



INTERNATIONAL ROAD DYNAMICS INC.

# LTPP SPS PHASE II

## WEIGH-IN-MOTION SITE ACCEPTABILITY ASSESSMENT REPORT

PENNSYLVANIA SPS-6  
LTPP ID 420600  
JUNE 27, 2006  
CLIN 2001 TASK ORDER 14



CONTRACT NO. DTFH61-05-D-00001



LONG TERM  
pavement  
PERFORMANCE

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## 1.0 EXECUTIVE SUMMARY

The Pennsylvania SPS-6 site was visited on June 22, 2006, by the CLIN 1 team and a Weigh-in-Motion (WIM) site acceptability assessment was performed. This site is located approximately 30 miles Northeast of State College on I-80 near the town of Mount Eagle in Centre County. This assessment resulted in the selection and evaluation of a WIM site for the Westbound outside lane at Mile Post 158.2 approximately 7 miles downstream of the SPS-6 pavement test section 420600. Based upon our site evaluation and discussions with the State, it is recommended that a new WIM system utilizing Kistler Quartz technology be installed at this location.

The search for a suitable WIM site location in the vicinity of the SPS-6 test sections was abandoned due to poor pavement condition and the steep grade near the existing WIM site. The State desires to utilize a location approximately 7 miles downstream of the SPS-6 test section in recently installed AC pavement. Currently at this location eastbound and westbound traffic are using the westbound lanes while the eastbound pavement is being rehabilitated. Completion of this paving operation is scheduled to be completed by mid October. The State has given its assurances that the for the most part the truck traffic through the SPS test sections and that through proposed WIM site location is the same. As a result, the installation of the WIM system and warranty and maintenance provisions will be modified accordingly, and a double threshold Quartz array will be installed in the LTPP lane to ensure the WIM meets the accuracy requirements specified by FHWA

The selected WIM site is located within a tangent section of roadway and the grade is relatively flat. Vehicles track smoothly through this area at speeds between 65 and 70 MPH. Traffic flow is moderate on this four lane Interstate.

A.C. power and land line telephone service is not readily available for the WIM system at this location. It is recommended by the State that the site utilize solar power and a CDMA (Code Division Multiple Access) cellular modem.

Based upon the CLIN 1 team's on-site observations, the adequacy of the pavement smoothness from 325 feet upstream to 75 feet downstream of the proposed WIM scale location ("WIM Pavement") is currently questionable and, as a result, WIM accuracy may or may not be met. A future evaluation should include visual observation of trucks passing through the site as well as an analysis of new pavement profile data by our team. Upon confirmation that the pavement smoothness is adequate for the WIM system to meet accuracy requirements, this site can be instrumented with WIM.

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## 2.0 EXISTING ROADWAY

### 2.1 PAVEMENT AND GEOMETRICS

The existing roadway pavement as well as the outside and inside (median) shoulders approaching, through, and departing the proposed WIM site are AC. The two westbound lanes were constructed in October 2005, each are 12 feet wide with a 10 foot wide outside shoulder and a 4 foot wide inside (median) shoulder. The pavement's thickness is 24 inches (19 inch base, 3 inch binder, 2 inch wearing). The alignment is tangent and the grade is relatively flat

### 2.2 OBSERVED TRAFFIC OPERATING CHARACTERISTICS

At this time east and west bound traffic are using the westbound lanes so vehicle operating characteristics at this location can't be determined at this time. However based on the site location traffic should flow moderately and good lane discipline should be kept.

### 2.3 SITE CONFORMANCE TO EVALUATION CRITERIA

A number of site parameters were evaluated at the proposed WIM location to confirm site acceptability. These site parameters included items such as pavement, traffic patterns, availability of power and telephone, and logistics. These parameters were rated as either "Pass", "Requires Attention", or "To Be Performed". At the end of this section, recommendations on site acceptance and any corrective action required is noted.

### 2.4 PAVEMENT TYPE AND CONDITION- PASS

The existing roadway pavement in the westbound (LTPP) direction at this location consists of an 8 month old 24 inch AC (19 inch base, 3 inch binder, 2 inch wearing). **Base** = Superpave PG-64-22 10 to < 30 million ESals 37.5 mm. **Binder** = Superpave PG-76-22 >/= 30 million ESals 19mm. **Wearing** = Superpave PG-76-22 >/= 30 million ESals 12.5 mm SRL-E

During conversations with the State it has been determined that it is not possible to replace the existing pavement with a 400 foot ground PCC slab to accommodate the WIM system's in-pavement sensors as preferred and recommended by FHWA. As a result the installation of the WIM system and warranty and maintenance provisions will be modified accordingly. The AC approach, WIM, and departure pavements are in very good condition

### 2.5 OBSERVED PAVEMENT SMOOTHNESS- REQUIRES ATTENTION

Although the AC approach, WIM, and departure pavements are in very good condition and would visually appear to be smooth, WIM accuracy may or may not be met A future evaluation should include visual observation of trucks passing

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through the site as well as an analysis of new pavement profile data by our team. Upon confirmation that the pavement smoothness is adequate for the WIM system to meet accuracy requirements, this site can be instrumented with WIM.

## **2.6 ANALYSIS OF PAVEMENT PROFILE DATA- TO BE PERFORMED**

Profile data analysis of the pavement at or near the recommended WIM site location for conformance to SPS smoothness criteria has not been provided to the CLIN 1 team for analysis.

## **2.7 ROADWAY GEOMETRICS- PASS**

The roadway's horizontal alignment is tangent, grade is minimal, and the lane in which the sensors are to be installed is 12 feet wide. The pavement cross slope is adequate for proper roadway drainage.

## **2.8 TRAFFIC OPERATING CHARACTERISTICS- PASS**

At this time east and west bound traffic are using the westbound lanes so vehicle operating characteristics at this location can't be determined at this time. However based on the site location traffic should maintain good lane discipline.

## **2.9 TRUCK TRAFFIC COMPARISON BETWEEN WIM AND TEST SITE- PASS**

The proposed WIM site location is 7 miles upstream of the SPS-6 test site and there are on and off points that could be used by local truck traffic. The State asserts that for the most part the eastbound truck traffic composition at the proposed WIM site location is the same as that through the SPS-6 test section location.

## **2.10 POTENTIAL WIM INTERFERENCE SOURCES- PASS**

The nearest source of any potential interference is overhead power lines which are 300 feet upstream of the proposed WIM system location. These are "service" lines and will not interfere with system performance.

## **2.11 ACCESS TO POWER AND PHONE SERVICES- PASS**

Both power and phone are not readily available at the proposed new WIM cabinet location. The State has requested to use solar power and cellular modem for communication.

## **2.12 EQUIPMENT INSTALLATION CAPABILITY- PASS**

There is an adequate location for the WIM controller cabinet in the median which is approximately 150 feet wide. The cabinet should be installed at least 75 feet from the edge of westbound passing lane. There is good visibility from the

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cabinet location of the sensors and approaching vehicles. There is adequate room adjacent to the cabinet location for service facilities. Roadway and overall site drainage is very good but it would appear that ponding or movement of water is likely to occur between the edge of the roadway and embankment. There is no foreseen potential for ponding or flooding at the recommended cabinet and pull box locations. The width and structural stability of the adjacent lane and median shoulder allow a lane closure and traffic shift which will provide safe clearance in the work zone from live traffic during installation of the WIM system.

### **2.13 POTENTIAL TRAFFIC CONTROL / WORK ZONE SAFETY ISSUES- PASS**

The traffic control should go smoothly, given the good approach sight distance, the lack of nearby intersections or interchanges, and the ability to move traffic's left wheels onto the adjacent lane's median shoulder. No other work zone safety issues are foreseen at this site.

### **2.14 TRUCK CIRCUIT- PASS**

The nearest usable EB truck turnaround is I-80 Exit 161, which is located 3 miles upstream of the WIM site.

The nearest useable WB truck turnaround is I- 80 Exit 158 (Milesburg), which is located 1 mile downstream of the WIM site.

The test truck round trip circuit route is 7 miles. There are no foreseen potential restrictions and the turnaround locations are easily accessed and maneuvered. The estimated lap time is 10 minutes.

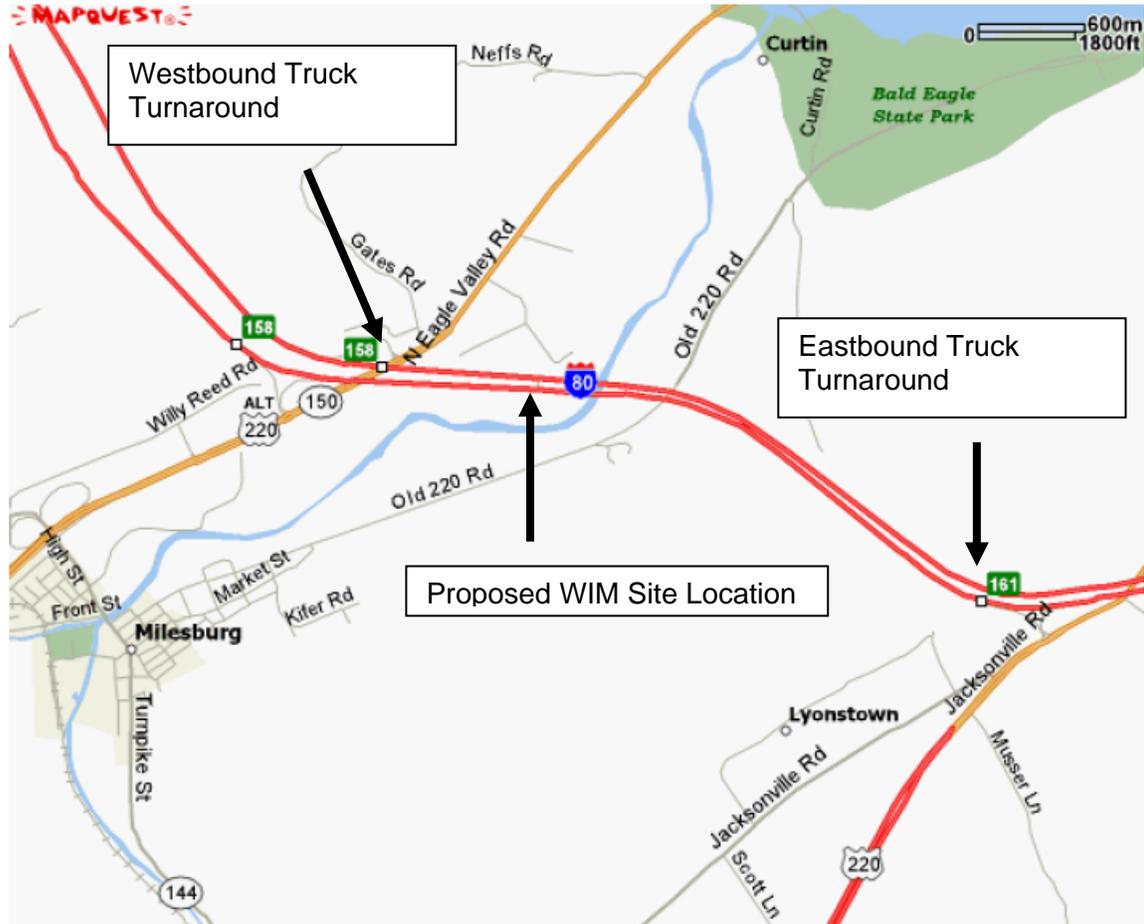


Figure 1: Truck Circuit Map

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## 2.15 RECOMMENDATIONS ON SITE ACCEPTANCE / CORRECTIVE ACTIONS

No further corrective action is required to this site location at this time. This site is acceptable for the installation of the proposed WIM System. (Please see the notes listed below for clarification and additional information)

Notes:

- During conversations with the State it has been determined that it is not possible to replace the existing pavement with a 400 foot ground PCC slab to accommodate the WIM system's in-pavement sensors as preferred and recommended by FHWA. As a result the installation of the WIM system and warranty and maintenance provisions will be modified accordingly.
- In the absence of a 400 foot ground PCC slab to accommodate the WIM system's in-pavement sensors, a double threshold Quartz array will be installed in the LTPP lane to ensure the WIM meets the accuracy requirements specified by FHWA.
- The State would like to instrument the westbound passing lane with loop-piezo-loop to collect classification data. In the future they would like to instrument the eastbound lanes with classification sensors as well.
- The State will need to provide cellular service for the CDMA modem at the WIM site.
- The state will need to provide a solar power system for the WIM site.

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### **3.0 TRAFFIC DATA REVIEW**

**Vehicle distributions of all trucks (FHWA Class 4 and higher) – 25.3%**

**Vehicle distributions for heavy trucks (FHWA Class 6 and higher) – 36%**

**Volume of trucks comprising of 10 % or more of truck population**

**Class 9 vehicles – 34%**

**Volume of heavy trucks comprising 10 % or more of heavy truck population**

**Class 9 vehicles – 36%**

**The 2005 Traffic Volumes provided indicate the LTPP ADT to be 19,000**

The data as noted has been collected by Pennsylvania Department of Transportation as supplied from March 2005 traffic study.

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## **4.0 PAVEMENT EVALUATION**

In determining WIM site acceptability, visual on-site observation of the existing AC pavement was made by the CLIN 1 Team..

### **4.1 SURFACE CONDITION**

The site evaluation concentrated efforts on the range of pavement from 900 feet prior to and 100 feet following the proposed WIM scale location. Pictures were taken to document the surface condition, several of which are presented in Appendix E.

#### **4.1.1 AC PAVEMENT 325 FEET IN ADVANCE OF AND 75 FEET FOLLOWING PROPOSED WIM SCALE LOCATION (“WIM PAVEMENT”)**

The AC pavement was constructed in October of 2005. The structural condition of the AC pavement and shoulder throughout the 400 foot section appear to be very good. During conversations with the State it has been determined that it is not possible to replace the existing pavement with a 400 foot ground PCC slab to accommodate the WIM system’s in-pavement sensors as preferred and recommended by FHWA. As a result the installation of the WIM system and warranty and maintenance provisions will be modified accordingly. The State advises that the pavement is 24 inch thick (19 inches of base asphalt, 3 inch lift, with 2 inch wearing).

#### **4.1.2 PCC PAVEMENT UPSTREAM AND DOWNSTREAM OF WIM PAVEMENT**

There are no discernable differences between the 400 foot “WIM Pavement” section and the “WIM Pavement” approach and departure pavements included in the 1000 foot evaluation section. The entire 1000 foot section was constructed in October 2005. There are no distress conditions of any consequence.

#### **4.1.3 SHOULDER CONDITION**

The roadway shoulders are AC throughout the study area and were constructed in October 2005 in conjunction with the traveled way pavement. There are no distress conditions of any consequence in the shoulder pavement. The shoulder pavements are in very good condition.

## **4.2 SURFACE PROFILE**

Observations of trucks and other vehicle types approaching the selected scale location exhibited only minimal body motion. Several automobile “drive throughs” during the site assessment appeared to confirm the above noted observations. Only minimal vehicle body and suspension motion could be felt passing through the proposed scale location.

### **4.3 PAVEMENT EVALUATION SUMMARY**

Profile data analysis of the pavement at or near the recommended WIM site location for conformance to SPS smoothness criteria has not been performed. Evaluated and new profiling data need to be provided to our team for analysis to confirm that the pavement smoothness is adequate for the installation of the WIM system. Once this is performed and deemed acceptable, this site can be instrumented with WIM.

## 5.0 PROPOSED WIM SITE- INFORMATION

### 5.1 LOCATION – I-80, MP 158.2

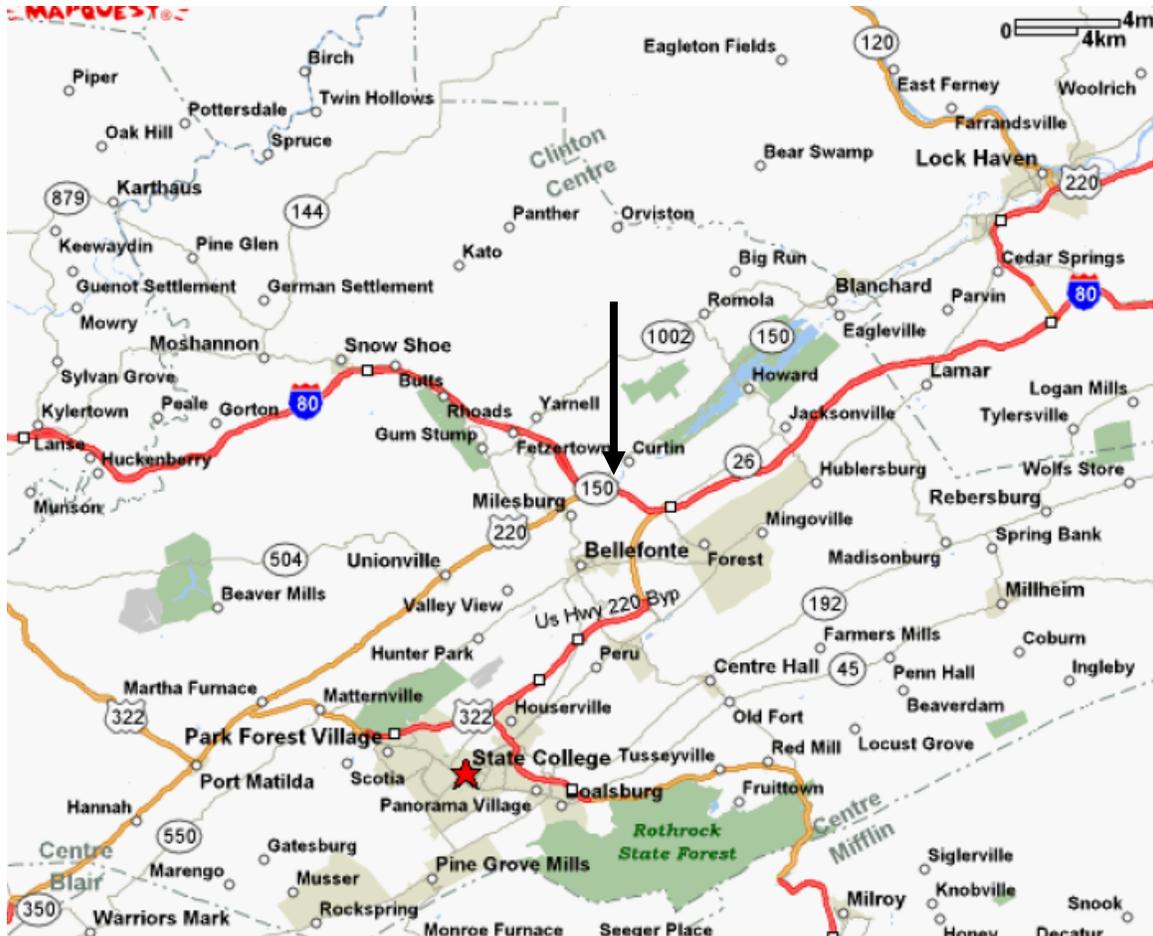
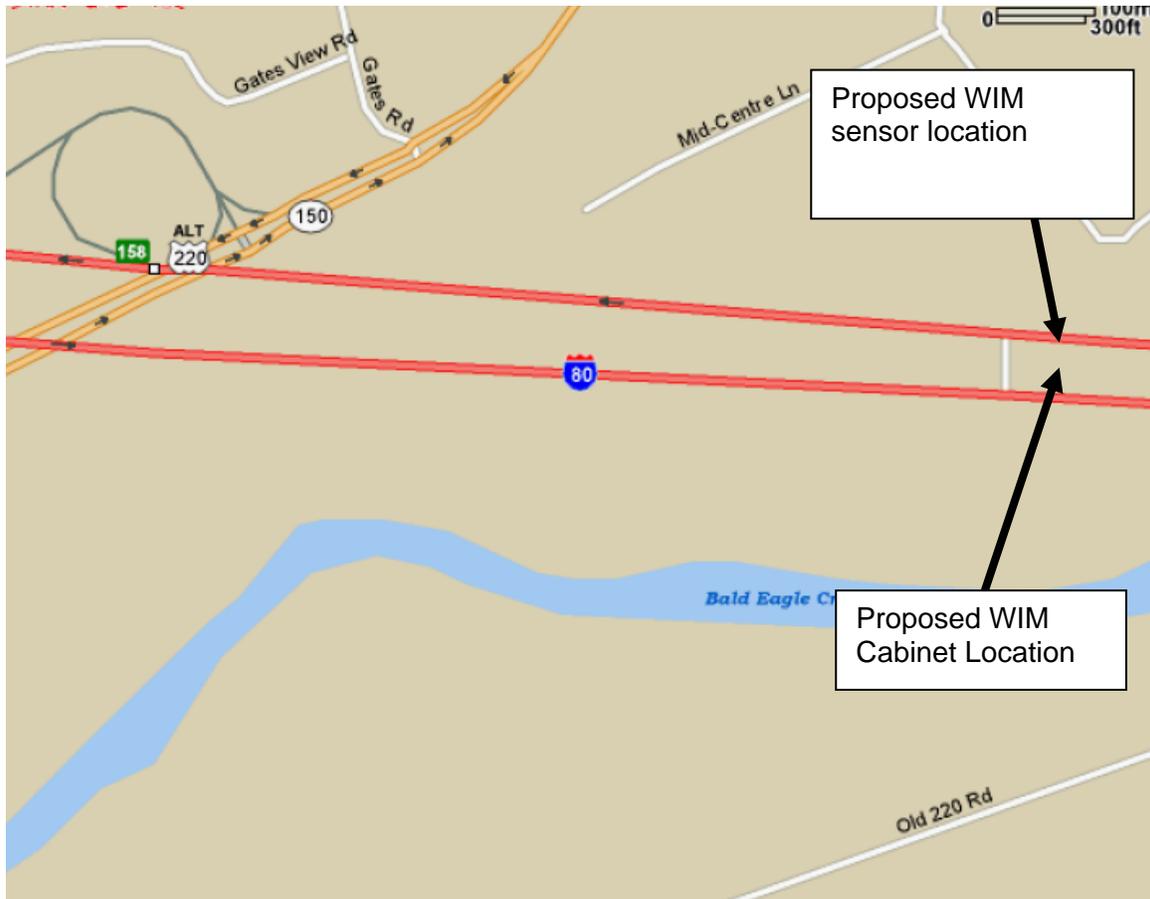


Figure 2: Map of the I-80 WIM Site



**Figure 3: Map of the I-80 WIM Site at Milepost 158.2**

The location for the proposed WIM site is the Westbound outside lane at milepost 158.2 near the town of Mount Eagle, approximately 30 miles Northeast of State College. The proposed location of the new scales is 7 miles upstream from the existing piezo WIM scales. The proposed WIM controller cabinet will be located approximately 75 feet off the edge of the left travel lane in the median adjacent to the new Kistler sensors. In addition to this the State would like to instrument the westbound passing lane with classification sensors.

This proposed new WIM site is approximately 7 miles upstream from the SPS-6 pavement study location.

## **6.0 RECOMMENDED WIM TECHNOLOGY**

The State has expressed the desire to utilize Quartz Sensor technology.

Based upon the site evaluation and feedback from the State, it is recommended that a new WIM system utilizing Quartz technology be installed into the existing AC roadway. (Please see the notes listed below for clarification and additional information)

### Notes:

- During conversations with the State it has been determined that it is not possible to replace the existing pavement with a 400 foot ground PCC slab to accommodate the WIM system's in-pavement sensors as preferred and recommended by FHWA. As a result the installation of the WIM system and warranty and maintenance provisions will be modified accordingly.
- In the absence of a 400 foot ground PCC slab to accommodate the WIM system's in-pavement sensors, a double threshold Quartz array will be installed in the LTPP lane to ensure the WIM meets the accuracy requirements specified by FHWA.
- The westbound passing lane that the State would like to instrument with classification sensors in conjunction with the LTPP lane is AC.

### 6.1 RECOMMENDED LOCATION AND LAYOUT FOR THE WIM SYSTEM

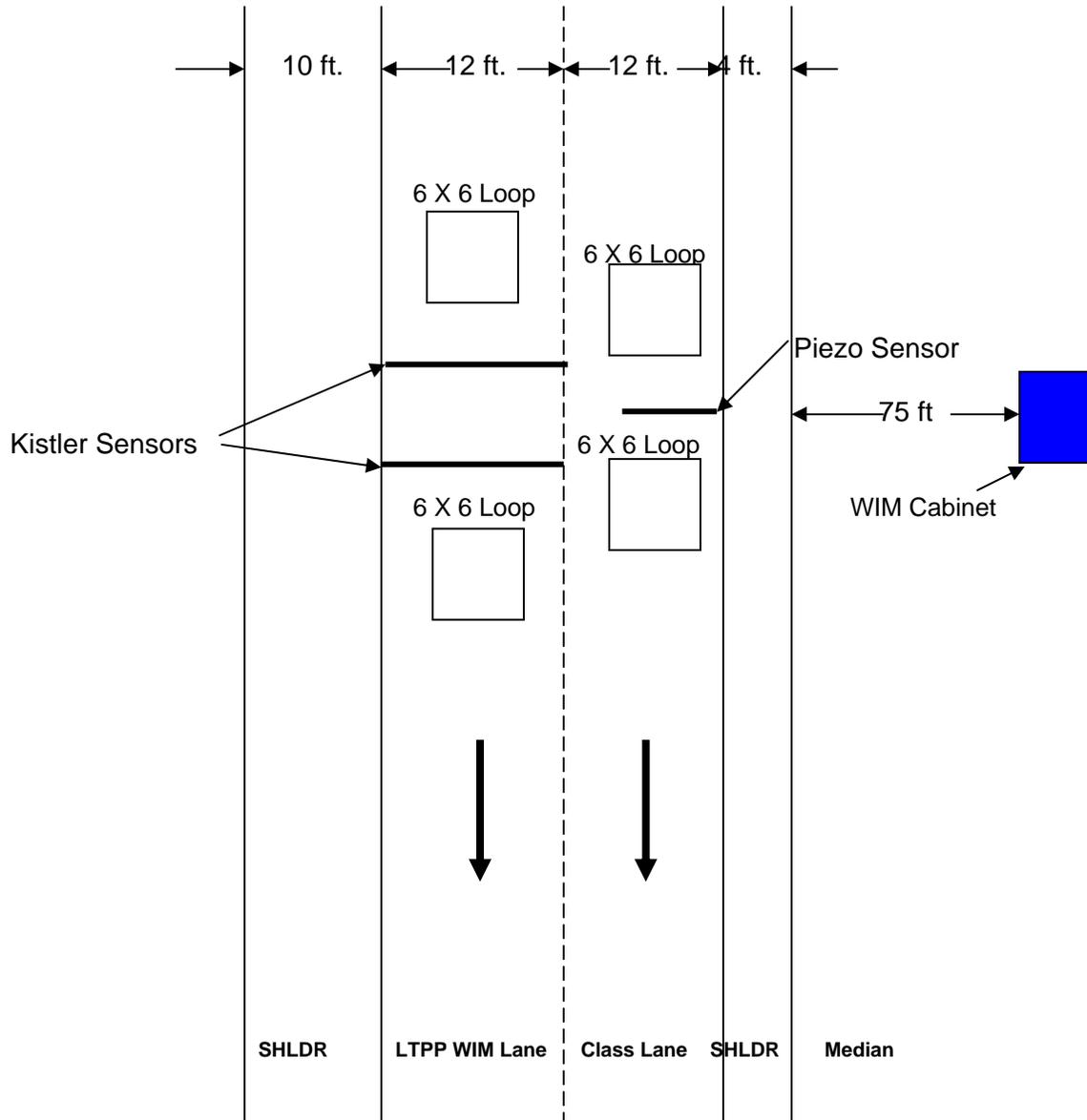


Figure 4: Proposed WIM Site Layout

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## **A.0 COORDINATION DETAILS**

Task Order #14, which authorized the CLIN 2001 “Determine Acceptability of Proposed Site” for the Pennsylvania SPS-6 Site (LTPP ID 420600), was issued on June 19, 2006.

Contacts were made with interested parties as follows:

- Contracting Officer’s Technical Representative (COTR)
  - Debbie Walker – FHWA-LTPP ph: 202-493-3068
- State Highway Agency
  - Gaye Liddick – Pennsylvania DOT ph: 717-787-5983
- LTPP Regional Support Contractor (RSC)
  - Basel Abukhater – RSC/Stantec ph: 716-632-0804
- FHWA Division Office
  - Zahur Siddiqui– FHWA Div Rep ph: 717-221-3410

Initial site selection reviews and assessments were made on June 22, 2006 by Bruce Myers (IRD), Gaye Liddick (PennDOT), Todd Rotett (PennDOT).



INTERNATIONAL ROAD DYNAMICS INC.

# LTPP SPS PHASE II

## WEIGH-IN-MOTION SITE ACCEPTABILITY PRE-VISIT HANDOUT GUIDE

PENNSYLVANIA SPS-6  
LTPP ID 420600

Date: June 22, 2006



**CONTRACT NO. DTFH61-05-D-00001**



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## **B.0 PRE-VISIT HANDOUT GUIDE**

### **B.1 SCHEDULE**

- a. Briefing session
  - i. Meeting is scheduled for 11:30 a.m. June 22, 2006 at the PennDOT field office Centre County.
- b. Site visit
  - i. July 22, 2006.

### **B.2 BRIEFING SESSION JUNE 22, 2006, POINTS OF CONTACT, PHONE No**

- a. Contracting Officer's Technical Representative (COTR)  
Debbie Walker – FHWA-LTPP ph: 202-493-3068
- b. State Highway Agency  
Gaye Liddick – Pennsylvania DOT ph: 717-787-5983
- c. LTPP Regional Support Contractor (RSC)  
Basel Abukhater – RSC/Stantec ph: 716-632-0804
- d. FHWA Division Office  
Zahur Siddiqui– FHWA Div Rep ph: 717-221-3410

### **B.3 INFORMATION REQUESTS**

- a. From COTR
  - i. FHWA Division contact person
  - ii. New pavement profile from RSC if recent profile data unavailable
- b. From RSC
  - i. SHA contact person
  - ii. SPS roadway section layouts (plan view and/or stationing or mileposts)
  - iii. Recent pavement profile data (within the past year)
- c. From SHA
  - i. As-built info on roadway at proposed site
    - 1. Pavement cross section and structural section
    - 2. Alignment and grade
    - 3. Any utilities located in WIM install work area
  - ii. Location and general availability of power and phone services, service providers, service provider contacts and phone numbers (may be beneficial if power and phone utility reps be requested to participate in briefing session and/or site visit)
  - iii. Will SHA agree to extend power and phone services from existing available access points to demarcation points near planned controller cabinet location?
  - iv. If existing roadway pavement is AC or inadequate PCC will SHA consider replacement with 400' PCC slab if recommended per site assessment?
  - v. What permits will be needed to install equipment and what are procedures and time frames for obtainment?

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- vi. Required cabinet clear zone from edge of traveled way?
  - vii. If no detour routing available at proposed site (or three or more adjacent lanes), will SHA permit shifting inside lane traffic partially onto inside shoulder to provide safe clearance during installation in outside lane?
  - viii. Historic truck traffic data?

#### **B.4 SITE LOCATION INFORMATION**

- a. Proposed WIM site
  - i. I-80 Mile Post 158.2 WB Outside Lane
- b. Briefing session location
  - i. PennDOT field office Centre County.
- c. Nearest major airport
  - i. State College, PA

Distribution --- COTR, RSC, SHA, FHWA Division, Site Assessment Team



INTERNATIONAL ROAD DYNAMICS INC.

# LTPP SPS PHASE II

## WEIGH-IN-MOTION SITE ACCEPTABILITY

### SITE VISIT EVALUATION FORM

#### PENNSYLVANIA SPS-6 LTPP ID 420600

Date of Site Visit: June 22, 2006



**CONTRACT NO. DTFH61-05-D-00001**



U.S. Department of Transportation  
**Federal Highway  
Administration**

**LONG TERM  
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## C.0 SITE EVALUATION FORM

### C.1 PROPOSED WIM LOCATION

Proposed WIM Site Location – 4 Lane Roadway (2 Lanes each Direction)

Route: I-80 Mile Post: 158.2 Direction: WB Lane: Outside

Proposed WIM Site approximately 7 miles East of SPS Test Section 420600. The Site is located in Centre County.

#### C.1.1 EXISTING ROADWAY SURROUNDING THE PROPOSED WIM SITE

Type Pavement: AC

Pavement Age: 8 months old

Lane Width: 12 feet

Thickness: 24 inches

Observed Structural Soundness: Very Good

Observed Smoothness: Fair

Outside WB Shoulder Type: AC

Width: 10 feet

Outside WB Shoulder Condition: Very Good

Inside WB Shoulder Type: AC

Width: 4 feet

Inside WB Shoulder Condition: Very Good

#### C.1.2 PAVEMENT 325' PRIOR AND 75' FOLLOWING WIM SCALE LOCATION

Type: AC

Structural Soundness: Very Good

Smoothness: Fair

Thickness: 24 inches

Jointed or Continuous: N/A

Notes/Comments on Pavement:

Although the pavement is in good condition in the 2 westbound lanes in the LTPP direction, there is concern with the AC pavement being strong enough to hold the WIM Sensors into place over a 5 year period. The State has indicated that they will not be installing a 400 foot blanket ground PCC WIM slab for the installation of WIM weighing sensors as preferred and recommended by FHWA. As a result the installation of the WIM system and warranty and maintenance provisions will need to be modified accordingly and a double threshold Quartz array will be installed into the LTPP lane to ensure the WIM meets the accuracy requirements specified by FHWA.

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### C.1.3 ROADWAY GEOMETRICS

Horizontal Alignment: Tangent Grade: + 1%  
Cross-slope: 2% Lane width: 12 feet

### C.1.4 OBSERVED TRAFFIC OPERATING CHARACTERISTICS

Passing, merging, not following lane lines? Not able to determine  
Stop and go traffic, congestion periods? Not able to determine  
Traffic signals/interchanges affecting traffic? None anticipated  
Other adverse traffic flow conditions? Not able to determine  
Truck traffic at "cruising" speed (no lugging)? Not able to determine  
Truck traffic staying within lane lines? Not able to determine  
Observed truck suspension or body motion dynamics? Not able to determine  
Truck traffic composition same at WIM site and SPS site? See notes  
Truck traffic on/off locations between WIM site and SPS site? See notes  
Posted Speed Limit: 70MPH  
Observed Truck Speeds: Not able to determine

Notes/Comments on Geometrics and/or Traffic Operating Characteristics:  
Until the road is opened in October 2006 the information above can't be obtained. However based on the location of the site we anticipate good traffic flow, minimal lane changes and relatively smooth roadway. For the most part truck traffic composition from the SPS Test Section to the Proposed WIM Location is the same. The grade is less than 0.5% throughout the area 900 feet upstream and 100 feet downstream of the site. Vehicles track smoothly through this area at speeds between 70 and 80 MPH. The posted speed is 75 MPH for all traffic. There is very good lane discipline at this site. Traffic flow is moderate on this four lane, two direction Interstate.

### C.1.5 ACCESS TO UTILITY SERVICES

Potential source(s) for power: A.C. Power is not readily available at the proposed new WIM cabinet location. The State has requested to use solar power. and cellular modem for communication.

Potential source(s) for telephone: Land line phone service is not readily available at the proposed new WIM cabinet location. The State has requested to use a cellular modem for communication.

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### C.1.6 EQUIPMENT INSTALLATION CAPABILITY

Adequate location for controller cabinet? Yes, Large median approximately 150 feet wide.

Distance from edge of traveled way to cabinet? 75 feet from edge of shoulder.

Visibility from cabinet of sensors and approaching vehicles? Very Good

Adequate location for service facilities? Yes

Adequate drainage for scale pits? N/A

Adequate roadway and overall site drainage? Yes, except from shoulder to embankment.

Potential for ponding or flooding at cabinet or pullboxes? Minimal at recommended location.

Potential for traffic control problems during installation? Minimal

Ability to provide safe clearance in work zone from live traffic via:

- OK from State Agency to use opposite shoulder for traffic shift
- Multiple Adjacent Lanes

Notes/Comments on Equipment Installation Capability:

The State will need to provide service for CDMA modem, Verizon would be the CDMA carrier for this area. The roadway is moderately busy. We will have to work closely with the State to coordinate closures lane. There are 4 feet available on inside lane shoulder to accommodate a traffic shift.

### C.1.7 POTENTIAL WIM SENSOR/EQUIPMENT INTERFERENCE SOURCES

Overhead power lines? 300 feet east of proposed WIM location, no problem

### C.1.8 CONDITIONS FOR USE OF TEST TRUCKS FOR CALIBRATION AND EVALUATIONS

Direction EB - Nearest usable truck turnaround location:

I-80, Exit 161 US26                      Distance from WIM: 3 Miles

Direction WB - Nearest usable truck turnaround location:

I-80, Exit 159                              Distance from WIM: 1 Miles

Circuit travel distance: 8 Miles              estimated lap time: 9 Minutes

Potential circuit route restrictions? None

Identification and location of trucking firm and certified static scales:

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Name Klapec Trucking Contact Bert Klapec

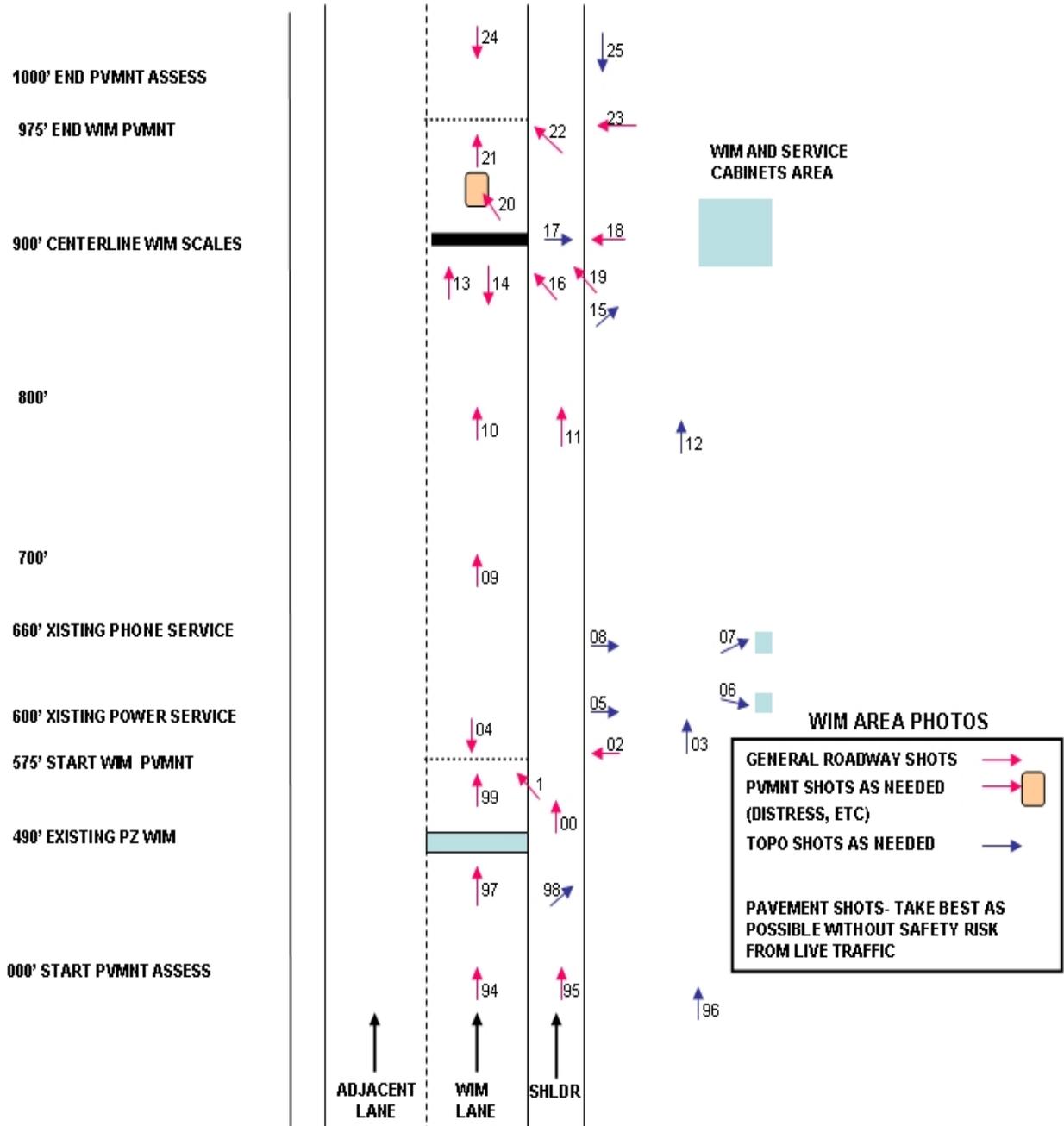
Address P.O. Box 961 Oil City PA 16301

Phone 814-677-4448 Hours 8:00 am to 5:00 pm

Notes/Comments on Test Truck Circuit and Static Weighing Facility

Klapec Trucking has 3S2 Tractor Trailer Air Ride vehicles and drivers available given 2-3 weeks notice. They have a certified static scale located near there facility.

**C.2 LOCATION LOG OF PHOTOS**



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### C.3 EQUIPMENT AND MATERIALS

- Site Evaluation Forms
- Graph paper and note paper
- Clipboard
- Pens & pencils
- Small stapler
- Digital camera, with PC cable
- GPS receiver
- Notebook PC
- Calculator
- Cell phone
- Site Pre-visit Handout Guide
- Metal tape measure (25 ft.)
- Measuring wheel (ft.) and/or 100 ft. rag tape
- Folding rule (6 foot)
- Hand level
- Small torpedo level
- Keel markers
- Spray can white paint
- String Line
- Line Level
- Hammer and Concrete Nails
- \_\_\_\_\_

Request furnish on-site by Highway Agency:

- Spray can white paint
- Lath, 4 ft.
- Hammer
- Misc. small tools
- Keys for known Agency service cabinets  
Note: Key for existing cabinet is a standard Type II

Proper attire for field work and expected weather:

- Durable shoes
- Cold weather layering
- Rain gear
- \_\_\_\_\_

Safety equipment per State Highway Agency requirements:

- Hard hat
- Safety vest – type Hi-Vis Safety Yellow
- Steel toe shoes
- Other required equipment \_\_\_\_\_

**D.0 SHEET 17**

Sheet 17	*STATE_CODE	LTPP
LTPP Traffic Data	*SPS PROJECT ID	420600
WIM SITE INVENTORY	*SPS WIM ID	SPS-6

1.\* ROUTE  MILEPOST  LTPP DIRECTION - N S E W

2.\* WIM SITE DESCRIPTION - Grade  % Sag vertical Y / N  
 Nearest SPS section upstream of the site   
 Distance from sensor to nearest upstream SPS section  ft

3.\* LANE CONFIGURATION  
 Lanes in LTPP direction  Lane width  ft  
 Median - 1 - painted  
           2 - physical barrier  
           3 - grass  
           4 - none  
 Shoulder - 1 - curb and gutter  
              2 - paved AC  
              3 - paved PCC  
              4 - unpaved  
              5 - none  
 Shoulder width  ft

4.\* PAVEMENT TYPE

8. RAMPS OR INTERSECTIONS  
 Intersection/driveway within 300 m upstream of sensor location Y / N - distance   
 Intersection/driveway within 300 m downstream of sensor location Y / N- distance   
 Is shoulder routinely used for turns or passing? Y / N

Form completed by:  Date:

## E.0 PHOTOGRAPHS

### E.1.1 GENERAL SITE VIEW OF THE ROADWAY APPROACHING WIM SITE



### E.1.2 DOWNSTREAM VIEW OF ROADWAY AT START OF WIM PAVEMENT SECTION



**E.1.3 UPSTREAM VIEW OF ROADWAY AT START OF WIM PAVEMENT SECTION**



**E.1.4 PAVEMENT TYPE**



**E.1.5 RECOMMENDED SCALE LOCATION**



**E.1.6 RECOMMENDED CABINET LOCATION, ON EMBANKMENT SLOPE**



2006/06/22

**E.1.7 WIM SITE, FACING UPSTREAM**



