

SHEET 16
LTPP MONITORED TRAFFIC DATA
SITE CALIBRATION SUMMARY

*STATE ASSIGNED ID [P10]
*STATE CODE [53]
*SHRP SECTION ID [EB Drive]

1005
Enter

SITE CALIBRATION INFORMATION

1. * DATE OF CALIBRATION (MONTH/DAY/YEAR) [8 /6 /2008]
2. * TYPE OF EQUIPMENT CALIBRATED X WIM CLASSIFIER BOTH
3. * REASON FOR CALIBRATION
 X REGULARLY SCHEDULED SITE VISIT RESEARCH
 EQUIPMENT REPLACEMENT TRAINING
 DATA TRIGGERED SYSTEM REVISION NEW EQUIPMENT INSTALLATION
 OTHER (SPECIFY) _____
4. * SENSORS INSTALLED IN LTPP LANE AT THIS SITE (CHECK ALL THAT APPLY):
 BARE ROUND PIEZO CERAMIC X BARE FLAT PIEZO BENDING PLATES
 CHANNELIZED ROUND PIEZO LOAD CELLS QUARTZ PIEZO
 CHANNELIZED FLAT PIEZO X INDUCTANCE LOOPS CAPACITANCE PADS
 OTHER (SPECIFY) _____
5. EQUIPMENT MANUFACTURER: INTERNATIONAL ROAD DYNAMIC

WIM SYSTEM CALIBRATION SPECIFICS**

6. ** CALIBRATION TECHNIQUE USED:
 TRAFFIC STREAM -- STATIC SCALE (Y/N) X TEST TRUCKS
 1 NUMBER OF TRUCKS COMPARED 1 NUMBER OF TEST TRUCKS USED
 PASSES PER TRUCK
TRUCK TYPE SUSPENSION
TYPE PER FHWA 13 BIN SYSTEM
SUSPENSION: 1 - AIR; 2 - LEAF SPRING
3 - OTHER (DESCRIBE)
1 Class 9 Air
2
3
7. SUMMARY CALIBRATION RESULTS (EXPRESSED AS A PERCENT)
MEAN DIFFERENCE BETWEEN ---
DYNAMIC AND STATIC GVW -1.29% STANDARD DEVIATION 1.67%
DYNAMIC AND STATIC SINGLE AXLES -3.30% STANDARD DEVIATION 2.07%
DYNAMIC AND STATIC DOUBLE AXLES -0.85% STANDARD DEVIATION 2.54%
8. 1 NUMBER OF SPEEDS AT WHICH CALIBRATION WAS PERFORMED
9. DEFINE THE SPEED RANGES USED (MPH) 60 mph _____

10. CALIBRATION FACTOR (AT EXPECTED FREE FLOW SPEED) Sensor #1= .3184, Sensor #2= .3518
11. ** IS AUTO-CALIBRATION USED AT THIS SITE? (Y/N) Yes
IF YES, LIST AND DEFINE AUTO-CALIBRATION VALUE: Site is set to auto-calibrate every week.
1 range is used. 10,780 pounds steer axle weigh is the target.

ENTERED
1-16-12

CLASSIFIER TEST SPECIFICS***

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

PERSON LEADING CALIBRATION EFFORT:

CONTACT INFORMATION:

rev. November 9, 1999

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SITE CALIBRATION INFORMATION

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1. * DATE OF CALIBRATION (MONTH/DAY/YEAR) [8 /6 /2008]
2. * TYPE OF EQUIPMENT CALIBRATED ☒ WIM ☐ CLASSIFIER ☐ BOTH
3. * REASON FOR CALIBRATION

<input checked="" type="checkbox"/> REGULARLY SCHEDULED SITE VISIT <input type="checkbox"/> EQUIPMENT REPLACEMENT <input type="checkbox"/> DATA TRIGGERED SYSTEM REVISION <input type="checkbox"/> OTHER (SPECIFY) _____	<input type="checkbox"/> RESEARCH <input type="checkbox"/> TRAINING <input type="checkbox"/> NEW EQUIPMENT INSTALLATION
---	---
4. * SENSORS INSTALLED IN LTPP LANE AT THIS SITE (CHECK ALL THAT APPLY):

<input type="checkbox"/> BARE ROUND PIEZO CERAMIC <input type="checkbox"/> CHANNELIZED ROUND PIEZO <input type="checkbox"/> CHANNELIZED FLAT PIEZO <input type="checkbox"/> OTHER (SPECIFY) _____	<input checked="" type="checkbox"/> BARE FLAT PIEZO <input type="checkbox"/> LOAD CELLS <input checked="" type="checkbox"/> INDUCTANCE LOOPS	<input type="checkbox"/> BENDING PLATES <input type="checkbox"/> QUARTZ PIEZO <input type="checkbox"/> CAPACITANCE PADS
--	--	---
5. EQUIPMENT MANUFACTURER: INTERNATIONAL ROAD DYNAMIC

WIM SYSTEM CALIBRATION SPECIFICS**

6. ** CALIBRATION TECHNIQUE USED:

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

☒ 1 NUMBER OF TRUCKS COMPARED ☐ 1 NUMBER OF TEST TRUCKS USED

	TRUCK	TYPE	PASSES PER TRUCK SUSPENSION
TYPE PER FHWA 13 BIN SYSTEM	1	Class 9	Air
SUSPENSION: 1 - AIR; 2 - LEAF SPRING	2		
3 - OTHER (DESCRIBE)	3		
7. SUMMARY CALIBRATION RESULTS (EXPRESSED AS A PERCENT)

MEAN DIFFERENCE BETWEEN ---			
DYNAMIC AND STATIC GVW	-2.54%	STANDARD DEVIATION	1.25%
DYNAMIC AND STATIC SINGLE AXLES	1.96%	STANDARD DEVIATION	1.93%
DYNAMIC AND STATIC DOUBLE AXLES	-3.38%	STANDARD DEVIATION	2.52%
8. ☒ 1 NUMBER OF SPEEDS AT WHICH CALIBRATION WAS PERFORMED
9. DEFINE THE SPEED RANGES USED (MPH) ☒ 60 mph _____
10. CALIBRATION FACTOR (AT EXPECTED FREE FLOW SPEED) Sensor #1= .1896, Sensor #2= .1871
11. ** IS AUTO-CALIBRATION USED AT THIS SITE? (Y/N) ☒ Yes

IF YES, LIST AND DEFINE AUTO-CALIBRATION VALUE: Site is set to auto-calibrate every week.
 1 range is used. 10,340 pounds steer axle weigh is the target.

CLASSIFIER TEST SPECIFICS***

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

PERSON LEADING CALIBRATION EFFORT:
CONTACT INFORMATION:

rev. November 9, 1999

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3. * REASON FOR CALIBRATION
☒ X REGULARLY SCHEDULED SITE VISIT ☐ RESEARCH
☐ EQUIPMENT REPLACEMENT ☐ TRAINING
☐ DATA TRIGGERED SYSTEM REVISION ☐ NEW EQUIPMENT INSTALLATION
☐ OTHER (SPECIFY) _____
4. * SENSORS INSTALLED IN LTPP LANE AT THIS SITE (CHECK ALL THAT APPLY):
☐ BARE ROUND PIEZO CERAMIC ☒ X BARE FLAT PIEZO ☐ BENDING PLATES
☐ CHANNELIZED ROUND PIEZO ☐ LOAD CELLS ☐ QUARTZ PIEZO
☐ CHANNELIZED FLAT PIEZO ☒ X INDUCTANCE LOOPS ☐ CAPACITANCE PADS
☐ OTHER (SPECIFY) _____
5. EQUIPMENT MANUFACTURER: INTERNATIONAL ROAD DYNAMIC

WIM SYSTEM CALIBRATION SPECIFICS**

6. ** CALIBRATION TECHNIQUE USED:
☐ TRAFFIC STREAM -- ☐ STATIC SCALE (Y/N) ☒ X TEST TRUCKS
- ☐ 1 NUMBER OF TRUCKS COMPARED ☐ 1 NUMBER OF TEST TRUCKS USED
- | | | PASSES PER TRUCK | |
|-------|---------|------------------|--|
| TRUCK | TYPE | SUSPENSION | |
| 1 | Class 9 | Air | |
| 2 | | | |
| 3 | | | |
- TYPE PER FHWA 13 BIN SYSTEM
SUSPENSION: 1 - AIR; 2 - LEAF SPRING
3 - OTHER (DESCRIBE)
7. SUMMARY CALIBRATION RESULTS (EXPRESSED AS A PERCENT)
MEAN DIFFERENCE BETWEEN ---
- | DYNAMIC AND STATIC GVW | -3.76% | STANDARD DEVIATION | 1.30% |
|---------------------------------|--------|--------------------|-------|
| DYNAMIC AND STATIC SINGLE AXLES | -1.70% | STANDARD DEVIATION | 2.44% |
| DYNAMIC AND STATIC DOUBLE AXLES | -4.17% | STANDARD DEVIATION | 2.03% |
8. ☐ 1 NUMBER OF SPEEDS AT WHICH CALIBRATION WAS PERFORMED
9. DEFINE THE SPEED RANGES USED (MPH) ☐ 59 mph _____
10. CALIBRATION FACTOR (AT EXPECTED FREE FLOW SPEED) Sensor #1= .1992, Sensor #2= .2068
11. ** IS AUTO-CALIBRATION USED AT THIS SITE? (Y/N) ☒ Yes
IF YES, LIST AND DEFINE AUTO-CALIBRATION VALUE: Site is set to auto-calibrate every week.
1 range is used. 11,000 pounds steer axle weigh is the target.

CLASSIFIER TEST SPECIFICS***

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

13. METHOD TO DETERMINE LENGTH OF COUNT ___ TIME ___ NUMBER OF TRUCKS

14. MEAN DIFFERENCE IN VOLUMES BY VEHICLES CLASSIFICATION:

*** FHWA CLASS 9	___	___	___	FHWA CLASS	___	___	___	___
*** FHWA CLASS 8	___	___	___	FHWA CLASS	___	___	___	___
				FHWA CLASS	___	___	___	___
				FHWA CLASS	___	___	___	___

*** PERCENT "UNCLASSIFIED" VEHICLES: ___ . ___

PERSON LEADING CALIBRATION EFFORT:

CONTACT INFORMATION:

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☐ DATA TRIGGERED SYSTEM REVISION ☐ NEW EQUIPMENT INSTALLATION
☐ OTHER (SPECIFY) _____
4. * SENSORS INSTALLED IN LTPP LANE AT THIS SITE (CHECK ALL THAT APPLY):
☐ BARE ROUND PIEZO CERAMIC ☒ BARE FLAT PIEZO ☐ BENDING PLATES
☐ CHANNELIZED ROUND PIEZO ☐ LOAD CELLS ☐ QUARTZ PIEZO
☐ CHANNELIZED FLAT PIEZO ☒ INDUCTANCE LOOPS ☐ CAPACITANCE PADS
☐ OTHER (SPECIFY) _____
5. EQUIPMENT MANUFACTURER: INTERNATIONAL ROAD DYNAMIC

WIM SYSTEM CALIBRATION SPECIFICS**

6. ** CALIBRATION TECHNIQUE USED:
☐ TRAFFIC STREAM -- ☐ STATIC SCALE (Y/N) ☒ TEST TRUCKS
- ☐ 1 NUMBER OF TRUCKS COMPARED ☐ 1 NUMBER OF TEST TRUCKS USED
- | | <u>PASSES PER TRUCK</u> | | |
|--------------------------------------|-------------------------|---------|------------|
| | TRUCK | TYPE | SUSPENSION |
| TYPE PER FHWA 13 BIN SYSTEM | 1 | Class 9 | Air |
| SUSPENSION: 1 - AIR; 2 - LEAF SPRING | 2 | | |
| 3 - OTHER (DESCRIBE) | 3 | | |
7. SUMMARY CALIBRATION RESULTS (EXPRESSED AS A PERCENT)
MEAN DIFFERENCE BETWEEN ---
- | | | | |
|---------------------------------|--------|--------------------|-------|
| DYNAMIC AND STATIC GVW | -2.66% | STANDARD DEVIATION | 2.49% |
| DYNAMIC AND STATIC SINGLE AXLES | -2.59% | STANDARD DEVIATION | 4.89% |
| DYNAMIC AND STATIC DOUBLE AXLES | -2.72% | STANDARD DEVIATION | 2.58% |
8. ☐ 1 NUMBER OF SPEEDS AT WHICH CALIBRATION WAS PERFORMED
9. DEFINE THE SPEED RANGES USED (MPH) ☐ 59 mph _____
10. CALIBRATION FACTOR (AT EXPECTED FREE FLOW SPEED) Sensor #1= .3663, Sensor #2= .3965
11. ** IS AUTO-CALIBRATION USED AT THIS SITE? (Y/N) ☒ Yes
IF YES, LIST AND DEFINE AUTO-CALIBRATION VALUE: Site is set to auto-calibrate every week.
1 range is used. 11,000 pounds steer axle weigh is the target.

CLASSIFIER TEST SPECIFICS***

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

PERSON LEADING CALIBRATION EFFORT:
CONTACT INFORMATION:

rev. November 9, 1999

<p align="center">SHEET 15 LTPP TRAFFIC DATA</p> <p align="center">LOG OF CHANGES AT GPS TEST LOCATIONS WITH PERM. AVC OR WIM</p>	*STATE ASSIGNED ID	[P10]
	*STATE CODE	[53]
	*SHRP SECTION ID	[1005]

File: 800.18.1.12
531005

LOCATION SR 90 TYPE EQUIP. Piezo (Class 1)

MP # 218.3 MODEL # IRD 1060

DATE OF CHANGE	TIME OF CHANGE	DESCRIPTION OF CHANGE	PERSON MAKING CHANGE	PHONE #	NEW EQUIP. SERIAL #
8/6/08	(07:45 - 13:30)	Ritzville1-P10 Calibrated site with truck. Copied log and parameter files. (HN)	HN		
8/18/08		<p>Storm rolls through as semi-trucks crash on I-90 12:45 AM PDT on Tuesday, August 19, 2008</p> <p>RITZVILLE, WA. -- A semi-truck carrying cars slammed into the back of another semi-truck on I-90 near Ritzville Monday night. Washington State Patrol troopers couldn't confirm if weather was a factor in the crash, but a storm packing high winds and rain was roaring through when the wreck happened. No one was injured. One eastbound lane of I-90 was shut down while the mess was cleaned up.</p> <p>8/19/-8 I-90 - Interstate 90 eastbound milepost 190, 10 miles east of Moses Lake is closed due to a semi collision. A detour is available via local roads. Estimated time to open the roadway is 12:00 p.m. (Tom)</p>			

<p style="text-align: center;">SHEET 15</p> <p style="text-align: center;">LTPP TRAFFIC DATA</p> <p style="text-align: center;">LOG OF CHANGES AT GPS TEST LOCATIONS WITH PERM. AVC OR WIM</p>	*STATE ASSIGNED ID	[P10]
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MP # 218.3 MODEL # IRD 1060

[illegible]