	3.9		51.2	57.0
35.0	65	2	2	7:47:58	5529	65.0	9.6	14.0	14.4	13.8	13.9		65.8	17.8	4.3	25.1	3.9		51.1	56.0
35.4	68	1	3	8:05:12	5595	68.0	10.0	16.6	16.6	16.4	16.3		75.9	17.8	4.4	25.4	3.9		51.5	56.0
35.4	68	2	3	8:05:39	5560	68.0	9.5	13.5	13.6	14.1	13.7		64.3	17.9	4.4	25.1	4.0		51.4	57.0
41.5	73	1	4	8:30:13	5690	74.0	10.3	17.0	16.9	17.8	16.1		78.0	17.8	4.4	25.3	3.9		51.4	57.0
41.5	72	2	4	8:30:15	5691	73.0	9.7	13.5	13.7	15.6	14.7		67.2	17.8	4.3	25.0	4.0		51.1	57.0
44.4	64	1	5	8:47:33	5775	66.0	10.3	16.7	16.5	18.0	17.3		78.7	17.8	4.4	25.2	3.9		51.3	56.0
44.4	64	2	5	8:47:36	5776	65.0	10.2	14.3	14.3	15.0	15.0		68.8	17.8	4.4	25.1	3.9		51.2	56.0
46.3	66	1	6	9:05:00	5859	66.0	10.1	16.7	16.9	17.4	16.6		77.7	17.8	4.4	25.2	3.9		51.3	56.0
46.3	70	2	6	9:05:06	9860	68.0	9.4	14.2	14.0	14.7	14.3		66.5	17.8	4.4	25.2	4.0		51.4	56.0
54.8	73	1	7	9:56:02	6088	74.0	10.5	17.2	16.5	17.3	16.3		77.9	17.8	4.4	25.1	3.9		51.2	56.0
54.8	74	2	7	9:56:05	6089	74.0	10.0	13.9	13.7	14.6	14.7		66.9	17.9	4.4	25.0	3.9		51.2	56.0
58.2	64	1	8	10:13:51	6170	66.0	10.4	16.9	16.7	17.4	17.6		79.2	17.8	4.4	25.2	3.9		51.3	57.0
58.2	64	2	8	10:13:53	6171	65.0	10.3	13.7	14.0	15.0	14.2		67.3	17.8	4.3	25.0	4.0		51.1	56.0
60.8	65	1	9	10:31:33	6250	67.0	10.1	16.5	16.4	17.1	15.9		76.0	17.8	4.3	25.2	3.9		51.2	56.0
60.8	66	2	9	10:31:18	6251	69.0	9.3	14.0	14.1	14.4	14.1		66.0	17.8	4.4	25.1	4.0		51.3	57.0
66.6	75	1	10	10:56:03	6354	74.0	10.1	17.1	16.2	16.8	16.6		76.7	17.8	4.4	25.3	4.0		51.5	57.0
66.6	72	2	10	10:56:07	6355	73.0	9.4	13.7	13.8	15.3	14.5		66.7	17.9	4.4	25.1	4.0		51.4	56.0
67.8	68	1	11	11:30:41	6499	68.0	9.9	16.8	16.6	15.9	18.1		77.4	17.8	4.4	25.3	3.9		51.4	56.0
67.8	69	2	11	11:30:46	6500	69.0	9.9	14.2	14.3	13.9	14.2		66.6	17.8	4.3	25.1	3.9		51.1	57.0
69.7	73	1	12	11:57:20	6617	74.0	10.2	17.1	16.5	17.5	17.4		78.6	17.8	4.4	25.1	3.9		51.2	56.0
69.7	74	2	12	11:57:23	6618	73.0	9.4	13.8	13.8	16.0	14.4		67.4	17.8	4.4	25.0	4.0		51.2	56.0
75.1	64	1	13	12:14:47	6684	65.0	10.3	16.7	16.9	16.8	17.4		78.2	17.8	4.3	25.2	4.0		51.3	57.0
75.1	65	2	13	12:14:50	6685	65.0	9.5	13.9	14.4	15.0	14.1		67.0	17.8	4.3	25.0	4.0		51.1	57.0

Recorded By: _____ ar _____	Verified By: _____ dw _____	Run Set _____ Post _____
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Traffic Sheet 21 (Wheel Load) LTPP MONITORED TRAFFIC DATA WIM SYSTEM TRUCK RECORDS										STATE CODE: 08 SPS WIM ID: 080200 DATE: (mm/dd/yyyy): 3/17/2011									
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Pvmt Temp	Radar speed	Truck	Pass	Time	Record No.	WIM Speed	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW	A-B space	B-C space	C-D space	D - E space	E - F space	Axle Length	Overall Length
74.9	66	1	14	12:32:05	6758	68.0	9.9	16.5	16.4	17.1	16.2		76.1	17.8	4.4	25.3	4.0		51.5	57.0
74.9	67	2	14	12:32:09	6579	68.0	9.8	13.9	14.2	15.0	14.2		67.2	17.8	4.3	25.0	4.0		51.1	57.0
77.5	74	1	15	12:56:56	6866	73.0	10.0	16.9	16.8	17.6	16.6		78.0	17.7	4.3	25.1	4.0		51.1	56.0
77.5	72	2	15	12:57:00	6867	72.0	9.3	13.9	13.8	15.4	14.4		67.0	17.8	4.4	25.1	4.0		51.3	57.0
75.9	66	1	16	13:15:27	6929	65.0	10.3	16.4	16.7	16.2	16.3		75.9	17.8	4.4	25.2	3.9		51.3	56.0
75.9	65	2	16	13:15:32	6930	65.0	9.8	14.0	14.6	14.8	14.3		64.7	17.8	4.3	25.0	3.9		51.0	56.0
76.0	64	1	17	13:32:50	7000	67.0	9.9	16.5	16.9	16.1	18.2		77.6	17.8	4.3	25.3	3.9		51.3	57.0
76.0	67	2	17	13:32:54	7001	69.0	9.5	14.1	14.0	14.9	14.7		67.1	17.8	4.4	25.0	3.9		51.1	57.0
78.9	73	1	18	13:57:44	7104	74.0	10.2	17.3	16.3	17.5	17.5		78.9	17.7	4.4	25.1	3.9		51.1	57.0
78.9	69	2	18	13:57:49	7105	70.0	9.6	13.9	14.4	14.6	14.4		67.0	17.8	4.4	25.1	4.0		51.3	57.0
74.7	64	1	19	14:15:19	7192	66.0	9.9	16.7	16.9	17.2	17.8		78.4	17.8	4.4	25.2	3.9		51.3	57.0
74.7	63	2	19	14:15:21	7193	62.0	10.2	13.8	14.2	14.5	14.2		66.8	17.9	4.4	25.1	4.0		51.4	57.0
70.9	67	1	20	14:32:36	7262	66.0	9.9	16.8	16.3	18.0	18.1		79.1	17.8	4.4	25.2	3.9		51.3	57.0
70.9	67	2	20	14:32:37	7263	68.0	9.2	14.1	14.3	14.7	15.1		67.3	17.8	4.3	25.0	3.9		51.0	57.0
67.3	73	1	21	14:57:15	7372	73.0	9.9	16.9	16.3	17.6	16.0		76.7	17.9	4.3	25.3	3.9		51.4	57.0
67.3	74	2	21	14:57:19	7373	72.0	9.2	13.5	13.8	14.9	15.5		67.1	17.9	4.4	25.1	3.9		51.3	56.0

Recorded By: _____ ar _____	Verified By: _____ dw _____	Run Set _____ Post _____
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Traffic Sheet 22 LTPP MONITORED TRAFFIC DATA SITE EQUIPMENT ASSESSMENT LTPP LANE ONLY	STATE CODE: 08 SPS WIM ID: 080200 STATE ASSIGNED ID 0 DATE (mm/dd/yyyy) 3/16/2011
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9. IN ROAD SENSORS:

Describe any deficiencies regarding the sensor installation. Indicate sensors that show any signs of being broken, severely worn, missing, removed, or loose. List photos on Sheet 24 for

the equipment is operating within the manufacturer's tolerances.

TRUCK OBSERVATIONS

- 10.** Indicate any irregular truck behaviors such as bouncing, swerving, or braking near the weighing area (within 40 meters). Note the distance from the weighing sensors.

A visual observation of the trucks as they approach, traverse, and leave the sensor area did not indicate any adverse dynamics that would affect the accuracy of the WIM system. The trucks appear to track down the center of the lane.

Minimum 15 minute or 35 truck sample video sample for pavement interaction deficiencies:

Tape Filename: _____

Time: _____

From: _____

To: _____

Traffic Sheet 22 LTPP MONITORED TRAFFIC DATA SITE EQUIPMENT ASSESSMENT LTPP LANE ONLY	STATE CODE: 08 SPS WIM ID: 080200 STATE ASSIGNED ID 0 DATE (mm/dd/yyyy) 3/16/2011
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11. CLASSIFICATION VERIFICATION VIDEO:

TAPE 1- NAME: _____

Interval	Filename	From	To
1	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____
5	_____	_____	_____
6	_____	_____	_____
7	_____	_____	_____
8	_____	_____	_____

TAPE 2- NAME: _____

Interval	Filename	From	To
1	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____
5	_____	_____	_____
6	_____	_____	_____
7	_____	_____	_____
8	_____	_____	_____

TAPE 3- NAME: _____

Interval	Filename	From	To
1	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____
5	_____	_____	_____
6	_____	_____	_____
7	_____	_____	_____
8	_____	_____	_____

Traffic Sheet 22 LTPP MONITORED TRAFFIC DATA SITE EQUIPMENT ASSESSMENT LTPP LANE ONLY	STATE CODE: 08 SPS WIM ID: 080200 STATE ASSIGNED ID 0 DATE (mm/dd/yyyy) 3/16/2011
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SYSTEM ACCURACY TESTS

12. CONDUCT THE FOLLOWING SYSTEM ACCURACY TESTS EITHER ON- SITE OR IN OFFICE

Speed Accuracy - Complete Sheet 20 and attach.

Average radar speed	<u>68.7</u>	mph	Average WIM Speed	<u>68.7</u>	mph
Mean Difference	<u>0.1</u>	mph	SD of mean	<u>1.4</u>	

Posted Speed Limit	<u>75</u>	mph			
Speed Range	15th percentile - <u>64</u>	mph	85th percentile - <u>76</u>	mph	

Spacing and Weight - Complete Sheet 21 and attach.

Average distance between axles of drive tandem		<u> </u>	feet	
% error from 4.25 ft (industry average)	OR	<u>4.30</u>	ft (WIM system average)	
= <u>1.2</u> %				

Average front axle weight for Class 9 vehicles		<u> </u>	lbs	
% error from 10.3 kips (industry average) OR	OR	<u>9.3</u>	lbs (known site value)	
= <u>-10.1</u> %				

SUPPORT EQUIPMENT STRUCTURES

17. Indicate any deficiencies with any site equipment other than the in-road sensors. List all photos on the Sheet 24 for each occurrence.

Cabinet/Foundation None ☒

no cabinet or foundation deficiencies

Pull Boxes None ☒

no pull box deficiencies

Mast None ☒

no service mast deficiencies

Solar Panels None ☒

no solar panel deficiencies

Traffic Sheet 22 LTPP MONITORED TRAFFIC DATA SITE EQUIPMENT ASSESSMENT LTPP LANE ONLY	STATE CODE: 08 SPS WIM ID: 080200 STATE ASSIGNED ID 0 DATE (mm/dd/yyyy) 3/16/2011
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Telephone D-Mark Box None ☒

no telephone d-mark box deficiencies

Power Service Box None ☒

no power service box deficiencies

Grounding None ☒

no grounding deficiencies

Conduit None ☒

no conduit deficiencies

STATIC AND DYNAMIC ELECTRONIC EQUIPMENT TESTS

18. Complete and attach a Sheet 22 addendum applicable to the installed road equipment.

ADDITIONAL COMMENTS

All values for the WIM sensors and inductive loops were within tolerances. Electronic tests of the power and communication devices indicated that they were operating normally.

Assessor _____

Traffic Sheet 22 Addendum - Weighpad LTPP MONITORED TRAFFIC DATA SITE EQUIPMENT ASSESSMENT LTPP LANE ONLY	STATE CODE: 08 SPS WIM ID: 080200 STATE ASSIGNED ID 0 DATE (mm/dd/yyyy) 3/16/2011
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STATIC EQUIPMENT VALUES (SYSTEM OFF)

1. POWER

a. Solar Panel		WATTS		VDC
b. Equipment Power	123.2	VAC		VDC
c. Battery 1	13.49	VDC		
d. Battery 2		VDC		
e. Regulated		VDC		
f. Power Supply	13.5	VDC	13.52	VDC
g. System Input	123.6	VAC	11.79	VDC
h. Modem Power		VAC		VDC
i. Telephone	49.2	VDC		

2. LOOP SENSORS

	Resistance	Inductance	Shield
a. Leading	0.6 Ω	144 μ h	inf M Ω
b. Trailing	0.6 Ω	143 μ h	inf M Ω

3. WEIGHPAD SENSORS

	Input	Output	Shield
a. Leading	983 Ω	846 Ω	inf Ω
b. Trailing	982 Ω	846 Ω	inf Ω

DYNAMIC EQUIPMENT VALUES (SYSTEM ON)

4. LOOP SENSORS

	Frequency
a. Leading	30.9 KHz
b. Trailing	20.5 KHz

5. WEIGHPAD SENSORS

	Zero Point
a. Leading	0.01 mV
b. Trailing	-0.02 mV

Assessor Kevin Trousdale

Traffic Sheet 24A LTPP MONITORED TRAFFIC DATA SITE PHOTO LOG - Equipment	STATE CODE: 08 SPS WIM ID: 080200 DATE (mm/dd/yyyy) 3/16/2011
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Item	Description	Filename
1	Power Source	080200_power_service_box_03_16_11.jpg
2	Telephone Source	080200_telephone_pedestal_03_16_11.jpg
3	Cabinet Exterior	080200_cabinet_exterior_03_16_11.jpg
4	Cabinet Interior	080200_cabinet_interior_front_03_16_11.jpg
5	Leading weight sensor	080200_leading_WIM_sensor_03_16_11.jpg
6	Trailing weight sensor	080200_trailing_WIM_sensor_03_16_11.jpg
7	Leading classification sensor	
8	Trailing classification sensor	
9	Leading loop sensor	080200_leading_loop_sensor_03_16_11.jpg
10	Trailing loop sensor	080200_trailing_loop_sensor_03_16_11.jpg
11	Downstream from site	080200_downstream_03_16_11.jpg
12	Upstream from site	080200_upstream_03_16_11.jpg
13	Cabinet Interior - Rear	080200_cabinet_interior_rear_03_16_11.jpg
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		

RECORDED BY: _____ Dean J. Wolf

Traffic Sheet 24B LTPP MONITORED TRAFFIC DATA SITE PHOTO LOG - Test Trucks	STATE CODE: 08 SPS WIM ID: 080200 DATE (mm/dd/yyyy) 3/16/2011
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Item	Description	Filename
1	Tractor, Truck #1	080200_Truck_1_Tractor_03_16_11.jpg
2	Trailer/Load, Truck #1	080200_Truck_1_Trailer_03_16_11.jpg
3	Kingpin Offset, Truck #1	
4	Suspension A, Truck #1	080200_Truck_1_Suspension_1_03_16_11.jpg
5	Suspension B, Truck #1	080200_Truck_1_Suspension_2_03_16_11.jpg
6	Suspension C, Truck #1	080200_Truck_1_Suspension_3_03_16_11.jpg
7	Suspension D, Truck #1	080200_Truck_1_Suspension_4_03_16_11.jpg
8	Suspension E, Truck #1	080200_Truck_1_Suspension_5_03_16_11.jpg
9	Suspension F, Truck #1	
10	Tractor, Truck #2	080200_Truck_2_Tractor_03_16_11.jpg
11	Trailer/Load, Truck #2	080200_Truck_2_Trailer_03_16_11.jpg
12	Kingpin Offset, Truck #2	
13	Suspension A, Truck #2	080200_Truck_2_Suspension_1_03_16_11.jpg
14	Suspension B, Truck #2	080200_Truck_2_Suspension_2_03_16_11.jpg
15	Suspension C, Truck #2	080200_Truck_2_Suspension_3_03_16_11.jpg
16	Suspension D, Truck #2	080200_Truck_2_Suspension_4_03_16_11.jpg
17	Suspension E, Truck #2	080200_Truck_2_Suspension_5_03_16_11.jpg
18	Suspension F, Truck #2	
19	Tractor, Truck #3	
20	Trailer/Load, Truck #3	
21	Kingpin Offset, Truck #3	
22	Suspension A, Truck #3	
23	Suspension B, Truck #3	
24	Suspension C, Truck #3	
25	Suspension D, Truck #3	
26	Suspension E, Truck #3	
27	Suspension F, Truck #3	
28	Scale	
29		
30		

RECORDED BY: _____ Dean J Wolf