INTERNATIONAL ROAD DYNAMICS INC.

LTPP SPS PHASE II

WEIGH-IN-MOTION SITE ACCEPTABILITY ASSESSMENT REPORT

TENNESSEE SPS-6
LTPP ID 470600
MAY 31, 2006
CLIN 2001 TASK ORDER 10

CONTRACT NO. DTFH61-05-D-00001

U.S. Department of Transportation
Federal Highway Administration

LONG TERM Pavement PERFORMANCE

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1.0 EXECUTIVE SUMMARY

The Tennessee SPS-6 (Rehabilitation of Rigid Concrete Pavements) test site was visited on April 1st, 2006. The pavement test sections are located in the westbound outside lane on I-40 approximately 12 miles east of Jackson in Madison County. During this visit a search was performed for a suitable Weigh-in-Motion (WIM) site. This search resulted in the selection and evaluation of a WIM site at Mile Post 91.6, approximately 10 miles east of Jackson. It is proposed to install a WIM system for the westbound outside lane approximately 894 feet downstream of the start of SPS-6 pavement test section 470607. In addition to this the State would like to instrument all other lanes with WIM at this time. This proposed WIM site location coincides with the location recommended by the State and the Phase I Contractor. 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.

The existing westbound roadway pavement at this location consists of a three year old AC overlay (9 ¼ inches of AC overall) on top of 9 inches of PCC pavement. The in-road sensors of the existing WIM system were removed during the milling and overlay operation. During conversations with the State it has been determined that it is not possible to replace the existing pavement and install 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, and a double threshold Quartz array will be installed in the LTPP lane to ensure the WIM meets the accuracy requirements specified by FHWA Based on the profile evaluation performed by the Phase I Contractor on October 23, 2003, the 400 foot section of existing pavement 325 feet in advance of to 75 feet following the planned WIM scale location conforms to smoothness requirements for SPS WIM sites and is acceptable to the Phase II contractor. It should be noted that the eastbound lanes that the State would like to instrument in conjunction with the LTPP lane are PCC and we recommend that this be blanket ground prior to installation or the WIM sensors for optimum performance.

The selected WIM site is located within a tangent section of roadway with a relatively flat grade approximately 180 feet downstream of the State's existing WIM system. Vehicles track smoothly through this area at speeds between 65 and 75 MPH. Traffic flow is medium to heavy on this four lane Interstate.

Overhead power lines and a power service is nearby, approximately 160 feet from the proposed WIM location. The telephone service utilized for the existing WIM system, located 180 feet away, is available for the proposed new system. Please note the existing system was solar so power is not available from this cabinet. The State will need to extend power and telephone services to service points within 25 feet of the new cabinet location.

2.0 EXISTING ROADWAY

Visual on-site observation of the existing roadway and traffic operating characteristics were performed and recorded. This included taking roadside measurements, digital photography, and driving over the roadway to evaluate conditions at the proposed location.

2.1 PAVEMENT AND GEOMETRICS

The SPS-6 is a rigid pavement rehabilitation study. The existing I-40 roadway at the study location as well as at the proposed WIM site location 894 feet downstream from the start of test section 470607 consists of 4 lanes, 2 eastbound and 2 westbound. The pavement test sections and the proposed WIM system are located in the outside westbound lane. The existing westbound roadway pavement approaching, through, and departing the proposed new WIM site is AC pavement. The outside and inside (median) shoulders are also AC. The two westbound lanes are each 12 feet wide with a 10 foot wide outside shoulder and a 4 foot wide inside shoulder. It is noted that the AC pavement section at the selected WIM site was constructed in 2003 and is a total 9 ¼ inches in thickness. This overlay covers 9 inches of existing PCC pavement that was installed in 1964. It should be noted that the eastbound pavement is still jointed PCC and is in rough condition when compared to the westbound AC roadway. The roadway alignment is tangent and the grade is relatively flat at the proposed WIM site. The cross-slope of the lanes are +/- 2% toward the outside shoulder.

2.2 OBSERVED TRAFFIC OPERATING CHARACTERISTICS

The medium to heavy traffic flow exhibited good lane discipline, staying well within the lane and shoulder line markings. Traffic is free flowing at all times at speeds between 65 and 75 MPH (posted speed limit is 70 MPH for all traffic). There are no signals or merging in the WIM site vicinity. Trucks are “cruising” through the site at constant speeds. In that there are no significant on/off locations between the WIM site and SPS site, the truck traffic composition at the WIM site is the same as that at the SPS site.

3.0 SITE CONFORMANCE TO EVALUATION CRITERIA

A number of site parameters where 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.

3.1 PAVEMENT TYPE AND CONDITION- *PASS*

The existing roadway pavement in the westbound (LTPP) direction at this location consists of a three year old AC overlay (9 ¼ inches of AC overall) on top of 9 inches of PCC pavement. 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.

3.2 PAVEMENT SMOOTHNESS- *PASS*

The AC approach, departure, and WIM pavements are in good condition. The ride through this area in the westbound direction is smooth and observations of trucks approaching and passing through the proposed scale location show minimal suspension and body motion dynamics.

3.3 ANALYSIS OF PAVEMENT PROFILE DATA- *PASS*

Based on the profile evaluation performed by the Phase I Contractor on October 23, 2003, the 400 foot section of existing pavement 325 feet in advance of and 75 feet following the planned WIM scale location conforms to smoothness requirements for SPS WIM sites and is acceptable to the Phase II contractor.

3.4 ROADWAY GEOMETRICS- *PASS*

The selected WIM site is located within a long tangent section of the roadway, 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.

3.5 TRAFFIC OPERATING CHARACTERISTICS- *PASS*

The general traffic pattern is free flowing with good lane discipline. There are no interchanges or signals affecting traffic flow. The truck traffic is cruising through the site and staying within the lane lines.

3.6 TRUCK TRAFFIC COMPARISON BETWEEN WIM AND TEST SITE- *PASS*

There are no significant exit/entrance locations between the WIM site and the SPS-6 pavement test sections.

3.7 POTENTIAL WIM SYSTEM INTERFERENCE SOURCES- *PASS*

The nearest source of any potential interference, power lines paralleling the eastbound lanes' right-of-way, are standard "service" lines and will not interfere with system performance.

3.8 ACCESS TO POWER AND PHONE SERVICES- *PASS*

Both power and phone are readily accessible and within 180 feet of the proposed new WIM cabinet location. The State will need to extend power and phone services to service points within 25 feet of the proposed WIM cabinet location.

3.9 EQUIPMENT INSTALLATION CAPABILITY- *PASS*

There is an adequate location for the WIM controller cabinet opposite the sensor location between the roadway and the highway right-of-way. The cabinet should be installed at 40 foot clearance from the edge of traveled way to utilize the higher ground located in this area, minimizing the chance of ponding water. There is good visibility from the 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. There is no foreseen potential for ponding or flooding at the recommended cabinet and pullbox locations.

3.10 POTENTIAL TRAFFIC CONTROL / WORK ZONE SAFETY ISSUES- *PASS*

The traffic control should go smoothly, given the good approach sight distance 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 rural site.

3.11 TRUCK CIRCUIT- *PASS*

The nearest usable westbound truck turnaround is I-40 Exit 87 (US 70), which is located 5 miles downstream of the WIM site.

The nearest useable eastbound truck turnaround is I- 40 Exit 93 (SR 152/Law Road), which is located 2 miles upstream of the WIM site.

The test truck round trip circuit route is 14 miles. There are no foreseen potential restrictions and the turnaround locations are easily accessed and maneuvered. The estimated lap time is 15 minutes.

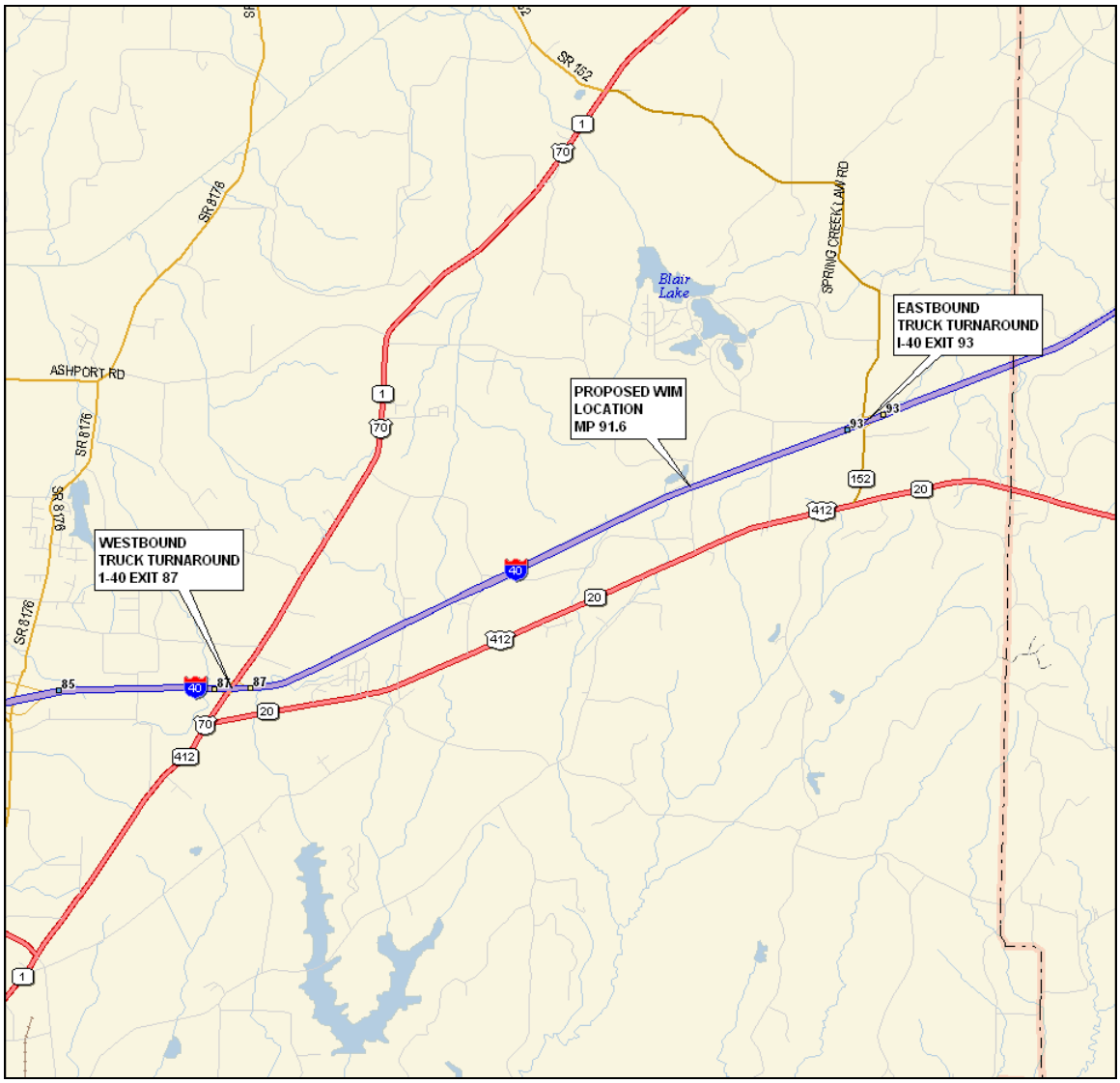


Figure 3.1: Truck Circuit Map, SPS-6 WIM Site on I-40

3.12 RECOMMENDATIONS ON SITE ACCEPTANCE / CORRECTIVE ACTIONS

The State will need to provide power and phone service points within 25 feet of the proposed WIM cabinet location.

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 eastbound lanes that the State would like to instrument in conjunction with the LTPP lane are PCC and we recommend that this be blanket ground prior to installation or the WIM sensors for optimum performance.

4.0 TRAFFIC DATA REVIEW

Vehicle distributions of all trucks (FHWA Class 4 and higher) – 35.4%

Vehicle distributions for heavy trucks (FHWA Class 6 and higher) – 33.9%

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

Class 9 vehicles – 64.0%
Class 6 vehicles – 11.7%

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

Class 9 vehicles – 66.8%
Class 6 vehicles – 12.2%

The 2004 Traffic Volumes provided indicate the ADT to be 39,960

The data as noted has been collected by Tennessee Department of Transportation as supplied from existing 2004 traffic studies.

5.0 PAVEMENT EVALUATION

In determining WIM site pavement acceptability, visual on-site observation of the existing AC pavement was performed. Additionally, structural section documentation provided by the State was reviewed.

5.1 SURFACE CONDITION

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

5.1.1 AC PAVEMENT 325 FEET IN ADVANCE OF AND 75 FEET FOLLOWING PROPOSED WIM SCALE LOCATION ("WIM PAVEMENT")

The existing roadway pavement in the westbound (LTPP) direction at this location consists of a three year old AC overlay (9 ¼ inches of AC overall) on top of 9 inches of PCC pavement. The PCC pavement was originally installed in 1964. 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.

5.1.2 AC PAVEMENT UPSTREAM AND DOWNSTREAM OF WIM PAVEMENT

As exists, 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.

5.1.3 SHOULDER CONDITION

The roadway shoulders are AC throughout the study area. The upper lift was placed in 2003 in conjunction with the traveled way overlay. The shoulder pavement appears to be in fair condition.

5.2 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.

5.3 PAVEMENT EVALUATION SUMMARY

Based on the profile evaluation performed by the Phase I Contractor on October 23, 2003, the 400 foot section of existing pavement 325 feet in advance of to 75 feet following the planned WIM scale location conforms to smoothness requirements for SPS WIM sites and is acceptable to the Phase II contractor.

6.0 PROPOSED WIM SITE- INFORMATION

6.1 LOCATION – I-40, MP 91.6

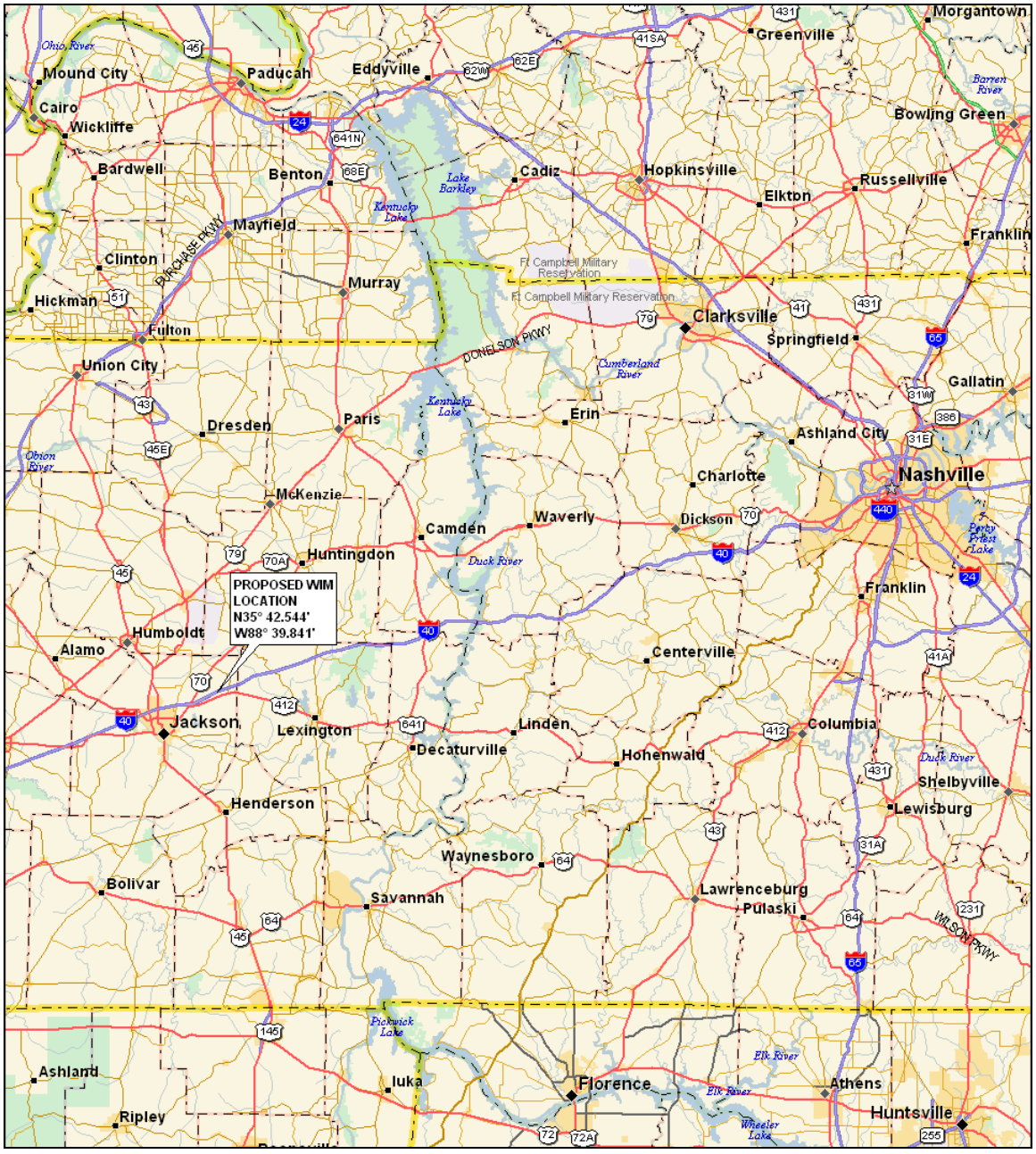


Figure 6.1: Map of the I-40 WIM Site

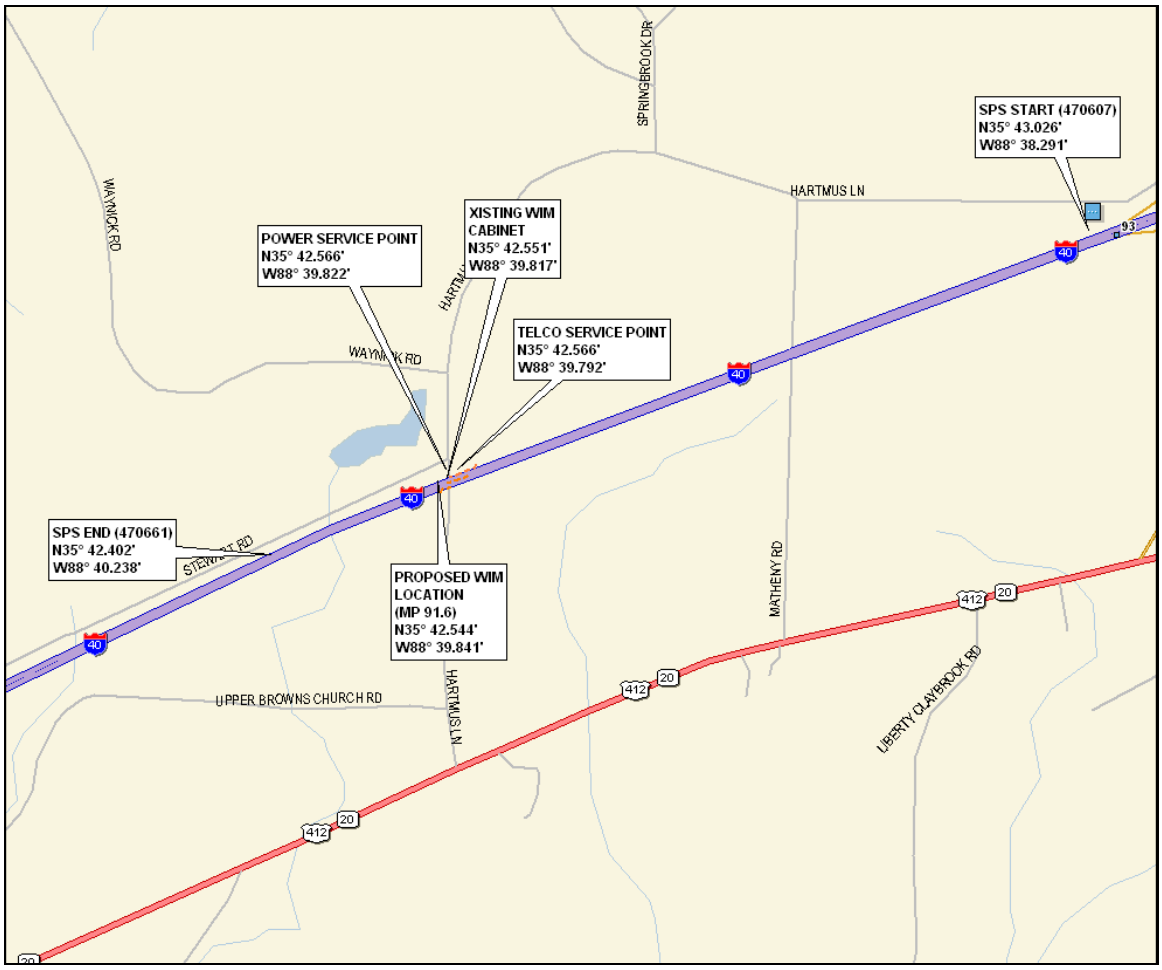


Figure 6.2: Map of the I-40 SPS-6 WIM Site at Milepost 91.6

The pavement test sections are located in the westbound outside lane on I-40 approximately 12 miles east of Jackson in Madison County.

The location selected for the proposed WIM system installation is at Mile Post 91.6, approximately 10 miles east of Jackson. It is proposed to install a WIM system for the westbound outside lane approximately 894 feet downstream of the start of the SPS-6 pavement test section 470607. In addition to this the State would like to instrument all other lanes with WIM at this time.

The proposed WIM controller cabinet can be located within the roadway's right-of-way opposite the scales approximately 40 feet off the edge of traveled way.

7.0 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 eastbound lanes that the State would like to instrument in conjunction with the LTPP lane are PCC and we recommend that this be blanket ground prior to installation or the WIM sensors for optimum performance.

7.1 RECOMMENDED LOCATION AND LAYOUT FOR THE WIM SYSTEM

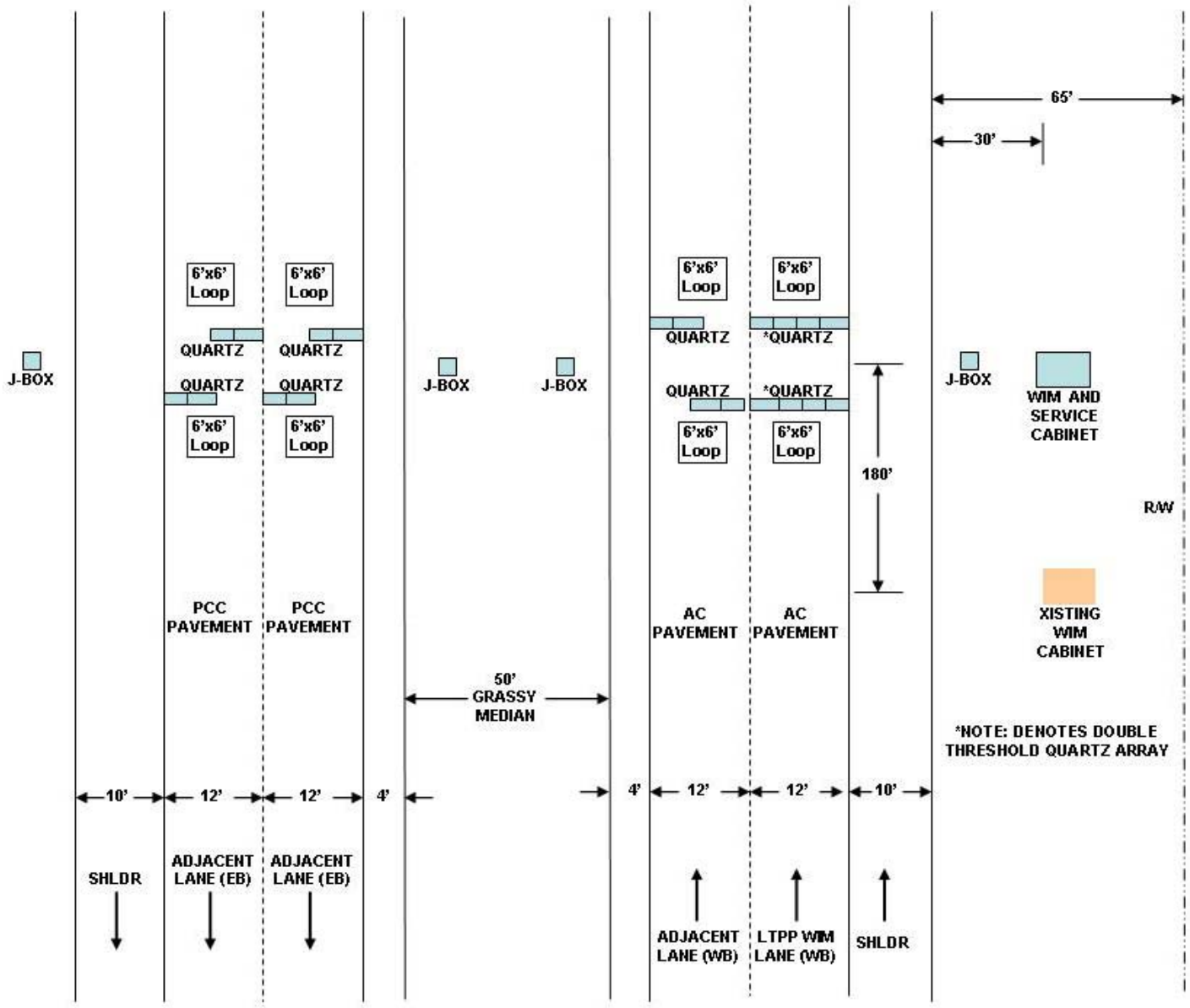


Figure 7.1: Proposed WIM Site Layout

GPS Coordinates for WIM Sensors:
N35° 42.544'
W88° 39.841'

A.0 COORDINATION DETAILS

Task Order # 10, which authorized the CLIN 2001 "Determine Acceptability of Proposed Site" for the Tennessee SPS-6 Site (LTPP ID 470600), was issued on March 7, 2006.

Contacts were made with interested parties as follows:

- Contracting Officer's Technical Representative (COTR)
  - Debbie Walker – FHWA-LTPP ph: 202-493-3068
  - Initial contact made March 7, 2006

- State Highway Agency (SHA)
  - James Maxwell – TN DOT ph: 615-350-4167
  - Initial contact made March 26, 2006

- LTPP Regional Support Contractor (RSC)
  - Mark Gardner – Fugro Consultants LP ph: 512-977-1800
  - Initial contact made March 26, 2006

- FHWA Division Office
  - Harris (Pete) Deere – FHWA Div Rep ph: 615-781-5792
  - Initial contact made March 26, 2006

The "Pre-Visit Handout Guide" was distributed on March 26, 2006, to the following individuals:

- James Maxwell
- Debbie Walker

The site was visited on March 31 – April 1, 2006, by Roy Czinku (IRD).

A briefing session was held at 2:00 p.m. March 31, 2006 at the Tennessee DOT Office, 6601 Centennial Blvd., Nashville, TN 37243-0360. Attendees included Nicholas B. Powell (TNDOT) and Roy Czinku (IRD).

INTERNATIONAL ROAD DYNAMICS INC.

LTPP SPS PHASE II

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

TENNESSEE SPS-6
LTPP ID 470600

Date: March 31, 2006

CONTRACT NO. DTFH61-05-D-00001

U.S. Department of Transportation
Federal Highway Administration

LONG TERM Pavement PERFORMANCE

B.0 PRE-VISIT HANDOUT GUIDE

B.1 SCHEDULE

a. Briefing session
   i. Meeting is scheduled for 2:00 p.m. March 31, 2006 at the Tennessee DOT Office, 6601 Centennial Blvd., Nashville, TN 37243-0360
b. Site visit
   i. March 31 – April 1, 2006

B.2 BRIEFING SESSION MARCH 31, 2006, POINTS OF CONTACT

a. Contracting Officer's Technical Representative (COTR)
   i. Debbie Walker – FHWA-LTPP ph: 202-493-3068
b. State Highway Agency (SHA)
   i. James Maxwell – TNDOT ph: 615-350-4167
c. LTPP Regional Support Contractor (RSC)
   i. Mark Gardner – Fugro Consultants LP ph: 512-977-1800
d. FHWA Division Office
   i. Harris (Pete) Deere – FHWA Div Rep ph: 615-781-5792

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)
   iv. Request any current traffic data (within past 2 years)
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?
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-40, westbound outside lane, Mile Post 91.6
b. Briefing session location
   i. Tennessee DOT Office, 6601 Centennial Blvd., Nashville, TN 37243-0360
c. Nearest major airport
   i. Nashville International, TN

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

INTERNATIONAL ROAD DYNAMICS INC.

LTPP SPS PHASE II

WEIGH-IN-MOTION SITE ACCEPTABILITY

SITE VISIT EVALUATION FORM

TENNESSEE SPS-6
LTPP ID 470600

Date of Site Visit: Mar 31 – Apr 1, 2006

CONTRACT NO. DTFH61-05-D-00001

U.S. Department of Transportation
Federal Highway Administration

LONG TERM Pavement PERFORMANCE

C.0 SITE EVALUATION FORM

C.1 PROPOSED WIM LOCATION

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

Route: I-40 Mile Post: 91.6 Direction: WB Lane: Outside

Proposed WIM Site is 859 feet downstream of the start of SPS Test Section 470607, and 237 feet upstream of the start of Test Section 470608, approximately 10 miles east of Jackson in Madison County.

C.1.1 EXISTING ROADWAY SURROUNDING THE PROPOSED WIM SITE

Type Pavement: AC

Pavement Age Top lift placed 2003

Lane Width: 12 feet

Thickness: 9 ¼" AC over 9" PCC

Observed Structural Soundness: Good

Observed Smoothness: Good

Outside WB Shoulder Type: AC

Width: 10 feet

Outside WB Shoulder Condition: Good

Inside WB Shoulder Type: AC

Width: 4 feet

Inside WB Shoulder Condition: Good

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

Type: AC Thickness: 9 ¼" AC over 9" PCC Jointed or Continuous: N/A

Observed Structural Soundness: Good Observed Smoothness: Good

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. Wheel path rutting is +/-1/8". 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.
It should be noted that the 2 lanes in the eastbound direction are jointed PCC and the State would like to instrument all lanes with Kistler Technology.

C.1.3 ROADWAY GEOMETRICS

Horizontal Alignment: Tangent Grade: Minimal (Less than +0.5 %)

Cross-slope: +/- 2.0 % Lane width: 12 feet

C.1.4 OBSERVED TRAFFIC OPERATING CHARACTERISTICS

Passing, merging, not following lane lines? Good Lane Discipline –occasional passing

Stop and go traffic, congestion periods? Free flowing, road is very busy

Traffic signals/interchanges affecting traffic? No signals or merging

Other adverse traffic flow conditions? None, traffic flow is fairly heavy

Truck traffic at "cruising" speed (no lugging)? No lugging, smooth flow

Truck traffic staying within lane lines? Yes, trucks track within lane lines

Observed truck suspension or body motion dynamics? Minimal body and suspension motion noted through scale area

Truck traffic composition same at WIM site and SPS site? Yes

Truck traffic on/off locations between WIM site and SPS site? None

Posted Speed Limit: 70 MPH

Observed Truck Speeds: 65–70 MPH

Notes/Comments on Geometrics and/or Traffic Operating Characteristics:
Vehicles track smoothly through this area at speeds between 65 and 75 MPH (posted speed is 70 MPH for all traffic). There is very good lane discipline at this site. Traffic flow is fairly heavy. Several drive throughs were performed and only minor body and suspension motion was observed across the proposed scale location in the AC westbound LTPP direction.
It should be noted that there is suspension chatter in the eastbound direction on the PCC lanes. If this is to be instrumented with Kistler we recommend grinding the pavement 325 feet upstream and 75 feet downstream prior to installation for optimum performance.

C.1.5 ACCESS TO UTILITY SERVICES

Potential source(s) for power: Overhead power lines and a power service is located 160 feet away from the proposed WIM cabinet location

Potential source(s) for telephone: Telco is available at the existing WIM cabinet 180 feet away from the proposed WIM cabinet location.

C.1.6 EQUIPMENT INSTALLATION CAPABILITY

Adequate location for controller cabinet? Yes, large area between roadway and R/W

Distance from edge of traveled way to right of way? 75 feet

Distance from edge of traveled way to cabinet? 40 feet off edge of traveled way

Visibility from cabinet of sensors and approaching vehicles? Good

Adequate location for service facilities? Yes, large area adjacent proposed cabinet

Adequate drainage for scale pits? Yes

Adequate roadway and overall site drainage? Yes

Potential for ponding or flooding at cabinet or pullboxes? Minimal

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 traffic is fairly heavy. We will have to work closely with the State to coordinate lane closures (possibly night closures). There is 4 feet available on inside lane shoulder to accommodate a traffic shift.

C.1.7 POTENTIAL WIM SENSOR/EQUIPMENT INTERFERENCE SOURCES

Overhead power lines? Parallel to eastbound roadway right of way. These are service lines that will not affect WIM system operation.

Adjacent railroad? None

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

Direction Westbound
Nearest usable truck turnaround location:
I-40, Exit 87 to US 70 Distance from WIM: 5.0 Miles

Direction Eastbound
Nearest usable truck turnaround location:
I-40, Exit 93 to SR 152 – Law Road Distance from WIM: 1.9 Miles

Circuit travel distance: 13.8 Miles Estimated lap time: 15 Minutes

Potential circuit route restrictions? None

Identification and location of trucking firm and certified static scales:

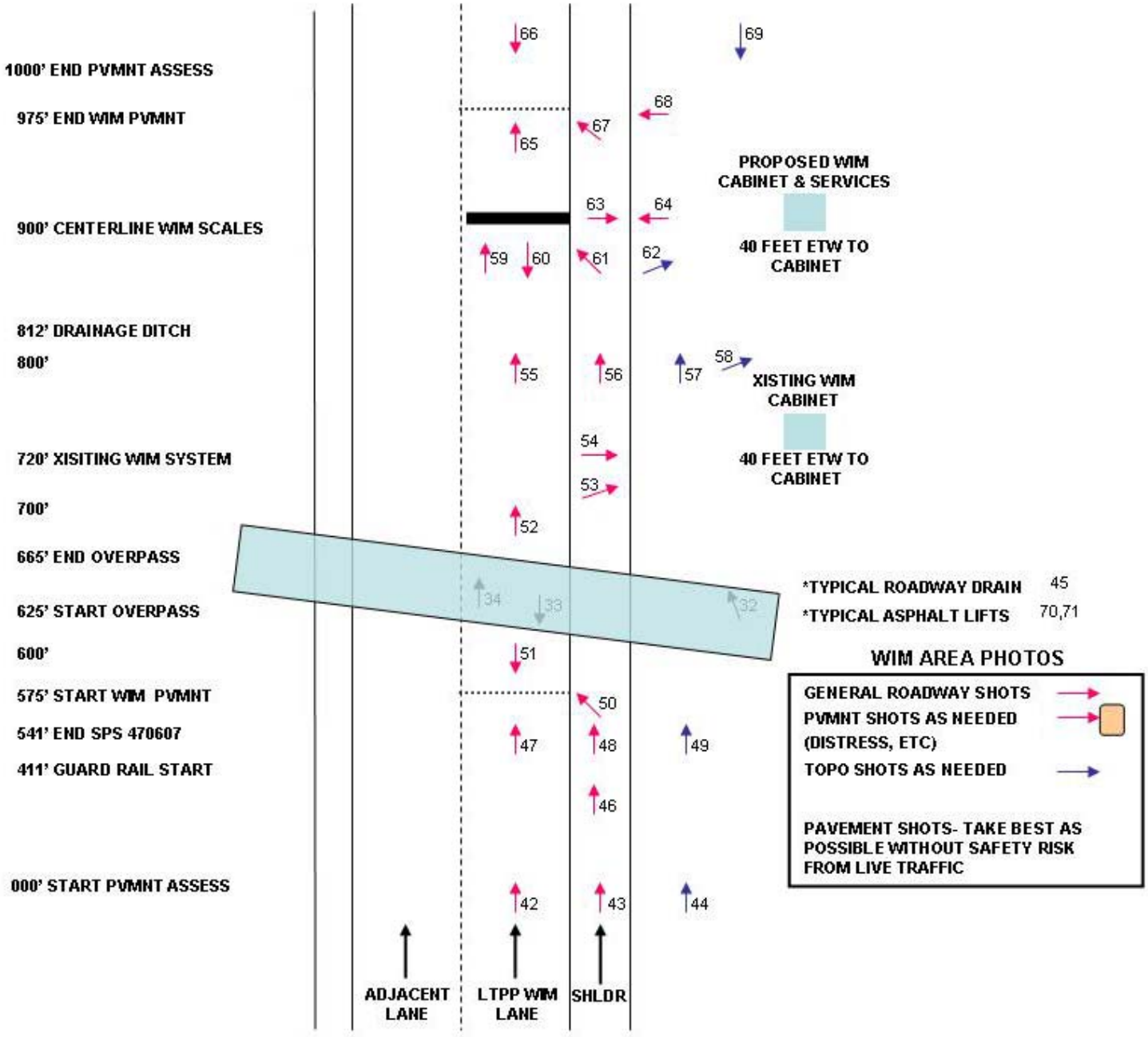
Name Jackson Sand Contact Albert or Carlton Pope

Address 139 United Drive, Jackson TN 38305

Phone 731-668-0440 Hours 8:00 a.m. – 5:00 p.m.

Notes/Comments on Test Truck Circuit and Static Weighing Facility:
Jackson Sand is located approximately 15 miles from the Proposed WIM Site. They currently have 2 - 3S2 Tractor Trailer Air Ride vehicles and drivers available given 2-3 weeks notice. A certified static scale for weighing is located close to their facility.

C.2 LOCATION LOG OF PHOTOS



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	**47**
LTPP Traffic Data		*SPS PROJECT ID	**470600**
WIM SITE INVENTORY		*SPS WIM ID	**SPS-6**

1.*ROUTE:	**I-40**	MILEPOST:	**91.6**	LTPP DIRECTION:	**W**

2.*WIM SITE DESCRIPTION - Grade		**+/- ½ %**	Sag vertical	**N**
	Nearest SPS section upstream of site		**470607**	
	Distance from sensor to nearest upstream SPS Section		**859 ft from start of 470607**	

3.*LANE CONFIGURATION					
	Lanes in LTPP direction	**2**		Lane Width	**12 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	
	Outside Shoulder Width	**10.0 feet**			
	Inside Shoulder Width	**4.0 feet**			

4.*PAVEMENT TYPE		
	WIM approach – (greater than 325 feet upstream of WIM array)	**AC**
	WIM – (325 feet upstream through 75 feet downstream of WIM array)	**AC**
	WIM departure – (greater than 75 feet downstream of WIM array)	**AC**

5.*RAMPS OR INTERSECTIONS		
	Intersection/driveway within 300 m upstream of sensor location	**N**
	Intersection/driveway within 300 m downstream of sensor location	**N**
	Is the shoulder routinely used for turns or passing?	**N**
	Other Information:	**NONE**

Form completed by:	**Roy Czinku - IRD**	Date:	**April 2, 2006**

E.0 PHOTOGRAPHS

E.1.1 MARKER FOR FIRST SPS TEST SECTION

E.1.2 FACING DOWNSTREAM 900 FEET IN ADVANCE OF WIM SCALE LOCATION

E.1.3 FACING DOWNSTREAM AT START OF 400 FOOT WIM PAVEMENT SECTION

E.1.4 FACING UPSTREAM AT START OF 400 FOOT WIM PAVEMENT SECTION

E.1.5 RECOMMENDED SCALE LOCATION

E.1.6 FACING DOWNSTREAM AT END OF 400' WIM PAVEMENT SECTION

E.1.7 FACING UPSTREAM AT END OF 1000 FOOT PAVEMENT ASSESSMENT SECTION

E.1.8 RECOMMENDED CABINET LOCATION

E.1.9 EXISTING OVERHEAD POWER LINES PARALLELING EASTBOUND ROADWAY

E.1.10 EXISTING TELCO LOCATED WITHIN EXISTING WIM CABINET

E.1.11 EXISTING WIM CABINET

E.1.12 OVERVIEW OF WIM SITE FROM NEARBY OVERPASS