MetroCount® traffic data specialists

Custom List Report

MTE User Manual

4.03

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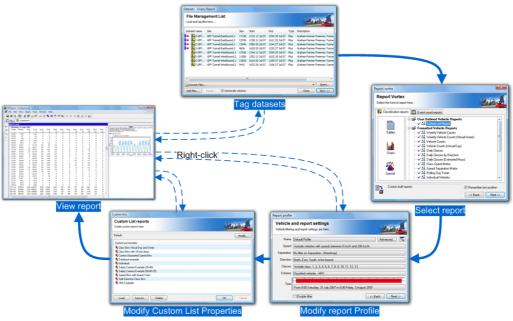
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Generating a Custom List Report

Report Wizard

The Custom List report is a **Classification** report, under **Tables** in the Report Vortex. The Custom List report's properties are displayed as an additional step to the Report Wizard, just before the report is generated.

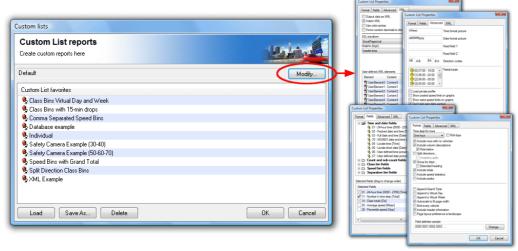
A Custom List report's properties can be accessed at any time via the report's right-click menu, just like the report's Local Profile. Custom Lists can also be easily saved for future use.



Report Wizard for the Custom List report

Custom List Properties

The main Custom List dialog box is used for loading and saving Custom List formats, and for changing the current format.



Custom List report properties

To load an existing Custom List format, select an item from the **Favorties** list and click the **Load** button, or simply double-click. The Custom List name will change to indicate the format has been loaded. Several examples are provided.

The **Save As** button writes the current Custom List format to a file, whose name will then appear in the **Favorites** list. Custom List format files have a **.xpt** extension, and should be stored in the **Profiles** folder in MTE's Documents folder.

The **Modify** button at the top leads to another dialog box, with the Custom List properties broken into four areas:

- **Format** defines the layout of the report, specifically the rows and totals.
- Fields defines the included columns, and their order.

- Advanced miscellaneous options, including user-defined fields and totals.
- XML options for exporting data via XML.

Most of these options are covered in subsequent sections. Exporting data via XML is covered in its own chapter.



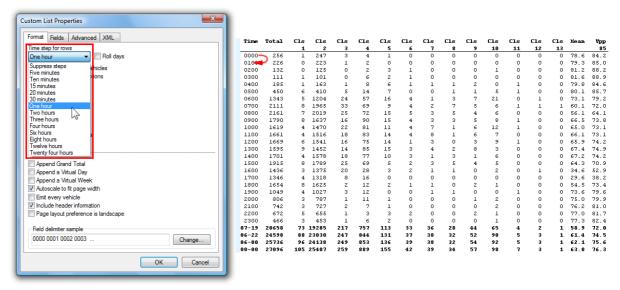
Note:

The word **modified** will be appended to the Custom List format name when any properties are changed. To remove this, simply save the format.

Custom List Format

Time Step Interval

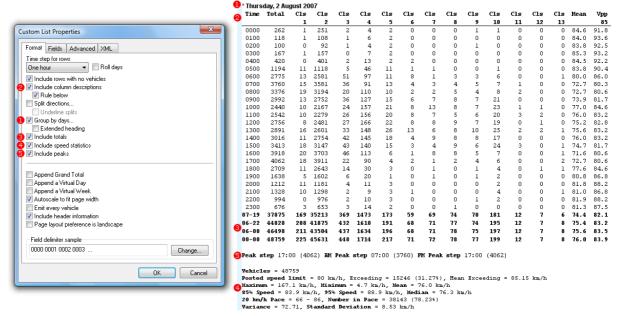
The **Time Step** option is the interval over which vehicles are accumulated for each row in a Custom List report. The **Suppress steps** selection removes all data rows from the Custom List report, leaving only summary totals and statistics such as the Virtual Day or Week.



Example Custom List report with a time step of one hour

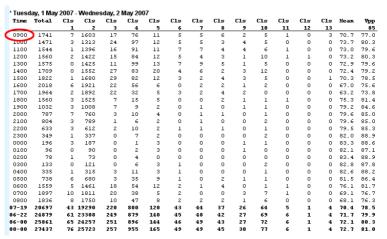
Time Step Grouping

The **Group by days** option breaks the time steps into 24-hour groups, placing the date at the start of the group. The option also includes the **column descriptions** option before the group, and the **totals**, **speed statistics** and **peaks** options after the group. If the **Group by days** option is not selected, these options appear at the beginning and end of the entire range of time steps.



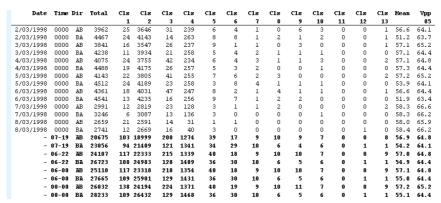
Custom List Grouping and Totals

When data is grouped by days, the first time step starts at midnight. The **Roll days** option groups data in 24-hour periods aligned to the start of the report's Time Filter. This is useful for short 24 or 48-hour counts where daily totals are required, but the data may not start at midnight.



Example Custom List report with roll days option enabled

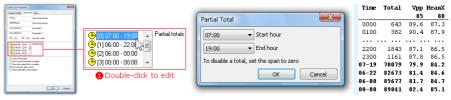
The **Split directions** options inserts two rows for each time step, one for each direction. Note that the direction is based on **A>B** and **B>A**, not the compass direction. When combining multiple files with this option, ensure the compass directions match.



Custom List with 24-hour time step and Split Directions option

Partial Totals

The **Include totals** formatting option by default includes a 24-hour total (00:00-00:00), as well as the common 12-hour (07:00-19:00), 16-hour (06:00-22:00) and 18-hour (06:00-00:00) partial totals. These can be changed or removed on the **Advanced** page of the Custom List Properties.



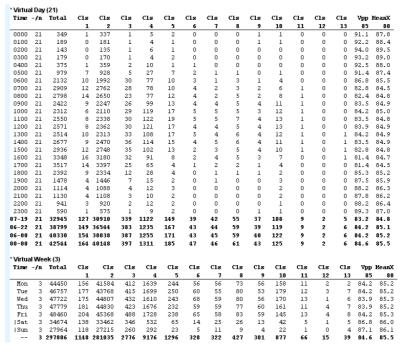
Editing Custom List Partial Totals

Double-click any of the Partial Totals to edit the time range. To disable a Partial Total set the start and end hours to the same value, except for 00:00-00:00 which is the 24-hour total. A disabled Partial Total will display **Off** and will not be displayed in the totals block.

Virtual Day/Week

The **Append a Virtual Day** or **Week** options include a virtualised summary of the data at the end of the Custom List report.

A virtual day represents a "typical" 24 hour period, using one hour per row. A virtual week represents a "typical" week, with a row per day. Data is accumulated for all the matching times, and then recalculated. The summaries are not just an average of previously calculated rows, totals or statistics.



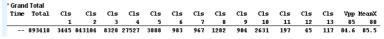
Custom List Virtual Day and Virtual Week

Careful attention should be paid to the start and finish time alignment in the Profile when including virtual summaries. When using the virtual day, the Profile duration should be a whole number of days. When using the virtual week, the Profile duration should be a whole number of weeks. This ensures that averages are not skewed by including part of an hour or day that was only partially recorded. The whole number of days and weeks can be unaligned (not aligned to midnight). The Profile's time **Auto-Wrap** options assist in selecting an appropriate time range.

If the Profile is not appropriately set, the title will indicate partial data, such as ** Virtual Day (Partial days = 7.06) or ** Virtual Week (Partial weeks = 1.01). In these cases, total rows (if selected) will not be shown.

Grand Total

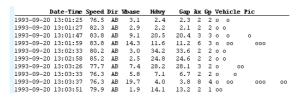
The **Append Grand Total** option includes an aggregate row for the entire range of data. Like the Virtual Day and Week, these values are calculated from all the underlying data, not from previously calculated rows, totals or statistics.



Custom List Grand Total

Individual Vehicle Steps

The **Emit every vehicle** option creates a row for every vehicle. The special **Vehicle parameter** group of fields contain fields similar to those found in the **Individual Vehicles** report.

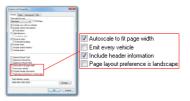


Custom List report with Individual Vehicles

Using the **Suppress steps** Time Step option, all other Custom List fields will be ignored, producing a report with just individual vehicles. If a Time Step is selected, they will be interspersed with the individual vehicles.

Page Layout

If the width of the selected fields in a Custom List report exceed the width of the page, the **Autoscale to fit page** width will automatically reduce the size of the report's font. If the font becomes too small to read, a landscape page layout may be preferable.



Custom List page layout options

The **Include header information** option includes the standard MetroCount report header at the start of the Custom List report, as well as a column legend for the selected fields.

Field Delimiters

Fields or columns in a Custom List report are separated by a space character by default. To change this to another character, such as a comma for exporting to a spreadsheet, click the **Change** button at the bottom of the **Format** page. Each field can optionally be enclosed in another character, such as a double quote.

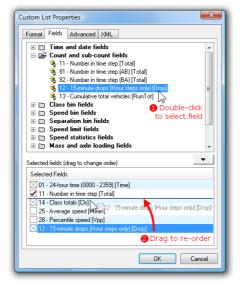


Custom List Field Delimiters

Custom List Fields

Selecting Fields

Fields in a Custom List report form the columns of the report. The **Fields** page of the Custom List Properties contains the **Fields Tree** at the top with the list of available fields, and the **Selected Fields** list at the bottom.



Selecting Custom List Fields

Fields can be added to the Selected Fields list by double-clicking them, or dragging them from the Fields Tree. The order of fields can be changed by dragging them around in the Selected Fields list. To remove a selected field, simply double-click it.

Note that the text in square brackets at the end of each field name is the column heading used for that field.

Time and Date Fields

The Time and Date Fields display the *beginning* of each time step. There are a variety of standard date formats, most of which are self-explanatory.



Custom List Time and Date Fields

The **Locale** options use the format provided by the operating system's regional settings.

The **ISO8601** format is recommended when exporting data, to provide compatibility with programs such as Excel.

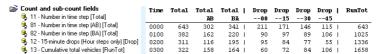
The **User defined** date and time pictures can be edited on the **Advanced** page of the Custom List Properties, using the standard Windows time and date notation.



Custom List user defined date and time pictures

Count and Sub-count Fields

The Count and Sub-count fields provide the total number of vehicles in the current time step.



Custom List Count Fields

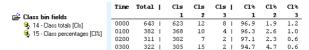
If the directional totals **AB** and **BA** are used with multiple datasets tagged, each dataset should have the same direction code.

When using an hourly time step, the **15-minute drops** field inserts a column for the total vehicles in each 15-minute period.

The **Cumulative total vehicles** field displays the cumulative number of vehicles since the beginning of the report.

Class Bin Fields

The **Class totals** and **percentages** fields include a column of total vehicles (or percentage) for each class included in the report's Local Profile.



Custom List Class Bin Fields

Speed Bin Fields

The **Speed bin totals** and **percentages** fields include a column of total vehicles (or percentage) for each *enabled* speed bin in the report's Local Profile. The lower and upper limits of each column are displayed in the column's heading.

Note that some vehicles may be hidden if some speed bins are disabled.



Custom List Speed Bin Fields

The **Speed rating** field is the sum of products of each speed bin total multiplied by the bin's multiplier. These are defined in the report's Local Profile.

Separation Bin Fields

The **Separation bin totals** and **percentages** fields include a column of total vehicles (or percentage) for each separation bin defined in the report's Local Profile. The lower and upper limits of each column are displayed in the column's heading.



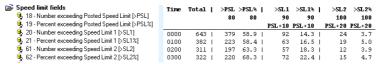
Custom List Separation Bin Fields

The **Separation rating** field is the sum of products of each separation bin total multiplied by the bin's multiplier. These are defined in the report's Local Profile.

Speed Limit Fields

The Speed Limit fields display the total number of vehicles (or percentage) exceeding the selected speed limit. The Posted Speed Limit, and up to 10 other limits are defined in the report's Local Profile.

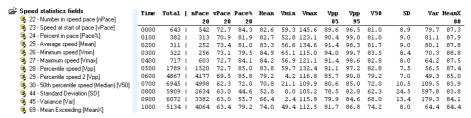
The actual limit, and the limit's name if one was defined, are displayed in the column heading.



Custom List Speed Limit Fields

Speed Statistics Fields

The Speed Statistics fields provide a variety of standard statistical measures for the speed of vehicles in the current time step.



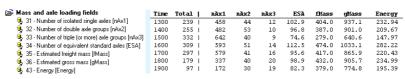
Custom List Speed Statistics Fields

The width of the speed pace, the percentile speeds and the posted speed limit for **Mean Exceeding** are all set in the report's Local Profile. The actual values are displayed in the column headings.

Mass and Axle Loading Fields

The number of single, double and triple axle groups are based on the definition of a group (two or more axles less than a certain distance apart) in the selected Classification Scheme.

The ESA and estimated mass fields use the Estimated Mass table in the report's Local Profile.

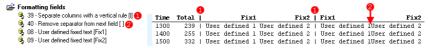


Custom List Mass Fields

Formatting Fields

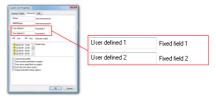
Fields or columns in the Custom List are normally separated by a space character on the right-hand side of the field. This character can be changed in the Custom List's Formatting options.

The **Separate columns with a vertical rule** field can be used to further delineate fields. Placing **Remove separator from next field** before a field will join the next two fields together.



Custom List Formatting Fields

The user defined text fields can be set in the **Advanced** page of the Custom List Properties.



Custom List user defined fields

Other Fields

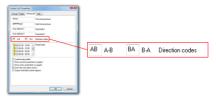
The **Average of sensor correlation** field is the average ratio of "matching" A and B hits for vehicles in the current time step. Perfect data will have a value of one.

The **Normalise divisor** field can be used in the Virtual Day and Week to show the number of times a particular hour of the day (or day of the week) contributed to the virtualised totals and statistics.



Custom List Other fields

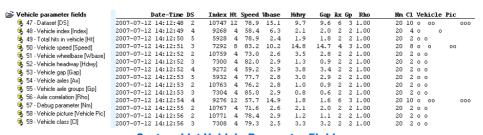
The **Direction code** field can be used with the **Split directions** formatting option where each time step is split into two rows (A>B and B>A). The text shown for each direction can be overridden in the Advanced page of the Custom List properties.



Custom List direction codes

Vehicle Parameter Fields

The **Vehicle Parameter** fields are used with the **Emit every vehicle** formatting option. Refer to the Individual Vehicle report for a definition of each field.



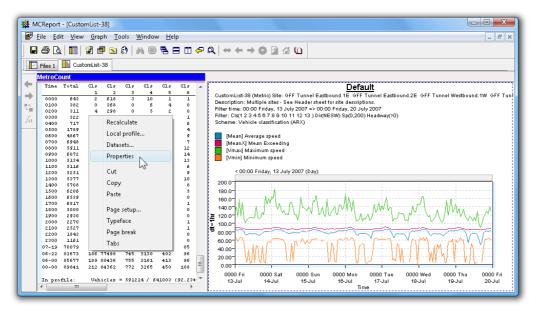
Custom List Vehicle Parameter Fields

Custom List Chart

Split Window

The Custom List report is a dual-pane split report, with a time-based chart on the right where fields included in the report can be optionally plotted. The entire time range of data is included in the chart, with the time step as the integration time.

Like dual-pane graphical reports, the left pane is the primary pane, with access to the report's Local Profile, datasets and Custom List Properties via the right-click menu.

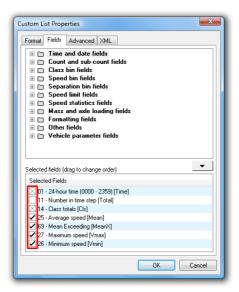


Custom List Chart

To print or save the Custom List chart it must first be activated by clicking anywhere within its pane. The blue MetroCount bar indicates the active pane, which print and save operations relate to. The usual graph rendering and scaling properties can be changed via the **Graph** menu in MCReport's main menu.

Selecting Fields

The check box next to each selected field in the Custom List report's Properties is used to include the field in the Custom List chart. Fields with a cross in the check box cannot be plotted.



Selecting fields to plot

All selected fields are plotted on one vertical axis, so for best results, only select fields with a similar range in values.

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