Traffic Sheet 17 LTPP MONITORED TRAFFIC DATA WIM SITE INVENTORY	STATE CODE: 18 SPS WIM ID: 180600 DATE (mm/dd/yyyy) 11/3/2010

1. ROUTE: US-31 **MILEPOST:** 216.9 **LTPP DIRECTION:** north

2. WIM SITE DESCRIPTION

Grade: <1% Sag Vertical: N
Nearest Upstream SPS Section: 180601
Distance from sensors to SPS Section: 3256 ft

3. LANE CONFIGURATION

Lanes in LTPP direction: 2 Median: 3 - grass
Lane width: 12' Shoulder: 2 - paved AC
Shoulder width: 11'

4. PAVEMENT TYPE AC

5. PAVEMENT SURFACE CONDITION - Distress Survey

Date: 11/3/10 Photo Filename: 180600_upstream_11_03_10.jpg
Date: 11/3/10 Photo Filename: 180600_downstream_11_03_10.jpg
Date: Photo Filename:

6. SENSOR SEQUENCE

Loop - Quartz - Quartz - Loop

7. REPLACEMENT AND/OR GRINDING

Date:
Date:
Date:

8. RAMPS OR INTERSECTIONS

Intersection within 300' upstream of site: N
Intersection within 300' downstream of site: Y
Is shoulder routinely used for turning? N

9. DRAINAGE

Drainage *(bending plate and load cell)* :
Clearance under plate (in.):
Clearance /access to flush fines from under system:

Traffic Sheet 17 LTPP MONITORED TRAFFIC DATA WIM SITE INVENTORY	STATE CODE: 18 SPS WIM ID: 180600 DATE (mm/dd/yyyy) 11/3/2010

10. CABINET LOCATION

Same side of road as LTPP lane: Y
Distance from edge of traveled lane: 64 ft
distance from system: 70 ft
type: M

Cabinet access controlled by: Agency and LTPP
Contact name: Roy Czinku Phone #
Alternate name: Kirk Mangold Phone #

11. POWER

Distance to cabinet from drop: 26 ft
Type: AC
AC in cabinet? Y
Service provider: Phone #

12. TELEPHONE

Distance to cabinet from drop: 26 ft
Type: landline
Service provider: Phone #

13. SYSTEM

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

14. TEST TRUCK TURNAROUND TIME

Duration: 9 minutes Distance: 4.8 miles

15. PHOTOS

Filename

Power source: 180600_power_box_11_03_10.jpg
Phone source: 180600_telephone_pedestal_11_03_10.jpg
Cabinet exterior: 180600_cabinet_exterior_11_03_10.jpg
Cabinet interior: 180600_cabinet_interior_front_11_03_10.jpg
Weight sensors: 180600_leading_quartz_11_03_10.jpg
180600_trailing_quartz_11_03_10.jpg
Other sensors: 180600_leading_loop_11_03_10.jpg
180600_trailing_loop_11_03_10.jpg
Downstream from sensors on LTPP lane: 180600_downstream_11_03_10.jpg
Upstream from sensors on LTPP lane: 180600_upstream_11_03_10.jpg

Traffic Sheet 18 LTPP MONITORED TRAFFIC DATA WIM SITE COORDINATION	STATE CODE: 18 SPS WIM ID: 180600 DATE (mm/dd/yyyy) 11/3/2010

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 LTPP contract

c. Maintenance Separate contract LTPP
   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 Asphalt Concrete

b. Allowable Rehabilitation activities Maintenance only

c. Profile Site Markings Temporary

Traffic Sheet 18 LTPP MONITORED TRAFFIC DATA WIM SITE COORDINATION	STATE CODE: 18 SPS WIM ID: 180600 DATE (mm/dd/yyyy) 11/3/2010

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: 18 SPS WIM ID: 180600 DATE (mm/dd/yyyy) 11/3/2010

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 Tim Allen Phone # 524-259-5407
Agency Wendt and Sons

f. Traffic control
Name _____ Phone # _____
Agency _____

g. Enforcement coordination
Name _____ Phone # _____
Agency _____

h. Nearest static scale
Name Pilot Travel Center Location: US30 and US31
Phone: _____

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # 1	STATE CODE: 18 SPS WIM ID: 180600 DATE (mm/dd/yyyy) 11/3/2010

CALIBRATION TEST TRUCK - Primary

PART A

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

3. AXLE WEIGHTS (1000s lbs)

	a. Empty Truck Avg. Axle Weight	b. Pre-test Average Axle Weight	c. Post-Test Avg. Axle Weight	d. Direct or Calculated?
A		11060	10930	Direct
B		13700	13690	Direct
C		13700	13690	Direct
D		19770	19770	Direct
E		19770	19770	Direct
F		0	0	

4. GVW (same units as axles)

a. Empty GVW:
b. Average Pre-Test Loaded weight: 78000
c. Post Test Loaded Weight: 77850
d. Difference Post Test - Pre-Tests: 150

5. TRUCK DESCRIPTION

a. Tractor Cab Style: Conventional Sleeper Cab: Yes
photo: ☑

b. Make: International
c. Model: 9900i

d. Trailer Load Distribution Description:
forklift over the drive tandem and steel beams over the rest of trailer.
photo: ☑

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

A to B 18.8 B to C 4.3 C to D 30.5 D to E 4.1 E to F 0.0

h. Wheelbase - ☐ Measured _____ ☑ Computed 57.7
i. Kingpin offset from Axle B (units) 1.4' photo: ☐

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # 1	STATE CODE: 18 SPS WIM ID: 180600 DATE (mm/dd/yyyy) 11/3/2010

CALIBRATION TEST TRUCK - Primary

6. SUSPENSION

	a. Tire size	b.Suspension description (leaf, air # of leaves, taper or flat leaf, etc.)	c. photo
A	285/75R24.5	steel spring	☑
B	285/75R24.5	air	☑
C	285/75R24.5	air	☑
D	255/70R22.5	air	☑
E	255/70R22.5	air	☑
F			☐

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

Steering Axle	Axle B	Axle C	AxleD	AxleE	Axle F

PART B

Table 1 - Raw Measurements -Platform Scale

Axles	Meas.	Pre-test Weight	Instance	Instance	Post-test weight
A	I	11100	0	0	10920
A+B	II	24770	0	0	24620
A+B+C	III	38440	0	0	38320
A+B+C+D	IV	58210	0	0	58090
A+B+C+D+E(1)	V	77980	0	0	77860
A+B+C+D+E+(F)(1)	VI	77980	0	0	77860
B+C+D+E+(F)	VII	67000	0	0	66900
C+D+E+(F)	VIII	53270	0	0	53220
D+E+(F)	IX	39540	0	0	39540
E+(F)	X	19770	0	0	19770
(F)	XI	0	0	0	0
A+B+C+D+E+(F)(2)	XII	78020	0	0	77860

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # 1	STATE CODE: 18 SPS WIM ID: 180600 DATE (mm/dd/yyyy) 11/3/2010

CALIBRATION TEST TRUCK - Primary

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

	1		2		Avg.
Axle A	I	11100	VI-VII	10980	11040
Axle B	II-I	13670	VII-VIII	13730	13700
Axle C	III-II	13670	VIII-IX	13730	13700
Axle D	IV-III	19770	IX-X	19770	19770
Axle E	V-IV	19770	X-XI	19770	19770
Axle F	VI-V	0	XI	0	0
GVW	VI	77980	XII	78020	78000

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	0	XI	0	0
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	0	XI	0	0
GVW	VI	0	XII	0	0

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

	1		2		Avg.
Axle A	I	10920	VI-VII	10960	10940
Axle B	II-I	13700	VII-VIII	13680	13690
Axle C	III-II	13700	VIII-IX	13680	13690
Axle D	IV-III	19770	IX-X	19770	19770
Axle E	V-IV	19770	X-XI	19770	19770
Axle F	VI-V	0	XI	0	0
GVW	VI	77860	XII	77860	77860

Traffic Sheet 19	STATE CODE:	18
LTPP MONITORED TRAFFIC DATA	SPS WIM ID:	180600
CALIBRATION TEST TRUCK # 1	DATE (mm/dd/yyyy)	11/3/2010

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	11100	13670	13670	19770	19770	0	77980
2	11020	13730	13730	19770	19770	0	78020
Avg.	11060	13700	13700	19770	19770	0	78000

Table 7- Raw Data- Axle scales -

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
1	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0
Avg.	0	0	0	0	0	0	0

Table 8- Raw Data- Axle scales -

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
1	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0
Avg.	0	0	0	0	0	0	0

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

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
1	10920	13700	13700	19770	19770	0	77840
2	10940	13680	13680	19770	19770	0	77860
Avg.	10930	13690	13690	19770	19770	0	77850

Validation Test Truck Run Set - Pre

Measured By: Kevin Trousdale

Verified By: Dean J. Wolf

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # 2	STATE CODE: 18 SPS WIM ID: 180600 DATE (mm/dd/yyyy) 11/3/2010

CALIBRATION TEST TRUCK - Secondary

PART A

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

3. AXLE WEIGHTS (1000s lbs)

	a. Empty Truck Avg. Axle Weight	b. Pre-test Average Axle Weight	c. Post-Test Avg. Axle Weight	d. Direct or Calculated?
A		10420	10600	Direct
B		13630	13795	Direct
C		13630	13795	Direct
D		14420	14410	Direct
E		14420	14410	Direct
F		0	0	

4. GVW (same units as axles)

a. Empty GVW:
b. Average Pre-Test Loaded weight: 66520
c. Post Test Loaded Weight: 67010
d. Difference Post Test - Pre-Tests: -490

5. TRUCK DESCRIPTION

a. Tractor Cab Style: Conventional Sleeper Cab: Yes
photo: ☑

b. Make: International
c. Model: 9900i

d. Trailer Load Distribution Description:
crane counter weights loaded on trailer
photo: ☑

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

A to B 18.1 B to C 4.3 C to D 35.9 D to E 4.1 E to F 0.0

h. Wheelbase - ☐ Measured ☑ Computed 62.4
i. Kingpin offset from Axle B (units) 1.4' photo: ☐

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # 2	STATE CODE: 18 SPS WIM ID: 180600 DATE (mm/dd/yyyy) 11/3/2010

CALIBRATION TEST TRUCK - Secondary

6. SUSPENSION

	a. Tire size	b.Suspension description (leaf, air # of leaves, taper or flat leaf, etc.)	c. photo
A	11R24.5	steel spring	☑
B	11R24.5	air	☑
C	11R24.5	air	☑
D	255/70R22.5	air	☑
E	255/70R22.5	air	☑
F			☐

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

Steering Axle	Axle B	Axle C	AxleD	AxleE	Axle F

PART B

Table 1 - Raw Measurements -Platform Scale

Axles	Meas.	Pre-test Weight	Instance	Instance	Post-test weight
A	I	10440	10340	0	10600
A+B	II	24060	23930	0	24400
A+B+C	III	37680	37520	0	38200
A+B+C+D	IV	52100	51930	0	52610
A+B+C+D+E(1)	V	66520	66340	0	67020
A+B+C+D+E+(F)(1)	VI	66520	66340	0	67020
B+C+D+E+(F)	VII	56120	55980	0	56400
C+D+E+(F)	VIII	42480	42410	0	42610
D+E+(F)	IX	28840	28840	0	28820
E+(F)	X	14420	14420	0	14410
(F)	XI		0	0	0
A+B+C+D+E+(F)(2)	XII	66520	66340	0	67000

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # 2	STATE CODE: 18 SPS WIM ID: 180600 DATE (mm/dd/yyyy) 11/3/2010

CALIBRATION TEST TRUCK - Secondary

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

	1		2		Avg.
Axle A	I	10440	VI-VII	10400	10420
Axle B	II-I	13620	VII-VIII	13640	13630
Axle C	III-II	13620	VIII-IX	13640	13630
Axle D	IV-III	14420	IX-X	14420	14420
Axle E	V-IV	14420	X-XI	14420	14420
Axle F	VI-V	0	XI	0	0
GVW	VI	66520	XII	66520	66520

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

	1		2		Avg.
Axle A	I	10340	VI-VII	10360	10350
Axle B	II-I	13590	VII-VIII	13570	13580
Axle C	III-II	13590	VIII-IX	13570	13580
Axle D	IV-III	14410	IX-X	14420	14415
Axle E	V-IV	14410	X-XI	14420	14415
Axle F	VI-V	0	XI	0	0
GVW	VI	66340	XII	66340	66340

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	0	XI	0	0
GVW	VI	0	XII	0	0

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

	1		2		Avg.
Axle A	I	10600	VI-VII	10620	10610
Axle B	II-I	13800	VII-VIII	13790	13795
Axle C	III-II	13800	VIII-IX	13790	13795
Axle D	IV-III	14410	IX-X	14410	14410
Axle E	V-IV	14410	X-XI	14410	14410
Axle F	VI-V	0	XI	0	0
GVW	VI	67020	XII	67000	67010

Traffic Sheet 19	STATE CODE:	18
LTPP MONITORED TRAFFIC DATA	SPS WIM ID:	180600
CALIBRATION TEST TRUCK # 2	DATE (mm/dd/yyyy)	11/3/2010

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	10440	13620	13620	14420	14420	0	66520
2	10400	13640	13640	14420	14420	0	66520
Avg.	10420	13630	13630	14420	14420	0	66520

Table 7- Raw Data- Axle scales -

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
1	10340	13590	13590	14410	14410	0	66340
2	10360	13570	13570	14420	14420	0	66340
Avg.	10350	13580	13580	14415	14415	0	66340

Table 8- Raw Data- Axle scales -

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
1	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0
Avg.	0	0	0	0	0	0	0

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

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
1	10600	13800	13800	14410	14410	0	67020
2	10600	13790	13790	14410	14410	0	67000
Avg.	10600	13795	13795	14410	14410	0	67010

Validation Test Truck Run Set - Pre

Measured By: Kevin Trousdale

Verified By: Dean Wolf

Traffic Sheet 21 (Wheel Load) LTPP MONITORED TRAFFIC DATA WIM SYSTEM TRUCK RECORDS	STATE CODE: 18 SPS WIM ID: 180600 DATE: (mm/dd/yyyy): 11/3/2010

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
34.3	49	1	1	9:54:24	8971	49.0	11.3	14.4	13.7	18.6	19.3		77.3	18.7	4.4	30.3	4.1	
34.3	48	2	1	9:54:00	8976	48.0	10.8	14.5	13.6	14.8	14.8		68.3	18.0	4.3	35.8	4.0	
36.3	54	1	2	10:01:11	9041	54.0	11.2	14.7	13.3	19.8	20.2		79.4	18.7	4.4	30.3	4.1	
36.3	55	2	2	10:01:30	9046	54.0	10.3	14.4	13.3	14.6	14.3		67.0	18.1	4.3	35.7	4.0	
37.3	59	1	3	10:06:31	9104	59.0	11.2	14.2	13.7	19.4	19.8		78.4	18.7	4.4	30.4	4.1	
38.5	49	2	3	10:13:19	9181	49.0	10.4	13.9	13.4	14.6	15.1		67.5	18.0	4.3	35.8	4.0	
38.5	54	1	4	10:17:24	9231	54.0	11.2	14.4	14.0	19.5	20.2		79.3	18.7	4.4	30.4	4.1	
38.5	55	2	4	10:18:55	9250	55.0	10.5	14.2	12.6	14.4	14.5		66.2	18.0	4.3	35.8	4.0	
38.5	59	1	5	10:23:06	9304	59.0	11.0	14.6	13.7	19.6	20.2		79.2	18.7	4.4	30.4	4.1	
38.5	59	2	5	10:24:37	9323	60.0	10.3	14.1	12.7	14.1	15.8		67.0	18.1	4.3	35.7	4.0	
38.5	48	1	6	10:28:52	9384	50.0	11.0	14.7	14.0	18.8	19.4		77.9	18.7	4.4	30.4	4.1	
38.5	49	2	6	10:30:55	9408	49.0	10.8	13.9	13.8	14.4	13.8		66.8	18.1	4.3	35.9	4.0	
38.3	54	1	7	10:34:30	9446	54.0	11.1	14.5	13.7	19.1	20.1		78.6	18.7	4.4	30.4	4.1	
38.3	54	2	7	10:36:13	9471	54.0	10.9	14.1	13.9	14.7	13.8		67.4	18.1	4.3	35.8	4.1	
40.6	60	1	8	10:40:26	9531	59.0	11.3	14.3	13.6	19.3	20.2		78.7	18.7	4.4	30.4	4.1	
40.6	60	2	8	10:41:18	9541	60.0	10.4	14.0	13.3	14.3	13.4		65.4	18.1	4.3	35.6	4.0	
44.4	51	1	9	11:31:13	10133	49.0	11.4	14.4	13.8	18.5	19.3		77.4	18.7	4.4	30.4	4.1	
44.4	49	2	9	11:31:26	10135	50.0	10.7	14.0	13.0	14.5	13.4		65.6	18.1	4.3	35.8	4.1	
44.0	55	2	10	11:38:33	10259	55.0	10.2	14.1	14.1	14.4	12.9		65.8	18.0	4.3	35.7	4.0	
44.6	60	1	10	11:43:33	10305	60.0	11.0	14.1	13.3	19.4	19.9		77.7	18.7	4.4	30.3	4.1	
48.4	49	1	11	14:21:18	12093	49.0	10.7	14.5	13.5	18.7	18.4		75.9	18.7	4.4	30.4	4.1	
48.4	50	2	11	14:21:36	12098	50.0	10.4	13.8	13.4	14.6	14.0		66.2	18.0	4.3	35.9	4.1	
48.3	55	1	12	14:27:28	12186	54.0	11.3	14.5	14.0	19.4	19.9		79.1	18.7	4.4	30.4	4.1	
48.3	54	2	12	14:27:57	12189	55.0	10.8	14.7	13.5	14.9	15.1		69.1	18.1	4.3	35.9	4.1	

Recorded By: djw Verified By: sk Run Set Pre

Traffic Sheet 21 (Wheel Load) LTPP MONITORED TRAFFIC DATA WIM SYSTEM TRUCK RECORDS	STATE CODE: 18 SPS WIM ID: 180600 DATE: (mm/dd/yyyy): 11/3/2010

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
47.3	60	1	13	14:33:15	12241	60.0	11.0	14.3	13.2	19.2	20.0		77.7	18.7	4.4	30.5	4.1	
47.3	61	2	13	14:33:47	12250	60.0	9.9	13.2	13.2	14.1	15.3		65.5	18.1	4.3	35.7	4.1	
45.8	50	1	14	14:38:30	12308	50.0	10.8	14.1	13.2	18.6	19.2		75.8	18.7	4.4	30.4	4.1	
45.8	50	2	14	14:39:17	12315	49.0	10.3	14.0	13.4	14.6	14.2		66.5	18.1	4.3	35.9	4.1	
44.7	55	1	15	14:44:17	12381	55.0	10.6	14.3	13.7	19.4	20.0		77.9	18.7	4.4	30.3	4.1	
44.7	55	2	15	14:45:08	12390	55.0	10.6	13.8	13.2	14.2	14.3		66.1	18.0	4.3	35.9	4.1	
43.9	59	1	16	14:50:02	12453	59.0	10.7	13.9	13.3	19.1	19.5		76.5	18.7	4.4	30.4	4.1	
43.9	60	2	16	14:50:42	12464	60.0	10.0	14.2	13.0	14.3	13.5		65.0	18.0	4.3	35.9	4.1	
39.1	50	1	17	8:32:18	19877	49.0	11.1	14.4	13.8	18.6	19.5		77.4	18.7	4.4	30.4	4.1	
39.1	48	2	17	8:32:38	19883	48.0	10.7	14.1	13.5	14.1	13.0		65.5	18.0	4.3	35.8	4.1	
40.2	55	1	18	8:38:21	19944	54.0	10.9	14.9	14.4	20.0	20.1		80.4	18.6	4.3	30.3	4.1	
40.2	55	2	18	8:38:36	19945	55.0	11.0	13.6	13.5	14.8	14.3		67.1	18.1	4.3	35.7	4.1	
40.5	60	2	19	8:43:44	20020	60.0	10.6	13.7	13.3	14.7	14.5		66.9	18.1	4.3	35.8	4.1	
40.4	50	1	19	8:49:00	20091	49.0	10.7	14.4	13.4	18.4	19.3		76.2	18.7	4.4	30.3	4.1	
40.4	48	2	20	8:49:57	20104	48.0	10.8	13.8	13.6	14.6	12.5		65.3	18.1	4.3	35.8	4.1	
40.3	55	1	20	8:54:36	20168	54.0	11.6	14.0	13.6	19.1	19.6		77.8	18.7	4.4	30.5	4.1	
40.6	59	1	21	8:59:54	20254	59.0	10.8	14.6	13.8	20.1	20.4		79.6	18.7	4.4	30.3	4.1	
40.6	60	2	22	9:02:14	20278	60.0	10.8	13.6	13.7	14.6	14.1		66.7	18.1	4.3	35.9	4.1	

Recorded By: djw Verified By: sk Run Set Pre

Traffic Sheet 22 LTPP MONITORED TRAFFIC DATA SITE EQUIPMENT ASSESSSMENT LTPP LANE ONLY	STATE CODE: 18 SPS WIM ID: 180600 STATE ASSIGNED ID 0 DATE (mm/dd/yyy) 11/3/2010

SITE EQUIPMENT INFORMATION

1. **TYPE OF EQUIPMENT** BOTH

2. **LANE NUMBER ON SITE** 1 **3. DIRECTION ON SITE** north

4. **VENDOR** IRD **MODEL** iSINC **SERIAL#** 80412304

5. **WEIGHING SENSOR TYPE** quartz

6. **SYSTEM SOFTWARE VERSIONS:**

CPU _____

LOOP _____

PIEZO _____

WEIGHPAD/ LOADCELL _____

COMMUNICATIONS _____

7. **CLASSIFICATION VIDEO:**

TIME FROM: _____ TO: _____
TIME FROM: _____ TO: _____

SITE CONDITIONS

8. **PAVEMENT:**

Indicate any deficiencies that may affect the performance of the WIM sytem. List all photos on Sheet 24 that support the evaluation.

repaired crack 160 feet prior to scales does not appear to cause adverse truck movement and although there is visible and audible truck dynamics at a bump 740 feet prior to the scales, the affects appear to diminish prior to trucks passing over the WIM scales

Traffic Sheet 22 LTPP MONITORED TRAFFIC DATA SITE EQUIPMENT ASSESSSMENT LTPP LANE ONLY	STATE CODE:	18
	SPS WIM ID:	180600
	STATE ASSIGNED ID	0
	DATE (mm/dd/yyy)	11/3/2010

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 epoxy covering the quartz sensor homeruns in the shoulder is breaking away and needs to be patched

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.

there are no adverse truck movements within the approach area (40 meters) of the WIM scales

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 ASSESSSMENT LTPP LANE ONLY	STATE CODE: 18 SPS WIM ID: 180600 STATE ASSIGNED ID 0 DATE (mm/dd/yyy) 11/3/2010

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 ASSESSSMENT LTPP LANE ONLY	STATE CODE: 18 SPS WIM ID: 180600 STATE ASSIGNED ID 0 DATE (mm/dd/yyy) 11/3/2010

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 62.0 mph Average WIM Speed 61.9 mph
Mean Difference -0.1 mph SD of mean 1.3

Posted Speed Limit 60 mph
Speed Range 15th percentile - 60 mph 85th percentile- 65 mph

Spacing and Weight - Complete Sheet 21 and attach.

Average distance between axles of drive tandem feet
% error from 4.25 ft (industry average) OR 4.35 ft (WIM system average)
= 2.3 %

Average front axle weight for Class 9 vehicles lbs
% error from 10.3 kips (industry average) OR 10.8 lbs (known site value)
= 4.7 %

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 occurance.

Cabinet/Foundation None ☐
no cabinet deficiencies

Pull Boxes None ☐
no pull box deficiencies

Mast None ☐
no mast deficiencies

Solar Panels None ☐
no solar panels

Traffic Sheet 22 LTPP MONITORED TRAFFIC DATA SITE EQUIPMENT ASSESSSMENT LTPP LANE ONLY	STATE CODE: 18 SPS WIM ID: 180600 STATE ASSIGNED ID 0 DATE (mm/dd/yyy) 11/3/2010

Telephone D-Mark Box None ☐

no telephone d-mark box deficiencies

Power Service Box None ☐

no pwer 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

no additional comments

Assessor Dean J. Wolf

Traffic Sheet 22 Addendum - Kistler Quartz LTPP MONITORED TRAFFIC DATA SITE EQUIPMENT ASSESSSMENT LTPP LANE ONLY	STATE CODE: 18 SPS WIM ID: 180600 STATE ASSIGNED ID 0 DATE (mm/dd/yyy) 11/3/2010

STATIC EQUIPMENT VALUES (SYSTEM OFF)

1. POWER

a. Solar Panel		WATTS		VDC
b. Equipment Power	119.6	VAC		VDC
c. Battery 1	13.5	VDC		
d. Battery 2		VDC		
e. Regulated		VDC		
f. Power Supply	13.4	VDC		VDC
g. System Input		VAC	11.7	VDC
h. Modem Power		VAC	11.7	VDC
i. Telephone	52.2	VDC		

2. LOOP SENSORS

	Resistance		Inductance		Shield	
a. Leading	0.9	Ω	138.4	µh	inf	MΩ
b. Trailing	1.4	Ω	137.2	µh	inf	MΩ

3. KISTLER SENSORS

	Resistance		Capacitance	
a. K1 (lead/left)	10^10	Ω	10.3	ηf
b. K2 (lead/middle)	10^11	Ω	11.8	ηf
c. K3 (lead mid/right)	10^11	Ω	12.9	ηf
d. K4 (lead/right)	10^11	Ω	12.1	ηf
e. K5 (trail/left)	10^10	Ω	11.1	ηf
f. K6 (trail/mid left)	10^10	Ω	10	ηf
g. K7 (trail/mid right)	10^10	Ω	5.13	ηf
h. K8 (trail/right)	10^9	Ω	4.77	ηf

DYNAMIC EQUIPMENT VALUES (SYSTEM ON)

4. LOOP SENSORS

	Frequency	
a. Leading	12.9	KHz
b. Trailing	12.9	KHz

5. KISTLER SENSORS

Dynamic testing for the Kistler Quartz sensor is not recommended.

Assessor Dean J. Wolf

Traffic Sheet 24A LTPP MONITORED TRAFFIC DATA SITE PHOTO LOG - Equipment	STATE CODE: 18 SPS WIM ID: 180600 DATE (mm/dd/yyy) 11/3/2010

Item	Description	Filename
1	Power Source	180600_power_box_11_03_10.jpg
2	Telephone Source	180600_telephone_pedestal_11_03_10.jpg
3	Cabinet Exterior	180600_cabinet_exterior_11_03_10.jpg
4	Cabinet Interior	180600_cabinet_interior_front_11_03_10.jpg
5	Leading weight sensor	180600_leading_quartz_11_03_10.jpg
6	Trailing weight sensor	180600_trailing_quartz_11_03_10.jpg
7	Leading classification sensor	
8	Trailing classification sensor	
9	Leading loop sensor	180600_leading_loop_11_03_10.jpg
10	Trailing loop sensor	180600_trailing_loop_11_03_10.jpg
11	Downstream from site	180600_downstream_11_03_10.jpg
12	Upstream from site	180600_upstream_11_03_10.jpg
13	Cabinet Interior - Rear	180600_cabinet_interior_rear_11_03_10.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: 18 SPS WIM ID: 180600 DATE (mm/dd/yyy) 11/3/2010

Item	Description	Filename
1	Tractor, Truck #1	180600_truck_1_tractor_11_03_10.jpg
2	Trailer/Load, Truck #1	180600_truck_1_trailer_11_03_10.jpg
3	Kingpin Offset, Truck #1	
4	Suspension A, Truck #1	180600_truck_1_suspension_1_11_03_10.jpg
5	Suspension B, Truck #1	180600_truck_1_suspension_2_11_03_10.jpg
6	Suspension C, Truck #1	180600_truck_1_suspension_3_11_03_10.jpg
7	Suspension D, Truck #1	180600_truck_1_suspension_4_11_03_10.jpg
8	Suspension E, Truck #1	180600_truck_1_suspension_5_11_03_10.jpg
9	Suspension F, Truck #1	
10	Tractor, Truck #2	180600_truck_2_tractor_11_03_10.jpg
11	Trailer/Load, Truck #2	180600_truck_2_trailer_11_03_10.jpg
12	Kingpin Offset, Truck #2	
13	Suspension A, Truck #2	180600_truck_2_suspension_1_11_03_10.jpg
14	Suspension B, Truck #2	180600_truck_2_suspension_2_11_03_10.jpg
15	Suspension C, Truck #2	180600_truck_2_suspension_3_11_03_10.jpg
16	Suspension D, Truck #2	180600_truck_2_suspension_4_11_03_10.jpg
17	Suspension E, Truck #2	180600_truck_2_suspension_5_11_03_10.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

WIM Field Validation Handout Guide – Post Visit

Indiana, 180600

Submitted: 11/9/2010

Table of Contents

1 Site Information

Site ID:	180600	**State:**	Indiana
LTPP Region:	North Central	**Configuration:**	Loop- quartz-quartz-loop
Controller Type:	iSINC	**Sensor Type:**	Quartz- Piezo
Power:	AC	**Communication:**	Landline
Class Scheme:	LTPP Mar 06	**CPU type/setup:**	

2 Contact Information

Agency	Contact	Position	Phone	Mobile
FHWA	Debbie Walker	COTR	202 493-3068	
FHWA	Tom Duncan	Division Office	317-226-5622	
RSC	Frank Meyer	North Central	716-632-0804	
IN DOT	Tommy Nantung	LTPP Contact	765-463-1521	
IN DOT	Kirk Mangold	Traffic Contact	317-233-3690	
ARA	Dean Wolf	Task Leader	717-691-7625	717-512-6638
ARA	Olga Selezneva	Project Manager	410-540-9949	
Wendt, LLP	Tim Allen	Test Truck Vendor	571-259-5407	
Truck Scale	Pilot Travel Center	Plymouth, IN	574-936-6525	

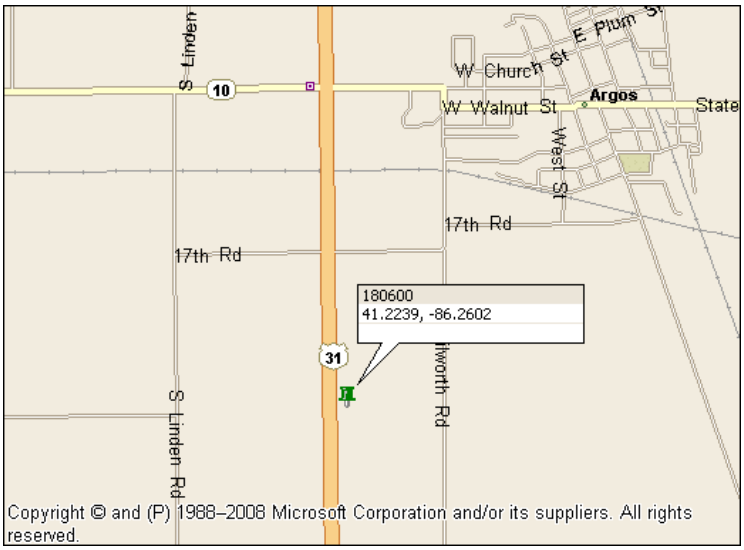
3 Schedule of Events

Date	Event	Location	Start Time
11/2/10	Travel	Plymouth, IN	TBD
11/3/10	Test Truck Weigh/Measure/Inspection	Pilot Travel Center	7:00 am
11/3/10	Equipment Assessment	WIM Site	7:30 am
11/3/10	Initial Performance Evaluation	WIM Site	9:30 am
11/3/10	System Test/Class and Speed Study	WIM Site	TBD
11/4/10	Validation	WIM Site	TBD
11/5/10	Travel	Camp Hill, PA	TBD

4 Maps

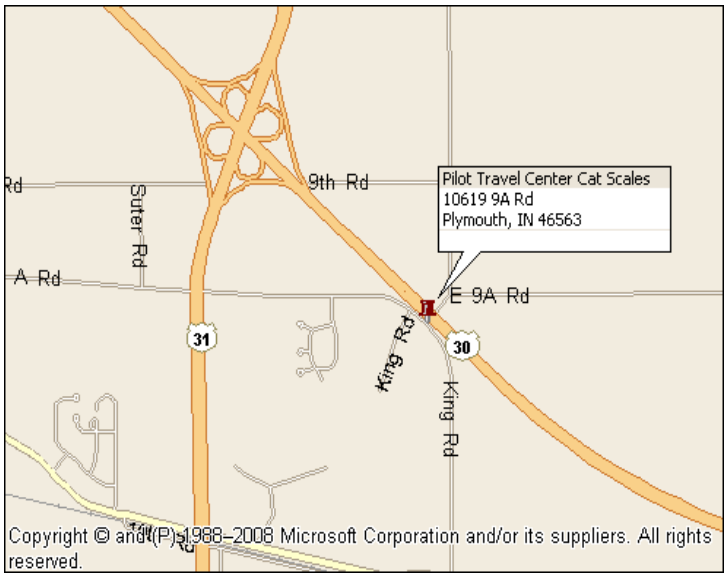
4.1 Site Location

Location:	US-31 North at M.P. 216.9			**Direction:**	NB
Latitude:	41.22390°	**Longitude:**	-86.26020°		



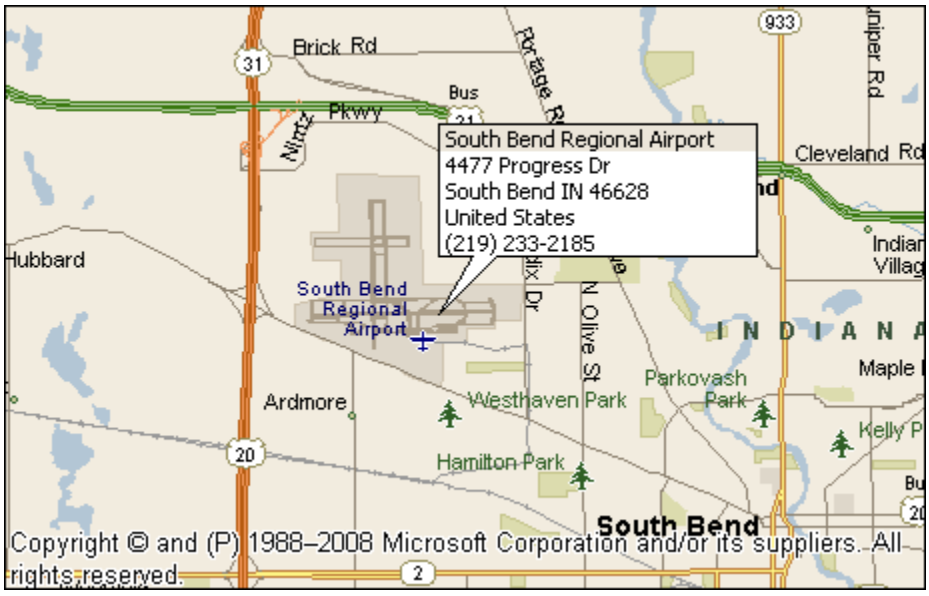
4.2 Truck Scale Location

Name:	Pilot Travel, Plymouth	**Location:**	US Hwy 30 & 31
Latitude:	41.3418000	**Longitude:**	-86.2625000



4.3 Airport Location

Name:	South Bend Regional Airport	**Location:**	South Bend, IN
Latitude:	41.070141	**Longitude:**	-86.30901



4.4 Hospital Location

Name:	St. Josephs Regional Medical Center		
Phone:	(574) 936-3181	**Location:**	1915 Lake Ave

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.