

Next Generation Simulation Program (NGSIM)

Vehicle Trajectory File Data Dictionary

File Information

File Name	Vehicle Trajectory File
File Location	vehicle-trajectory-data/trajectory-data.txt
Format	Text
Row Delimiter	[Hard Return]
Column Delimiter	[Comma]

Data Structure

[Row]	Col 1	Col 2	Col 3	Col 4	Col 5	Col 6	Col 7	Col 8	Col 9	Col 10	Col 11	Col 12	Col 13	Col 14	Col 15	Col 16	Col 17	Col 18
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Row Information

Row Description	A single X,Y,T data point for a vehicle (specified by vehicle identification number), with associated information.
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Column 1 Information

Name	Vehicle ID
Description	Vehicle identification number (ascending by time of entry into section)
Units	Number

Column 2 Information

Name	Frame ID
Description	Frame Identification number (ascending by start time)
Units	1/10 of a second

Column 3 Information

Name	Total Frames
Description	Total number of frames in which the vehicle appears in this data set.
Units	1/10 of a second

Column 4 Information

Name	Global Time (Epoch Time)
Description	Elapsed time since Jan 1, 1970.
Units	Milliseconds

Column 5 Information

Name	Local X
Description	Lateral (X) coordinate of the front center of the vehicle with respect to the left-most edge of the section in the direction of travel.
Units	Feet

Column 6 Information

Name	Local Y
Description	Longitudinal (Y) coordinate of the front center of the vehicle with respect to the entry edge of the section in the direction of travel.
Units	Feet

Column 7 Information

Name	Global X
Description	X Coordinate of the front center of the vehicle based on CA State Plane III in NAD83.
Units	Feet

Column 8 Information

Name	Global Y
Description	Y Coordinate of the front center of the vehicle based on CA State Plane III in NAD83.
Units	Feet

Column 9 Information

Name	Vehicle Length
Description	Length of vehicle
Units	Feet

Column 10 Information

Name	Vehicle Width
Description	Width of vehicle
Units	Feet

Column 11 Information

Name	Vehicle Class
Description	Vehicle type: 1 - motorcycle, 2 - auto, 3 - truck
Units	Text

Column 12 Information

Name	Vehicle Velocity
Description	Instantaneous velocity of vehicle
Units	Feet/Second

Column 13 Information

Name	Vehicle Acceleration
Description	Instantaneous acceleration of vehicle
Units	Feet/Second Square

Column 14 Information

Name	Lane Identification
Description	Current lane position of vehicle. Lane 1 is farthest left lane; lane 6 is farthest right lane. Lane 7 is the on-ramp at Powell Street, and Lane 9 is the shoulder on the right-side.
Units	Number

Column 15 Information

Name	Preceding Vehicle
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Description Vehicle Id of the lead vehicle in the same lane. A value of '0' represents no preceding vehicle - occurs at the end of the study section and off-ramp due to the fact that only complete trajectories were recorded by this data collection effort (vehicles already in the section at the start of the study period were not recorded).

Units Number

Column 16 Information

Name Following Vehicle

Description Vehicle Id of the vehicle following the subject vehicle in the same lane. A value of '0' represents no following vehicle - occurs at the beginning of the study section and on-ramp due to the fact that only complete trajectories were recorded by this data collection effort (vehicle that did not traverse the downstream boundaries of the section by the end of the study period were not recorded).

Units Number

Column 17 Information

Name Spacing (Space Headway)

Description Spacing provides the distance between the front-center of a vehicle to the front-center of the preceding vehicle.

Units Feet

Column 18 Information

Name Headway (Time Headway)

Description Headway provides the time to travel from the front-center of a vehicle (at the speed of the vehicle) to the front-center of the preceding vehicle. A headway value of 9999.99 means that the vehicle is traveling at zero speed (congested conditions).

Units Seconds