

**SHEET 10
LTPP TRAFFIC DATA**

**TRAFFIC VOLUME AND LOAD
ESTIMATE UPDATE-NO SITE COUNT**

*STATE ASSIGNED ID [_ _ _]
 *STATE CODE [34]
 *SHRP SECTION ID [1033]

1. ANNUAL TRAFFIC ESTIMATES

*YEAR	ESTIMATED TOTAL VEHICLES AADT (TWO-WAY)	ESTIMATED TOTAL TRUCK AADT (TWO-WAY)	ESTIMATED TOTAL VEHICLES AADT LTPP LANE	*ESTIMATED TOTAL TRUCKS AADT LTPP LANE	*ESTIMATED ESAL=S/YR LTPP LANE (1000'S)
<u>2001</u>	<u>9854</u>	<u>722</u>	<u>1531</u>	<u>252</u>	<u>37</u>

**2. METHOD FOR ESTIMATING TOTAL VEHICLE
AADT (TWO-WAY)**

- ☒ Growth factored last year=s estimate. (6)
☐ Estimated based on volume counts at nearby locations. (3)
☐ Used computerized network analyses. (4)
☐ Factored a single count taken this year at the LTPP site. (1)
☐ Average multiple counts taken this year at the LTPP site. (2)
☐ Average and factored multiple count taken this year at the LTPP site. (5)
☐ Used flow maps. (7)
☐ Other: (8) _____

**3. METHOD FOR ESTIMATING TOTAL TRUCK
AADT (TWO-WAY)**

- ☐ Used system averages from counts taken this year. (6)
☐ Used count data from nearby sites. (3)
☐ Used count data from previous years at the LTPP site. (7)
☒ Used system averages from previous years. (8)
☐ Used computerized network analyses. (4)
☐ Used a single count taken this year at the LTPP site. (5)
☐ Factored a single count taken this year at the LTPP site. (1)
☐ Averaged multiple counts taken this year at the LTPP site. (2)
☐ Other: (9) _____

**4. METHOD FOR ESTIMATING TOTAL VEHICLES
LTPP LANE AADT**

- ☐ System distribution factors. (2)
☐ Based on actual lane count data. (1)
☒ Other: (3) G-F.

***5. METHOD FOR ESTIMATING TOTAL TRUCKS,
LTPP LANE, AADT**

- ☐ System distribution factors. (2)
☐ Based on actual lane data count. (1)
☒ Other: (3) G-F.

***6. METHOD FOR ESTIMATING ESAL//YEAR
IN LTPP LANE**

- ☒ ESAL/Truck factor (1)
☐ ESAL/Vehicle class. (2) (No. of classes)
☐ ESAL/Axle(3) Sing. ____ Tand. ____ Tri. ____
☐ Other:(4) _____

7. ESAL ESTIMATES - SOURCE OF DATA

- ☐ Weight data collected at LTPP site prior years. (2)
☐ Weight data from system averages this year. (3)
☒ Weight data from system averages prior years. (4)
☐ Weight data from historic W-4 Tables used. (5)
☐ Other: (6) _____

8. WEIGHT SCALE TYPE

- ☐ WIM scale. (1)
☐ Static scale used for enforcement. (2)
☒ Static scale not used for enforcement. (3)
☐ Other: (4) _____

NAME OF PREPARER ABID IKRAM
 DATE PREPARED APR 28/09

PHONE# _____

Sheet 12Traffic Data
Collection SiteState Code: 34
SHRP Section ID: 1033
Effective Date: 01/01/01Highway Route Number: US-202Milepost Number: 4.10Location: East Amwell Township, 1 mile South of Route NJ-179Vehicle Classification Method: FHWA: X Other: _____ #Bins:Type of Classification Equipment: Portable: _____ Permanent: XAVC Equipment Make/Model No: International Road Dynamics' Piezo WIM SystemSensor Type: Each lane has a single upstream loop and two (2) class I piezoelectric wim sensors.Weight Scale Type: Portable WIM: _____ Permanent WIM: X Other:Equipment Make/Model No: International Road Dynamics' Piezo WIM SystemSensor Type: Same as the above (permanent WIM system)Method of Calibration: Automatic - daily; Manual - Yearly (last calibrated - Nov. 20, 1999)

Comments: *January 2001* - Weight data for the month January is not provided due to a high number of errors for the front axle weight table.
Missing data on January 01-12,18-21,24,28 due the system failure.

February 2001- Weight data for the month February is not provided due to a high number of errors for the front axle weight table.
Missing data on February 02,05,06,22 due to the system failure.

Date Prepared: March 5, 2001
Name of Preparer: Christopher I. ZajacFax Number: (609) 530-3514
Phone Number: (609) 530 4548

Sheet 12
Traffic Data
Collection Site

State Code: 34
SHRP Section ID: 1033
Effective Date: 03/01/01

Highway Route Number: US-202

Milepost Number: 4.10

Location: East Amwell Township, 1 mile South of Route NJ-179

Vehicle Classification Method: FHWA: X Other: _____ #Bins:

Type of Classification Equipment: Portable: _____ Permanent: X

AVC Equipment Make/Model No: International Road Dynamics' Piezo WIM System

Sensor Type: Each lane has a single upstream loop and two (2) class I piezoelectric wim sensors.

Weight Scale Type: Portable WIM: _____ Permanent WIM: X Other:

Equipment Make/Model No: International Road Dynamics' Piezo WIM System

Sensor Type: Same as the above (permanent WIM system)

Method of Calibration: Automatic - daily; Manual - Yearly (last calibrated - Nov. 20, 1999)

Comments: *March 2001* - Weight data for the month March is not provided due to a high number of errors for the front axle weight table.
Missing data on March 01-06 due the system failure.

April 2001 - Weight data for the month April is not provided due to a high number of errors for the front axle weight table.
Missing data on April 01,02,09,10 due to the system failure.

Date Prepared: *May 3, 2001*
Name of Preparer: *Christopher I. Zajac*

Fax Number: *(609) 530-3514*
Phone Number: *(609) 530 4548*

SHEET 12 LTPP TRAFFIC DATA CLASSIFICATION DATA TRANSMITTAL FORM	*STATE ASSIGNED ID	[US-202]
	*STATE CODE	[3 4]
	*SHRP SECTION ID	[1 0 3 3]

HIGHWAY RT. NO. (THIS COUNT) : **US-202**

MILEPOST NO. OR LOCATION (THIS COUNT): **MP.4.10, East Amwell Township, 1 mile
South of Route NJ - 179**

FILENAME :

DISK ID :

BEGINNING DATE: **05-01-2001**

BEGINNING TIME: **00:00**

ENDING DATE: **06-30-2001**

ENDING TIME: **24:00**

:

COUNT DURATION: **2** ☐ HOURS ☐ DAYS ☒ MONTHS

VEHICLE CLASSIFICATION METHOD: FHWA ☒ OTHER

NAME OF AGENCY CLASSIFICATION SCHEME: **N/A** NO. OF BINS: **N/A**

NOTE: IF NOT PREVIOUSLY PROVIDED TO SHRP/LTPP, PLEASE ATTACH SHEET 6
DESCRIBING THE VEHICLE CLASSIFICATION CATEGORIES AND ALSO ATTACH
SHEET 7 DESCRIBING HOW THE AGENCY WOULD CONVERT ITS CLASSIFICATION
SCHEME TO THE FHWA 13 BIN SYSTEM.

TYPE OF AVC EQUIPMENT: PORTABLE PERMANENT ☒

EQUIPMENT MAKE/MODEL#: **International Road Dynamics' Piezo WIM System.**

SENSOR TYPE: **Each lane has a single upstream loop and two (2) class I piezoelectric WIM sensors.**
Sensor status: Lane 3 both piezos are down.
Lane 1 piezo # 2 is down.

ADJUSTMENT FACTORS FOR ESTIMATING AVERAGE ANNUAL VOLUMES BY
CLASSIFICATION:

GENERAL FACTORS:

CLASS SPECIFIC FACTORS (PROVIDE BY CLASS OF CLASS GROUPS):

COMMENTS:

May 2001 - Missing data from 5/1 to 5/20 and 5/24, 5/25 due to the system failure.
June 2001 - Missing data from 6/1 to 6/20 and 6/25 due to the system failure.
No weight data has been processed for a month of June.

NAME OF PREPARER: Christopher Zajac	PHONE: (609)-530-4548
DATE PREPARED: July 10, 2001	

SHEET 12 LTPP TRAFFIC DATA CLASSIFICATION DATA TRANSMITTAL FORM	*STATE ASSIGNED ID	[US-202]
	*STATE CODE	[3 4]
	*SHRP SECTION ID	[1 0 3 3]

HIGHWAY RT. NO. (THIS COUNT): *US-202*

MILEPOST NO. OR LOCATION (THIS COUNT): *MP.4.10, East Amwell Township, 1 mile South of Route NJ - 179*

FILENAME :

DISK ID :

BEGINNING DATE: *07-01-2001*

BEGINNING TIME: *00:00*

ENDING DATE: *08-31-2001*

ENDING TIME: *24:00*

COUNT DURATION: *2* [] HOURS [] DAYS [X] MONTHS

VEHICLE CLASSIFICATION METHOD: FHWA *X* OTHER

NAME OF AGENCY CLASSIFICATION SCHEME: *N/A* NO. OF BINS: *N/A*

NOTE: IF NOT PREVIOUSLY PROVIDED TO SHRP/LTPP, PLEASE ATTACH SHEET 6 DESCRIBING THE VEHICLE CLASSIFICATION CATEGORIES AND ALSO ATTACH SHEET 7 DESCRIBING HOW THE AGENCY WOULD CONVERT ITS CLASSIFICATION SCHEME TO THE FHWA 13 BIN SYSTEM.

TYPE OF AVC EQUIPMENT: PORTABLE PERMANENT *X*

EQUIPMENT MAKE/MODEL#: *International Road Dynamics' Piezo WIM System.*

SENSOR TYPE: *Each lane has a single upstream loop and two (2) class I piezoelectric WIM sensors.*
Sensor status: Lane 3 both piezos are down.
Lane 1 piezo # 2 is down.

ADJUSTMENT FACTORS FOR ESTIMATING AVERAGE ANNUAL VOLUMES BY CLASSIFICATION:

GENERAL FACTORS:

CLASS SPECIFIC FACTORS (PROVIDE BY CLASS OF CLASS GROUPS):

COMMENTS:

July 2001 – Missing data on 7/01-7/19 due to the system failure.
 No weight data has been processed for a month of July.
 August 2001 – Missing data on 8/03 & 8/21-8/31 due to the system failure.
 No weight data has been processed for a month of August.

NAME OF PREPARER: <i>Christopher Zajac</i>	PHONE: <i>(609)-530-4548</i>
DATE PREPARED: <i>September 11, 2001</i>	

SHEET 12 LTPP TRAFFIC DATA CLASSIFICATION DATA TRANSMITTAL FORM	*STATE ASSIGNED ID	[US-202]
	*STATE CODE	[3 4]
	*SHRP SECTION ID	[1 0 3 3]

HIGHWAY RT. NO. (THIS COUNT) : *US-202*

MILEPOST NO. OR LOCATION (THIS COUNT): *MP.4.10, East Amwell Township, 1 mile South of Route NJ - 179*

FILENAME :

DISK ID :

BEGINNING DATE: *09-04-2001*

BEGINNING TIME: *00:00*

ENDING DATE: *10-31-2001*

ENDING TIME: *24:00*

COUNT DURATION: *2* ☐ HOURS ☐ DAYS ☒ MONTHS

VEHICLE CLASSIFICATION METHOD: FHWA *X* OTHER

NAME OF AGENCY CLASSIFICATION SCHEME: *N/A* NO. OF BINS: *N/A*

NOTE: IF NOT PREVIOUSLY PROVIDED TO SHRP/LTPP, PLEASE ATTACH SHEET 6 DESCRIBING THE VEHICLE CLASSIFICATION CATEGORIES AND ALSO ATTACH SHEET 7 DESCRIBING HOW THE AGENCY WOULD CONVERT ITS CLASSIFICATION SCHEME TO THE FHWA 13 BIN SYSTEM.

TYPE OF AVC EQUIPMENT: PORTABLE PERMANENT *X*

EQUIPMENT MAKE/MODEL#: *International Road Dynamics' Piezo WIM System.*

SENSOR TYPE: *Each lane has a single upstream loop and two (2) class I piezoelectric WIM sensors.*
Sensor status: Lane 3 both piezos are down.
Lane 1 piezo # 2 is down.

ADJUSTMENT FACTORS FOR ESTIMATING AVERAGE ANNUAL VOLUMES BY CLASSIFICATION:

GENERAL FACTORS:

CLASS SPECIFIC FACTORS (PROVIDE BY CLASS OF CLASS GROUPS):

COMMENTS:

September 2001 –Missing data on 09/01-09/03 & 09/26 due to the system failure.
No weight data has been processed for a month of September.
October 2001 – Missing data on 10/02 & 10/30 due to the system failure.
No weight data has been processed for a month of October.

NAME OF PREPARER: <i>Christopher Zajac</i>	PHONE: <i>(609)-530-4548</i>
DATE PREPARED: <i>November 15, 2001</i>	

SHEET 12 LTPP TRAFFIC DATA CLASSIFICATION DATA TRANSMITTAL FORM	*STATE ASSIGNED ID	[US-202]
	*STATE CODE	[3 4]
	*SHRP SECTION ID	[1 0 3 3]

HIGHWAY RT. NO. (THIS COUNT): *US-202*

MILEPOST NO. OR LOCATION (THIS COUNT): *MP.4.10, East Amwell Township, 1 mile South of Route NJ - 179*

FILENAME :

DISK ID :

BEGINNING DATE: *11-01-2001*

BEGINNING TIME: *00:00*

ENDING DATE: *12-14-2001*

ENDING TIME: *24:00*

COUNT DURATION: *2* ☐ HOURS ☐ DAYS ☒ MONTHS

VEHICLE CLASSIFICATION METHOD: FHWA *X* OTHER

NAME OF AGENCY CLASSIFICATION SCHEME: *N/A* NO. OF BINS: *N/A*

NOTE: IF NOT PREVIOUSLY PROVIDED TO SHRP/LTPP, PLEASE ATTACH SHEET 6 DESCRIBING THE VEHICLE CLASSIFICATION CATEGORIES AND ALSO ATTACH SHEET 7 DESCRIBING HOW THE AGENCY WOULD CONVERT ITS CLASSIFICATION SCHEME TO THE FHWA 13 BIN SYSTEM.

TYPE OF AVC EQUIPMENT: PORTABLE PERMANENT *X*

EQUIPMENT MAKE/MODEL#: *International Road Dynamics' Piezo WIM System.*

SENSOR TYPE: *Each lane has a single upstream loop and two (2) class I piezoelectric WIM sensors.*
Sensor status: Lane 3 both piezos are down.
Lane 1 piezo # 2 is down.

ADJUSTMENT FACTORS FOR ESTIMATING AVERAGE ANNUAL VOLUMES BY CLASSIFICATION:

GENERAL FACTORS:

CLASS SPECIFIC FACTORS (PROVIDE BY CLASS OF CLASS GROUPS):

COMMENTS:

November 2001 – The weight data has been processed for south bound only.
December 2001 – Missing data on 12/15-31 due to the system failure.

NAME OF PREPARER: <i>Christopher Zajac</i>	PHONE: <i>(609)-530-4548</i>
DATE PREPARED: <i>January 15, 2002</i>	

Sheet 13Traffic Data Files
Transmittal FormState: ***New Jersey***
State Code: ***34***

FILENAME	START DATE (mm / dd / yy)	START TIME (hh:mm)	END DATE (mm / dd / yy)	END TIME (hh:mm)	CLASS SCHEME
DIR 1011_195					
V341011.C1B	01/01/01	00:00	01/31/01	24:00	FHWA
C341011.C1B	01/01/01	00:00	01/31/01	24:00	FHWA
W341011.C1B	01/01/01	00:00	01/31/01	24:00	FHWA
DIR 0500_195					
V340500.C1B	01/01/01	00:00	01/31/01	24:00	FHWA
C340500.C1B	01/01/01	00:00	01/31/01	24:00	FHWA
W340500.C1B	01/01/01	00:00	01/31/01	24:00	FHWA
DIR 1033_202					
V341033.CBB	01/12/01	00:00	01/31/01	24:00	FHWA
C341033.CBB	01/12/01	00:00	01/31/01	24:00	FHWA
DIR 1030_023					
V341030.C1B	01/01/01	00:00	01/21/01	24:00	FHWA
C341030.C1B	01/01/01	00:00	01/21/01	24:00	FHWA
W341030.C1B	01/01/01	00:00	01/21/01	24:00	FHWA
DIR 1003_015					
V341003.C1B	01/01/01	00:00	01/31/01	24:00	FHWA
C341003.C1B	01/01/01	00:00	01/31/01	24:00	FHWA
W341003.C1B	01/01/01	00:00	01/31/01	24:00	FHWA

Name of Preparer: ***Christopher I. Zajac***Phone Number: ***609/ 530-4548***Date Prepared: ***MARCH 5, 2001***FAX Number: ***609/ 530-3514***

Sheet 13Traffic Data Files
Transmittal Form

State:

New Jersey

State Code:

34

FILENAME	START DATE (mm / dd / yy)	START TIME (hh:mm)	END DATE (mm / dd / yy)	END TIME (hh:mm)	CLASS SCHEME
DIR 1011_195					
V341011.D1B	02/01/01	00:00	02/28/01	24:00	FHWA
C341011.D1B	02/01/01	00:00	02/28/01	24:00	FHWA
W341011.D1B	02/01/01	00:00	02/28/01	24:00	FHWA
DIR 0500_195					
V340500.D1B	02/01/01	00:00	02/28/01	24:00	FHWA
C340500.D1B	02/01/01	00:00	02/28/01	24:00	FHWA
W340500.D1B	02/01/01	00:00	02/28/01	24:00	FHWA
DIR 1033_202					
V341033.D1B	02/01/01	00:00	02/28/01	24:00	FHWA
C341033.D1B	02/01/01	00:00	02/28/01	24:00	FHWA
DIR 1030_023					
V341030.DGB	02/17/01	00:00	02/28/01	24:00	FHWA
C341030.DGB	02/17/01	00:00	02/28/01	24:00	FHWA
DIR 1003_015					
V341003.D2B	02/02/01	00:00	02/28/01	24:00	FHWA
C341003.D2B	02/02/01	00:00	02/28/01	24:00	FHWA
W341003.D2B	02/02/01	00:00	02/28/01	24:00	FHWA

Name of Preparer: ***Christopher I. Zajac***Phone Number: ***609/ 530-4548***Date Prepared: ***MARCH 5, 2001***FAX Number: ***609/ 530-3514***

Sheet 13Traffic Data Files
Transmittal FormState: **New Jersey**
State Code: **34**

FILENAME	START DATE (mm / dd / yy)	START TIME (hh:mm)	END DATE (mm / dd / yy)	END TIME (hh:mm)	CLASS SCHEME
DIR 1011_195					
V341011.F8B	04/08/01	00:00	04/30/01	24:00	FHWA
C341011.F8B	04/08/01	00:00	04/30/01	24:00	FHWA
W341011.F8B	04/08/01	00:00	04/30/01	24:00	FHWA
DIR 0500_195					
V340500.F8B	04/08/01	00:00	04/30/01	24:00	FHWA
C340500.F8B	04/08/01	00:00	04/30/01	24:00	FHWA
W340500.F8B	04/08/01	00:00	04/30/01	24:00	FHWA
DIR 1033_202					
V341033.F3B	04/03/01	00:00	04/30/01	24:00	FHWA
C341033.F3B	04/03/01	00:00	04/30/01	24:00	FHWA
DIR 1030_023					
V341030.FMB	04/22/01	00:00	04/30/01	24:00	FHWA
C341030.FMB	04/22/01	00:00	04/30/01	24:00	FHWA
W341030.FMB	04/22/01	00:00	04/30/01	24:00	FHWA
DIR 1003_015					
V341003.F3B	04/03/01	00:00	04/30/01	24:00	FHWA
C341003.F3B	04/03/01	00:00	04/30/01	24:00	FHWA
W341003.F3B	04/03/01	00:00	04/30/01	24:00	FHWA

Name of Preparer: **Christopher I. Zajac**Phone Number: **609/ 530-4548**Date Prepared: **MAY 3, 2001**FAX Number: **609/ 530-3514**

SHEET 13 LTPP TRAFFIC DATA VEHICLE WEIGHT DATA TRANSMITTAL FORM	*STATE ASSIGNED ID	[US-202]
	*STATE CODE	[3 4]
	*SHRP SECTION ID	[1 0 3 3]

HIGHWAY RT. NO. (THIS SESSION): **US-202**

MILEPOST NO. OR LOCATION (THIS SESSION):): **MP.4.10, East Amwell Township, 1 mile South of Route NJ - 179**

FILENAME: V341033.GKB
C341033.GKB
W341033.GKB

DISK ID:

BEGINNING DATE **05-21-2001**

BEGINNING TIME: **00:00**

ENDING DATE: **05-31-2001**

ENDING TIME: **24:00**

COUNT DURATION: 1 ☐ HOURS ☐ DAYS ☒ MONTHS

WEIGHT SCALE TYPE: PORT. WIM PERM. WIM **X** OTHER

EQUIPMENT MAKE/MODEL# **International Road Dynamics Piezo WIM System**

SENSOR TYPE: **Each lane has a single upstream loop and two (2) class I piezoelectric WIM sensors.**

VEHICLE CLASSIFICATION METHOD:

7-card FHWA 13 bin in cols. 18-19

7-card FHWA 13 bin in cols. 22-23

7-card 6 digit Truck Weight study

W-card **X**

OTHER

NAME OF AGENCY CLASSIFICATION SCHEME:

NO. OF BINS

NOTE: IF NOT PREVIOUSLY PROVIDED TO SHRP/LTPP, PLEASE ATTACH SHEET 6 DESCRIBING THE VEHICLE CLASSIFICATION CATEGORIES AND ALSO ATTACH SHEET 7 DESCRIBING HOW THE AGENCY WOULD CONVERT ITS CLASSIFICATION SCHEME TO THE FHWA 13 CLASS SYSTEM.

METHOD OF CALIBRATION AND FREQUENCY: **Calibration is field validated on each site once a year using one 3S2 vehicle loaded and statically weighed at about 70,000 to 80,000 pounds. A minimum of 20 passes is made per lane at highway speeds or until a consistent calibration tolerance of ± 5 percent of the gross test vehicle weight is achieved. The initial run consists of about 10 or more passes of the calibration vehicles and the weights recorded are averaged using only the consistently measured GVW. Another 10 or more passes are then made after inputting the new changes to confirm the calibration tolerances. The process is repeated until the required tolerance is satisfied.**

COMMENTS:

NAME OF PREPARER: Christopher Zajac	PHONE: (609)-530-4548
DATE PREPARED: July 10, 2001	

SHEET 13 LTPP TRAFFIC DATA VEHICLE WEIGHT DATA TRANSMITTAL FORM	*STATE ASSIGNED ID	[US-202]
	*STATE CODE	[3 4]
	*SHRP SECTION ID	[1 0 3 3]

HIGHWAY RT. NO. (THIS SESSION): *US-202*

MILEPOST NO. OR LOCATION (THIS SESSION): *MP.4.10, East Amwell Township, 1 mile South of Route NJ - 179*

FILENAME: V341033.HKB
C341033.HKB

DISK ID:

BEGINNING DATE: *06-21-2001*

BEGINNING TIME: *00:00*

ENDING DATE: *06-30-2001*

ENDING TIME: *24:00*

COUNT DURATION: 1 [] HOURS [] DAYS [X] MONTHS

WEIGHT SCALE TYPE: PORT. WIM PERM. WIM *X* OTHER

EQUIPMENT MAKE/MODEL# *International Road Dynamics Piezo WIM System*

SENSOR TYPE: *Each lane has a single upstream loop and two (2) class I piezoelectric WIM sensors.*

VEHICLE CLASSIFICATION METHOD:

7-card FHWA 13 bin in cols. 18-19

7-card FHWA 13 bin in cols. 22-23

7-card 6 digit Truck Weight study

W-card *X*

OTHER

NAME OF AGENCY CLASSIFICATION SCHEME:

NO. OF BINS

NOTE: IF NOT PREVIOUSLY PROVIDED TO SHRP/LTPP, PLEASE ATTACH SHEET 6 DESCRIBING THE VEHICLE CLASSIFICATION CATEGORIES AND ALSO ATTACH SHEET 7 DESCRIBING HOW THE AGENCY WOULD CONVERT ITS CLASSIFICATION SCHEME TO THE FHWA 13 CLASS SYSTEM.

METHOD OF CALIBRATION AND FREQUENCY: *Calibration is field validated on each site once a year using one 3S2 vehicle loaded and statically weighed at about 70,000 to 80,000 pounds. A minimum of 20 passes is made per lane at highway speeds or until a consistent calibration tolerance of ± 5 percent of the gross test vehicle weight is achieved. The initial run consists of about 10 or more passes of the calibration vehicles and the weights recorded are averaged using only the consistently measured GVW. Another 10 or more passes are then made after inputting the new changes to confirm the calibration tolerances. The process is repeated until the required tolerance is satisfied.*

COMMENTS:

NAME OF PREPARER: *Christopher Zajac*
DATE PREPARED: *July 10, 2001*

PHONE: *(609)-530-4548*

SHEET 13 LTPP TRAFFIC DATA VEHICLE WEIGHT DATA TRANSMITTAL FORM	*STATE ASSIGNED ID	[US-202]
	*STATE CODE	[3 4]
	*SHRP SECTION ID	[1 0 3 3]

HIGHWAY RT. NO. (THIS SESSION): **US-202**

MILEPOST NO. OR LOCATION (THIS SESSION):): **MP.4.10, East Amwell Township, 1 mile South of Route NJ - 179**

FILENAME: V341033.IJB
C341033.IJB

DISK ID:

BEGINNING DATE : **07-20-2001**

BEGINNING TIME: **00:00**

ENDING DATE: **07-31-2001**

ENDING TIME: **24:00**

COUNT DURATION: 1 [] HOURS [] DAYS [X] MONTHS

WEIGHT SCALE TYPE: PORT. WIM PERM. WIM **X** OTHER

EQUIPMENT MAKE/MODEL# **International Road Dynamics Piezo WIM System**

SENSOR TYPE: **Each lane has a single upstream loop and two (2) class I piezoelectric WIM sensors.**

VEHICLE CLASSIFICATION METHOD:

7-card FHWA 13 bin in cols. 18-19
7-card 6 digit Truck Weight study

7-card FHWA 13 bin in cols. 22-23
W-card **X** OTHER

NAME OF AGENCY CLASSIFICATION SCHEME:

NO. OF BINS

NOTE: IF NOT PREVIOUSLY PROVIDED TO SHRP/LTPP, PLEASE ATTACH SHEET 6 DESCRIBING THE VEHICLE CLASSIFICATION CATEGORIES AND ALSO ATTACH SHEET 7 DESCRIBING HOW THE AGENCY WOULD CONVERT ITS CLASSIFICATION SCHEME TO THE FHWA 13 CLASS SYSTEM.

METHOD OF CALIBRATION AND FREQUENCY: **Calibration is field validated on each site once a year using one 3S2 vehicle loaded and statically weighed at about 70,000 to 80,000 pounds. A minimum of 20 passes is made per lane at highway speeds or until a consistent calibration tolerance of ± 5 percent of the gross test vehicle weight is achieved. The initial run consists of about 10 or more passes of the calibration vehicles and the weights recorded are averaged using only the consistently measured GVW. Another 10 or more passes are then made after inputting the new changes to confirm the calibration tolerances. The process is repeated until the required tolerance is satisfied.**

COMMENTS:

NAME OF PREPARER: **Christopher Zajac**
DATE PREPARED: **September 11, 2001**

PHONE: **(609)-530-4548**

SHEET 13 LTPP TRAFFIC DATA VEHICLE WEIGHT DATA TRANSMITTAL FORM	*STATE ASSIGNED ID	[US-202]
	*STATE CODE	[3 4]
	*SHRP SECTION ID	[1 0 3 3]

HIGHWAY RT. NO. (THIS SESSION): *US-202*

MILEPOST NO. OR LOCATION (THIS SESSION): *MP.4.10, East Amwell Township, 1 mile South of Route NJ - 179*

FILENAME: V341033.J1B
C341033.J1B

DISK ID:

BEGINNING DATE *08-01-2001*

BEGINNING TIME: *00:00*

ENDING DATE: *08-20-2001*

ENDING TIME: *24:00*

COUNT DURATION: 1 [] HOURS [] DAYS [X] MONTHS

WEIGHT SCALE TYPE: PORT. WIM PERM. WIM *X* OTHER

EQUIPMENT MAKE/MODEL# *International Road Dynamics Piezo WIM System*

SENSOR TYPE: *Each lane has a single upstream loop and two (2) class I piezoelectric WIM sensors.*

VEHICLE CLASSIFICATION METHOD:

7-card FHWA 13 bin in cols. 18-19

7-card FHWA 13 bin in cols. 22-23

7-card 6 digit Truck Weight study

W-card *X*

OTHER

NAME OF AGENCY CLASSIFICATION SCHEME:

NO. OF BINS

NOTE: IF NOT PREVIOUSLY PROVIDED TO SHRP/LTPP, PLEASE ATTACH SHEET 6 DESCRIBING THE VEHICLE CLASSIFICATION CATEGORIES AND ALSO ATTACH SHEET 7 DESCRIBING HOW THE AGENCY WOULD CONVERT ITS CLASSIFICATION SCHEME TO THE FHWA 13 CLASS SYSTEM.

METHOD OF CALIBRATION AND FREQUENCY: *Calibration is field validated on each site once a year using one 3S2 vehicle loaded and statically weighed at about 70,000 to 80,000 pounds. A minimum of 20 passes is made per lane at highway speeds or until a consistent calibration tolerance of ± 5 percent of the gross test vehicle weight is achieved. The initial run consists of about 10 or more passes of the calibration vehicles and the weights recorded are averaged using only the consistently measured GVW. Another 10 or more passes are then made after inputting the new changes to confirm the calibration tolerances. The process is repeated until the required tolerance is satisfied.*

COMMENTS:

NAME OF PREPARER: *Christopher Zajac*
DATE PREPARED: *September 11, 2001*

PHONE: *(609)-530-4548*

SHEET 13 LTPP TRAFFIC DATA VEHICLE WEIGHT DATA TRANSMITTAL FORM	*STATE ASSIGNED ID	[US-202]
	*STATE CODE	[3 4]
	*SHRP SECTION ID	[1 0 3 3]

HIGHWAY RT. NO. (THIS SESSION): **US-202**

MILEPOST NO. OR LOCATION (THIS SESSION):): **MP.4.10, East Amwell Township, 1 mile South of Route NJ - 179**

FILENAME: V341033.K4B
C341033.K4B

DISK ID:

BEGINNING DATE **09-01-2001**

BEGINNING TIME: **00:00**

ENDING DATE: **09-30-2001**

ENDING TIME: **24:00**

COUNT DURATION: 1 [] HOURS [] DAYS [X] MONTHS

WEIGHT SCALE TYPE: PORT. WIM PERM. WIM **X** OTHER

EQUIPMENT MAKE/MODEL# **International Road Dynamics Piezo WIM System**

SENSOR TYPE: **Each lane has a single upstream loop and two (2) class I piezoelectric WIM sensors.**

VEHICLE CLASSIFICATION METHOD:

7-card FHWA 13 bin in cols. 18-19
7-card 6 digit Truck Weight study

7-card FHWA 13 bin in cols. 22-23
W-card **X** OTHER

NAME OF AGENCY CLASSIFICATION SCHEME:

NO. OF BINS

NOTE: IF NOT PREVIOUSLY PROVIDED TO SHRP/LTPP, PLEASE ATTACH SHEET 6 DESCRIBING THE VEHICLE CLASSIFICATION CATEGORIES AND ALSO ATTACH SHEET 7 DESCRIBING HOW THE AGENCY WOULD CONVERT ITS CLASSIFICATION SCHEME TO THE FHWA 13 CLASS SYSTEM.

METHOD OF CALIBRATION AND FREQUENCY: **Calibration is field validated on each site once a year using one 3S2 vehicle loaded and statically weighed at about 70,000 to 80,000 pounds. A minimum of 20 passes is made per lane at highway speeds or until a consistent calibration tolerance of ± 5 percent of the gross test vehicle weight is achieved. The initial run consists of about 10 or more passes of the calibration vehicles and the weights recorded are averaged using only the consistently measured GVW. Another 10 or more passes are then made after inputting the new changes to confirm the calibration tolerances. The process is repeated until the required tolerance is satisfied.**

COMMENTS:

NAME OF PREPARER: Christopher Zajac	PHONE: (609)-530-4548
DATE PREPARED: November 13, 2001	

SHEET 13 LTPP TRAFFIC DATA VEHICLE WEIGHT DATA TRANSMITTAL FORM	*STATE ASSIGNED ID	[US-202]
	*STATE CODE	[3 4]
	*SHRP SECTION ID	[1 0 3 3]

HIGHWAY RT. NO. (THIS SESSION): **US-202**

MILEPOST NO. OR LOCATION (THIS SESSION): **MP.4.10, East Amwell Township, 1 mile South of Route NJ - 179**

FILENAME: V341033.L1B
C341033.L1B

DISK ID:

BEGINNING DATE **10-01-2001**

BEGINNING TIME: **00:00**

ENDING DATE: **10-31-2001**

ENDING TIME: **24:00**

COUNT DURATION: 1 ☐ HOURS ☐ DAYS ☒ MONTHS

WEIGHT SCALE TYPE: PORT. WIM PERM. WIM ☒ OTHER

EQUIPMENT MAKE/MODEL# **International Road Dynamics Piezo WIM System**

SENSOR TYPE: **Each lane has a single upstream loop and two (2) class I piezoelectric WIM sensors.**

VEHICLE CLASSIFICATION METHOD:

7-card FHWA 13 bin in cols. 18-19

7-card FHWA 13 bin in cols. 22-23

7-card 6 digit Truck Weight study

W-card ☒

OTHER

NAME OF AGENCY CLASSIFICATION SCHEME:

NO. OF BINS

NOTE: IF NOT PREVIOUSLY PROVIDED TO SHRP/LTPP, PLEASE ATTACH SHEET 6 DESCRIBING THE VEHICLE CLASSIFICATION CATEGORIES AND ALSO ATTACH SHEET 7 DESCRIBING HOW THE AGENCY WOULD CONVERT ITS CLASSIFICATION SCHEME TO THE FHWA 13 CLASS SYSTEM.

METHOD OF CALIBRATION AND FREQUENCY: **Calibration is field validated on each site once a year using one 3S2 vehicle loaded and statically weighed at about 70,000 to 80,000 pounds. A minimum of 20 passes is made per lane at highway speeds or until a consistent calibration tolerance of ± 5 percent of the gross test vehicle weight is achieved. The initial run consists of about 10 or more passes of the calibration vehicles and the weights recorded are averaged using only the consistently measured GVW. Another 10 or more passes are then made after inputting the new changes to confirm the calibration tolerances. The process is repeated until the required tolerance is satisfied.**

COMMENTS:

NAME OF PREPARER: **Christopher Zajac**
DATE PREPARED: **November 13, 2001**

PHONE: **(609)-530-4548**

SHEET 13 LTPP TRAFFIC DATA VEHICLE WEIGHT DATA TRANSMITTAL FORM	*STATE ASSIGNED ID	[US-202]
	*STATE CODE	[3 4]
	*SHRP SECTION ID	[1 0 3 3]

HIGHWAY RT. NO. (THIS SESSION): *US-202*

MILEPOST NO. OR LOCATION (THIS SESSION): *MP.4.10, East Amwell Township, 1 mile South of Route NJ - 179*

FILENAME: V341033.M1B
C341033.M1B
W341033.M1B

DISK ID:

BEGINNING DATE : *11-01-2001*

BEGINNING TIME: *00:00*

ENDING DATE: *11-30-2001*

ENDING TIME: *24:00*

COUNT DURATION: 1 ☐ HOURS ☐ DAYS ☒ MONTHS

WEIGHT SCALE TYPE: PORT. WIM PERM. WIM *X* OTHER

EQUIPMENT MAKE/MODEL# *International Road Dynamics Piezo WIM System*

SENSOR TYPE: *Each lane has a single upstream loop and two (2) class I piezoelectric WIM sensors.*

VEHICLE CLASSIFICATION METHOD:

7-card FHWA 13 bin in cols. 18-19
7-card 6 digit Truck Weight study

7-card FHWA 13 bin in cols. 22-23
W-card *X* OTHER

NAME OF AGENCY CLASSIFICATION SCHEME:

NO. OF BINS

NOTE: IF NOT PREVIOUSLY PROVIDED TO SHRP/LTPP, PLEASE ATTACH SHEET 6 DESCRIBING THE VEHICLE CLASSIFICATION CATEGORIES AND ALSO ATTACH SHEET 7 DESCRIBING HOW THE AGENCY WOULD CONVERT ITS CLASSIFICATION SCHEME TO THE FHWA 13 CLASS SYSTEM.

METHOD OF CALIBRATION AND FREQUENCY: *Calibration is field validated on each site once a year using one 3S2 vehicle loaded and statically weighed at about 70,000 to 80,000 pounds. A minimum of 20 passes is made per lane at highway speeds or until a consistent calibration tolerance of ± 5 percent of the gross test vehicle weight is achieved. The initial run consists of about 10 or more passes of the calibration vehicles and the weights recorded are averaged using only the consistently measured GVW. Another 10 or more passes are then made after inputting the new changes to confirm the calibration tolerances. The process is repeated until the required tolerance is satisfied.*

COMMENTS:

NAME OF PREPARER: *Christopher Zajac*
DATE PREPARED: *January 15, 2002*

PHONE: *(609)-530-4548*

SHEET 13 LTTP TRAFFIC DATA VEHICLE WEIGHT DATA TRANSMITTAL FORM	*STATE ASSIGNED ID	[US-202]
	*STATE CODE	[3 4]
	*SHRP SECTION ID	[1 0 3 3]

HIGHWAY RT. NO. (THIS SESSION): *US-202*

MILEPOST NO. OR LOCATION (THIS SESSION): *MP.4.10, East Amwell Township, 1 mile South of Route NJ - 179*

FILENAME: V341033.N1B
C341033.N1B
W341033.N1B

DISK ID:

BEGINNING DATE : *12-01-2001*

BEGINNING TIME: *00:00*

ENDING DATE: *12-14-2001*

ENDING TIME: *24:00*

COUNT DURATION: 1 [] HOURS [] DAYS [X] MONTHS

WEIGHT SCALE TYPE: PORT. WIM PERM. WIM *X* OTHER

EQUIPMENT MAKE/MODEL# *International Road Dynamics Piezo WIM System*

SENSOR TYPE: *Each lane has a single upstream loop and two (2) class I piezoelectric WIM sensors.*

VEHICLE CLASSIFICATION METHOD:

7-card FHWA 13 bin in cols. 18-19
7-card 6 digit Truck Weight study

7-card FHWA 13 bin in cols. 22-23
W-card *X* OTHER

NAME OF AGENCY CLASSIFICATION SCHEME:

NO. OF BINS

NOTE: IF NOT PREVIOUSLY PROVIDED TO SHRP/LTPP, PLEASE ATTACH SHEET 6 DESCRIBING THE VEHICLE CLASSIFICATION CATEGORIES AND ALSO ATTACH SHEET 7 DESCRIBING HOW THE AGENCY WOULD CONVERT ITS CLASSIFICATION SCHEME TO THE FHWA 13 CLASS SYSTEM.

METHOD OF CALIBRATION AND FREQUENCY: *Calibration is field validated on each site once a year using one 3S2 vehicle loaded and statically weighed at about 70,000 to 80,000 pounds. A minimum of 20 passes is made per lane at highway speeds or until a consistent calibration tolerance of ± 5 percent of the gross test vehicle weight is achieved. The initial run consists of about 10 or more passes of the calibration vehicles and the weights recorded are averaged using only the consistently measured GVW. Another 10 or more passes are then made after inputting the new changes to confirm the calibration tolerances. The process is repeated until the required tolerance is satisfied.*

COMMENTS:

NAME OF PREPARER: <i>Christopher Zajac</i>	PHONE: <i>(609)-530-4548</i>
DATE PREPARED: <i>January 15, 2002</i>	

SHEET 16 LTPP MONITORED TRAFFIC DATA SITE CALIBRATION SUMMARY	*STATE ASSIGNED ID	[NJ-15]
	*STATE CODE	[34]
	*SHRP SECTION ID	[1003]

SITE CALIBRATION INFORMATION

1. * DATE OF CALIBRATION (MONTH/DAY/YEAR) [07 / 14 / 2001]
2. * TYPE OF EQUIPMENT CALIBRATED ☒ WIM ☐ CLASSIFIER ☐ BOTH
3. * REASON FOR CALIBRATION
☐ REGULARLY SCHEDULED SITE VISIT ☐ RESEARCH
☐ EQUIPMENT REPLACEMENT ☐ TRAINING
☐ DATA TRIGGERED SYSTEM REVISION ☐ NEW EQUIPMENT INSTALLATION
☒ OTHER (SPECIFY) ANNUAL CALIBRATION
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 IRD

WIM SYSTEM CALIBRATION SPECIFICS**

- 6.** CALIBRATION TECHNIQUE USED:
☐ TRAFFIC STREAM -- ☒ Y STATIC SCALE (Y/N) ☒ TEST TRUCKS
- 1 NUMBER OF TRUCKS COMPARED 1 NUMBER OF TEST TRUCKS USED
- 12 PASSES PER TRUCK
- | TRUCK | TYPE | SUSPENSION |
|-------|----------------|------------|
| 1 | <u>class 9</u> | <u>2</u> |
| 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 (D)72.57 (S)71.96 STANDARD DEVIATION 0.847
DYNAMIC AND STATIC SINGLE AXLES N/A STANDARD DEVIATION _____
DYNAMIC AND STATIC DOUBLE AXLES N/A STANDARD DEVIATION _____
8. 1 NUMBER OF SPEEDS AT WHICH CALIBRATION WAS PERFORMED
9. DEFINE THE SPEED RANGES USED (MPH) 50-55
10. CALIBRATION FACTOR (AT EXPECTED FREE FLOW SPEED) :
NB_SLOW sensor 1: 0.884 sensor 2: 0.783
NB_PASS sensor 1: 0.625 sensor 2: 0.459

- 11.** IS AUTO-CALIBRATION USED AT THIS SITE? (Y/N) Y
IF YES, LIST AND DEFINE AUTO-CALIBRATION VALUE: The auto-calibration is defined in 24 hours intervals. The method is set to *adjust after 50 trucks*, the number of auto-calibration class 9 trucks for the interval and the sum of front axle weights for the period are calculated and added to a running totals read from the ASCII file. If the number of trucks is less than 50 *trucks required before adjust*, then the new count and sum are stored in the file. If the number of accumulated trucks is greater than the user entered, then, as above, the error between the calculated mean front axle weight and the user entered Population Mean is determined. Temperature sensor is another factor that has an influence on auto-calibration process.

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: CHRIS ZAJAC
CONTACT INFORMATION: ED DATU (609) 530-5379

SHEET 16 LTPP MONITORED TRAFFIC DATA SITE CALIBRATION SUMMARY	*STATE ASSIGNED ID	[NJ-202]
	*STATE CODE	[34]
	*SHRP SECTION ID	[1033]

SITE CALIBRATION INFORMATION

1. * DATE OF CALIBRATION (MONTH/DAY/YEAR) [05/ 26 /2001]
2. * TYPE OF EQUIPMENT CALIBRATED X WIM CLASSIFIER BOTH
3. * REASON FOR CALIBRATION
 REGULARLY SCHEDULED SITE VISIT RESEARCH
 EQUIPMENT REPLACEMENT TRAINING
 DATA TRIGGERED SYSTEM REVISION NEW EQUIPMENT INSTALLATION
 X OTHER (SPECIFY) ANNUAL CALIBRATION
4. * SENSORS INSTALLED IN LTPP LANE AT THIS SITE (CHECK ALL THAT APPLY):
 BARE ROUND PIEZO CERAMIC BARE FLAT PIEZO BENDING PLATES
 X CHANNELIZED ROUND PIEZO LOAD CELLS QUARTZ PIEZO
 CHANNELIZED FLAT PIEZO X INDUCTANCE LOOPS CAPACITANCE PADS
 OTHER (SPECIFY) _____
5. EQUIPMENT MANUFACTURER IRD

WIM SYSTEM CALIBRATION SPECIFICS**

- 6.**CALIBRATION TECHNIQUE USED:
 TRAFFIC STREAM -- Y STATIC SCALE (Y/N) X TEST TRUCKS
- 1 NUMBER OF TRUCKS COMPARED 1 NUMBER OF TEST TRUCKS USED
- 10 PASSES PER TRUCK
- | TRUCK | TYPE | SUSPENSION |
|-------|------------------|------------|
| 1 | <u> class 9 </u> | <u> 2 </u> |
| 2 | <u> </u> | <u> </u> |
| 3 | <u> </u> | <u> </u> |
- 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 (D)43.9 (S)43.00 STANDARD DEVIATION 2.09
 DYNAMIC AND STATIC SINGLE AXLES N/A STANDARD DEVIATION
 DYNAMIC AND STATIC DOUBLE AXLES N/A STANDARD DEVIATION
8. 1 NUMBER OF SPEEDS AT WHICH CALIBRATION WAS PERFORMED
9. DEFINE THE SPEED RANGES USED (MPH) 44-52
10. CALIBRATION FACTOR (AT EXPECTED FREE FLOW SPEED) :
 NB_SLOW sensor 1: 0.917 sensor 2: 0.883
 NB_PASS sensor 1: Down sensor 2: Down
 SB_SLOW sensor 1: 0.438 sensor 2: Down
 SB_PASS sensor 1: 0.682 sensor 2: 0.758
- 11.** IS AUTO-CALIBRATION USED AT THIS SITE? (Y/N) Y

IF YES, LIST AND DEFINE AUTO-CALIBRATION VALUE: The auto-calibration is defined in 24 hours intervals. The method is set to *adjust after 50 trucks*, the number of auto-calibration class 9 trucks for the interval and the sum of front axle weights for the period are calculated and added to a running totals read from the ASCII file. If the number of trucks is less than 50 trucks required before *adjust*, then the new count and sum are stored in the file. If the number of accumulated trucks is greater than the user entered, then, as above, the error between the calculated mean front axle weight and the user entered Population Mean is determined. Temperature sensor is another factor that has an influence on auto-calibration process.

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: SIMON NWACHUKWU
 CONTACT INFORMATION: ED DATU (609)530-5379