

# Instructions for Travel Time – Variation Routine Analysis

For this part you are required to see how the Travel time from RITIS changes between two selected dates in addition to visualization of how a specific Variation Routine is activated on those two dates and potentially seeing the impact of a variation routine on

**Step1:** Identify the two dates of comparison and lower/upper time thresholds that you want to constraint the analysis to

**SCATS Data Manager**  
Developed by Abdullah Shabarek

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### Travel Time / Variation Routine Analysis

Select the first date:  
You can pick a date

Select the second date:  
You can pick a date

Lower Time  
14 00 00

Upper Time  
18 00 00

Select the first date you want to use in the comparison

Select the second date you want to use in the comparison

Select the lower and upper time that you want the analysis to be constraint to

**Step2:** Type in TMCs from RITIS that belong to one direction. You may type in multiple TMCs as long as you separate them by next line (by hitting enter between the TMCs as shown below). Select the site ID and both the variation 1 (i.e., VR activation) and variation 2 (i.e., VR deactivation). You may find the VR numbers which are identical to each intersection from SCATS log.

The screenshot shows a web form for entering TMC data. It has four main sections: a text input for TMCs, a dropdown for direction, and two input fields for Site ID, Variation 1, and Variation 2. Annotations with arrows point to each section:

- Orange arrow:** Points to the TMC input field containing "103+11414" and "103P11414".
- Blue arrow:** Points to the "Select the TMC direction:" dropdown menu showing "Eastbound".
- Red arrow:** Points to the "Site ID" and "Variation 1" and "Variation 2" input fields.

**Annotations:**

- Orange text:** "Type in the TMCs from RITIS that belong to one approach. You can type multiple TMCs as long as you separate them by next line as shown"
- Blue text:** "Choose the approach direction you are analyzing"
- Red text:** "Choose the Site ID from in addition to Variation 1 that indicates when a variation routine is activated and Variation 2 that indicates when a variation routine is deactivated"

**Step3:** Go to RITIS to "Massive Data Download". Select the segments that you are interested in and the range of dates that includes both Date 1 & Date 2 in one file.

The screenshot shows a web form for downloading data. It has four main sections: "6. Select units for travel time", "7. Select averaging", "8. Provide title", and "9. Notification". Annotations with arrows point to each section:

- Red arrow:** Points to the "6. Select units for travel time" section with radio buttons for "Seconds" and "Minutes".
- Blue arrow:** Points to the "7. Select averaging" section with radio buttons for "Don't Average", "5 minutes", "10 minutes", "15 minutes", and "1 hour".
- Green arrow:** Points to the "8. Provide title" section with a text input field.

**Annotations:**

- Red text:** "Make sure Travel time is in 'Seconds'"
- Blue text:** "Make sure the averaging is per '5 minutes'"
- Green text:** "Add the Travel Time file name here (e.g., US1&SandHill)"

**Step 4:** From SCATS Log, you need to export the results as CSV file but make sure that the filter is checked in for “Origin” as shown below. Also, make sure you are not filtering for a specific site id that is different from the Site ID you are analyzing, as shown below. You don’t have to click enable. The website will exclude the irrelevant results automatically even if you include them.

The screenshot shows the 'Filter' dialog box with the following sections:

- Commands:** Includes 'Origin' (checked), 'Type', 'Other events', 'Site events', and 'Source'.
- Origin:** A list of categories with checkboxes. The 'Origin' category is checked, and its sub-items are also checked.
- Type:** A list of event types with checkboxes. The 'Type' category is checked, and its sub-items are also checked.
- Other events:** A list of other events with checkboxes. The 'Other events' category is checked, and its sub-items are also checked.
- Site events:** A list of site events with checkboxes. The 'Site events' category is checked, and its sub-items are also checked.
- Source:** A list of sources with checkboxes. The 'Source' category is checked, and its sub-items are also checked.
- Selected sites:** A list of selected sites. The 'Selected sites' list is highlighted with a blue box, and the 'Ignored sites' list is also highlighted with a blue box.
- Ignored sites:** A list of ignored sites.

At the bottom of the dialog box, there are buttons for 'Load...', 'Save...', 'Apply', 'OK', and 'Cancel'.

**Make sure that all checks are on**

**Make sure you don't enable this choice or it is consistent with Site ID you are analyzing**

## Step5: In case you are wondering where you get the Variation Routine # from SCATS Log

SCATS Log - Reading Sunday, October 31, 2021

File View Tools Help

From: Friday, October 1, 2021 To: Sunday, October 31, 2021 Period: [00:00] to [24:00] ITS status: ✔

Show: ☒ Concurrent alarms ☒ Duplicate events ☒ Record category ☒ Record type ☒ Perked sites ☒ Test sites ☒ Plan data ☒ No local cache ☒ Bad records (0)

List Region plot Time plot

No.	Record	Date	Time	Source	Site	+/-	Event	Mode	User	Details
1112	66361	30/10/2021	17:24:26	NUR001	10012		VR			[Variation routine, Other] [0x03] 129: Is 10012 VAR1.9e=45 (was 60)
1111	66360	30/10/2021	17:24:26	NUR001	10012		VR			[Variation routine, Other] [0x03] 129: Is 10012 VAR1.9e=45
1110	66348	30/10/2021	17:19:42	NUR001	10012		VR			[Variation routine, Other] [0x03] 128: Is 10012 VAR1.9e=60 (was 45)
1109	66347	30/10/2021	17:19:42	NUR001	10012		VR			[Variation routine, Other] [0x03] 128: Is 10012 VAR1.9e=60
1108	66023	30/10/2021	16:36:18	NUR001	10012		VR			[Variation routine, Other] [0x03] 129: Is 10012 VAR1.9e=45 (was 60)
1107	66022	30/10/2021	16:36:18	NUR001	10012		VR			[Variation routine, Other] [0x03] 129: Is 10012 VAR1.9e=45
1106	65977	30/10/2021	16:33:52	NUR001	10012		VR			[Variation routine, Other] [0x03] 128: Is 10012 VAR1.9e=60 (was 45)
1105	65976	30/10/2021	16:33:52	NUR001	10012		VR			[Variation routine, Other] [0x03] 128: Is 10012 VAR1.9e=60
1104	65784	30/10/2021	16:10:16	NUR001	10012		VR			[Variation routine, Other] [0x03] 129: Is 10012 VAR1.9e=45 (was 60)
1103	65783	30/10/2021	16:10:16	NUR001	10012		VR			[Variation routine, Other] [0x03] 129: Is 10012 VAR1.9e=45
1102	65784	30/10/2021	16:07:40	NUR001	10012		VR			[Variation routine, Other] [0x03] 128: Is 10012 VAR1.9e=60 (was 45)
1101	65783	30/10/2021	16:07:40	NUR001	10012		VR			[Variation routine, Other] [0x03] 128: Is 10012 VAR1.9e=60
1100	65779	30/10/2021	16:02:44	NUR001	10012		VR			[Variation routine, Other] [0x03] 129: Is 10012 VAR1.9e=45 (was 60)
1099	65778	30/10/2021	16:02:44	NUR001	10012		VR			[Variation routine, Other] [0x03] 129: Is 10012 VAR1.9e=45
1098	65776	30/10/2021	15:58:16	NUR001	10012		VR			[Variation routine, Other] [0x03] 128: Is 10012 VAR1.9e=60 (was 45)
1097	65775	30/10/2021	15:58:16	NUR001	10012		VR			[Variation routine, Other] [0x03] 128: Is 10012 VAR1.9e=60
1096	65084	30/10/2021	15:13:20	NUR001	10012		VR			[Variation routine, Other] [0x03] 129: Is 10012 VAR1.9e=45 (was 60)
1095	65083	30/10/2021	15:13:20	NUR001	10012		VR			[Variation routine, Other] [0x03] 129: Is 10012 VAR1.9e=45
1094	64889	30/10/2021	15:03:38	NUR001	10012		VR			[Variation routine, Other] [0x03] 128: Is 10012 VAR1.9e=60 (was 45)
1093	64888	30/10/2021	15:03:38	NUR001	10012		VR			[Variation routine, Other] [0x03] 128: Is 10012 VAR1.9e=60
1092	64626	30/10/2021	14:22:58	NUR001	10012		VR			[Variation routine, Other] [0x03] 129: Is 10012 VAR1.9e=45 (was 60)
1091	64625	30/10/2021	14:22:58	NUR001	10012		VR			[Variation routine, Other] [0x03] 129: Is 10012 VAR1.9e=45
1090	64617	30/10/2021	14:20:30	NUR001	10012		VR			[Variation routine, Other] [0x03] 128: Is 10012 VAR1.9e=60 (was 45)
1089	64616	30/10/2021	14:20:30	NUR001	10012		VR			[Variation routine, Other] [0x03] 128: Is 10012 VAR1.9e=60
1088	64220	30/10/2021	13:30:30	NUR001	10012		VR			[Variation routine, Other] [0x03] 129: Is 10012 VAR1.9e=45 (was 60)
1087	64219	30/10/2021	13:30:30	NUR001	10012		VR			[Variation routine, Other] [0x03] 129: Is 10012 VAR1.9e=45
1086	64205	30/10/2021	13:28:10	NUR001	10012		VR			[Variation routine, Other] [0x03] 128: Is 10012 VAR1.9e=60 (was 45)
1085	64204	30/10/2021	13:28:10	NUR001	10012		VR			[Variation routine, Other] [0x03] 128: Is 10012 VAR1.9e=60
1054	50343	29/10/2021	17:18:02	NUR001	10012		VR			[Variation routine, Other] [0x03] 129: Is 10012 VAR1.9e=45 (was 60)
1053	50342	29/10/2021	17:18:02	NUR001	10012		VR			[Variation routine, Other] [0x03] 129: Is 10012 VAR1.9e=45
1052	50165	29/10/2021	17:09:36	NUR001	10012		VR			[Variation routine, Other] [0x03] 128: Is 10012 VAR1.9e=60 (was 45)
1051	50164	29/10/2021	17:09:36	NUR001	10012		VR			[Variation routine, Other] [0x03] 128: Is 10012 VAR1.9e=60
1050	49908	29/10/2021	16:49:18	NUR001	10012		VR			[Variation routine, Other] [0x03] 129: Is 10012 VAR1.9e=45 (was 60)
1049	49907	29/10/2021	16:49:18	NUR001	10012		VR			[Variation routine, Other] [0x03] 129: Is 10012 VAR1.9e=45
1048	49844	29/10/2021	16:44:04	NUR001	10012		VR			[Variation routine, Other] [0x03] 128: Is 10012 VAR1.9e=60 (was 45)
1047	49843	29/10/2021	16:44:04	NUR001	10012		VR			[Variation routine, Other] [0x03] 128: Is 10012 VAR1.9e=60
1046	49825	29/10/2021	16:41:26	NUR001	10012		VR			[Variation routine, Other] [0x03] 129: Is 10012 VAR1.9e=45 (was 60)
1045	49824	29/10/2021	16:41:26	NUR001	10012		VR			[Variation routine, Other] [0x03] 129: Is 10012 VAR1.9e=45
1044	49764	29/10/2021	16:36:02	NUR001	10012		VR			[Variation routine, Other] [0x03] 128: Is 10012 VAR1.9e=60 (was 45)
1043	49763	29/10/2021	16:36:02	NUR001	10012		VR			[Variation routine, Other] [0x03] 128: Is 10012 VAR1.9e=60
1042	49582	29/10/2021	16:19:48	NUR001	10012		VR			[Variation routine, Other] [0x03] 129: Is 10012 VAR1.9e=45 (was 60)
1041	49581	29/10/2021	16:19:48	NUR001	10012		VR			[Variation routine, Other] [0x03] 129: Is 10012 VAR1.9e=45

1113 matches from 71649 records

**When you sort the results based on "User" and you look for "VR" You will find something similar to this screen**

**In this case, 128 is the activation VR and 129 is the deactivation VR**

## Step6: Go back to the website to upload the following three files as shown and illustrated below:

Site ID: 10012 Variation 1: 128

Variation 2: 129

Upload RITIS Travel Time CSV file

Browse... No file selected

Upload RITIS TMC Identification CSV file

Browse... No file selected

Upload SCATS log as CSV file

Browse... No file selected

Preview Download

**Upload the Travel Time file you got from RITIS**

**Upload the "TMC Identification" file that you got in the same folder as Travel Time file from RITIS**

**Upload the SCATS log csv file you exported from SCATS log**

**Click Preview to see the results on the webpage or Download to download the results as csv file**

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