

# Commercial-vehicle Roadside Information Sorting System Operators Manual



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## **Introduction**

This manual provides an overview of the Commercial Vehicle Information Systems and Networks (CVISN) and the Commercial-vehicle Roadside Information Sorting System (CRISS). Its intent is to provide a basic understanding of CVISN and CRISS and the electronic features and screens associated with the program.

# Chapter 1

## Breakdown of the Screening Display

Menu Bar  
See Chapter 2

Parameters  
See Chapter 3

Individual Vehicle  
information  
See Chapter 4

The screenshot shows the 'Commercial Vehicle Screening' software interface. At the top, there is a menu bar and a parameter control area. The main display area lists several vehicles with their respective axle weights and classifications. Below the vehicle list, there is a detailed view of the axle weights and WIM (Weight In Motion) bridge calculations.

**Vehicle List:**

ID	Time	Lane	Speed	Class	WIM Status
59432-1	12:53:49	WEST	63 mph	Class 8	Wim Random Pull
59474-1	12:53:42	M1	67 mph	Class 9	Good Vehicle
59423-1	12:53:18	WEST	67 mph	Class 13	Wim Random Pull
59401-1	12:53:04	WEST	62 mph	Class 9	Wim Random Pull
59361-1	12:52:21	M1	76 mph	Class 5	Wim Random Pull
59380-1	12:52:03	WEST	57 mph	Class 5	Wim Random Pull

**Static Scales Display:**

1. 15,000  
2. 15,000

**Static Scale and WIM bridge Calculations:**

Static (lbs)	Axle	WIM (lbs)	Sep (ft)	A	T	Bridge
11,446	1	11,446	18.2			
16,000	2	15,815	4.5			
15,000	3	14,521	33.8			
	4	13,452	4.3			
	5	13,864				
31,000	Totals	69,098	60.8			
31,000		30,336	4.5			

Variable Message  
Sign Control- See  
Chapter 5

Static Scale Display  
See below and  
Chapter 6

Figure 1-1

Static Scale and WIM bridge  
Calculations  
See Chapter 6

Figure 1-1 is a copy of the main screen of the Roadside Operation Screens (ROSS) for the CVISN/CRISS program and will be displayed when the program is started. It can be divided into the four sections as shown in Figure 1-1 above. At the top of the screen is the menu bar, which is similar to menu bars found in most Windows programs. Chapter 2 will explain the functions of the menu bar.

Just below the menu bar is the parameter display. This display contains a row of small windows showing the value to which a number of parameters are set. These parameters can be set to other values by clicking on the “MODIFY...” button on the far right of this row. This will bring up the Parameter screen, which will be explained in Chapter 3, as is the remainder of this row.

The next area of the screen displays six rows, each giving a summary of vehicle information on each truck as it passes through the AVI/WIM on the mainline. Chapter 4 will detail each item of this display.

At the bottom of the screen are three areas. The first is the variable message sign controls. Further information on this area can be found in Chapter 5.

The second area is the display of up to two static scales readings. The only items that are not obvious here are if communications is lost between the scale head and CVISN or the variable message signs and CVISN then a message will appear in red at the top of this area of the screen stating that communications has been lost. If this happens then the CVISN Project Team should be notified as soon as possible.

The last area of the display shows a detail of the WIM and static scale weights. A more detailed discussion of how to use this area is found in Chapter 6.

## Chapter 2

### The Menu Bar



File View Vehicle Settings Reports Tools Station Status Help

Figure 2-1

#### **File**

Clicking on “File” brings down a window with the following items to select.

Item	Shortcut	Description
Exit		Exits the program

#### **View**

Clicking on “View” brings down a window with the following items to select.

Item	Shortcut	Description
Refresh	F5	Refreshes the display
Show Static Lane #1	F9	Selects the lane to display
Show Static Lane #2	Shift+F9	Selects the lane to display
Show Mainline (Report Only)	F11	Selects the lane to display
Show Mainline (All)	Shift +F11	Selects the lane to display
Display Screen Controls		Removes the Menu and Parameter bars from view. Clicking it again restores the bars.

#### **Vehicle**

Clicking on “Vehicle” brings down a window with the following items to select.

Item	Shortcut	Description
Display Carrier/Vehicle Detail	Ctrl D	Brings up screen shown in Fig. 4-3
Display Violations	Ctrl V	Brings up screen shown in Fig. 4-4
Add Vehicle to Hot List		Adds vehicle to a list that is available for 48 hours at the station.
Print <u>A</u> ll		Prints the information in the above 2 screens
Print <u>D</u> etail		Prints the information in the screen of Fig 4-3
Print <u>V</u> iolations		Prints the information in the screen of Fig 4-4

## Settings

Clicking on “Settings” brings down a window with the following items to select.

Item	Shortcut	Description
<u>S</u> ort Control. >		Brings up menu below
<u>O</u> ptions		Brings up an administrative menu

## Sort Control

Moving the cursor down to the “Sort Control >” and clicking it brings down another window with the following items to select.

Item	Shortcut	Description
View/Modify Controls	F6	Brings up screen in Fig. 3-2
WIM Control Off	F1	See Chapter 3 for more detail
WIM Control Sorting	F2	on these parameters
WIM Control Bypass	F3	
WIM Control Report	F4	
Raise Untagged Random pull by 10%	F7	
Lower Untagged Random Pull by 10%	Shift+F7	
Raise Untagged Threshold by 2%	F8	
Lower Untagged Threshold by 2%	Shift+F8	
Raise Tagged Random Pull by 5%	Ctrl+F7	These are grayed out and can not be changed
Lower Tagged Random Pull by 5%	Shift+Ctrl+F7	
Raise Tagged Threshold by 2%	Ctrl+F8	
Lower Tagged Threshold by 2%	Shift+Ctrl+F8	
Toggle Over height Detection	Ctrl+O	

## Reports

Clicking on “Reports” brings down a window with the following items to select.

Item	Shortcut	Description
<u>S</u> tatistics	Ctrl+S	Takes you to the statistics web page
<u>R</u> oad & Weather	Ctrl+W	Takes you to the R-Weather web page

## Tools

Clicking on “Tools” brings down a window with the following items to select.

Item	Shortcut	Description
Plaza Administrator		Brings up a password protected program to allow parameters to be changed that are not available to the normal operator
OOSI Local		Instate Out Of Service Inspection notification
Supervisor Screen		Brings up password protected screen to allow vehicle search on vehicle plate, VIN, USDOT Number, etc.

## Station Status

Clicking on “Station Status” brings down a window with the following items to select.

Item	Shortcut	Description
Open		A check in front indicates the station is open
Closed		A check in front indicates the station is closed

## Help

Clicking on “Help” brings down a window with the following items to select.

Item	Shortcut	Description
Create Problem Ticket		Takes you to the <b>Remedy</b> system to fill out a ticket
Help System		Takes you to the <b>Remedy</b> system to look at outstanding tickets
<u>A</u> bout CV Screening List		Gives system and version information

## Chapter 3

### Setting Parameters

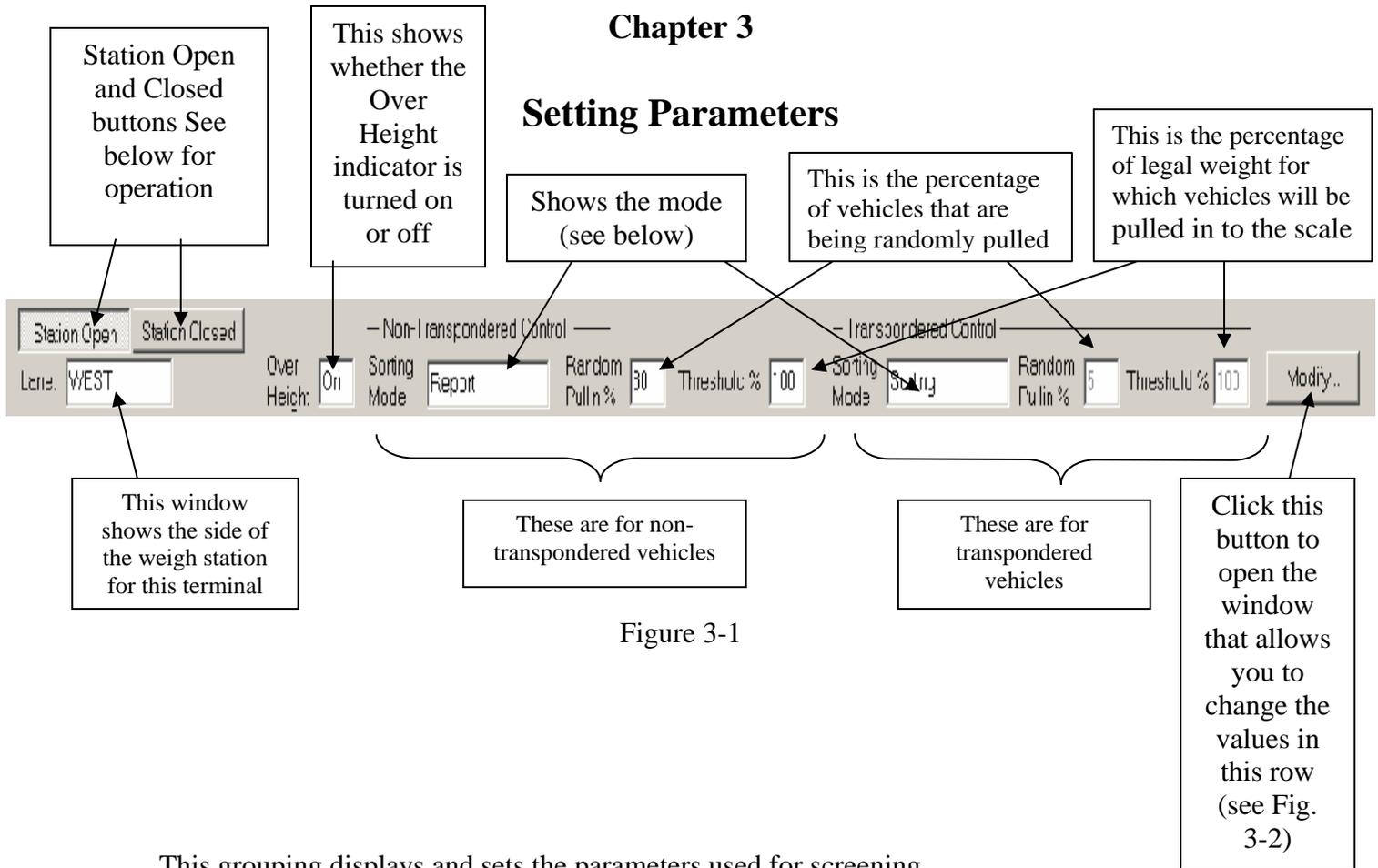


Figure 3-1

This grouping displays and sets the parameters used for screening.

**Note** – When a parameter is grayed out, gray instead of black, this indicates it cannot be changed by the operator.

### Station Open and Station Closed

These two windows show the condition that is active and the buttons will toggle the status. This will change both of the mode switches, for transpondered and non-transpondered shown above. This is meant to make it easier to open and close the weigh station. (See Modes below). If the station is open the “Open” window will be green. If the station is closed then the “Closed” window will be red.

To properly close the station at the end of your shift when no one else is coming on then just select the “Closed” button and it will turn red showing the station is closed.

## Modes

1. **Bypass** – Everything is told to bypass the scales **B**.
2. **Report** – Everything is told to report to the scales **R**.
3. **Sorting** – Only vehicles not meeting the selected criteria are told to report to the scales.
4. **OFF** – In this mode everything is off and no statistics are saved.

Table 3-1 shows the results of the various combinations of modes for non- transpondered vehicles (no transponder in our database) and transpondered vehicles (those having a transponder in our database)

WIM Sorting Mode	SCRNR Sorting Mode	Decision Location	Signs	Transponder
O – Off	O – Off	Manual	Off	B
O – Off	S – Sort	SCRNR	Bypass/Report	B/R
O – Off	R – All Report	SCRNR	Report	R
O – Off	B – All Bypass	SCRNR	Bypass	B
S – Sort	O – Off	WIM	Bypass/Report	B/R
S – Sort	S – Sort	SCRNR	Bypass/Report	B/R
S – Sort	R – All Report	SCRNR	Report	R
S – Sort	B – All Bypass	SCRNR	Bypass	B
R – All Report	O – Off	WIM	Report	R
R – All Report	S – Sort	SCRNR	Bypass/Report	B/R
R – All Report	R – All Report	SCRNR	Report	R
R – All Report	B – All Bypass	SCRNR	Bypass	B
B – All Bypass	O – Off	WIM	Bypass	B
B – All Bypass	S – Sort	SCRNR	Bypass/Report	B/R
B – All Bypass	R – All Report	SCRNR	Report	R
B – All Bypass	B – All Bypass	SCRNR	Bypass	B

Table 3-1

## Overheight

**On** – Over height detection is enabled.

**Off** – Over height detection is disabled.

## Random Pull %

This parameter selects the percent of commercial vehicles automatically pulled into the scales. (i.e. If set for 10% then ten out of ever 100 vehicles qualifying to bypass will be pulled into the scales.)

## Threshold %

This parameter selects the percent of legal weight, as measured by the WIM, that a commercial vehicle will be pulled in for an “OVERWEIGHT” violation. (i.e. If the untagged threshold is set to 95% and the legal weight for the vehicle is 80,000 LBS. then the system will pull the vehicle in if the WIM calculates a weight of 76,000 LBS. or more.)

### CV Screening List Parameters screen

The screenshot shows the 'CV Screening List Parameters' dialog box with the following sections and controls:

- Non-Transpondered Control (unknown carriers):**
  - Sorting Mode: Bypass
  - Over Height: On (selected)
  - Random Pullin %: 80
  - Threshold %: 100
- Transpondered Control (known carriers only):**
  - Sorting Mode: Bypass
  - SafeStat Threshold: 100
  - ISS2 Threshold: 100
  - Random Pullin %: 5
  - Threshold %: 100
- Display:**
  - Meas. Units: English
  - List Period (min): 60
  - Lane Units: English
  - Scale Heads Reversed:
  - Scale Units: English
  - Platform Display: Platform 1 & 2
  - Lane: EAST
  - Reset Vehicle Tracking:
- AVI Status:**
  - On Off: Reader 1 (On), Reader 2 (Off), Reader 3 (Off), Reader 4 (Off), Reader 5 (Off)
  - Writer 1 (On), Writer 2 (Off)
- Vehicle Class Range:**
  - Start: 4
  - End: 23
- Selected Camera:**
  - Color (selected), Black & White
- VMS Scale:**
  - Scale 1
- VMS Messages:**

Message	Light	Time Out	Next Msg	Warn
Msg 8 <not in use>	Off	0	0	<input type="checkbox"/>
Msg 9 <not in use>	Off	0	0	<input type="checkbox"/>
Msg 10 <not in use>	Off	0	0	<input type="checkbox"/>

Buttons: OK, Cancel

Figure 3-2

When the modify button is clicked the CV Screening List Parameters screen shown in Figure 3-2 will display. This screen allows many parameter changes to be made. You may make changes on this screen by choosing the appropriate parameters and then by clicking the **OK** button at the right bottom of the screen. If you do not want to make

any changes then click the **Cancel** button next to the **OK** button. In both cases the screen will close.

### **Non-Transpondered Control (unknown carriers)**

**Sorting Mode, Random Pull%, Threshold% and Over Height** are all explained above.

### **Transpondered Control (known carriers)**

**Sorting Mode, Random Pull%, Threshold% and Over Height** are all explained above.

**Safe Stat Threshold** – Trucks with safety scores below the one selected would be pulled in for possible inspection. This is not presently implemented so is grayed out.

**ISS2 Threshold** - Will provide the threshold above which a vehicle will be told to report for possible inspection. This is presently grayed out.

### **VMS Messages**

This area allows the operator to input up to three messages that can then be selected on the main screen. See Chapter 5 for more information.

### **Display**

**Note** - The first three items below are grayed out in Washington (can't be changed) to prevent an inadvertent change to metric units.

**Measurement Units** – This can be in English units (Feet and Pounds (LBS)) or metric units (Meters and Kilograms).

**Lane Units** – This can be in English units (Feet and Pounds (LBS)) or metric units (Meters and Kilograms).

**Scale Units** – These can be in Pounds or Kilograms for the scale display.

**List Period (min)** – How long the information is displayed in the screening list area.

**Platform Display** – Selects what static scale platforms are displayed in the static scale windows on the main display screen. This display is also grayed out so it cannot be changed.

**Lane** - The lane of the scale house this terminal is on should be selected. This will determine the lane designation displayed on the main screen on the top left. It does not determine which lanes are displayed in the main display area. See Figure 3-3.

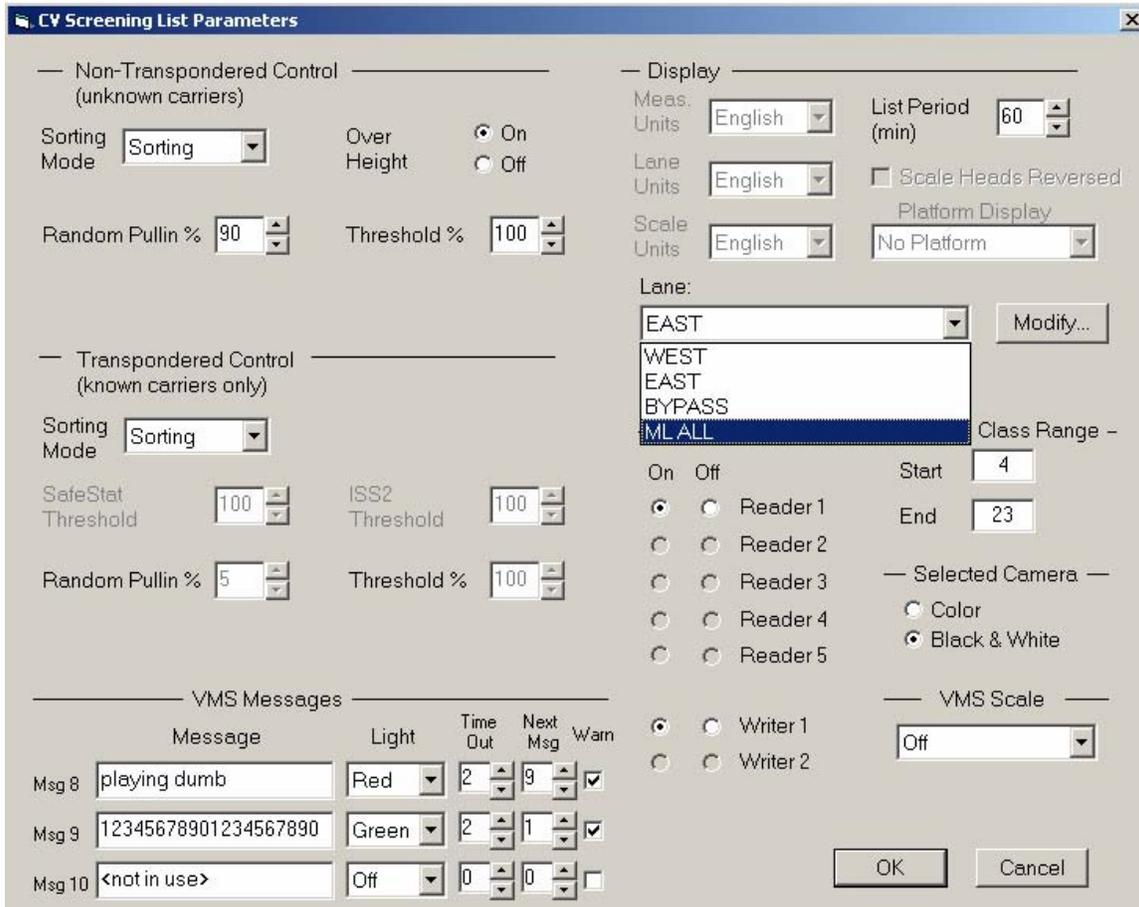


Figure 3-3

**Modify...** – Clicking on this button will bring up the screen in Figure 3-4. In the lower left hand window are all the lanes possible at that scale. This will vary for different scales and may not look like the display at your scale. By checking or unchecking the boxes will determine which lanes are displayed on your main screen. Those checked will be displayed. Note the Function Key window to the right of the large window. This gives the function key for the lane selected. In the case of Figure 3-4 the East lane is selected (blue bar) and the Shift F9 key is the key sequence to be used on the main screen to select this lane if it were not already selected. This means to hold down the shift key while pressing the F9 key.

When you have made your selection on this screen, select the OK button or if you don't want to change anything then select the Cancel button.

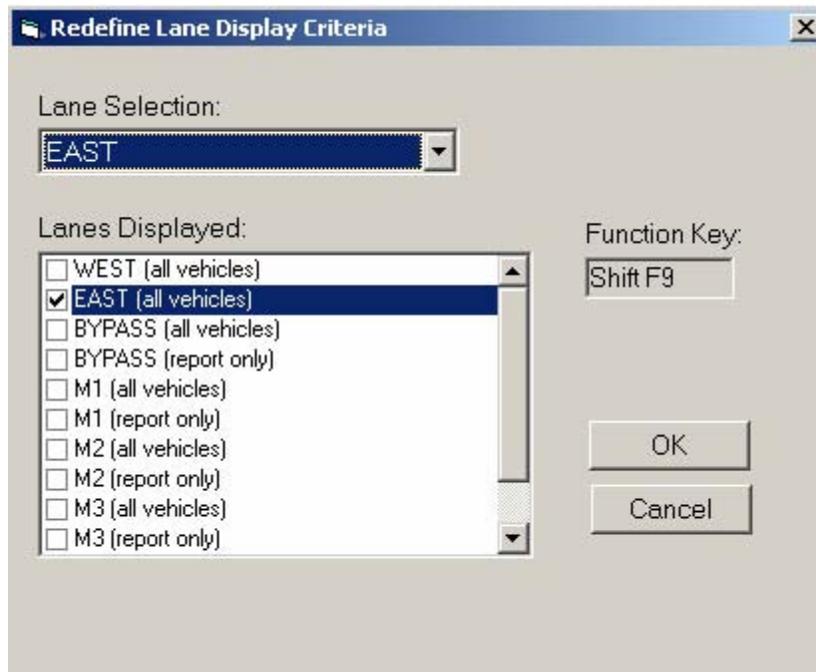


Figure 3-4

Figure 3-5 shows the **Lane Selection** drop down window. The lane selected is the same as the Lane on the CV Screening List Parameters screen shown in Figure 3-2 and 3-3. It does not determine which lanes are displayed on the main screen. This should never need to be changed once it is properly selected.

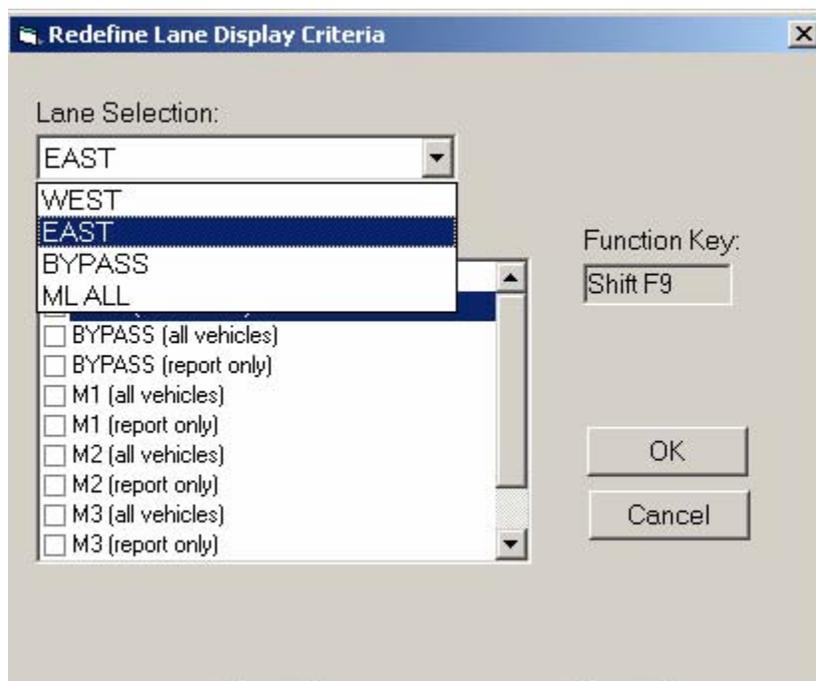


Figure 3-5

## **AVI Status**

The AVI system uses the antennas seen over hanging the roadway (see Figure 8-1). Each one is connected to a reader. OFF disables the reader or writer and ON enables them. When they are disabled the system will no longer communicate with the transponders on the vehicles and therefore will not respond to, or recognize, any tagged vehicles.

## **Vehicle Class Range**

Shows the class range being used to screen commercial vehicles. See Table 3-2 of classes below:

Class	Description	Class	Description
1	Motorcycle	8	Tractor and trailer with 4 or less axles
2	Passenger Cars	9	Single Trailer with 5 axles
3	Light Trucks with two axles (4 tires)	10	Single Trailer with 6 or more axles
4	Buses	11	Multi Trailer with 5 or less axles
5	Straight Truck with 2 axles (6 tires)	12	Multi Trailer with 6 axles
6	Straight Truck with 3 axles	13	Multi Trailer with 7 or more axles
7	Straight Truck with 4 axles		

Table 3-2

## **Selected Camera**

This area allows you to select the roadside camera that will be used to provide the pictures that are displayed on the main screen. The color camera should be selected during daylight hours and the black and white camera, which is infrared, should be selected after dark. There is an infrared illuminator used with the black and white camera at the roadside.

## **VMS Scale**

This allows you to select which static scale is displayed on the Variable Message Sign, if there is more than one static scale. See Figure 3-6 below. It will also allow you to select "Off" which means no scale reading is displayed on the Variable Message Sign.

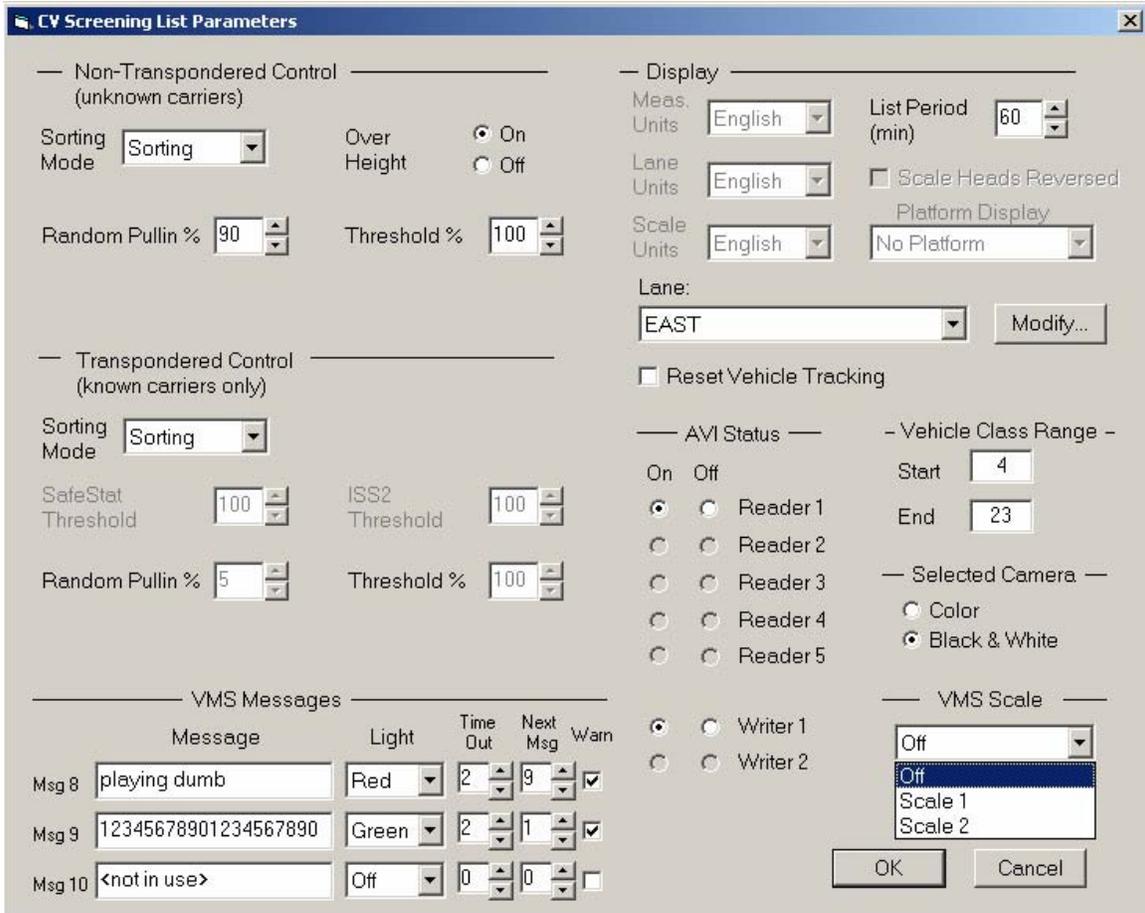


Figure 3-6

## Warning icons

Figure 3-7 shows the top of the screen with the Unable to Connect symbol displayed. This shows that there is a problem with the CVISN programs connecting to the WIM. The CVISN Team should be called to correct this problem.



Figure 3-7

Only comes on to show that the CVISN system cannot connect to the WIM

This icon will appear at scales with overflow detection to warn that the overflow system has temporarily shut the station down due to too many vehicles in the scale.

Commercial Vehicle Screening List -- Seatac South SB - DWS, Weighstation #27 -- STATION CLOSED

File View Vehicle Settings Reports Tools Station Status Help

Station Open Station Closed

Lane: WEST Screening: English

**Weigh Station Closed**

— Transpondered Control  
Sorting Mode: Bypass

	<b>44283-1</b>	11:13:00	Lane: EAST	47 mph	64.3 ft									
						11.4	11.4	11.1		7.1	7.1	48.1		
						o===16===o==4==o=====28=====o==4==o					52.4			
						5 Axles - Class 9						Hold	Print	More..
	<b>44259-1</b>	11:12:44	Lane: EAST	57 mph	67.8 ft									
						11.2	6.6	5.9		6.2	4.7	34.6		
						o===17===o==4==o=====33=====o==4==o					58.3			
						5 Axles - Class 9						Hold	Print	More..
	<b>44253-1</b>	11:12:38	Lane: WEST	55 mph	57.0 ft									
						9.7	13.3	14.2		7.0	5.2	49.3		
						o==11==o==4==o=====31=====o==4==o					51.3			
						5 Axles - Class 9						Hold	Print	More..
	<b>44237-1</b>	11:12:16	Lane: WEST	54 mph	69.3 ft									
						12.0	12.4	13.0		10.1	11.5	59.0		
						o===17===o==4==o=====33=====o==4==o					58.4			
						5 Axles - Class 9						Hold	Print	More..

Figure 3-8

## Chapter 4

### Individual Vehicle Information

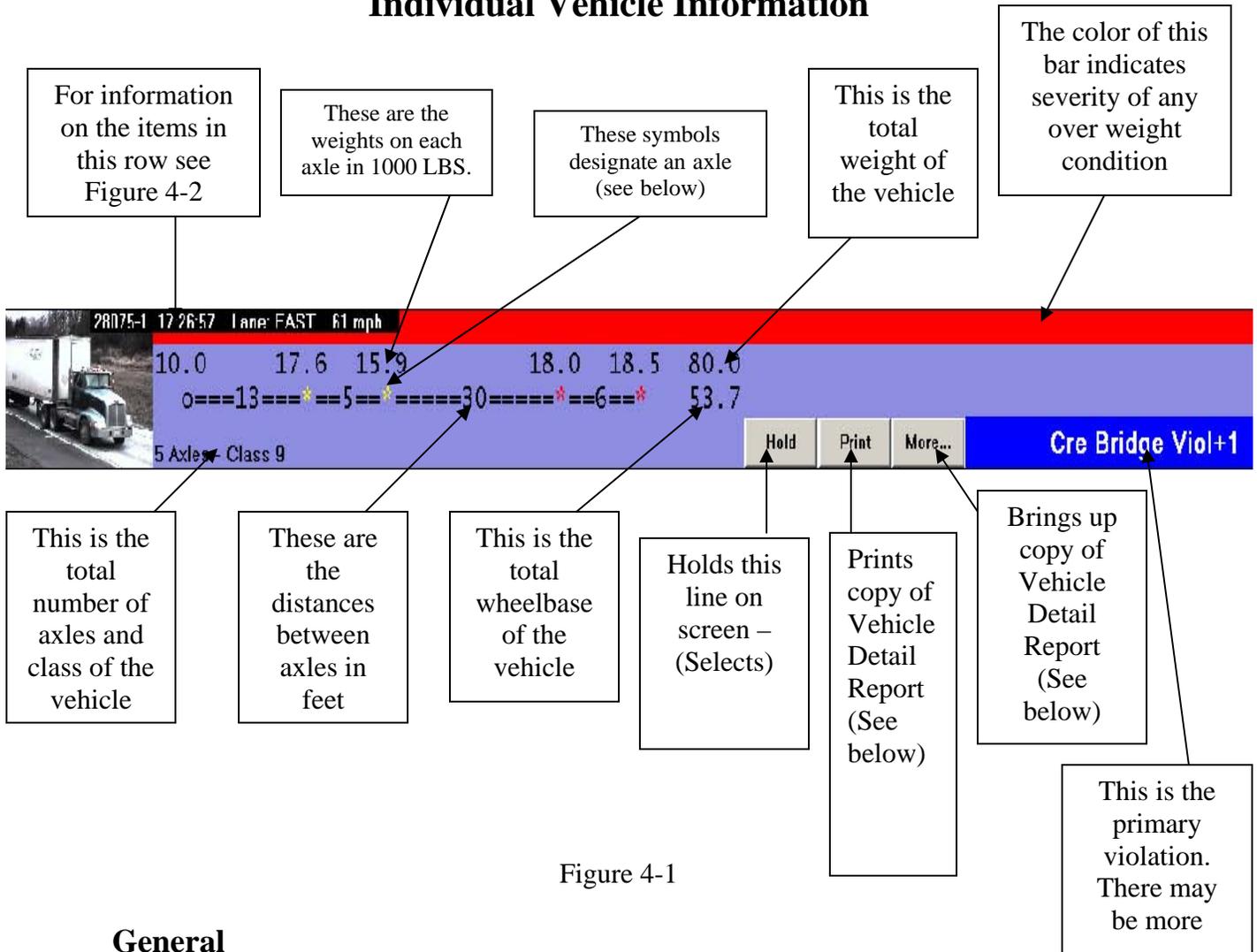


Figure 4-1

### General

Each row displays the results of one vehicle that passed over the WIM and was told to report for some reason. Each row contains five possible lines of data. Left clicking anywhere on the row will select that row or vehicle and the color of the row will darken when it is selected.

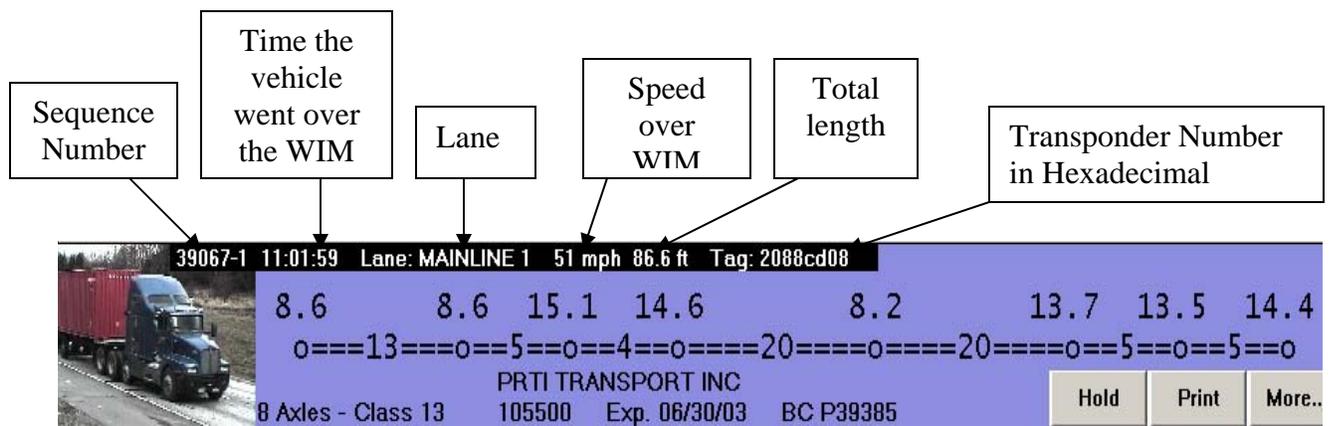


Figure 4-2

### Sequence #

There are two sets of sequence numbers. One assigned by the WIM computer and the other assigned by the ramp computer. Each computer assigns these numbers sequentially. Normally the WIM sequence number is displayed. When the vehicle does not go over the WIM the ramp sequence number is displayed. These numbers are generated whether it is told to report or bypass. The sequence numbers increase with each vehicle passing until it reaches 65,000 or midnight then it starts over.

Attached to the sequence by a - is a number, 1 or 2, which indicates from which computer, WIM (1) or ramp (2) the sequence number originates.

Next to the sequence number is the **time** the vehicle crossed over the WIM or ramp sensors.

Following the time is the **lane** the WIM computer thinks the vehicle is coming down.

Next to the lane is the **speed** of the vehicle as it went over the WIM. **This speed is not to be used for enforcement.**

Next is the total length that the loops in the roadway sensed for the vehicle. This should be very close to the total length of the vehicle in most cases.

The final item in this line is the tag or transponder number that the AVI system read. This tag number may or may not be in the database. If it is in the database then the information on the vehicle will appear at the bottom of the row as in Figure 4-2. If there was no tag number read then this area will be missing.

## **Significances of Top Row Color**

The color of the Row indicates the severity of any over weight condition the vehicle may have. (See Appendix B).

<b>Color</b>	<b>WIM Weight</b>	<b>Severity</b>
White	Less than 2% under legal weight	
Yellow	At least 1% over legal weight	55% likelihood of violation
Orange	At least 3% over legal weight	80% likelihood of violation
Red	At least 6% over legal weight	99+% likelihood of violation

Table 4-1

## **Vehicle Information**

This section shows a profile of the vehicles wheels starting from left to right from the front or steering axle. On the top line shown above each wheel symbol is the weight of that axle. At the end of this line is the total weight of the vehicle.

### **Axle designations**

- o – Axle weight is legal.
- \* - Based on legal weight a single axle, tandem or bridge is overweight.
- x - Based on the Threshold setting a tandem or bridge is overweight.

On the third line are the wheel symbols with the distance shown between the axles as measured by the WIM. At the end of this line is the total length of the vehicle and then the total number of axles (>X<). *Note the total length is for the wheelbase and does not include any overhang in front or back of the vehicle past the axles.*

If the vehicle has a transponder, which is in the database, there will be information displayed in the fourth and fifth lines. This information will start with the name of the licensee on the fourth line followed by the maximum legal weight, the expiration date, the state where licensed, and the vehicle license number on the fifth line.

At the end of the fourth and fifth line is the highest priority reason for the vehicle being told to report. If there is more than one reason there will be a plus sign followed by the quantity of any additional violations. The additional reasons will be found in the Violation Detail Report. (See Figures 4-3 and 4-4). Right clicking on this area will also

bring up the form of Figure 4-4 directly without having to open the form in Figure 4-3 first.

**Hold** - Clicking on this button will hold this line of data on the screen as the others scroll off. This is helpful for vehicles that you call in so they are still visible for your use when the driver comes into the scale house.

**Print** - Clicking on this button will print a copy of the Commercial Vehicle Detail Report shown and discussed below.

**More** - Clicking on this button will display a copy of the Commercial Vehicle Detail Report on the screen so you can view and edit it before it is printed.

# Commercial Vehicle Detail Report

Vehicle Detail Report
Page 1



## Bow Hill - POE, Weighstation No. 33

### Commercial Vehicle Detail



Vehicle Weight Data				
Axle	Static lbs.	Static Axle Dist. ft.	Weigh in Motion lbs.	W.I.M. Axle Dist. ft.
1	0		10,533	
2	0		11,821	18.0
3	0		11,755	4.2
4	0		9,713	22.4
5	0		9,173	4.8
6	0		8,077	4.8
7	0		6,624	19.8
8	0		10,674	4.1
<b>Total</b>			78,370	78.1

Seq. # 22822-1      Mon, 01/27/2003 02:33:52

Lane: NORTH

Scale Head 1 Type: 4 - Mettler Toledo JagExtreme

Certification no. - date: UNKNOWN - 10/07/2002

Axle Configuration:      Vehicle Length: 9.818.0 ft      Axle Weight Threshold Applied: 100%

10.5    11.8    11.8    9.7    9.2    8.1    6.6    10.7    78.4 klbs

0===18===0===4===0===22===0===5===0===5===0===20===0===4===0    78.1 ft

8 Axles - Class 13

#### Vehicle Information:

License Plate: WA - A12827B	Licensed GVW: 50,000
VIN: 1XKEA28X4HJ369907	GVW Exp. Date: 02/06/2003
Transponder ID: 20877670	Reg. Exp. Date: 02/06/2003
Stolen Vehicle:	IRP Status Code: Current

#### Carrier Information:

Carrier Name & Address: B E HANDERSON 6799 GOODWIN ROAD EVERSON, WA 98247 - USA	USDOT #: 499491
	Safety Rating: Satisfactory
	Safety Rating Effective Date: 09/13/1993
	ISS-2 Score: 47
	ISS-2 Score Effective Date: 11/29/2002
Contact Information: B E HANDERSON 6799 GOODWIN ROAD EVERSON, WA 98247 - USA	Safety NSC ID #:
	NSC Safety Rating:
	Financial Resp.:




Figure 4-3

This report shows all the details of the selected vehicle. It is meant to provide convenient documentation for your records. See Chapter 6 to learn how to add the static scale weights to this report for even more detail.

There are five buttons on this screen.

**Don't Show Picture** –Clicking on this will cause the picture of the vehicle to not show and not be printed.

**Don't Show Weigh in Motion** – Clicking on this button will cause the weigh in motion weights to be removed from the report.

**Violations** – Clicking on this button will open the Vehicle Violation Detail Report. (see Figure 4-4)

**Bridging** – Clicking on this button will open the Vehicle Axle Bridging Weight Detail Report. (See Figure 4-6)

**Print Page** – Clicking on this button will print the report as it appears at the time this button is clicked.

**Close** - Clicking on this button will close the Report to close without making any changes.

### **Vehicle Violation Detail Report**

(See Figure 4-4)

This screen shows what items are being screened in the CRISS and which items failed.

**Code & Description** – See Table 4-2.

**Checked** – Possibilities are **No** – CRISS is not checking this item.

**Yes** – This is an active item that is being checked against the database and a vehicle will be pulled in if it is not OK

**Bypassed** – This means it is being checked for statistical purposes but it is not screening on this item.

**Status** – Possibilities are

**OK** (Green) – The vehicle passed this item.

**FAIL** (Yellow) – The vehicle failed this item but it is in bypass so it was not an item that caused the vehicle to be pulled in

**FAIL** (Red) – Vehicle failed this item and was pulled in because of this and perhaps additional items

**Priority** - The priority of the violation.

This screen has three buttons.

**Violations 2** – Opens the second page of violations (see Figure 4-4). This screen has additional violations used to screen on but is otherwise the same as the first page.

**Print Page** – Prints a copy of this screen.

**Close** - To close this screen click the **Close** button

**Vehicle Detail Report** Page 2

**Washington State Patrol** **Bow Hill - POE, Weighstation No. 33** **Vehicle Violation Detail**

Veh Time: 01/27 02:33:52    Seq. No.: 22822-1    Carrier: B E HANDERSON  
 License: A12827B    Dangerous Goods: N    Violations 2  
 Tag No.: 20877670    VIN: 1XKEA28X4HJ369907    Permitted GVW: 50,000    Print Page    Close

Code	Description	Checked	Status	Priority
22	Over Licensed GVW	yes	FAIL	12
24	No Active IFTA Status	bypassed	FAIL	14
33	Non NORPASS Transponder - In Database	bypassed	FAIL	33
10	Over GVW	yes	ok	5
01	Overweight	yes	ok	6
19	Stolen Vehicle	yes	ok	6
06	Bridge Formula Violation - WIM	yes	ok	7
13	Safety Rating Not Satisfactory	yes	ok	8
41	NSC Safety Rating Not Satisfactory	yes	ok	8
09	Running Scale	yes	ok	9
18	Vehicle Registration Out of Date	yes	ok	9
21	Licensed GVW Expired	yes	ok	10
02	Overheight	yes	ok	11
25	No Current IRP Status	bypassed	ok	13
14	Liability Insure Not Compliant	bypassed	ok	16
26	Outstanding Out-Of-Service Inspects	yes	ok	17
27	Carrier Out-Of-Business	bypassed	ok	21
20	CVSEF Fee Not Paid	yes	ok	22
12	Credential Random Pull	yes	ok	23
05	WIM Random Pull	yes	ok	24
28	Tag Serial Number Does Not Exist In Database	bypassed	ok	26
30	Bridge Formula Violation - Credentialing	yes	ok	27
42	Axle Spacing between Axle Groups is Illegal	yes	ok	27
04	Manipulation Error	yes	ok	28
80	Partly Off Scale	yes	ok	28
81	Onscale Missed	yes	ok	28
82	Speed Change	yes	ok	28
83	Weight Difference	yes	ok	28
84	Partial Axle Detected	yes	ok	28
85	Unequal Axles Detected	yes	ok	28
86	Tailgating	yes	ok	28
87	Bad Lateral Position	yes	ok	28
88	No Compliance Table	yes	ok	28
89	Overlength	yes	ok	28
90	Override Failed	yes	ok	28
91	Vehicle Entered Roadway btwn WIM and Weigh Station	yes	ok	28

 **Washington State Department of Transportation**  **Washington State Department of Licensing**

Figure 4-4

**Vehicle Detail Report** Page 3

**Washington State Patrol** **Bow Hill - POE, Weighstation No. 33** **Vehicle Violation Detail**

Veh Time: 01/27 02:33:52    Seq. No.: 22822-1    Carrier: B E HANDERSON  
 License: A12827B    Dangerous Goods: N    Violations 1  
 Tag No.: 20877670    VIN: 1XKEA28X4HJ369907    Permitted GVW: 50,000    Print Page    Close

Code	Description	Checked	Status	Priority
91	Vehicle Entered Roadway btwn WIM and Weigh Station	yes	ok	28
03	Speeding	bypassed	ok	29
08	Truck not in WIM lane	yes	ok	29
11	Vehicle not Matched	bypassed	ok	29
31	Over Tandem - Credentialing	yes	ok	31
32	Over Axle - Credentialing	yes	ok	32
48	CRE Set to Bypass Mode	yes	ok	48
49	CRE Set to Report Mode	yes	ok	49
78	WIM Set to Bypass Mode	yes	ok	78
79	WIM Set to Report Mode	yes	ok	79
23	Over Licensed GVW - W/Permits	no		15
17	No Active Operating Authority	no		18
15	Cargo Insure Not Compliant	no		19
16	Bond Trust Not Compliant	no		20
29	SAFESTAT Score Greater Than Threshold	no		30
34	Report Given - Illegal Bypass	no		34
35	ISS-2 Score > Threshold	no		35
36	SafeStat Category Reflect Bad Carrier	no		36
37	No Jur Operating Authority	no		37
38	Jur Insurance Not Active	no		38
39	Vehicle Cargo contains Hazardous Materials (HAZMAT)	no		39
40	PRISM Targeted Vehicle - Mandatory Pull-In	no		40




Figure 4-5

## **Vehicle Axle Bridging Weight Detail Report**

(See Figure 4-6)

This Report shows all possibilities of axle combinations and the weight that WIM measured. If the static weights were entered, as in Chapter 8, then by clicking on the **Static Scale** button at the bottom of the screen a report, just like this one but with the static scale weight instead of the WIM weights, will be shown.

As on the other screens the **print page** button will print a copy of the report and the **close** button will close the report.

The **Page 2** button will bring up page 2 if there are enough axle combinations to need a second page.



**Bow Hill - POE, Weighstation No. 33  
Vehicle Axle Bridging Weight Detail**

Axles	W.I.M. Weight	W.I.M. Span	Legal Weight	Over Legal	Threshold	Thshld Wght	Axles	W.I.M. Weight	W.I.M. Span	Legal Weight	Over Legal	Threshold	Thshld Wght
1	10533		20000		70	14000	7	6624		20000		100	20000
1-2	22354	18	40000		100	40000	7-8	17298	4.1	34000		100	34000
1-3	34109	22.2	52500		100	52500	8	10674		20000		100	20000
1-4	43822	44.6	72000		100	72000							
1-5	52995	49.4	78500		100	78500							
1-6	61072	54.2	86500		100	86500							
1-7	67696	74	103000		100	103000							
1-8	78370	78.1	105500		100	105500							
2	11821		20000		100	20000							
2-3	23576	4.2	34000		100	34000							
2-4	33289	26.6	56000		100	56000							
2-5	42462	31.4	62500		100	62500							
2-6	50539	36.2	70500		100	70500							
2-7	57163	56	87500		100	87500							
2-8	67837	60.1	95000		100	95000							
3	11755		20000		100	20000							
3-4	21468	22.4	40000		100	40000							
3-5	30641	27.2	56000		100	56000							
3-6	38718	32	63500		100	63500							
3-7	45342	51.8	80500		100	80500							
3-8	56016	55.9	87500		100	87500							
4	9713		20000		100	20000							
4-5	18886	4.8	34000		100	34000							
4-6	26963	9.6	43500		100	43500							
4-7	33587	29.4	61500		100	61500							
4-8	44261	33.5	69000		100	69000							
5	9173		20000		100	20000							
5-6	17250	4.8	34000		100	34000							
5-7	23874	24.6	54500		100	54500							
5-8	34548	28.7	61500		100	61500							
6	8077		20000		100	20000							
6-7	14701	19.8	40000		100	40000							
6-8	25375	23.9	54000		100	54000							



Figure 4-6

Right clicking anywhere on a vehicle row will bring up the popup screen shown in Figure 4-7. This will allow you to do any of those functions listed for the vehicle selected. In Figure 4-7 the top row has been selected as apparent but the darker color.

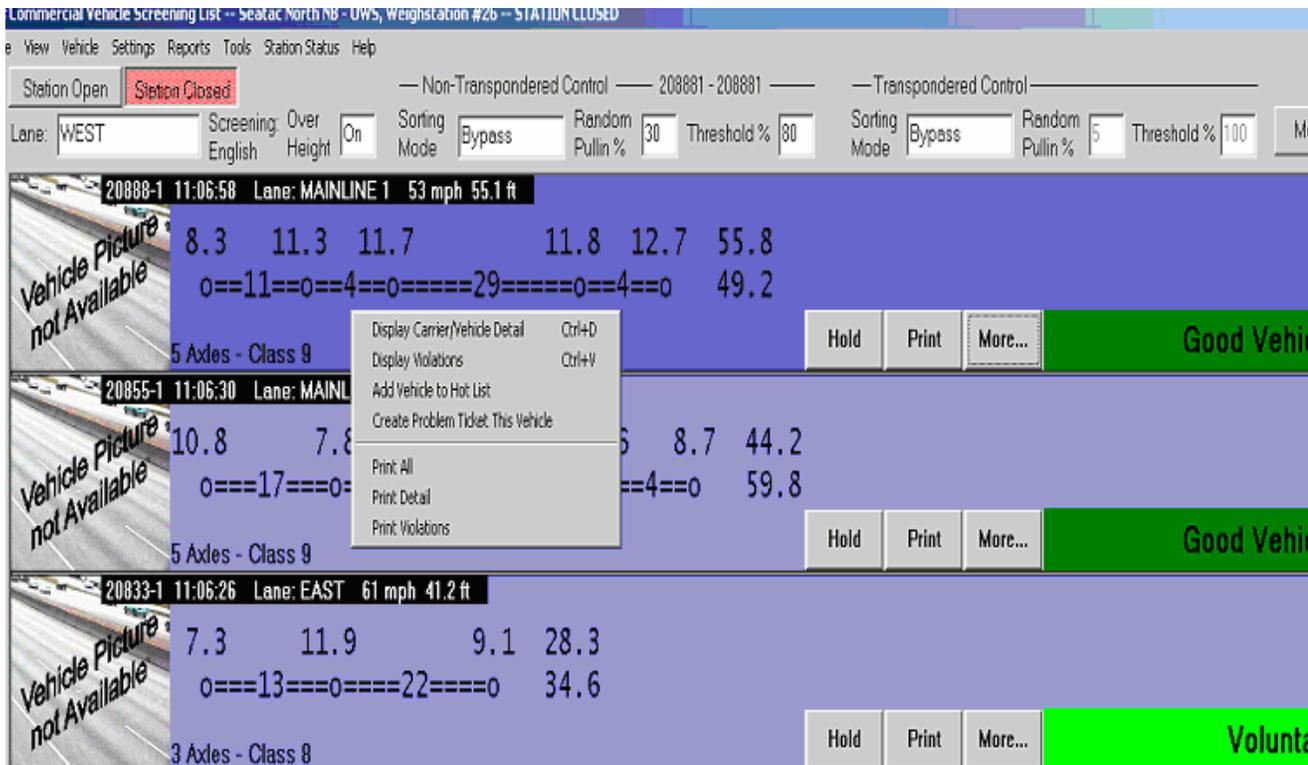


Figure 4-7

The following actions can be selected:

- Display Carrier – This will display the form shown in Figure 4-3 and is equivalent to clicking the More... button
- Display Violations – This will display the form shown in Figure 4-4. This is the equivalent of right clicking on the violation area of the row such as the one that says Good Vehicle in Figure 4-7.
- Add Vehicle to Hot List – When implemented this will place the selected vehicle on the hot list computer.
- Create Problem Ticket This Vehicle – This will bring up the form shown in Figure 4-8 to allow you to file a problem ticket to request a repair or correction. See appendix D for information on how to fill in this form.
- Print All - This item is not activated but when it gets activated it will print all the three forms including the Detail, Violation and Bridging.
- Print Detail – This prints the bridging form and is the equivalent or clicking on the Print button.
- Print Violations – This prints the Violation form.

If you double click anywhere on a vehicle row you will bring up a window with the picture of that vehicle. You can then click on the window with the picture and it will enlarge with each click.

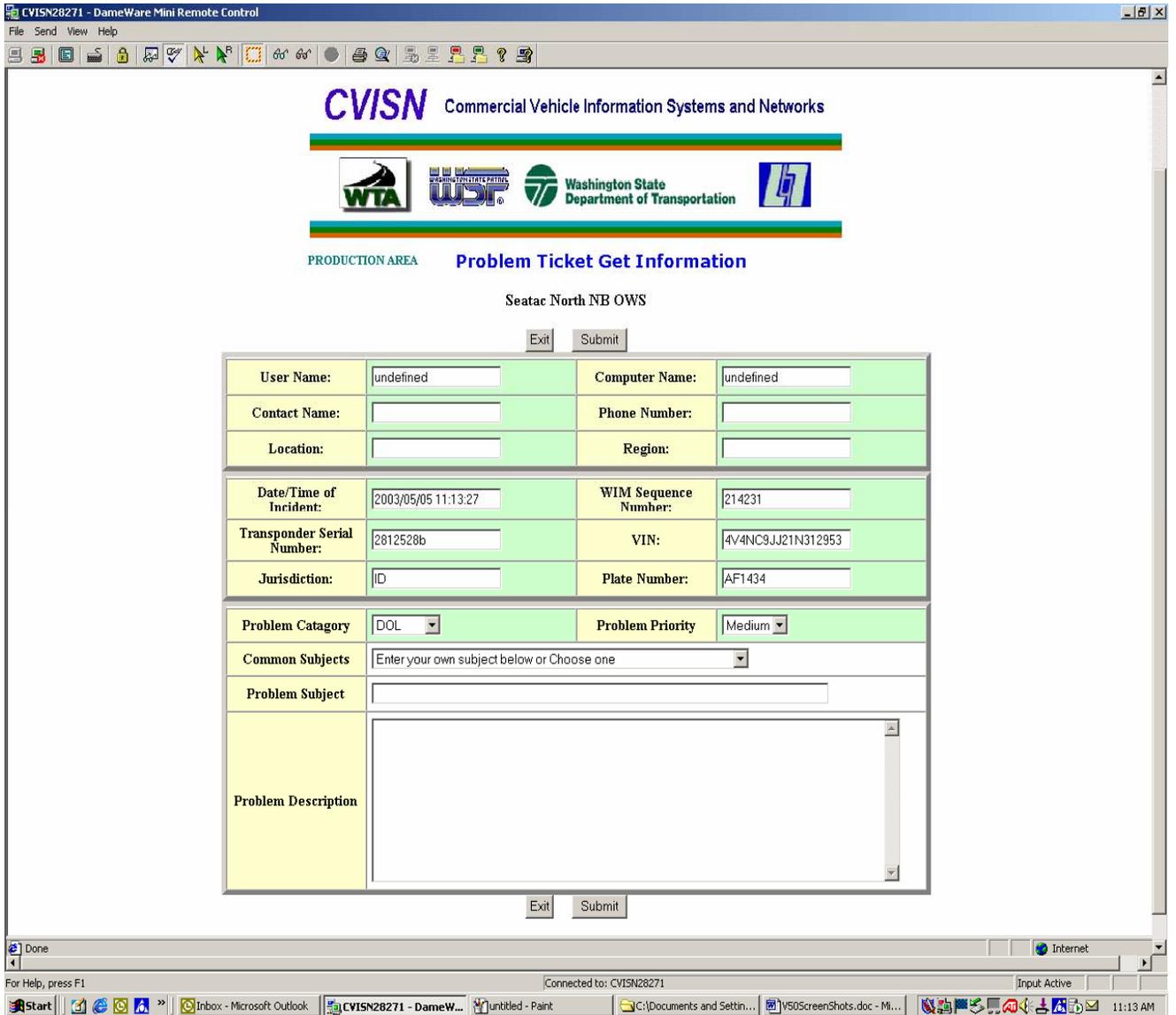


Figure 4-8

## Chapter 5

### Variable Message Sign Control

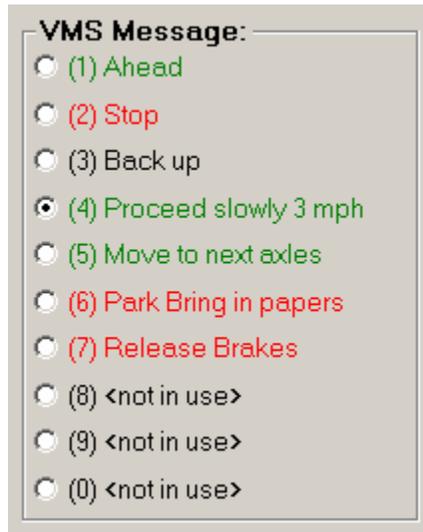


Figure 5-1

This area allows you to choose which message you desire to have displayed on the variable message sign that instructs the driver on the scale what you want them to do. You will note that these buttons allow only one to be selected at one time. The selected button has a dot in the middle. In Figure 5-1 message number 4 is selected. As you select another message such as number 2 and either click on it with the mouse or press the number “2” key then the dot will move to the button in front of message number 2 and the dot will disappear from message number 4.

There are two ways to select a message. You can use the mouse and click on the button in front of the message or you can press the number key shown in parentheses in front of the message. This is the number key that have 1 – 0 on the row with the backspace key, not the functions keys that start with F.

The color of the message shows the light on top of the sign that is caused to blink when that message is selected. In the case of message 1, 4, and 5 the green light will be flashing. In the case of message 2, 6 and 7 the red light will be flashing and in the case of message 3 no light will be on.

Messages 8-10 are ones you can compose your self that can then be selected on the main screen. The message size is limited to 20 characters. Any character over 20 will not be displayed on the variable message sign.

**Message** – Type the message you want displayed. Remember, 20 characters or less.

**Light** – Allows you to control the two lights on top of the newer sign installations. You can select: Off - No light will light. Red - The red light comes on with this selection, or Green - the green light will come on if this is selected.

**Time Out** – This is the time the message will be displayed. This would only be used if you wanted to default to another message.

**Next Msg** – This allows you to default to another message after the time out time has been reached. You select the number of the message to which you want to default.

**Warn** – When this box is checked, a warning message will be displayed on the main screen when the time out time is reached and the messages are switched.

An example of how the three items above would work – suppose you are having a problem with the drivers not bringing in their log book in when you put up the message “Park bring in papers.” You could use 8, 9, or 10 to make a message that says “Bring in Log Book” then select a Time Out such as 6 seconds, select Next Msg as 6 and you can check Warn but it is probably not necessary. Now when you select the message you just customized and it will put “Bring in Log Book” up on the variable message sign for 6 seconds and then default to “Park Bring in Papers” which will remain on until you change the sign to something else. (See Figure 5–2)

**CV Screening List Parameters**

**Non-Transpondered Control (unknown carriers)**

Sorting Mode:  Over Height:  On  Off

Random Pullin %:  Threshold %:

**Transpondered Control (known carriers only)**

Sorting Mode:

SafeStat Threshold:  ISS2 Threshold:

Random Pullin %:  Threshold %:

**VMS Messages**

Message	Light	Time Out	Next Msg	Warn
Msg 8 <input type="text" value="Bring in Log Book"/>	<input type="text" value="Red"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="checkbox"/>
Msg 9 <input type="text" value="12345678901234567890"/>	<input type="text" value="Green"/>	<input type="text" value="2"/>	<input type="text" value="1"/>	<input checked="" type="checkbox"/>
Msg 10 <input type="text" value="&lt;not in use&gt;"/>	<input type="text" value="Off"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="checkbox"/>

**Display**

Meas. Units:  List Period (min):

Lane Units:   Scale Heads Reversed

Scale Units:  Platform Display:

Lane:

Reset Vehicle Tracking

**AVI Status**

On Off

Reader 1

Reader 2

Reader 3

Reader 4

Reader 5

Writer 1

Writer 2

**Vehicle Class Range**

Start:  End:

**Selected Camera**

Color  Black & White

**VMS Scale**

Figure 5-2

Enter custom message here. Up to 20 spaces

Select light you want on during the display of this message

Select period of time you want this message on. If you want it to stay on until another message is selected choose "0"

If there is a time out period selected beside "0" then select the number of the message it is to go to after the time out period

## Chapter 6

### Scale Information

The screenshot shows a software window titled "Static Scales on Lane WEST - English". On the left, there are two green display windows. The top one, labeled "2.", shows the number "20". The bottom one, labeled "1.", shows the number "39,240". To the right of these displays are buttons for "Save Scale 2 Weight ->" and "Save Scale 1 Weight ->". Below these are "Switch Scales" and "Clear Selected Static Weight(s)" buttons. On the right side of the window, there is a table titled "Axe Detail: 20206-1" with columns for "Static (lbs)", "Axle", "WIM (lbs)", "Sep (ft)", and "A T Bridge". The table contains five rows of data. Below the table, there are "Totals" for "61,560" and "50.3". A "Static Scale Vehicle Counts" button is located at the bottom right. A "Weight Violations:" section is also visible at the top right.

Callouts and their descriptions:

- Weight display for vehicle on static scales:** Points to the green display windows showing "20" and "39,240".
- Shows sequence number of vehicle being displayed below:** Points to the numbers "2." and "1." next to the display windows.
- "x" in these boxes shows there is a weight violation with the axles (A) or tandem (T):** Points to the "A T Bridge" column in the table.
- Ones (1) in these boxes means there is a bridge violation with the combination of those axles:** Points to the "A T Bridge" column in the table.
- Static scale number for that window:** Points to the numbers "2." and "1." next to the display windows.
- Switches the displays (left above) between scales:** Points to the "Switch Scales" button.
- Will clear any static scale weight that is highlighted above right:** Points to the "Clear Selected Static Weight(s)" button.
- These totals are for the axles highlighted above:** Points to the "Totals" section.
- Clicking on this button will bring up window shown in Figure 6-2:** Points to the "Static Scale Vehicle Counts" button.

Figure 6-1

This area has two distinct areas. On the left the two green windows show the static scale weights for vehicles that are at that moment on the static scales. At the top left corner is the scale number.

The window in Figure 6-2 appears, when the button titled “Static Scale Vehicle Count” in the lower right hand corner of the screen is clicked. This is used to give a work load indicator for the operators report. It should be reset at the start of the shift and then read at the end to give a count of the vehicles passing by the operator during their shift.

The screenshot shows a window titled "Scale Vehicle Counts" with a close button (X) in the top right corner. The window content is titled "Static Scale Counters" and displays a table of data. The table has three columns: "Lane", "Count", and "Last Time Reset". There are three rows: "WEST", "EAST", and "Total". Each row has a "Count" field and a "Last Time Reset" field. The "WEST" row shows a count of 0 and a reset time of 01/26/2003 21:57. The "EAST" row shows a count of 234 and a reset time of 01/26/2003 21:58. The "Total" row shows a count of 234. There are "Reset" buttons next to the "Last Time Reset" fields for the "WEST" and "EAST" rows, and an "OK" button at the bottom right of the window.

Lane	Count	Last Time Reset
WEST	0	01/26/2003 21:57
EAST	234	01/26/2003 21:58
Total	234	

Figure 6-2

To enter static weights for a vehicle first click on the HOLD button (See Figure 6-3) for the vehicle on the static scale and highlight the axle row(s) of the axles on one of the scales. Click on the appropriate button to the right of the scale whose weight you want to enter. The weight will appear under the Static (LBS) column in the highlighted rows.

A vehicle is selected so the HOLD button changes to RELEASE

---

Lane: WEST 58 mph 76.0 ft Tag: 20890c31

6.1 5.7 10.2 1.6 2.4 1.7 39.1

=18==0==4==0=====36=====0==5==0==4==0==4==0 71.8

WALSH TRUCKING CO LTD

Class 13 105500 Exp. 04/30/03 WA 74851PR

Release Print More... WIM

---

Lane: WEST 35 mph 70.0 ft Weight Data Not Available

-18--0--4--0-----34-----0--4--0 60 5

Static Scales on Lane WEST - English

2. 34,160

1. 32,220

Scale 2 Axle(s) weighed:

Save Scale 2 Weight ->

Scale 1 Axle(s) weighed:

Save Scale 1 Weight ->

Switch Scales Clear Selected Static Weight(s)

Axle Detail: 40735-1

Static (lbs)	Axle	WIM (lbs)	S
11,519	1		
6,080	2		
5,709	3		
10,167	4		
1,569	5		
2,420	6		
1,679	7		
<b>Totals</b>		<b>39,143</b>	

Figure 6-3

When a hold button is actuated then all these buttons darken. They were grayed out until a vehicle is selected

Example: If the Vehicle you have on the scale has two rear axles and you want to put their static weight in rows 6 and 7 then you would highlight these two rows by placing the cursor at one corner and pressing the left mouse button and then dragging the cursor across to highlight all the rows you want to select. Then click on the scale button for the scale they are on. In the example this is scale number 2.

Static Scales on Lane WEST - English

Scale 2 Axle(s) weighed:

Save Scale 2 Weight ->

Scale 1 Axle(s) weighed:

Save Scale 1 Weight ->

Switch Scales

Clear Selected Static Weight(s)

Axle Detail: 40735-1

Static (lbs)	Axle	WIM (lbs)	Sep (ft)	A	T	I
	1	11,519	18.5			
	2	6,080	4.4			
	3	5,709	35.8			
	4	10,167	4.6			
	5	1,569	4.2			
	6	2,420	4.2			
	7	1,679				
<b>Totals</b>		<b>39,143</b>	<b>71.7</b>			

Click on this button to place the weight from static scale number 1 in the highlighted row or rows

Clicking on this button to place the weight from static scale number 2 in the highlighted row or rows

Highlight these two rows

Figure 6-4

Clicking on this button will reverse the two displays shown in the green windows. The top one would then be scale number 1 and the bottom one will be scale number 2

If you make a mistake this button can be used to erase the weight shown in the highlighted rows

Scale 0 Axle(s) weighed:

Compute Weight Using Scale 0 Weight ->

Scale 1 Axle(s) weighed:

Compute Weight Using Scale 1 Weight ->

Save Static Scale Weights

Switch Scales

Clear Selected Static Weight(s)

Axle Detail: 2756-1

Weight Violations:

Static (lbs)	Axle	WIM (lbs)	Sep (ft)	A	T	Bridge
11,520	1	9,188	19.0			
30,740	2	5,897	4.4			
^^^^^	3	6,080	12.7			
29,540	4	6,503	4.1			
^^^^^	5	9,043				
<b>71,800</b>	<b>Totals</b>	<b>36,711</b>	<b>40.2</b>			
<b>29,540</b>		<b>15,546</b>	<b>4.1</b>			

Static Scale Vehicle Counts

Figure 6 - 5

When the static weights are filled in, then the "Save Static Scale Weights" key will appear and you can save the weights. They will then appear on the Detail Form and can be printed out when the Vehicle Detail form is printed for your record.

## Chapter 7

### Logging On

#### Startup and Logging On

If the computer is off, turn it on by pressing the largest button on the front of the computer CPU in the cabinet. The display unit must also be turned on. It will take a few minutes for the computer to boot up to the point that it displays the Log in window shown in Figure 7-1.



Figure 7-1

While holding down the Ctrl key and the Alt key using two fingers from the left hand press the Delete key with the right hand. This will bring up the window shown in Figure 7-2.

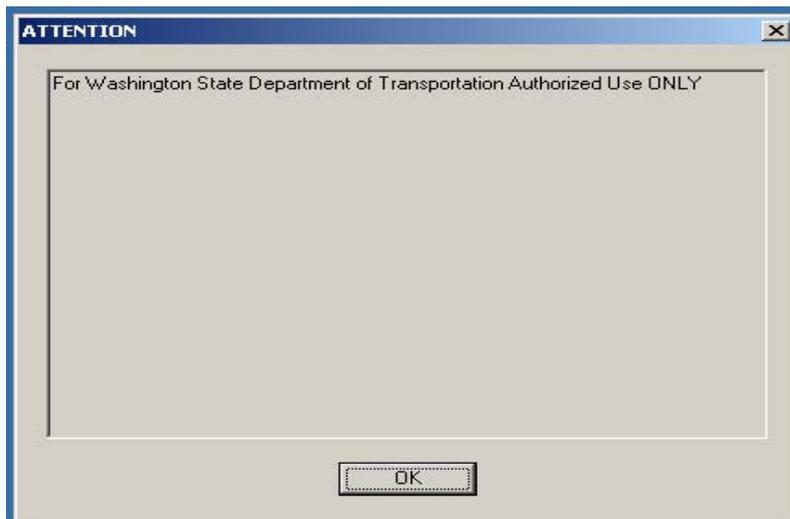


Figure 7-2

Just press the enter key to get rid of this window and then the window shown in Figure 7-3 will appear.

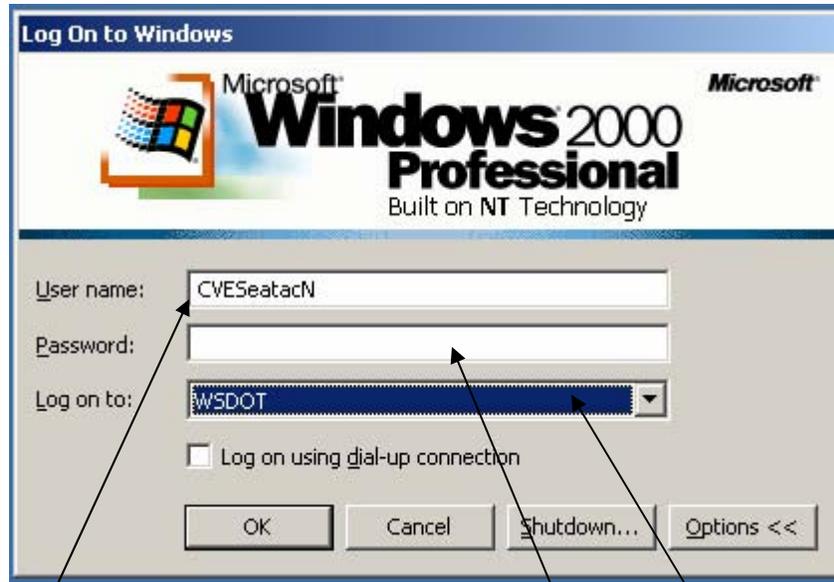


Figure 7-3

User Name. Will vary with the actual scale. See Table 7-1

Enter password in this window

This window should show the computer number (see below)

Figure 7-3 is the actual login window. You should only have to enter the password and press enter (or click on OK) and the computer will complete the login, load the desktop and start the CVISN program. Your supervisor will give you the password.

Note the other two data fields above and below the password field. The top one is for the station name and Table 7-1 shows these for each weigh station. The one below the password is for the domain that is being used. PLEASE NOTE the correct domain to log on the terminals is "CVISNXXXXX (this computer)". The number of that computer replaces the X's. This will normally be found in the drop down list if it does not already appear at start up. The computer number can be found on a tag on the computer case and will normally be five digits.

Ridgefield NB	72	CVERidgefieldN
Kelso SB	77	CVEKelsoS
Fort Lewis NB	7	CVEFtLewisN
SeaTac NB	26	CVSEatacN
SeaTac SB	27	CVSEatacS
Everett SB	39	CVEEverettS
Stanwood Bryant NB	38	CVStanwoodN
Bow Hill SB	33	CVEBowHills
Cle Elum WB	53	CVECleElumW
Cle Elum EB	52	CVECleElumE
Spokane EB	64	CVESpokaneE
Plymouth WB	54	CVEPlymouthW

Table 7-1

If the program does not start automatically at start up or if you should have to shut it down for some reason then it can be started in one of the following methods.



Figure 7-4

Figure 7-4 is the icon for the CVISN CV Screening List program. If it is on the desktop then you can double click on this icon to start CV Screening list. A final method to start the program is by clicking on the “Start” button at the bottom left side of the windows screen and then selecting “Programs”, and then “CVISN” and finally clicking on “CVISN Screening List” will start the program.

## Chapter 8

# System Operation

### CVISN

CVISN (pronounced see – vision) is a cooperative effort between the Washington State Department of Transportation (WSDOT), the Federal Motor Carrier Safety Administration (FMCSA), the Washington State Patrol (WSP), the Washington Department of Licensing (DOL), and the Washington Truckers Associations (WTA). The purpose of CVISN is the deployment of Intelligent Transportation System (ITS) technology to promote the safe and legal movement of commercial vehicle traffic across the state and the nation.

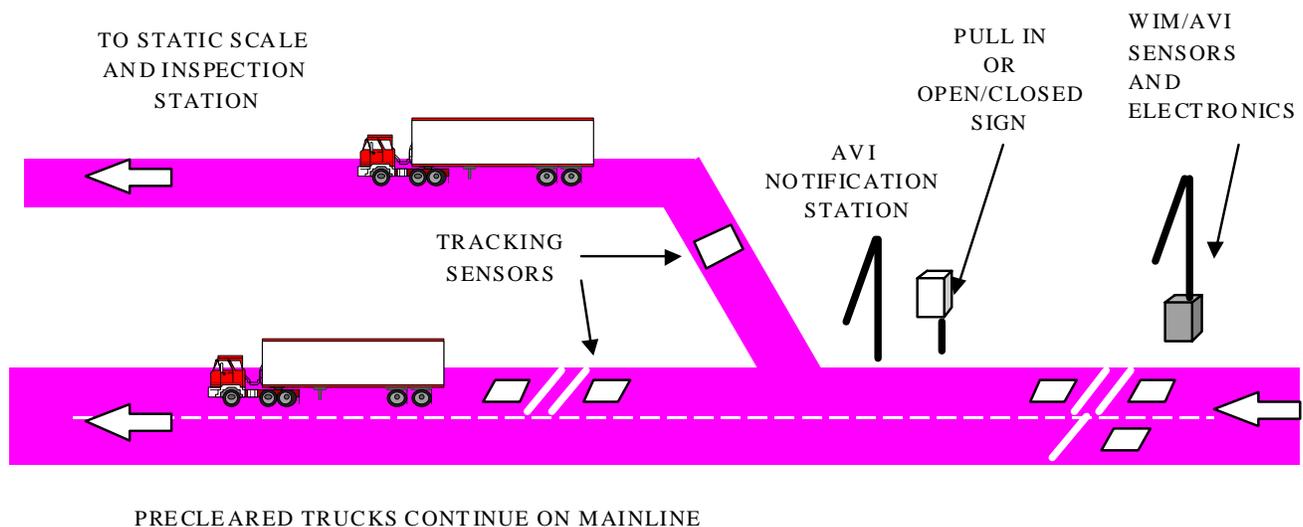
At CVISN compliant weigh stations in the state of Washington this means that trucks equipped with transponders can be electronically checked for legal size, weight, load, safety rating, and credentials. Those vehicles that pass the electronic and legal criteria are able to bypass weigh stations without stopping. This technology allows enforcement personnel to concentrate their limited resources on those commercial vehicles that have a higher probability of violations.

### Transponders

The transponder used in the CVISN program is a dedicated short-range communication (DSRC) device that can send and receive radio signals. Carriers can obtain transponders from WSDOT or other states and provinces through an application process. The process includes a review of the carriers' safety rating, registration, prorate and use fuel status, and other credentialing information. If all the credentials are current and the safety rating is satisfactory, a transponder with a unique electronic identification signal is assigned to a particular vehicle and the information is stored in CRISS. The carrier then mounts the transponder on the windshield of the assigned vehicle where it continually emits its unique signal and can receive a signal from the notification station at the scale site.

# Mainline Screening & Clearance

A way to electronically sort trucks on the mainline



JHK & Associates an SAIC Company Oct. 30, 1996

Figure 8-1

## Roadside System

(See Figure 8-1)

When a commercial vehicle approaches a CVISN compliant weigh station it is required to travel in the right hand lane. The vehicle then passes over a steel plate that is the Weigh in Motion (WIM) sensor. The plate has buried loops, both in front of and after it, to detect the vehicle and provide information needed to calculate the weight, speed and the distances between axles.

Suspended over the WIM is the "advanced reader." This device determines if the vehicle has a transponder. At the roadside in a metal box is the WIM computer. This computer takes the output of the WIM and calculates the weights of each axle and the distance between each axle. The WIM computer then assigns the next sequence number

to the vehicle and sends all this information, including any transponder ID to the CRISS Computer in the scale house. This information is used to determine if the truck will be allowed to bypass the scale or will be told to report.

Weigh in motion (WIM) systems are not as accurate as the static scales at the scale house. Much of the error is caused by the dynamics of the roadway and the suspension and loading of the vehicle. **Therefore, weights measured by the WIM systems are only approximate and must be confirmed on the static scale before enforcement action can be taken. Also, any credential violation must be confirmed before any enforcement action can be taken.**

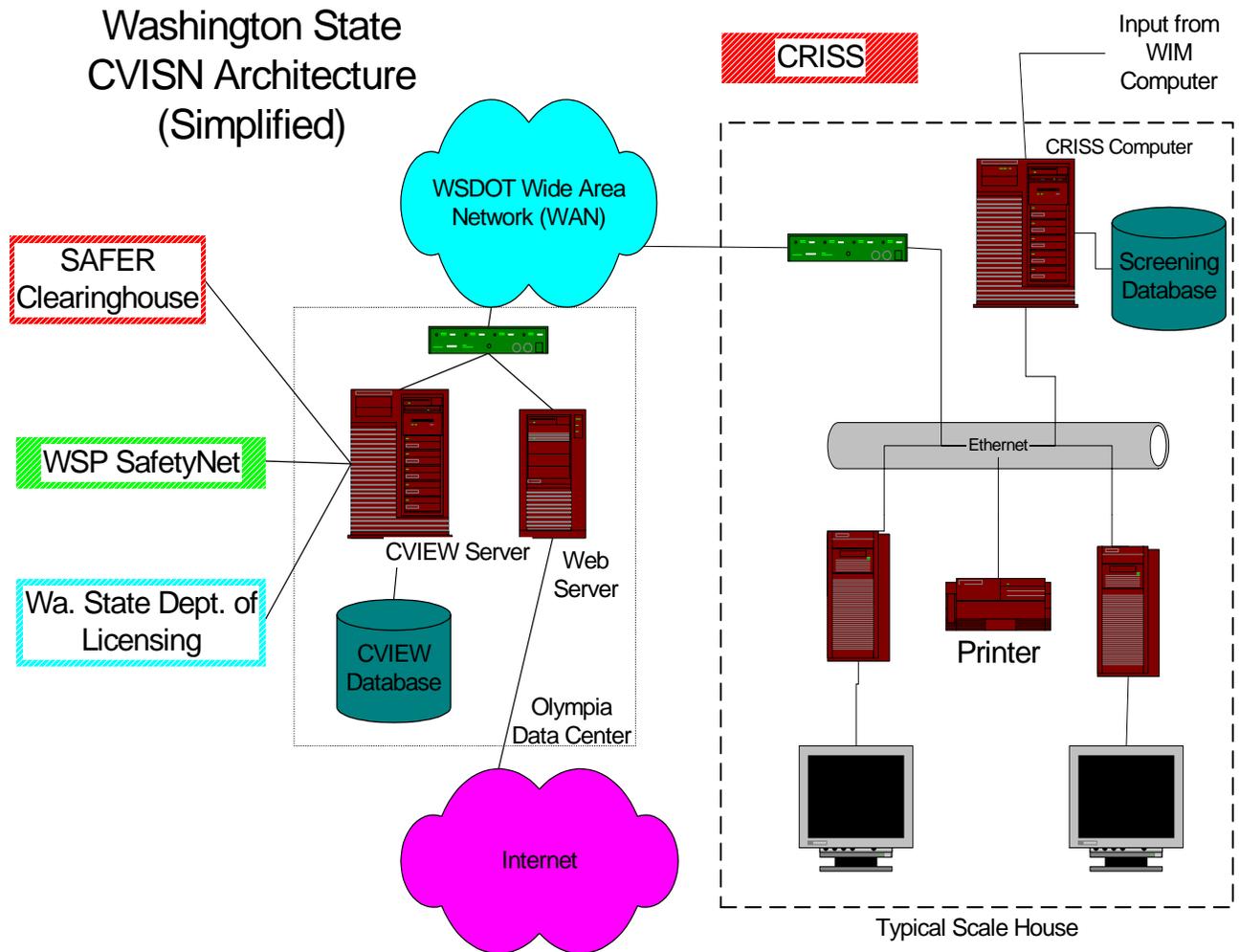


Figure 8-2

### Commercial-vehicle Roadside Information Sorting System (CRISS)

(See Figure 8-2)

At WSDOT headquarters is a database called Commercial Vehicle Information Exchange Window (CVIEW). This database is the heart of the CVISN system where all data is

gathered and stored. CVIEW gets its data from the Department of Licensing (DOL) database, the federal Safety and Fitness Electronic Record (SAFER) and WSP Safety Net databases, and other state and provincial vehicle licensing systems. This system provides the credential and safety information on most commercial vehicles that come into Washington from other states and provinces.

Information on vehicles that have transponders is moved over to a second database called the “Screening Database.” This database is then replicated out to a like database (CRISS) at each CVISN equipped scalehouse. The screening database at the scalehouse is used to screen each transpondered equipped vehicle as it goes over the WIM.

As the vehicles pass over the WIM on the mainline the “advanced reader” queries the vehicle to see if it has a transponder. If it does, it sends back to the reader a serial number identifying that vehicle. The scalehouse screening database is searched for that number and if found the CRISS computer looks at the information and determines if there are any violations and if the safety rating is satisfactory. If all is found to be satisfactory then the vehicle is sent a green light signal from the “notification reader.” The green light authorizes the vehicle to continue by the scalehouse on the mainline. If there is a violation found or the safety rating for the carrier is not satisfactory then the “notification reader” sends a red light signal to the vehicle and the vehicle must report to the scalehouse. At the same time the information on any red-lighted vehicle is displayed on the operators display unit as will be seen later in this manual. In addition, the system allows the operator to randomly pull in a percentage of the legal trucks passing the scalehouse that would normally get a green light. The random pull feature is used to verify and validate the information contained in the CRISS computer.

Commercial-vehicle Roadside Information Sorting System (CRISS)			
Analog Input/Output System (AIOS)		Validation Screening & Listing (VSL)	
Weigh In Motion (WIM)	Automatic Vehicle Identification (AVI)	Systematic Complete Roadside Networks Review (SCRNR)	Roadside Operation Screens (ROSS)
Receives inputs from sensors, loops, and weigh-in-motion devices and controls signage	Receives input from transponder antenna devices and transmits response back to the transponder	Validates credentials of commercial vehicles with transponders  Validates axle weights, bridge weights, and random pulls.	Displays results of vehicle validation and detail vehicle information when available  Administrative screens and Web application
Makes initial sort decision		Makes final sort decision	

Table 8-1

The purpose of the CRISS system is to electronically make an informed automatic decision to allow a commercial vehicle to bypass a weigh station or require the commercial vehicle to report (enter) a weigh station for further review. The CRISS system is composed of two major components and four minor subcomponents. The first major component is the hardware and software that gathers the information from the roadside input devices such as the devices that detect weights of axles or the device that detects and reads a transponder serial number. These input signals are converted and merged into digital information that is processed and transmitted to the second major component. This first major component we will call the Analog Input/Output System (AIOS). The second major component is the hardware and software that takes the digital information from the preliminary processing, validates the information and then if possible, processes it against a database of carrier, vehicle, and in the future, driver information. A final decision to either give the vehicle a bypass or report is made and transmitted back to the AIOS for dissemination to the commercial vehicle driver. Available information is then displayed on a monitor for further manual review. This second major component we will call Validation Screening & Listing (VSL).

Each major component is comprised of two subcomponents.

The AIOS is made up of the Weigh-In-Motion (WIM) input/output devices and software, and the Automatic-Vehicle-Identification (AVI) input/output devices and software.

The VSL is made up of the Systematic Complete Roadside Networks Review (SCRNR) hardware and software, and the Roadside Operation Screens (ROSS) hardware and software.

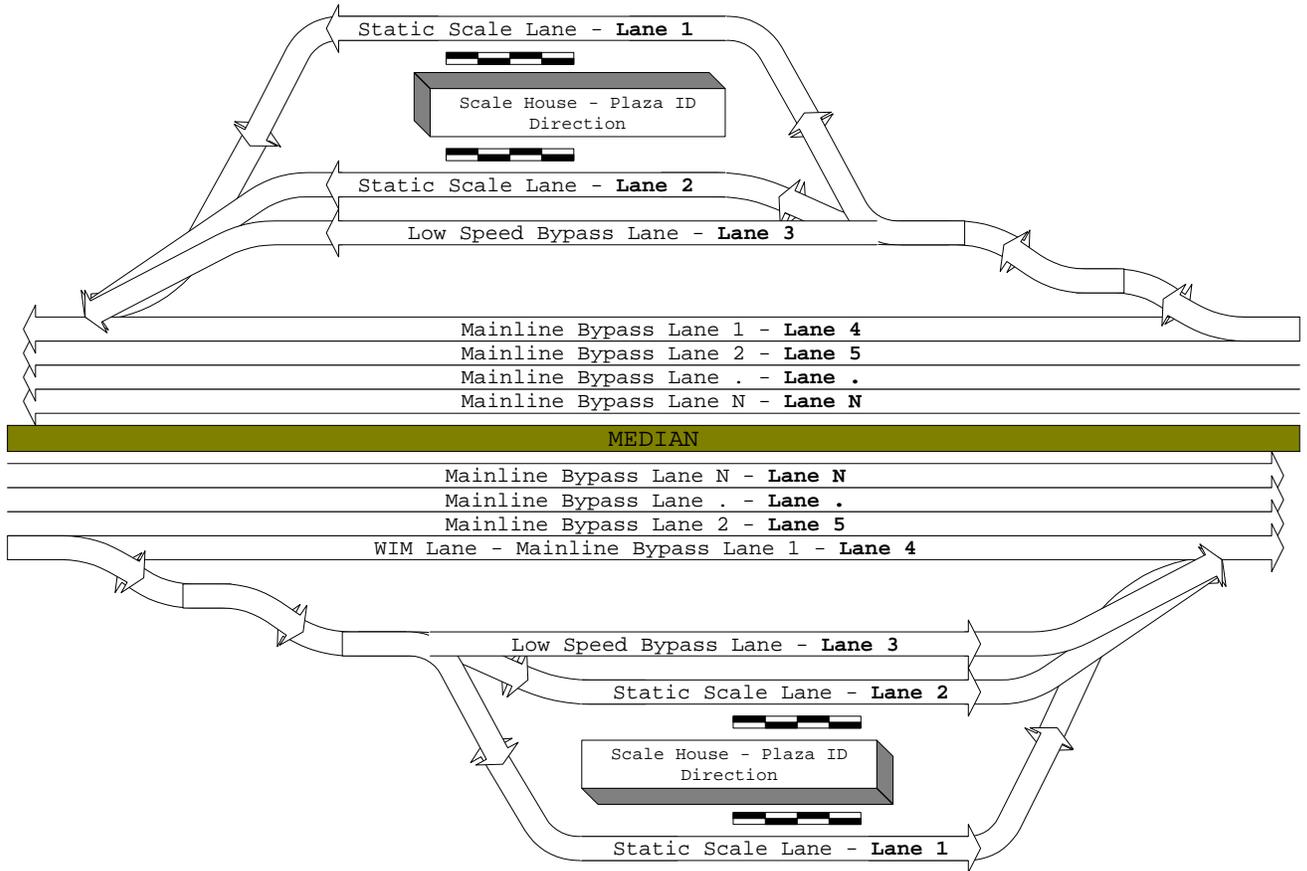
## **SAFER**

FMCSA has provided carrier safety data to industry and the public for many years via telephone requests. The Safety and Fitness Electronic Records (SAFER) System now makes it possible to offer this information electronically.

The SAFER system is a component of the ITS which is being designed to increase roadway safety, reduce motorist delays and air pollution, and improve the overall productivity of Commercial Vehicle Operations (CVO) through the use of advanced technology. This information allows the roadside inspector to select vehicles and/or drivers for inspection based on the number of prior carrier inspections, as well as carrier, vehicle, and driver safety and credential historical information. The current focus is on creating transparent borders for interstate commercial vehicles and improving the safety of commercial vehicle operations.

# APPENDIX A

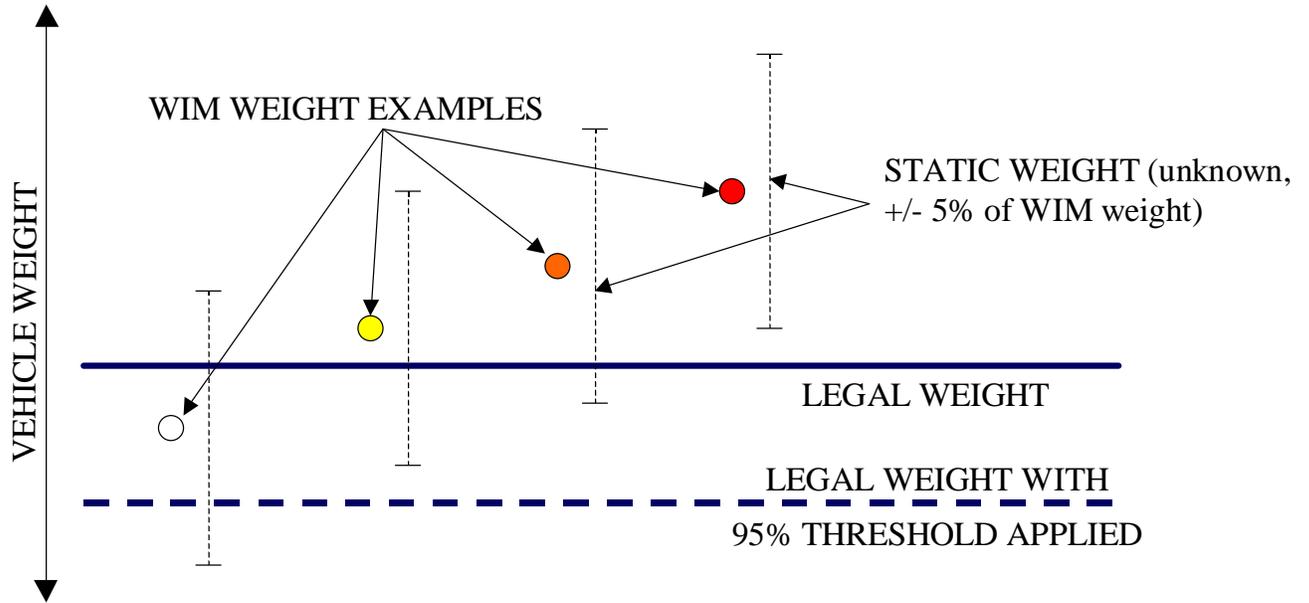
## Lane Numbering Diagram



## APPENDIX B

### Weight Violation Severity

#### WEIGHT VIOLATION SEVERITY



- WIM weight is 2% under legal weight (severity white, pulled in due to threshold setting)
- WIM weight is 1% over legal weight (severity yellow, 55+% likelihood of violation)
- WIM weight is 3% over legal weight (severity orange, 80+% likelihood of violation)
- WIM weight is 6% over legal weight (severity red, 99+% likelihood of violation)

## **APPENDIX C**

### **Printing the Contents of the Screen**

If you want to print a record of what is on the screen and there is no print function showing then you can follow the process below to print an exact copy of the screen.

1. Press the “Shift” key and then while holding it down also press the “Print Screen” key.
  - a. The “Shift” key is the one you press to get upper case letters.
  - b. The “Print Screen” key is usually found in the top right of the keyboard after all the function keys.
2. The above process places the contents of the screen on what is called the Windows “Clipboard.” This is the same as when you use the “Cut” or “Copy” functions in most Windows programs.
3. Now start MS Word by clicking on the “START” button at the lower left corner of the screen and dragging the curser up to “Programs” and then over to the new window that appears until the curser touches “Microsoft Word.” When you click this item “Word” will start loading. When it has loaded you can click on the “Paste” icon on the tool bar at the top, which looks like a clipboard, or you can click on “Edit” on the menu bar and then click on “Paste.”
4. This places the contents of the clipboard, which is the screen contents you want to print, in the open Word document.
5. When you have what you want you can now print the “Screen Print” page by clicking on the print icon on the tool bar or click on “File” on the menu bar and then either “Print” or “Print Preview.”

## APPENDIX D

### Problem Ticket Instructions

1. Click on **HELP** on the **CVISN** Screen upper tool bar, or right click on a vehicle bar.
2. Highlight and click on **CREATE PROBLEM TICKET**,
3. A screen similar to Figure D-1 will appear.
4. Type in your name for the Contact Name.
5. Type in your phone number next.
6. Use the drop down list to select your location. See Figure D – 2. If you do not find your location on the list then type it in the box on the right.
7. Enter the date and time, or you can click on “NOW” and enter the present date and time.
8. If you enter the Problem Ticket by right clicking on a vehicle row then the vehicle information will be entered for you.
9. Use the drop down list to select the jurisdiction of the vehicle. See Figure D – 3
10. Select the problem category from the drop down list. See Figure D – 5. If you are not sure of the proper category then select **WSDOT** and we will determine the proper category.
11. Select the priority type; **Low, Medium, High, or Urgent** from the drop down list, See figure D – 4
12. Select a summery from the Choose Subject drop down list. If you do not see one that fits your problem then enter your summery in the box below.
13. Type in the **description of the problem** in the box provided and click on **Submit**. The ticket will be automatically forwarded to the proper persons.



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### Problem Ticket Get Information

Exit

Submit

<b>User Name:</b>	<input type="text" value="deckerd"/>	<b>Computer Name:</b>	<input type="text" value="CVISN32586L"/>
<b>Contact Name:</b>	<input type="text"/>	<b>Phone Number:</b>	<input type="text"/>
<b>Choose Location:</b>	<input type="text" value="Enter your own location or Choose one"/>	<b>Location:</b>	<input type="text"/>
<b>Date/Time of Incident:</b>	<input type="text"/> <b>NOW</b>	<b>WIM Sequence Number:</b>	<input type="text"/>
<b>Transponder Serial Number:</b>	<input type="text"/>	<b>VIN:</b>	<input type="text"/>
<b>Jurisdiction:</b>	<input type="text" value="Choose Jurisdiction"/>	<b>Plate Number:</b>	<input type="text"/>
<b>Problem Category</b>	<input type="text" value="DOL"/>	<b>Problem Priority</b>	<input type="text" value="Medium"/>
<b>Choose Subject</b>	<input type="text" value="Enter your own summary below or Choose one"/>		
<b>Problem Summary</b>	<input type="text"/>		
<b>Problem Description</b>	<input type="text" value="The problem is"/>		

Exit

Submit

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Figure D-1



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**Problem Ticket Get Information**

Exit Submit

<b>User Name:</b>	<input type="text" value="deckerd"/>	<b>Computer Name:</b>	<input type="text" value="CVISN32586L"/>
<b>Contact Name:</b>	<input type="text"/>	<b>Phone Number:</b>	<input type="text"/>
<b>Choose Location:</b>	<input type="text" value="Enter your own location or Choose one"/> <input type="text" value="Enter your own location or Choose one"/>	<b>Location:</b>	<input type="text"/>
<b>Date/Time of Incident:</b>	<input type="text" value="Fort Lewis NB OWS"/> <input type="text" value="Seatac North NB OWS"/> <input type="text" value="Seatac South SB OWS"/>	<b>IM Sequence Number:</b>	<input type="text"/>
<b>Transpond Num</b>	<input type="text" value="Bow Hill SB POE"/> <input type="text" value="Starwood Bryant NB OWS"/> <input type="text" value="Cle Elum WB POE"/>	<b>VIN:</b>	<input type="text"/>
<b>Jurisdiction:</b>	<input type="text" value="Vancouver (Ridgefield) NB POE"/> <input type="text"/>	<b>Plate Number:</b>	<input type="text"/>
<b>Problem Category</b>	<input type="text" value="DOL"/>	<b>Problem Priority</b>	<input type="text" value="Medium"/>
<b>Choose Subject</b>	<input type="text" value="Enter your own summary below or Choose one"/>		
<b>Problem Summary</b>	<input type="text"/>		
<b>Problem Description</b>	<input type="text" value="The problem is"/> <input type="text"/>		

Exit Submit

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Figure D - 2



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**Problem Ticket Get Information**

Exit

Submit

<b>User Name:</b>	<input type="text" value="deckerd"/>	<b>Computer Name:</b>	<input type="text" value="CVISN32586L"/>
<b>Contact Name:</b>	<input type="text"/>	<b>Phone Number:</b>	<input type="text"/>
<b>Choose Location:</b>	<input type="text" value="Enter your own location or Choose one"/>	<b>Location:</b>	<input type="text"/>
<b>Date/Time of Incident:</b>	<input type="text" value="NOW"/>	<b>WIM Sequence Number:</b>	<input type="text"/>
<b>Transponder Serial Number:</b>	<input type="text"/>	<b>VIN:</b>	<input type="text"/>
<b>Jurisdiction:</b>	<input type="text" value="Choose Jurisdiction"/>	<b>Plate Number:</b>	<input type="text"/>
<b>Problem Category</b>	<ul style="list-style-type: none"> <li>TX TEXAS</li> <li>US UNITED STATES</li> <li>UT UTAH</li> <li>VA VIRGINIA</li> <li>VI VIRGIN ISLANDS</li> <li>VT VERMONT</li> <li>WA WASHINGTON</li> <li>WI WISCONSIN</li> <li>WV WEST VIRGINIA</li> <li>WY WYOMING</li> <li>OT OTHER</li> </ul>	<b>Priority</b>	<input type="text" value="Medium"/>
<b>Choose Subject</b>		<input type="text"/>	
<b>Problem Summary</b>		<input type="text"/>	
<b>Problem Description</b>		<input type="text"/>	

Exit

Submit

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Figure D – 3



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**Problem Ticket Get Information**

Exit Submit

<b>User Name:</b>	<input type="text" value="deckerd"/>	<b>Computer Name:</b>	<input type="text" value="CVISN32586L"/>
<b>Contact Name:</b>	<input type="text"/>	<b>Phone Number:</b>	<input type="text"/>
<b>Choose Location:</b>	<input type="text" value="Enter your own location or Choose one"/>	<b>Location:</b>	<input type="text"/>
<b>Date/Time of Incident:</b>	<input type="text" value="NOW"/>	<b>WIM Sequence Number:</b>	<input type="text"/>
<b>Transponder Serial Number:</b>	<input type="text"/>	<b>VIN:</b>	<input type="text"/>
<b>Jurisdiction:</b>	<input type="text" value="Choose Jurisdiction"/>	<b>Plate Number:</b>	<input type="text"/>
<b>Problem Category:</b>	<input type="text" value="DOL"/>	<b>Problem Priority:</b>	<input type="text" value="Medium"/>
<b>Choose Subject:</b>	<input type="text" value="Enter your own summary below or Choose one"/>	<ul style="list-style-type: none"> <li>Urgent</li> <li>High</li> <li><b>Medium</b></li> <li>Low</li> </ul>	
<b>Problem Summary:</b>	<input type="text"/>		
<b>Problem Description:</b>	<input type="text" value="The problem is"/>		

Exit Submit

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Figure D – 4



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**Problem Ticket Get Information**

Exit

Submit

<b>User Name:</b>	<input type="text" value="deckerd"/>	<b>Computer Name:</b>	<input type="text" value="CVISN32586L"/>
<b>Contact Name:</b>	<input type="text"/>	<b>Phone Number:</b>	<input type="text"/>
<b>Choose Location:</b>	<input type="text" value="Enter your own location or Choose one"/>	<b>Location:</b>	<input type="text"/>
<b>Date/Time of Incident:</b>	<input type="text" value="NOW"/>	<b>WIM Sequence Number:</b>	<input type="text"/>
<b>Transponder Serial Number:</b>	<input type="text"/>	<b>VIN:</b>	<input type="text"/>
<b>Jurisdiction:</b>	<input type="text" value="Choose Jurisdiction"/>	<b>Plate Number:</b>	<input type="text"/>
<b>Problem Category</b>	<input type="text" value="DOL"/>	<b>Problem Priority</b>	<input type="text" value="Medium"/>
<b>Choose Subject</b>	<input type="text" value="own summary below or Choose one"/>		
<b>Problem Summary</b>	<input type="text"/>		
<b>Problem Description</b>	<input type="text" value="the problem is"/>		

Exit

Submit

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Figure D - 5



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**Problem Ticket Get Information**

Exit

Submit

<b>User Name:</b>	<input type="text" value="deckerd"/>	<b>Computer Name:</b>	<input type="text" value="CVISN32586L"/>
<b>Contact Name:</b>	<input type="text"/>	<b>Phone Number:</b>	<input type="text"/>
<b>Choose Location:</b>	<input type="text" value="Enter your own location or Choose one"/>	<b>Location:</b>	<input type="text"/>
<b>Date/Time of Incident:</b>	<input type="text" value="NOW"/>	<b>WIM Sequence Number:</b>	<input type="text"/>
<b>Transponder Serial Number:</b>	<input type="text"/>	<b>VIN:</b>	<input type="text"/>
<b>Jurisdiction:</b>	<input type="text" value="Choose Jurisdiction"/>	<b>Plate Number:</b>	<input type="text"/>
<b>Problem Catagory</b>	<input type="text" value="DOL"/>	<b>Problem Priority</b>	<input type="text" value="Medium"/>
<b>Choose Subject</b>	<input type="text" value="Testing"/>		
<b>Problem Summary</b>	<input type="text" value="Screen Shows Incorrect Licensed GWW"/>		
<b>Problem Description</b>	<input type="text" value="Screen Shows Invalid Vehicle Registration but Papers are in order"/>		
	<input type="text" value="Printer/Monitor/Server Problems"/>		
	<input type="text" value="Software Problems"/>		
	<input type="text" value="Testing"/>		

Exit

Submit

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Figure D - 6