

## TrafBase Product Specification

**MS001-94009-40**

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**Issue 2**



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# TrafBase Product Specification

<b>Document Number</b>	<b>MS001-94009-40</b>	<b>Issue:</b>	<b>2</b>
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## Revision History

<b>Issue</b>	<b>Author</b>	<b>Date</b>	<b>Reason for Change</b>	<b>Authorised</b>
1	RS	25 May 2006	Initial copy	CS
2	RS	25 Aug 2012	Revision page added	CS

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## Introduction

TrafBase is a software application developed by ProSoft and distributed by Mikros Systems for the traffic-engineering environment. The product was specifically designed to validate, store and manage large amounts of traffic information as collected by traffic logging equipment. Traffic information is made available to a user either in original or summarised form through data files, spreadsheet files and physical reports.

### General Requirements

The TrafBase software requires Windows 95/98, Windows NT or Windows XP as its operating system. It was designed to run on a Pentium II 233MHz machine with a minimum of 64 MByte of memory. The amount of hard disk space required depends on the particular implementation of the system. For the operator that validates data, a high-resolution 20" screen is recommended. The system was designed for a minimum resolution of 800x600 pixels.

### Trafbase Systems

As of version 1.70 the Trafbase system offers implementations on both Local Area Networks (LAN) and Wide Area Networks (WAN). The WAN implementation is aimed at users that seek information from the system, and does not support editing, modification or updating of the TrafBase system. The following software packages are available:

- ❑ **psTrafBase**  
This software package supports all features on the TrafBase system, but can only be used on a LAN. It is the only package that can be used to add raw data to the TrafBase system.
- ❑ **TBLocal**  
This software package is intended for users that need to access a TrafBase database as read-only users on a LAN or local computer. It supports adding of new data from other TrafBase systems from TrafBase Archive Files. It cannot be used to add raw data to the system. In addition, some releases support communication with Mikros System TEL Loggers ®.
- ❑ **TBAdministrator**  
This software package is used to upkeep a TrafBase database for which no **psTrafBase** package was purchased. It enables the system administrator to update information and user log-on tables, and to add new data to the system from TrafBase Archive Files generated by another psTrafBase system.
- ❑ **TBServer**  
This software package is the server application that provides information to client applications on a Wide Area Network (WAN). The current server implementation only allows the clients to read information. Data modification functions are not supported.
- ❑ **TBClient & TBOOnline**  
These packages are used in conjunction with the TrafBase Server (TBServer) to retrieve information on a Wide Area Network. All TrafBase data information features are supported with the exception of Detailed Data Views and Data File Outputs (Formatted and Spread Sheet Files). The TBOOnline package also supports communication with Mikros System TEL Loggers ® as an additional feature.

## **TrafBase Components**

The TrafBase system consists of the following components:

- Site Information Database
- Traffic Information Database
- Data Addition/Verification
- Data Information
- Data Reporting
- Fixed Format File Output
- Spread-sheet compatible ASCII file output
- Mikros Systems Logger Communication Access (OPTIONAL)

### **Site Information Database**

TrafBase uses a briefcase-type database to save site-specific information. The site information database manages data on the sites/location points at which traffic information is gathered. Site information such as the site identifier, the site location, number of lanes and the layout of the site are kept in a database. All traffic information must be linked to a site before it can be entered into the traffic data information system. Currently TrafBase only supports standard single/dual carriageway layouts. The site DB is shared with TelWin applications.

### **Traffic Information Database**

TrafBase uses a stream-orientated data information system to save site-specific traffic information. The type of traffic information data that can be saved in the TrafBase database is limited to the RSA Data Format Specification Version 1.01. and the CTO P20 RAW data format. Data must first pass the data verification procedure before it can be added to the historical traffic information database and accessed by the user.

### **Data Addition/Verification Component**

The data addition/verification component verifies the raw data as collected by the loggers. Data verification is limited to RSA Data Format files and CTO Prg 2.0 RAW data files. After the raw data has been verified and accepted the verification module adds the verified data to the historical traffic information database.

### **Data Information Component**

The data information component enables the user to determine whether and what data is available for a specified site and period. It also enables the user to plot the traffic data or view the detailed information record by record.

### **Data Reporting Component**

The data reporting component enables a user to generate reports and graphical output of the traffic information gathered by the system. The following reports are currently available per site if the relevant information is available. Reports can be viewed or printed on a Windows compatible printer. They are not available in ASCII file format.

The reporting capabilities of TrafBase are at this stage limited but new modules are continually added to enhance the product.

#### **Volume.v.Time Report**

This is a report and a plot of the traffic volumes at intervals and periods as given below. The user is able to generate such a report per lane, per direction and per road total.

#### **Light/Heavy.v.Time Report**

This is a report and a plot of the Light and Heavy vehicle volumes at intervals and periods as given below. The user is able to generate such a report per lane, per direction and per road total.

### Vehicle Class.v.Time Report

This is a report and a plot of the vehicle class volumes at intervals and periods as given below. The user is able to generate such a report per lane, per direction and per road total. The following classification schemes, among other, are supported

RSA Light/Heavy  
RSA Extended Light/Heavy  
RSA Vehicle  
FHWA 13 (Federal Highway Administration 13 Class)  
AustRoad (Australia)

### Speed.v.Time Report

This is a report and a plot of the vehicle speeds at intervals and periods as given below. The user is able to define, independently of the data set, up to 20 speed bins. The user is able to generate such a report per lane, per direction and per road total.

### Gross Vehicle Mass.v.Time Report

This is a report and a plot of the vehicle masses at intervals and periods as given below. The user is able to define, independently of the data set, up to 20 mass bins. The user is able to generate such a report per lane, per direction and per road total.

### Axle Mass .v. Time Report

This is a report and a plot of the vehicle axle masses at intervals and periods as given below. The user is able to define, independently of the data set, up to 20 axle mass bins. The user is able to generate such a report per lane, per direction and per road total.

For all above mentioned reports, the user can define the start of a day ie at what hour a day starts, and the start of a week ie at which day (Sun, Mon etc) a week starts and specify the following report periods and intervals :

Period	Interval
Daily	Minutes,Hours
Weekly	Hours, Daily
Monthly	Hours, Daily
Yearly	Minutes, Hours, Daily, Monthly

### Traffic Highlights Report

This is a traffic highlights report. The user is able to generate such a report for **Daily, Weekly, Monthly** and **Yearly** intervals for any specified period and site.

### Overload Report

This report provides information on overloading. The vehicle overloading is determined on axle, axle group, GVM and Bridge Formula (South African definition) overload violations. The user is able to generate a plot showing the total truck traffic and the part due to over loading. The user is able to generate such a report per lane, per direction and per road total for **Daily, Weekly, Monthly** and **Yearly** periods. The user is also able to define the start of a day ie at what hour a day starts, and the start of a week ie at which day (Sun, Mon etc) a week starts.

### **RSA EAL Report (E80 report)**

This report provides information on E80 loading as per dynamic axle masses. The user is able to generate such a report per lane, per direction and per road total for **Daily, Weekly, Monthly** and **Yearly** periods. The user is also able to define the start of a day ie at what hour a day starts, and the start of a week ie at which day (Sun, Mon etc) a week starts.

### **Formatted Data File Output**

This TrafBase component enables the user to generate traffic data files from the information saved in the database. The user can generate these data files per site for any given period. The following data file formats are currently supported

RSA Data File Format Version 1.01 (all formats)

### **Spread-Sheet Format Files**

This component enables the user to generate ASCII data files that can be read by most spreadsheets. The user can setup the component to generate field information on the following per site :

- Vehicle Volume,
- Light Vehicle Volume,
- Heavy Vehicle Volume,
- Vehicle Class Volume,
- Binned Speed Volumes,
- Axle Count,
- Axle Mass,
- Gross Vehicle Mass,
- Overloaded Heavy Vehicles (Axle,Group,Bridge and/or GVM)
- RSA E80s for Heavy Vehicles (vehicle class, total)

Above information is available per lane, per direction or per road total for minute, hour, daily, weekly, monthly or yearly intervals.

## Validation

TrafBase provides four levels of data validations referred to as “Scans”.

Site Id.	Site Number	From	To	Message
3001	3001	010901 01:52:06	010902 01:47:05	OK
3001	3001	010902 01:47:05	010903 01:27:38	OK
3001	3001	010903 01:27:38	010904 01:49:16	OK
3001	3001	010904 01:49:16	010905 02:04:27	OK
3001	3001	010905 02:04:27	010906 01:54:30	OK
3001	3001	010906 01:56:26	010906 13:23:24	OK
3001	3001	010906 14:00:13	010907 01:42:50	OK
3001	3001	010907 01:42:50	010908 02:30:13	OK
3001	3001	010908 02:30:13	010909 02:13:35	OK
3001	3001	010909 02:13:35	010910 01:47:34	OK
3001	3001	010910 01:47:34	010911 01:48:04	OK
3001	3001	010911 01:48:04	010911 14:52:23	OK
3001	3001	010911 15:48:28	010912 10:54:42	OK
3001	3001	010912 14:04:05	010914 11:44:20	OK
3001	3001	010914 11:53:21	010917 11:29:48	OK
3001	3001	010917 11:29:48	010918 00:57:57	OK
3001	3001	010918 00:57:57	010918 11:33:27	OK
3001	3001	010918 12:35:43	010919 02:36:56	OK

- Scan 1:** Checking the formal correctness of the data files (format and compatibility).
- Scan 2:** Checking the headers against the recorded data file. Check for duplicate data in the data base.
- Scan 3:** Validate the data against the applicable templates as setup for each site and data type (user definable).
- Scan 4:** Final stage before submitting the data the data base (archiving).

Validation of data is done on two levels. Individual vehicle information is validated against individual user definable vehicle templates. Aggregated (binned) data is validated against user definable traffic profiles (patterns).



TL 2040 - Vaal Plaza 1

SiteInfo | Layout | LaneInfo | General | Spec.Diz | Construction | Toll Info | Data | Traffic |

Source: Vehicle | Volume | Speed | Mass | Bin Data |

Checks: Fail ON |

Default: Load | UseDefault |

Site: Load | Save |

Vehicle Checks

Check Individual Vehicles	<input checked="" type="checkbox"/>	Enforce Axle Jitter Checking	<input checked="" type="checkbox"/>
Check Vehicles against Class Limits	<input checked="" type="checkbox"/>	Acceptable Jitter Rate	1.0 %
Acceptable Class Limit Fail Rate	5.0 %	Maximum Jitter Axle Spacing	80 cm
Allow zero spacing Axle Classification	<input checked="" type="checkbox"/>	Enforce % Vehicles weighed Check	<input checked="" type="checkbox"/>
Allow zero mass Axle Classification	<input checked="" type="checkbox"/>	Acceptable % weighed vehicles	95.0 %
Enforce Vehicle Identification Check	<input checked="" type="checkbox"/>	Allow Partial Weighing of Vehicles	<input checked="" type="checkbox"/>
Accept if Vehicle was identified	<input checked="" type="checkbox"/>	Enforce % Partially weighed Check	<input checked="" type="checkbox"/>
Acceptable Vehicle Pass Rate	95.0 %	Acceptable % partially weighed	10.0 %
Enforce % vehicle miss-classification Check	<input checked="" type="checkbox"/>	Enforce % Vehicle -v- Summary Check	<input checked="" type="checkbox"/>
Acceptable Vehicle miss-classification Rate	5.0 %	Acceptable % mismatch of ALL Vehicles	0.0 %
Validate Class 0 Vehicles	<input checked="" type="checkbox"/>	Enforce % Light Vehicle -v- Summary Check	<input checked="" type="checkbox"/>
Enforce % Class 0 Vehicle Check	<input checked="" type="checkbox"/>	Acceptable % mismatch of Light Vehicles	0.0 %
Acceptable % of Class 0 Vehicles	1.0 %	Enforce % Heavy Vehicle -v- Summary Check	<input checked="" type="checkbox"/>
		Acceptable % mismatch of Heavy Vehicles	0.0 %

Vehicle Data Files

Auto-Fix Length-Total Spacing Errors ☐

Auto-Fix Vehicle Classification Errors ☐

Mass Selection

Info to use: Axle Mass Average | Maximum Mass Difference: 30.0 %

Navigator: List Order | Identifier | Record | First | Last | Find | Save | Restore | New | Add | Delete | Print

Validation Control Panel

Validation - Data Details

Info: Vehicle | Basic | AxleInfo | Shape |

Diagram showing vehicle layout with axle positions and dimensions.

Min	85	200	90	320	90	90	100
Act	200	200	135	717	135	133	250
Max	200	700	265	1300	265	265	250
Min	2.0	1.5	1.5		0.8	0.8	0.8
Typ	5.2	7.2	5.0		5.8	5.0	5.0
Max	15.0	17.0	17.0		17.0	17.0	17.0
Min				1000			
Act				1750			
Max				2500			

Compare | Classify | Resize FROM 134 TO 134 + RATIO 1.000

Site Identifier: 312 | Total Records: 8404 | Failed Records: 62 | Suspect Records: 742

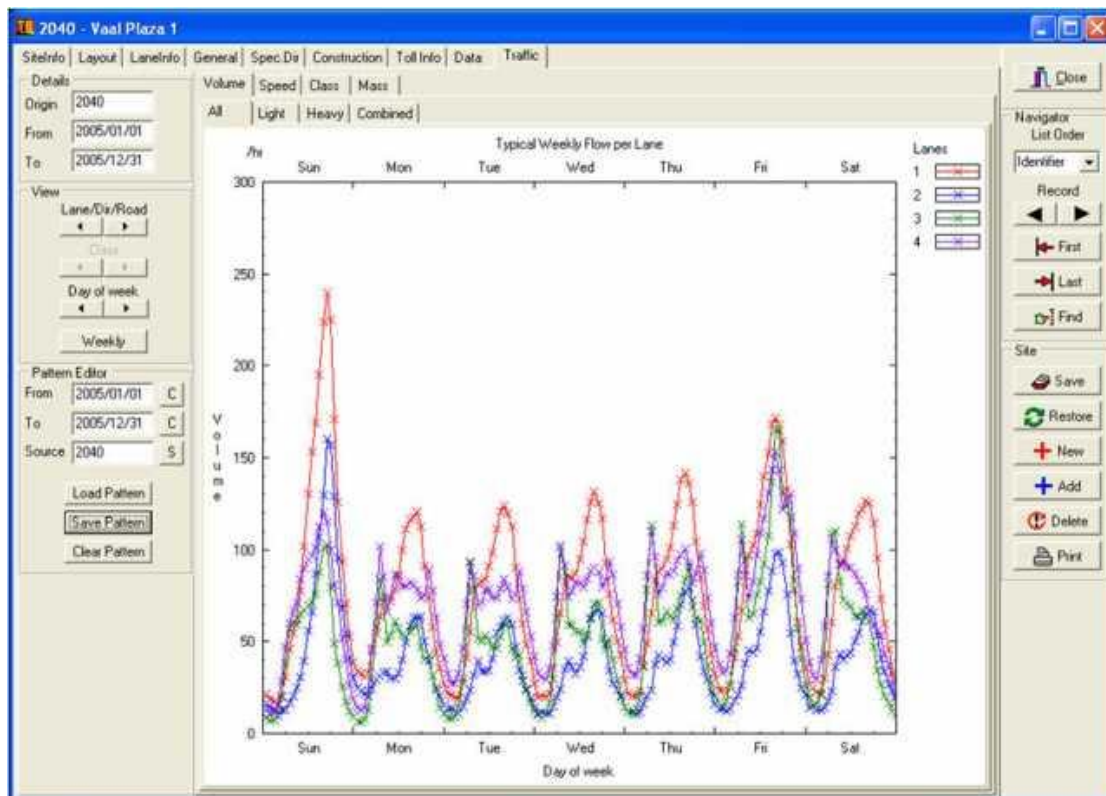
Site Name: Baskfontein | Current Record: 29 | To Process: 62 | To Process: 742

Editor: Navigator | File | OK | Abort | ReDefFile | VehicleFile | Record | Accept | Check | Restore | Invalidate | Failed Records | Failed | Vehicle | Summary | Suspect Records | Suspect | Vehicle | Summary | Vehicle Lane | Any | Direction | None | Penalties

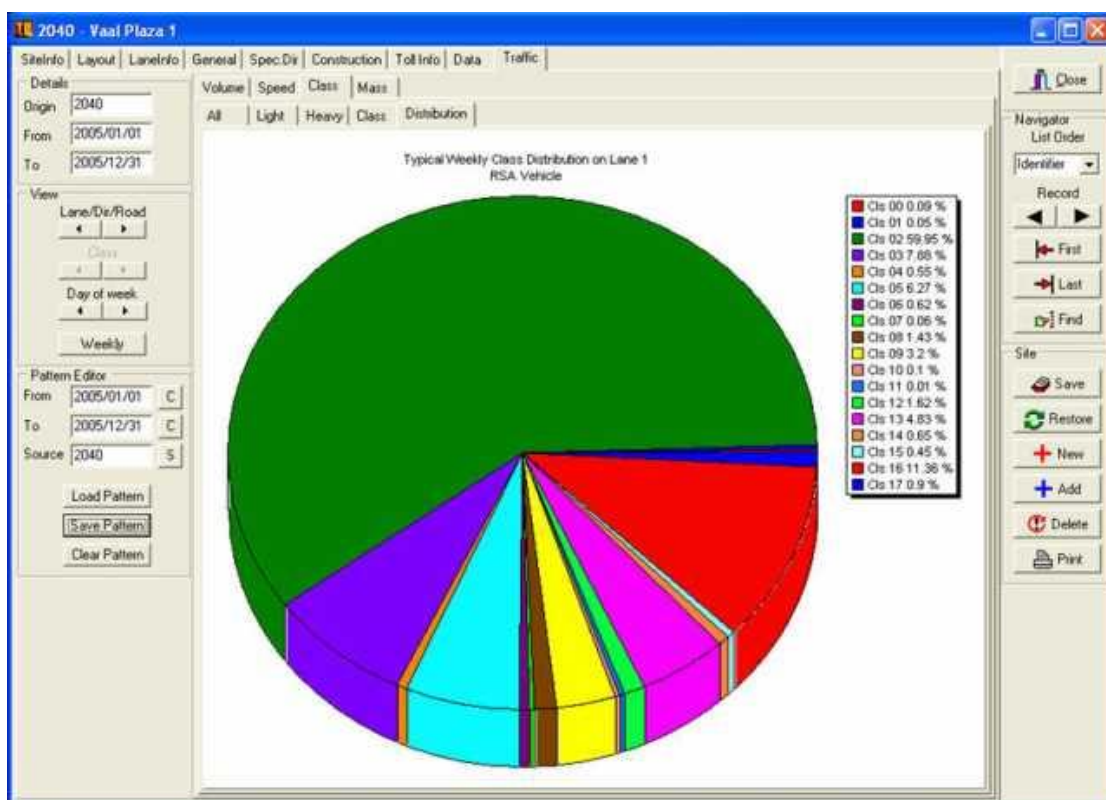
Individual Vehicle Parameters

Upper lower and typical values for all parameters to be checked on a per vehicle basis.

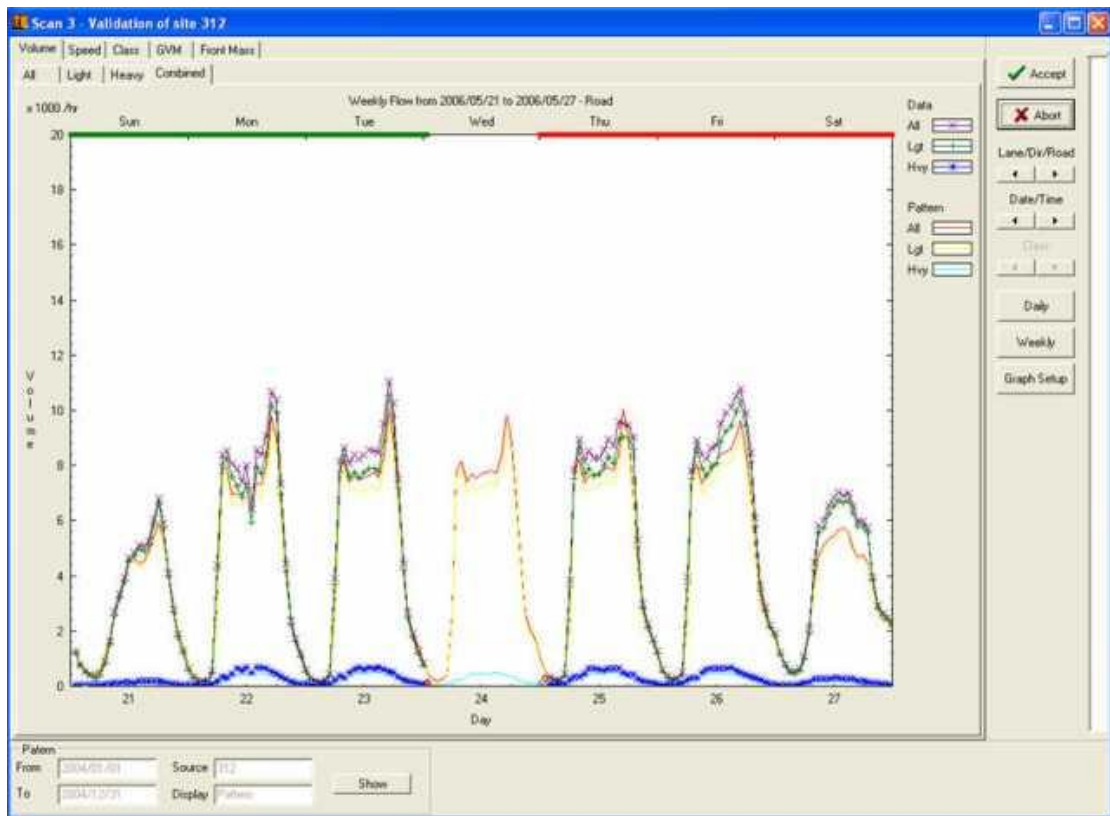




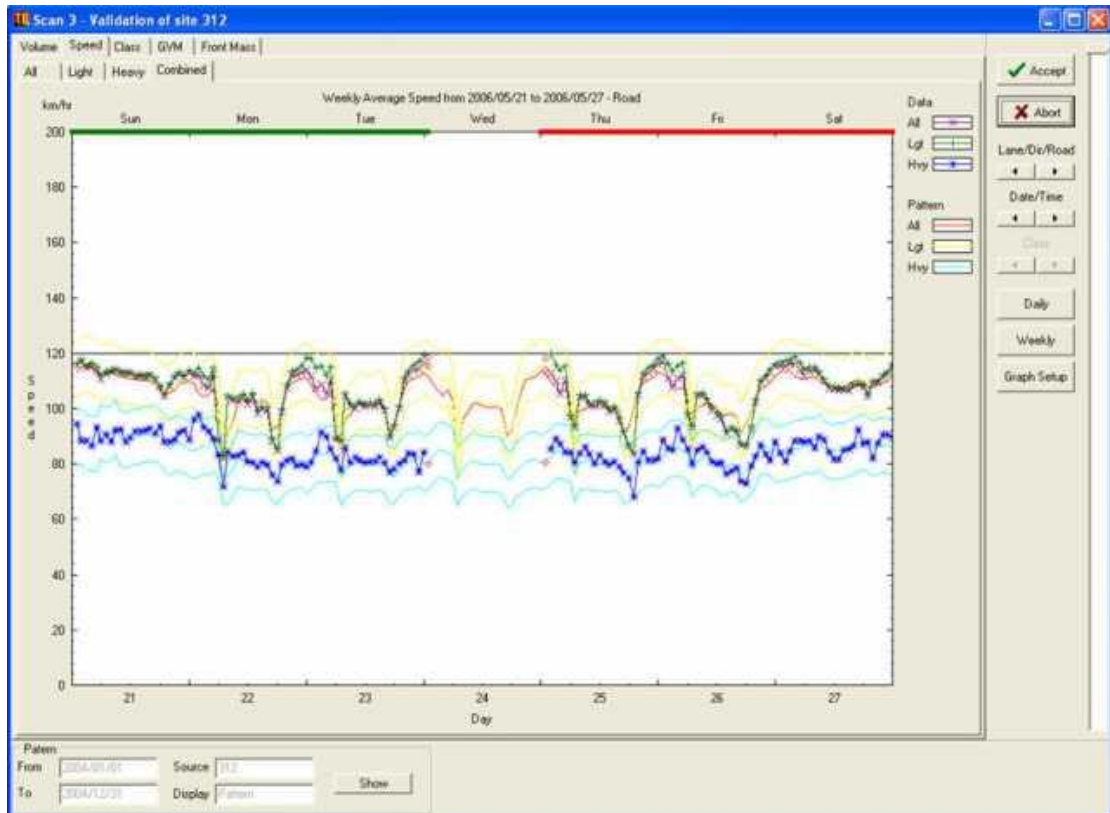
*Selected Traffic Pattern (Template) For Validation*



*Selected Classification Breakdown Template*



*Validated Data Plotted Against Volume Template*



*Validated Data Plotted Against Speed Profile*

## Reporting

**TR Reports**

Data Period  
 From: 2005/11/01 B  
 Tuesday C  
 At: 00:00:00  
 To: 2005/11/30 E  
 Wednesday C  
 At: 24:00:00

Report  
 Report Name:   
 Report File:

Site  
 Site: List All  
 Identifier: 011  
 Number: 011  
 Name: Halfway House  
 Select Site

Reports  
 Load  
 Save  
 Clear  
 Add  
 Edit  
 Delete

No.	Type	Description
<input checked="" type="checkbox"/> 1	Lgt/Heavy/...	Light/Heavy/Volume Report
<input checked="" type="checkbox"/> 2	Class Report	Class Report
<input checked="" type="checkbox"/> 3	Speed Report	Speed Report
<input checked="" type="checkbox"/> 4	GVM Report	GVM Report
<input checked="" type="checkbox"/> 5	Axle Mass R...	Axle Mass Report
<input checked="" type="checkbox"/> 6	Overloading...	Overload Report
<input checked="" type="checkbox"/> 7	E80 Report	E80 Report
<input checked="" type="checkbox"/> 8	Traffic Highl...	Traffic Highlight Report
<input checked="" type="checkbox"/> 9	Site Compari...	Site Comparison Report
<input checked="" type="checkbox"/> 10	Typical We...	Typical Week Report
<input checked="" type="checkbox"/> 11	List Class R...	Site List Class Report
<input checked="" type="checkbox"/> 12	List Overlap ...	Site List Data Overlap Report

Close View Print PrinterSetup FontSetup Print Special

Reports that can be selected

**TR Reports for Site 625**

Site: 625 Report: 1/1 Page: 1/8 Description: Light/Heavy/Volume Report

Light/Heavy/Volume Report

Period: 2005/11/01 00:00:00 (Tue) to 2005/11/30 24:00:00 (Wed)

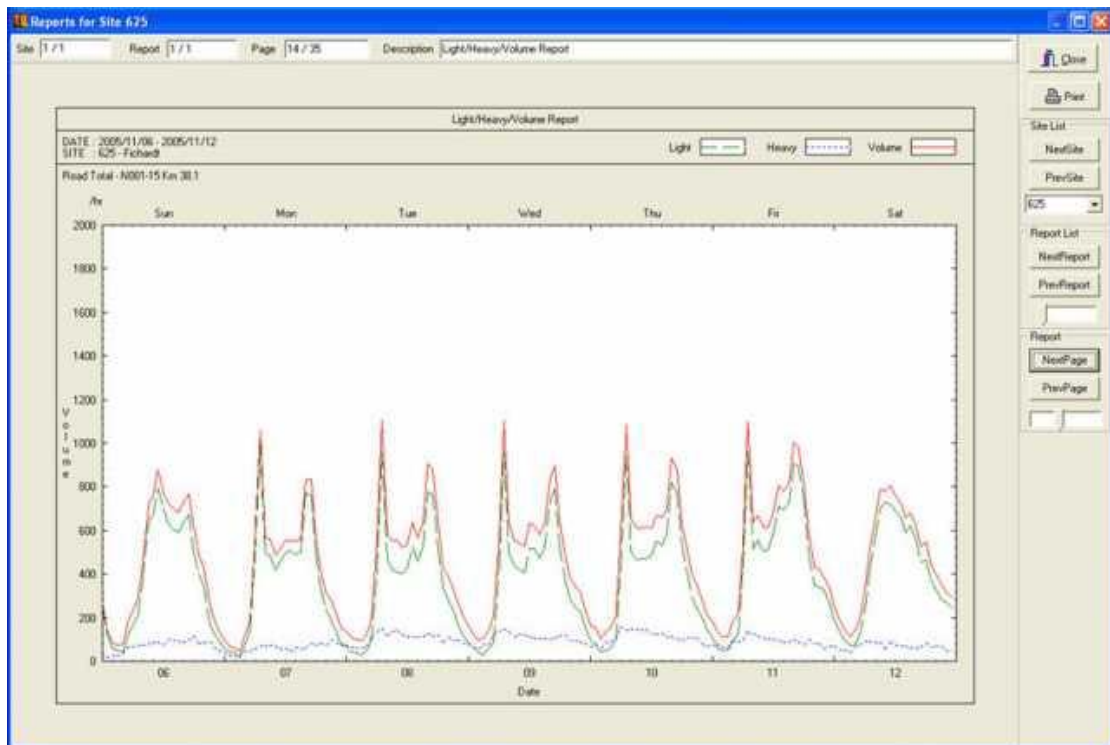
Site Identifier: 625

Site Description: Between Cure VC and Halldon Rd NB VC

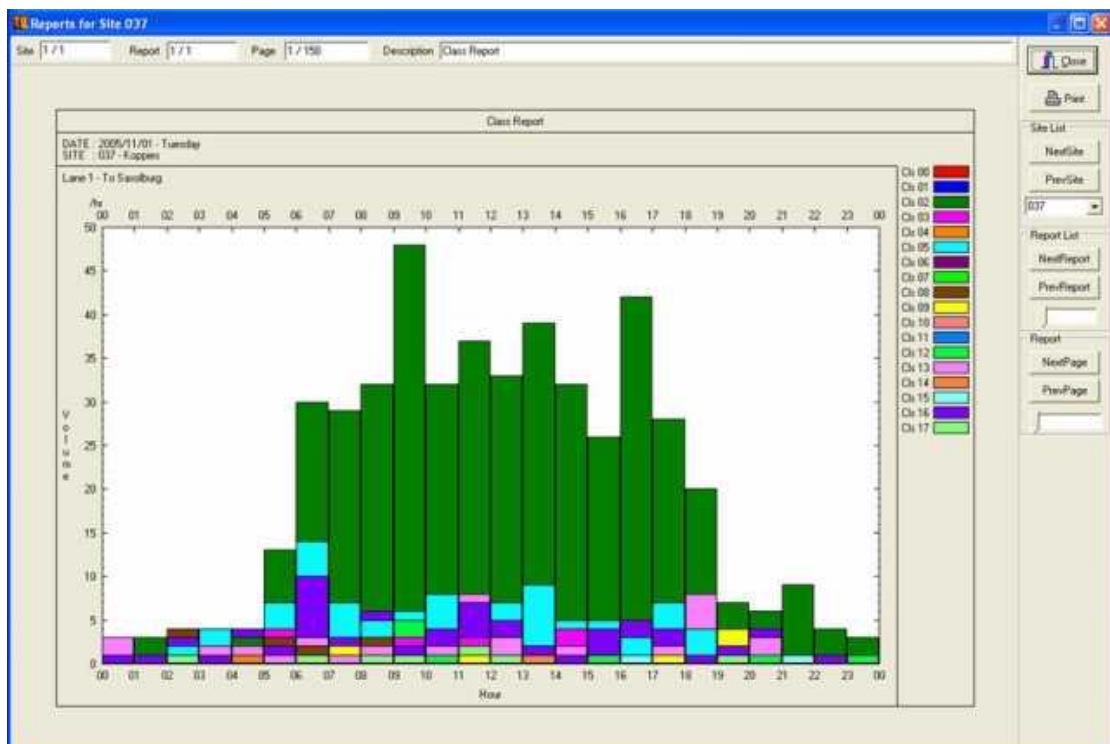
Date	Time	Hours	Lane 1			Lane 2			Lane 3			Lane 4			To Koonstail			To Colindale			All Lanes		
			Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
09/11/01	00:00:00	24:00	3105	1130	4235	1132	37	1169	1211	46	1259	3077	1241	4318	4237	1167	5404	4288	1289	5577	9525	2456	10981
09/11/01	00:00:00	23:00	3036	1145	4181	1119	35	1154	1099	44	1143	3151	1136	4287	4155	1180	5335	4250	1182	5432	9405	2362	10767
09/11/01	00:00:00	22:00	3201	1169	4449	1197	40	1237	1284	59	1334	3411	1228	4639	4470	1208	5678	4695	1289	5984	9173	2487	11660
09/11/01	00:00:00	21:00	3807	1011	4896	1425	32	1467	1449	36	1485	4267	1021	5188	5422	1042	6465	5716	957	6673	11738	2030	13768
09/11/01	00:00:00	20:00	3824	887	4711	1162	31	1193	989	31	1192	4055	757	4812	4988	718	5706	5036	798	5834	10824	1516	12340
09/11/01	00:00:00	19:00	3619	794	4403	1161	30	1191	966	26	1014	2194	836	4032	4760	814	5574	4102	964	5066	8922	1670	10592
09/11/01	00:00:00	18:00	3433	827	4260	961	14	875	956	30	986	3331	773	4104	4294	641	5035	4267	303	5090	8691	1444	10135
09/11/01	00:00:00	17:00	3147	1172	4320	1111	36	1147	1085	40	1125	3175	1278	4453	4298	1289	5487	4260	1318	5578	8918	2527	11445
09/11/01	00:00:00	16:00	3200	1175	4375	1206	38	1244	1157	47	1264	3346	1219	4565	4406	1213	5619	4503	1306	5789	8889	2479	11368
09/11/01	00:00:00	15:00	3318	1204	4520	1277	37	1314	1321	53	1374	3363	1349	4712	4693	1241	5934	4674	1402	6076	9267	2642	11910
09/11/01	00:00:00	14:00	3799	1052	4851	1401	38	1519	1515	46	1541	4189	1012	5201	5280	1090	6370	5704	1098	6792	10884	2148	13032
09/11/01	00:00:00	13:00	3061	882	4543	988	23	1011	1108	43	1151	3665	876	4541	4649	705	5554	4773	819	5602	8622	1624	10246
09/11/01	00:00:00	12:00	3240	862	4102	1085	20	1025	881	30	911	3031	829	3980	4245	882	5127	3912	853	4771	8157	1741	8898
09/11/01	00:00:00	11:00	3296	716	4002	967	16	1003	927	25	952	2312	773	4005	4273	732	5005	4239	786	5037	8512	1530	10042
09/11/01	00:00:00	10:00	3017	1285	4302	1176	48	1234	1082	55	1187	3116	1264	4480	4193	1333	5526	4198	1339	5537	8391	2672	11063
09/11/01	00:00:00	09:00	3308	1253	4561	1416	35	1451	1330	47	1377	3420	1319	4739	4724	1288	6012	4750	1366	6116	9474	2054	12528
09/11/01	00:00:00	08:00	3394	1226	4620	1399	52	1411	1407	58	1445	3522	1348	4970	4751	1278	6031	4829	1486	6315	9602	2054	12656
09/11/01	00:00:00	07:00	2992	1077	5065	1593	26	1628	1522	47	1569	4056	1016	5084	5595	1188	6833	5590	1057	6647	11105	2185	13290
09/11/01	00:00:00	06:00	2568	818	4386	1112	38	1142	1072	41	1113	2779	823	4031	4680	949	5528	4850	964	5714	9304	1712	11016
09/11/01	00:00:00	05:00	3310	739	4049	1025	29	1063	917	17	934	3200	868	4069	4345	767	5112	4117	305	5022	8402	1672	10074
09/11/01	00:00:00	04:00	3324	700	4024	1096	20	1076	1038	25	1063	3388	782	4180	4380	720	5100	4436	817	5253	8816	1537	10353
09/11/01	00:00:00	03:00	3163	1261	4424	1275	50	1326	1107	58	1245	3264	1327	4591	4436	1311	5748	4451	1305	5756	8889	2696	11585
09/11/01	00:00:00	02:00	3378	1201	4579	1222	45	1267	1213	67	1280	3480	1227	4657	4597	1246	5843	4653	1294	5947	9250	2540	11790
09/11/01	00:00:00	01:00	3368	1268	4632	1421	51	1472	1263	59	1412	3481	1332	4813	4767	1317	6104	4834	1391	6225	9621	2706	12327
09/11/01	00:00:00	00:00	4033	1075	5108	1654	38	1692	1602	41	1701	4488	943	5441	5687	1114	6001	6158	984	7142	11845	2088	13933
09/11/01	00:00:00	24:00	3391	736	4127	1238	24	1262	1199	34	1233	4103	858	4959	5165	760	5529	5002	889	6191	10471	1649	12120
09/11/01	00:00:00	23:00	3602	762	4365	1160	22	1182	1134	36	1149	3430	362	4332	4853	794	5637	4544	937	5481	9397	1723	11120
09/11/01	00:00:00	22:00	3429	875	4304	1095	16	1074	1007	37	1044	3570	791	4321	4467	691	5719	4577	788	5365	9064	1479	10543
09/11/01	00:00:00	21:00	3398	1306	4664	1226	42	1269	1249	49	1294	3236	1256	4528	4524	1309	5933	4601	1341	6022	9395	2650	11845
09/11/01	00:00:00	20:00	3350	1198	4538	1428	45	1473	1439	75	1510	2610	1232	4742	4779	1225	6003	5041	1311	6352	8819	2536	12355
09/11/01	00:00:00	19:00	103767	29533	133300	38651	1089	37462	39537	1300	37237	109583	31576	137159	140438	32042	771380	147150	33076	114306	291988	63816	345776

Close Print Site List NewSite NewPage PrintPage

Printout of a volume reports



*Volume Report Plot*

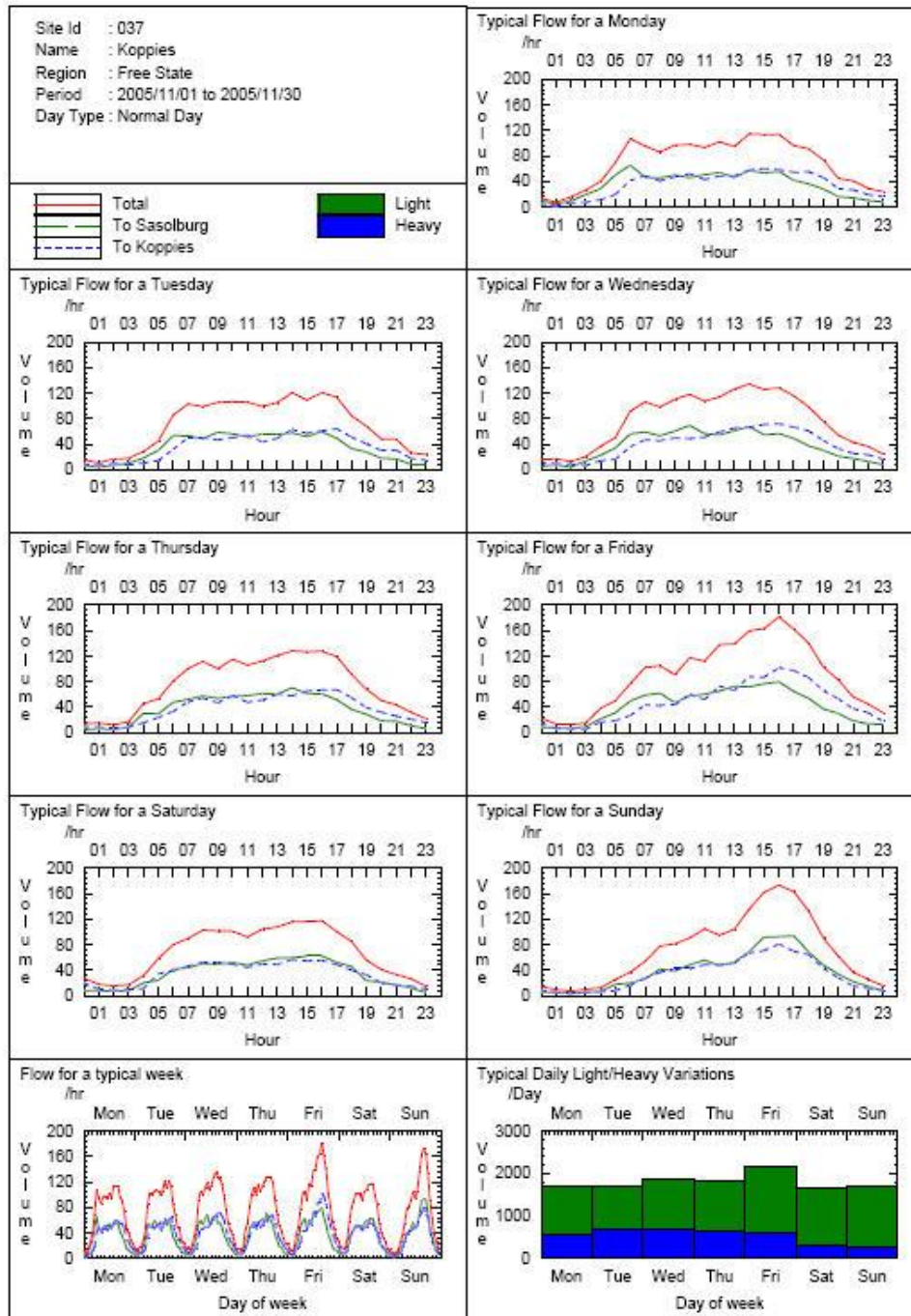


*Daily Classification Distribution Plot*



TRAFFIC HIGHLIGHTS OF SITE 037			
1.1	Site Identifier	037	
1.2	Site Name	Koppies	
1.3	Site Description	Between Koppies and Sasolburg	
1.4	Road Description	Route : R082 Road : P030 Section : 01 Distance : 4.0km	
1.5	GPS Position	27.60028E 27.20181S	
1.6	Number of Lanes	2	
1.7	Station Type	Permanent Piezo	
1.8	Requested Period	2005/01/01 - 2005/12/31	
1.9	Length of record requested (hours)	8760	
1.10	Actual First & Last Dates	2005/11/01 - 2005/11/30	
1.11	Actual available data (hours)	720	
1.12	Percentage data available for requested period	8.2	
2.1	Total number of vehicles	26751	53937
2.2	Average daily traffic (ADT)	892	1798
2.3	Average daily truck traffic (ADTT)	255	517
2.4	Percentage of trucks	28.7	28.8
2.5	Truck split % (short:medium:long)	35 : 21 : 44	34 : 20 : 46
2.6	Percentage of night traffic (20:00 - 06:00)	15.8	16.5
3.1	Speed limit (km/hr)	120.0	
3.2	Average speed (km/hr)	94.6	97.3
3.3	Average speed - light vehicles (km/hr)	99.8	102.9
3.4	Average speed - heavy vehicles (km/hr)	81.6	83.3
3.5	Average night speed (km/hr)	90.6	93.3
3.6	15th centile speed (km/hr)	73.7	75.7
3.7	85th centile speed (km/hr)	113.9	117.9
3.8	Percentage vehicles in excess of speed limit	9.5	13.1
4.1	Percentage vehicles in flows over 600 vehicles/hr	0.0	
4.2	Highest volume on the road (vehicles/hr)	2005/11/06 18:00:00	201
4.3	Highest volume in the North (vehs/hr)	2005/11/06 18:00:00	115
4.4	Highest volume in the South (vehs/hr)	2005/11/18 18:00:00	117
4.5	Highest volume in a lane (vehicles/hr)	2005/11/18 18:00:00	117
4.6	15th highest volume on the road (vehicles/hr)	2005/11/06 17:00:00	165
4.7	15th highest volume in the North direction (vehs/hr)	2005/11/18 15:00:00	84
4.8	15th highest volume in the South direction (vehs/hr)	2005/11/18 15:00:00	89
4.9	30th highest volume on the road (vehicles/hr)	2005/11/27 19:00:00	149
4.10	30th highest volume in the North direction (vehs/hr)	2005/11/18 17:00:00	75
4.11	30th highest volume in the South direction (vehs/hr)	2005/11/27 19:00:00	79
5.1	Percentage of vehicles less than 2s behind vehicle ahead	5.2	5.8
6.1	Total number of heavy vehicles	7679	15531
6.2	Estimated average number of axles per truck	5	
6.3	Estimated truck mass (Ton/truck)	24	
6.4	Estimated average E80/truck	2	
6.5	Estimated daily E80 on the road	1126	
6.6	Estimated daily E80 in the North direction	540	
6.7	Estimated daily E80 in the South direction	586	
6.8	Estimated daily E80 in the worst North lane	540	
6.9	Estimated daily E80 in the worst South lane	586	
6.10	ASSUMPTION on Axles/Truck (Short:Medium:Long)	(2.2 : 4.3 : 6.5)	
6.11	ASSUMPTION on Mass/Truck (Short:Medium:Long)	(7.9 : 22.1 : 37.3)	
6.12	ASSUMPTION on E80s/Truck (Short:Medium:Long)	(0.5 : 1.9 : 3.5)	

### Highlights Report



### Highlights Report Plot

### 7.3 GVM OVERLOAD DETAILS (Relative to heavy vehicles weighed)

Class	Vehicles Weighed	Vehicles Overload	Percent Overload	Percentage Overloading					
				0.0 -5.0	5.0 -10.0	10.0 -15.0	15.0 -20.0	20.0 -25.0	> 25.0
Cls 04	3103	109	3.5	2.4	0.7	0.3	0.0	0.0	0.1
Cls 05	11734	169	1.4	0.9	0.3	0.1	0.1	0.0	0.1
Cls 06	832	7	0.8	0.8	0.0	0.0	0.0	0.0	0.0
Cls 07	25	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cls 08	2059	43	2.1	1.1	0.5	0.1	0.1	0.0	0.1
Cls 09	3718	38	1.0	0.4	0.2	0.1	0.0	0.1	0.2
Cls 10	158	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cls 11	9	1	11.1	0.0	0.0	0.0	0.0	0.0	11.1
Cls 12	2174	87	4.0	2.3	1.1	0.2	0.0	0.2	0.1
Cls 13	7157	1292	18.1	11.1	5.0	1.1	0.4	0.1	0.3
Cls 14	304	2	0.7	0.3	0.3	0.0	0.0	0.0	0.0
Cls 15	482	37	7.7	4.4	1.5	0.8	0.4	0.2	0.4
Cls 16	12909	5574	43.2	12.4	14.3	10.1	4.3	1.2	0.8
Cls 17	1500	751	50.1	15.7	16.7	11.5	4.0	0.9	1.3

### Detail Overload Report

### 8.3 Road - E80 Totals (Heavy Vehicles only)

Class	Total Vehicles	Weighed Vehicles	%Truck Dist.	Daily Total	Total Axles	Ave. Axles	Total Mass	Ave. Mass	E80 per Vehicle	% E80 Dist.	Total E80
Cls 04	3103	3103	6.72	103	6206	2.0	43664	14.1	1.590	3.49	4934
Cls 05	11734	11734	25.42	391	23468	2.0	85769	7.3	0.429	3.56	5030
Cls 06	832	832	1.80	28	2720	3.3	15023	18.1	1.478	0.87	1230
Cls 07	25	25	0.05	1	75	3.0	79	3.2	0.019	0.00	0
Cls 08	2059	2059	4.46	69	6177	3.0	34084	16.6	1.309	1.91	2696
Cls 09	3718	3718	8.05	124	13162	3.5	55699	15.0	0.951	2.50	3534
Cls 10	158	158	0.34	5	790	5.0	3983	25.2	2.405	0.27	380
Cls 11	9	9	0.02	0	45	5.0	245	27.2	2.874	0.02	26
Cls 12	2174	2174	4.71	72	10870	5.0	56236	25.9	1.899	2.92	4127
Cls 13	7157	7157	15.50	239	42942	6.0	275875	38.5	4.314	21.82	30872
Cls 14	304	304	0.66	10	1520	5.0	8317	27.4	1.577	0.34	479
Cls 15	482	482	1.04	16	2892	6.0	15461	32.1	3.197	1.09	1541
Cls 16	12909	12909	27.96	430	90363	7.0	600153	46.5	6.119	55.84	78986
Cls 17	1500	1500	3.25	50	12037	8.0	74200	49.5	5.078	5.39	7618
Totals	46164	46164		1539	213267		1268787				141452

### Detailed Equivalent 80 KN Report





*Calendar Selection for Special Days*

## Summary of RAKTEL/TEL Communications Software

Program	Function Summary
TelWin	<ul style="list-style-type: none"> <li>○ Basic logger communications.</li> <li>○ Set-up loggers (configure and adjust parameters).</li> <li>○ Real-time traffic monitoring.</li> <li>○ Perform sensor and logger diagnostics.</li> <li>○ Long term status monitoring.</li> <li>○ Data extraction.</li> <li>○ Data conversion to standard formats (that do not require SDB).</li> <li>○ Viewing of extracted binary file information.</li> </ul>
TelWinPlus	<ul style="list-style-type: none"> <li>○ The same as TelWin and additionally:</li> <li>○ Site Database support (SDB).</li> <li>○ Setup of loggers from SDB.</li> <li>○ Dynamic Run File view (direct access to saved traffic information).</li> <li>○ Video frame grabbing.</li> <li>○ Data conversion to formats requiring SDB. (US FHWA).</li> </ul>
TelWinPro	<ul style="list-style-type: none"> <li>○ The same as TelWinPlus and additionally:</li> <li>○ Comprehensive automated dialer.</li> <li>○ Full compressed video support.</li> <li>○ Basic reports from raw data.</li> </ul>
NetTel	<ul style="list-style-type: none"> <li>○ Network logger communication.</li> <li>○ Automated simultaneous data extraction and conversion. *</li> <li>○ Monitor of traffic and system status (simultaneous mode).</li> <li>○ Automatic updates of site data.</li> <li>○ Scheduled data conversion.</li> <li>○ Support for SQL DB.</li> </ul>
TelNetDLL	<ul style="list-style-type: none"> <li>○ DLL software interface for user logger network applications.</li> <li>○ Windows DLL that enables users to link to the Mikros Loggers with their own software.</li> <li>○ Enables protocol control.</li> </ul>
MoniCar	<ul style="list-style-type: none"> <li>○ Web based monitoring of online loggers.</li> <li>○ Comprehensive graphical interface.</li> <li>○ Comparison with historical traffic patterns.</li> </ul>

Notes: \* Limited to hardware performance from CPU and available bandwidth.

All programs require a Windows XP platform and Pentium IV 1500 MHz with 256 Kbyte RAM as a computer.

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