Disclaimer

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Users should also review any relevant disclaimers found within storage systems used by ITS DataHub and/or datasets discoverable through ITS DataHub.

The NGSIM data were collected between 2005 and 2006 and the video files are being made available to the public as of November 2021. The ITS JPO has made the metadata file following this page available to support the release of the video files. However, the U.S. DOT is not responsible for broken links or outdated information that may be contained within the file. Please refer to the NGSIM website (https://ops.fhwa.dot.gov/trafficanalysistools/ngsim.htm) for further information or contact James Colyar (James.Colyar@dot.gov) with questions. Additional, related data are included in the “Related Datasets” below.

Related Datasets

NGSIM Vehicle Trajectories and Supporting Data:
https://data.transportation.gov/Automobiles/Next-Generation-Simulation-NGSIM-Vehicle-Trajector/8ect-6jqj

NGSIM I-80 Videos: https://data.transportation.gov/Automobiles/Next-Generation-Simulation-NGSIM-Program-I-80-Vide/2577-gpny

NGSIM US-101 Videos: https://data.transportation.gov/Automobiles/Next-Generation-Simulation-NGSIM-Program-US-101-Vi/4qzi-thur

NGSIM Lankershim Boulevard Videos:
https://data.transportation.gov/Automobiles/Next-Generation-Simulation-NGSIM-Program-Lankershi/uv3e-y54k

NGSIM Peachtree Street Videos: https://data.transportation.gov/Automobiles/Next-Generation-Simulation-NGSIM-Program-Peachtree/mupt-aksf

Next Generation Simulation Program (NGSIM)

I-80 Data Set

prepared by:
Cambridge Systematics, Inc.

Basic Information

Description

This dataset contains trajectory data developed by Cambridge Systematics, Inc. as part of the Federal Highway Administration's (FHWA) Next Generation Simulation (NGSIM) project. This represents data collected and processed on a segment of Interstate 80 located in Emeryville, California on April 13, 2005. A total of 45 minutes of data are available in the full dataset, segmented into three 15 minute periods: 1) 4:00 p.m. 4:15 p.m.; 2) 5:00 p.m. to 5:15 p.m.; and 3) 5:15 p.m. to 5:30 p.m. This data contains detailed trajectory data, wide-area detector data, and supporting data needed for behavioral algorithm research.

License

[Local Link] [On-Line Link]

Citation

Next Generation Simulation Program (NGSIM)

Federal Highway Administration
Washington, D.C.
USA

Cambridge Systematics, Inc.
555 12th Street, Suite 1600
Oakland, CA 94607
USA

Navigation

[Data by Type] [Format Types] [Metadata] [File Index]

Data by Type

Vehicle Trajectory Data (primary data)

This directory contains vehicle trajectory data collected on the east-bound (north-bound) direction of Interstate 80 in Emeryville, California on April 13, 2005. The folder contains transcribed data from 4:00 p.m. to 4:15 p.m., 5:00 p.m. to 5:15 p.m. and 5:15 p.m. to 5:30 p.m. This data was collected using seven video cameras mounted on a 30-story building, Pacific Park Plaza, which is located in 6363 Christie Avenue and is adjacent to the study area. Vehicle trajectory data were transcribed from the video data using a customized software application developed for NGSIM. This program was used to automatically detect and track most vehicles from the video images and transcribe the trajectory data to a database. Manual transcription was used to track any vehicles which failed to be automatically detected and tracked. The data provides X, Y coordinates of each vehicle, every 1/10th of a second in relative space and in the California State Plane Coordinate System, Zone 3, NAD83 (the units are US Survey Feet). Time is given in Epoch time, which is the elapsed time since midnight (beginning of the calendar day) GMT on January 1, 1970 in milliseconds. This elapsed epoch time must be shifted to the US Pacific time

zone for comparisons to local time at the highway. The bounds for the data are west: -122.2987, east: -122.2962, north: 37.8466, and south: 37.8385.

Location:

- /vehicle-trajectory-data

Files:

- trajectories-0400-0415.txt [Text] ?
  This simple text file contains all vehicle trajectories for the entire time period, sorted by time. The accompanying data dictionary file describes the file structure more fully. The X accuracy of this data set is estimated at around 2 feet and the Y accuracy is estimated at around 4 feet.
- trajectories-0500-0515.txt [Text] ?
  This simple text file contains all vehicle trajectories for the entire time period, sorted by time. The accompanying data dictionary file describes the file structure more fully. The X accuracy of this data set is estimated at around 2 feet and the Y accuracy is estimated at around 4 feet.
- trajectories-0515-0530.txt [Text] ?
  This text file contains all vehicle trajectories for the entire time period, sorted by time. The accompanying data dictionary file describes the file structure more fully. The X accuracy of this data set is estimated at around 2 feet and the Y accuracy is estimated at around 4 feet.
- trajectory-data-dictionary.htm [Hypertext] ?

Prepared by:

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USA

Raw Video Data (support data)

This directory contains raw video data from each of the seven cameras for the three time-periods used for data reduction. Camera numbering is in order of southern-most (1) to northern-most (7). The videos give the original vehicle movement data and offer users a view of how the section was observed. The videos are compressed using open-sourced XviD codec. If you are having trouble opening the file, please download the codec from http://www.koepi.org/xvid.shtml. The XviD file used for compressing the files is XviD-1.0.3-20122004.exe, a self extracting binary file.

Location:

- /raw-video

Files:

- nb-camera1-0400pm-0415pm.avi [Video] ?
- nb-camera2-0400pm-0415pm.avi [Video] ?
- nb-camera3-0400pm-0415pm.avi [Video] ?
- nb-camera4-0400pm-0415pm.avi [Video] ?
- nb-camera5-0400pm-0415pm.avi [Video] ?
- nb-camera6-0400pm-0415pm.avi [Video] ?
- nb-camera7-0400pm-0415pm.avi [Video] ?
- nb-camera1-0500pm-0515pm.avi [Video] ?
- nb-camera2-0500pm-0515pm.avi [Video] ?
- nb-camera3-0500pm-0515pm.avi [Video] ?
- nb-camera4-0500pm-0515pm.avi [Video] ?
- nb-camera5-0500pm-0515pm.avi [Video] ?
- nb-camera6-0500pm-0515pm.avi [Video] ?
- nb-camera7-0500pm-0515pm.avi [Video] ?
- nb-camera1-0515pm-0530pm.avi [Video] ?
- nb-camera2-0515pm-0530pm.avi [Video] ?
- nb-camera3-0515pm-0530pm.avi [Video] ?
- nb-camera4-0515pm-0530pm.avi [Video] ?
- nb-camera5-0515pm-0530pm.avi [Video] ?
- nb-camera6-0515pm-0530pm.avi [Video] ?

- nb-camera7-0515pm-0530pm.avi [Video] ?

Prepared by:

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Processed Video Data (support data)

This directory contains processed video data from each of the seven cameras for the three time periods used for data reduction. These files provide videos of vehicle position along with a superimposition of the vehicle identification numbers and extracted vehicle dimensions and trajectories. This data is provided to users to allow cross referencing of the textual vehicle trajectory data provided in trajectory-data.txt with the corresponding video. This data is provided to users so that they may have a visual sense of the extracted data. The videos are compressed using open-sourced XviD codec. If you are having trouble opening the file, please download the codec from http://www.koepi.org/xvid.shtml. The XviD file used for compressing the files is XviD-1.0.3-20122004.exe, a self extracting binary file.

Location:

- /processed-video

Files:

- nb-camera1-0400pm-0415pm-processed.avi [Video] ?
- nb-camera2-0400pm-0415pm-processed.avi [Video] ?
- nb-camera3-0400pm-0415pm-processed.avi [Video] ?
- nb-camera4-0400pm-0415pm-processed.avi [Video] ?
- nb-camera5-0400pm-0415pm-processed.avi [Video] ?
- nb-camera6-0400pm-0415pm-processed.avi [Video] ?
- nb-camera7-0400pm-0415pm-processed.avi [Video] ?
- nb-camera1-0500pm-0515pm-processed.avi [Video] ?
- nb-camera2-0500pm-0515pm-processed.avi [Video] ?
- nb-camera3-0500pm-0515pm-processed.avi [Video] ?
- nb-camera4-0500pm-0515pm-processed.avi [Video] ?
- nb-camera5-0500pm-0515pm-processed.avi [Video] ?
- nb-camera6-0500pm-0515pm-processed.avi [Video] ?
- nb-camera7-0500pm-0515pm-processed.avi [Video] ?
- nb-camera1-0515pm-0530pm-processed.avi [Video] ?
- nb-camera2-0515pm-0530pm-processed.avi [Video] ?
- nb-camera3-0515pm-0530pm-processed.avi [Video] ?
- nb-camera4-0515pm-0530pm-processed.avi [Video] ?
- nb-camera5-0515pm-0530pm-processed.avi [Video] ?
- nb-camera6-0515pm-0530pm-processed.avi [Video] ?
- nb-camera7-0515pm-0530pm-processed.avi [Video] ?

Prepared by:

Cambridge Systematics, Inc.
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Ortho Photographs (support data)

This directory contains ortho-rectified photographs of the study area.

Location:

- /I-80-aerial-ortho-photos

Files:

- emeryville1.tif [Image] ?
  The tfw file coordinates are in California State Plane Coordinate System, Zone 3, NAD83 (the units are US Survey Feet).The ortho-rectified photographs are at a resolution of 1":1000' and a pixel resolution of 0.25 feet. The photographs provide a relative accuracy of 2.5 feet. Please note that due

to the large size of the tif file, problems in opening the file in some photo editors may be encountered. ArcGIS software is capable of opening the file.

- emeryville1.tfw Support? for *emeryville1.tif*;
- emeryville2.tif [Image] ?
  The tfw file coordinates are in California State Plane Coordinate System, Zone 3, NAD83 (the units are US Survey Feet).The ortho-rectified photographs are at a resolution of 1":1000' and a pixel resolution of 0.25 feet. The photographs provide a relative accuracy of 2.5 feet.
- emeryville2.tfw Support? for *emeryville2.tif*;

Prepared by:

HJW GeoSpatial, Inc.
8407 Edgewater Drive
Oakland, CA 94621
USA

Cambridge Systematics, Inc.
555 12th Street, Suite 1600
Oakland, CA 94607
USA

CAD Drawings (support data)

This directory contains CAD drawings of the study area. The CAD drawings were developed using the the ortho-rectified photographs

Location:

- /cad-diagram

Files:

- emeryville.dwg [dwg] ?
  The dwg file provides a CAD drawing of the vehicle trajectory study area. A highly detailed representation of the network required for accurately transcribing vehicle trajectories is provided in the CAD network.
- emeryville.shx Support? for *emeryville.dwg*;
- emeryville-legend.jpg Description? for *emeryville.dwg*;
  This file provides the legend for the data elements used in the CAD drawing (dwg file).

Prepared by:

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Signal Timing (support data)

This directory contains signal timing sheets for the traffic signals present in the study area.

Location:

- /signal-timing

Files:

- powell-street-and-I80-EB-ramp.pdf [PDF] ?
  The signal timing sheet provides the controller timings for the signal at the intersection of Powell Street and I-80 EB Ramp.
- powell-street-and-I80-WB-ramp.pdf [PDF] ?
  The signal timing sheet provides the controller timings for the signal at the intersection of Powell Street and I-80 WB Ramp/Frontage Road.
- charlie-brown-way-and-I80-WB-ramp.pdf [PDF] ?
  The signal timing sheet provides the controller timings for the signal at the intersection of I-80 WB Ramp and Charlie Brown Way, the intersection immediately north of Powell Street on I-80 WB Frontage Road.

Prepared by:

California Department of Transportation
Signal Operations, District 4
Oakland, CA 94612
USA

Cambridge Systematics, Inc.
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Oakland, CA 94607
USA

Weather Data (support data)

This directory contains the AWOS/ASOS weather data at San Francisco Airport for Apirl 13th and April 14th of 2005.

Location:

- /weather-data

Files:

- getclimate.php-April13-2005.htm Support?
  Provides the temperature, precipitation, and other weather information for April 13, 2005.
- getclimate.php-April14-2005.htm Support?
  Provides the temperature, precipitation, and other weather information for April 14, 2005.

Prepared by:

Cambridge Systematics, Inc.
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USA

Detector Data (primary data)

This directory contains wide-area detector data collected between Powell Street and Gilman Avenue on Interstate 80 in Emeryville, California. The data were collected through Freeway Performance Measurement System (PeMS) project. This project is conducted by the Department of Electrical Engineering and Computer Sciences at the University of California, at Berkeley, with the cooperation of California Department of Transportation. The intent of this project is to collect historical and real-time freeway data from freeways in the State of California in order to compute freeway performance measures. Relevant data collected through the PeMS project was provided in this data set. Available data from six detector stations (Stations 1, 3, 4, 5, 6 and 7) for 10 days, from April 7th to April 20th, excluding the weekends, were provided in this data set. Each detector station contains two detectors per lane. This data set complements the vehicle trajectory data collection effort by providing information on volumes, speeds and occupancy, adjacent to the vehicle trajectory study area.

Location:

- /detector-data

Files:

- detector-data.txt [Text] ?
  This data set provides 30-second processed, loop detector data for a period of 10-days, between April 7, 2005 and April 20, 2005. Speed, volume and occupancy at each detector for the 30-second time step are presented at each detector in each lane. The accompanying data dictionary file describes the file structure more fully.
- detector-data-dictionary.htm Description? for *detector-data.txt*;
  Provides the data dictionary for the PeMS detector data set.

Prepared by:

Cambridge Systematics, Inc.
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GIS Files (support data)

This directory provides network data in the form of shapefiles. The files provides the geometry and attribute information for the area for which data is provided in the detector data study data set. This network includes area surrounding the vehicle trajectory study area.

Location:

- /gis-files

Files:

- emeryville.shp [Shapefile] ?
  This file provides the geometry and attribute information of the study area for wide-area detector data from Powell Street to Gilman Avenue.
- emeryville.dbf Support? for *emeryville.shp*;
  This database file stores the data presented through the shapefile.
- emeryville.shx Support? for *emeryville.shp*;
- signs-and-signals.shp [Shapefile] ?
  This file presents the signs, signals and detector locations. The data are provided as points in the shapefile.
- signs-and-signals.dbf Support? for *signs-and-signals.shp*;
- signs-and-signals.shx Support? for *signs-and-signals.shp*;
- camera-coverage.shp [Shapefile] ?
  This file provides the coverage of each of the seven cameras. The camera number and the length of coverage are provided.
- camera-coverage.dbf Support? for *camera-coverage.shp*;
- camera-coverage.shx Support? for *camera-coverage.shp*;
- I-80-study-site.jpg [Image] ?
  This file illustrates the location of the detectors at the study site.
- emeryville.mxd [Arcview-Project-File] ?
  This file provides an ArcView project file. The two shapefiles provided in the data set can be opened in any shapefile viewer without the need for this project file. This file is provided only for convenience purposes for those using ArcGIS software for opening the GIS files.

Prepared by:

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Signage Photos (support data)

This directory contains pictures of the signage in the prototype data section (in both directions) along Interstate 80/580. The names of these photo files correspond with the 'filename' attribute of the "gis-files/signs-and-signals.shp" file.

Location:

- /signs

Files:

- I80EB-sign1.JPG [Image] ?
- I80EB-sign2.JPG [Image] ?
- I80EB-sign3.JPG [Image] ?
- I80EB-sign4.JPG [Image] ?
- I80EB-sign5.JPG [Image] ?
- I80EB-sign6.JPG [Image] ?
- I80EB-sign7.JPG [Image] ?
- I80EB-sign8.JPG [Image] ?
- I80EB-sign9.JPG [Image] ?
- I80EB-sign10.JPG [Image] ?
- I80EB-sign11.JPG [Image] ?
- I80WB-sign1.JPG [Image] ?
- I80WB-sign2.JPG [Image] ?
- I80WB-sign3.JPG [Image] ?
- I80WB-sign4.JPG [Image] ?

- I80WB-sign5.JPG [Image] ?
- I80WB-sign6.JPG [Image] ?
- I80WB-sign7.JPG [Image] ?
- I80WB-sign8.JPG [Image] ?
- I80WB-sign9.JPG [Image] ?
- I80WB-sign10.JPG [Image] ?
- I80WB-sign11.JPG [Image] ?
- I80WB-sign12.JPG [Image] ?
- I80WB-sign13.JPG [Image] ?
- I80WB-sign14.JPG [Image] ?
- I80WB-sign15.JPG [Image] ?
- I80WB-sign16.JPG [Image] ?

Prepared by:

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Data Analysis (support data)

This directory presents aggregation of vehicle trajectory results to provide common macroscopic flow parameters. The results provided in the report include aggregations of flows, speeds and number of lane changes. Aggregation is conducted by distance (every 100 feet), by time (every 5 minutes), and by lane.

Location:

- /data-analysis

Files:

- data-analysis-report-0400-0415.pdf [PDF] ?
  Contains data aggregation for 4:00 p.m. and 4:15 p.m. on April 13th, 2005 for NB I-80. Aggregates of speeds, volumes, headways are provided by section (100 feet), time period (5 minutes), and lane. Input-output analysis and number of lane changes are also provided in the data analysis report.
- data-analysis-report-0500-0515.pdf [PDF] ?
  Contains data aggregation for 5:00 p.m. and 5:15 p.m. on April 13th, 2005 for NB I-80. Aggregates of speeds, volumes, headways are provided by section (100 feet), time period (5 minutes), and lane. Input-output analysis and number of lane changes are also provided in the data analysis report.
- data-analysis-report-0515-0530.pdf [PDF] ?
  Contains data aggregation for 5:15 p.m. and 5:30 p.m. on April 13th, 2005 for NB I-80. Aggregates of speeds, volumes, headways are provided by section (100 feet), time period (5 minutes), and lane. Input-output analysis and number of lane changes are also provided in the data analysis report.

Prepared by:

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License (support data)

The NGSIM license with specifics to the project is provided. The specific license applicable to the data, Common Deeds, Attibution 2.0 and its support files are presented here.

Location:

- /creative-commons-deed-files

Files:

- ngsim-license.htm [Hypertext] ?
  Provides the NGSIM specific language for the license. The actual license applicable to the data is the Common Deed - Attribution 2.0.
- creative-commons-deed.html [Hypertext] ?
  Provides the Creative Commons, Commons Deed - Attribution 2.0 license.

- deeds.css Support? for *creative-commons-deed.html*;
- logo-code.jpg Support? for *creative-commons-deed.html*;

Prepared by:

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Oakland, CA 94607
USA

XML Files (support data)

This directory contains all XML versions of files and associated schemas.

Location:

- /xml-files

Files:

- ngsim-metadata.xsd [Schema] ?
  Provides a schema for this metadata file.
- data-dictionary.xsd [Schema] ?
  Provides a schema for the data dictionary files.
- trajectory-data-dictionary.xml [XML] ?
  An XML instance for the trajectory data dictionary.
- detector-data-dictionary.xml [XML] ?
  An XML instance for the detector data dictionary.
- metadata.xml [XML] ?
  An XML instance for this file.

Prepared by:

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Format Types

Arcview-Project-File

MXD file formats are proprietary ESRI project file formats. They are provided here as a convenience for ESRI software users.

Extension: .MXD

Resources: [ESRI]

Description

Description files are not meant to be read directly. They describe related files, which are meant to be read directly.

DWG

DWG is a binary file format used by AutoDesk AutoCAD. It can contain 2D or 3D objects and offers compression and a CRC check for internal data.

Extension: .DWG

Resources: [Autodesk] [Infograph]

Hypertext

Hypertext Markup Language (HTML) is an open format maintained by the World Wide Web Consortium (W3C) and supported by most Internet browsers.

Extension: .HTM, .HTML

Resources: [W3C HTML Page]

Image

The majority of image files in this data set are all in the JPEG (Joint Photographic Experts Group) file format. JPEG is an open image file format that can be read easily by most internet browsers. Some image files are in a georeferences TIFF image format called TIFF world file (TFW). TFW format is a georeferenced image

format that uses the TIFF image format and an associated georeferenced text file called a TFW file. TIFF is an open image file format, while TFW is an Autodesk refererencing standard.

Extension: .JPG, .TIF, .TFW

Resources: [Autodesk]

PDF

Portable Document Format (PDF) files are a proprietary file standard from Adobe. They can be read using the free Adobe Reader program.

Extension: .PDF

Resources: [Adobe Reader]

Schema

XML Schemas are part of the extensible Markup Language (XML) and are in XML, an open format maintained by the World Wide Web Consortium (W3C) and supported by most Internet browsers.

Extension: .XML

Resources: [W3C XML Site]

Shapefile

A shapefile stores nontopological geometry and attribute information for the spatial features in a data set. The geometry for a feature is stored as a shape comprising a set of vector coordinates. Because shapefiles do not have the processing overhead of a topological data structure, they have advantages over other data sources such as faster drawing speed and edit ability. Shapefiles handle single features that overlap or that are noncontiguous. They also typically require less disk space and are easier to read and write. Shapefiles can support point, line, and area features. Area features are represented as closed loop, double-digitized polygons. Attributes are held in a dBASE format file. Each attribute record has a one-to-one relationship with the associated shape record.

Extension: .SHP

Resources: [ESRI] [Shapefile Description]

Support

Support files are not meant to be read directly. They offer needed functionality to related files, which are meant to be read directly.

Text

Text files contain ASCII standard text. In this data set, they are generally formatted as rows and columns, using comma delimiters.

Extension: .TXT

Video

The video files in this data set are all in AVI (Audio Video Interleave) format, a widely used video file format developed by Microsoft Corporation for storing audio and video information. The AVI files in this data set are compressed using XviID codec. If you have trouble viewing the video, you may need to obtain the XviD codec files from http://www.koepi.org/xvid.shtml.

Extension: .AVI

Resources: [Windows Media Player]

XML

Extensible Markup Language (XML) is an open format maintained by the World Wide Web Consortium (W3C) and supported by most Internet browsers.

Extension: .XML

Resources: [W3C XML Site]

Metadata Information

XML Version xml-files/metadata.xml

XML Schema xml-files/ngsim-metadata.xsd

Modifications

version: Version 1.2
comments: This is Version 1.2 of the data collection documentation for the I-80 data set. Version 1.1 had a few modifications in the trajectory data, while Version 1.2 contains some minor changes to the data analysis reports.
on: 2006-01-07
by: Kovvali, Zhang
modified files:

- metadata.xml [XML] ?
  XML file of metadata for version 1.2 of the data
- data-analysis-report-0400-0415.pdf [PDF] ?
  Contains data aggregation for 4:00 p.m. and 4:15 p.m. on April 13th, 2005 for NB I-80. Aggregates of speeds, volumes, headways are provided by section (100 feet), time period (5 minutes), and lane. Input-output analysis and number of lane changes are also provided in the data analysis report.
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File Index

All Files

- camera-coverage.dbf Support? for *camera-coverage.shp*;
- camera-coverage.shp [Shapefile] ?
  This file provides the coverage of each of the seven cameras. The camera number and the length of coverage are provided.
- camera-coverage.shx Support? for *camera-coverage.shp*;
- charlie-brown-way-and-I80-WB-ramp.pdf [PDF] ?
  The signal timing sheet provides the controller timings for the signal at the intersection of I-80 WB Ramp and Charlie Brown Way, the intersection immediately north of Powell Street on I-80 WB Frontage Road.
- creative-commons-deed.html [Hypertext] ?
  Provides the Creative Commons, Commons Deed - Attribution 2.0 license.
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- data-dictionary.xsd [Schema] ?
  Provides a schema for the data dictionary files.

- deeds.css Support? for *creative-commons-deed.html*;
- detector-data-dictionary.htm Description? for *detector-data.txt*;
  Provides the data dictionary for the PeMS detector data set.
- detector-data-dictionary.xml [XML] ?
  An XML instance for the detector data dictionary.
- detector-data.txt [Text] ?
  This data set provides 30-second processed, loop detector data for a period of 10-days, between April 7, 2005 and April 20, 2005. Speed, volume and occupancy at each detector for the 30-second time step are presented at each detector in each lane. The accompanying data dictionary file describes the file structure more fully.
- emeryville-legend.jpg Description? for *emeryville.dwg*;
  This file provides the legend for the data elements used in the CAD drawing (dwg file).
- emeryville.dbf Support? for *emeryville.shp*;
  This database file stores the data presented through the shapefile.
- emeryville.dwg [dwg] ?
  The dwg file provides a CAD drawing of the vehicle trajectory study area. A highly detailed representation of the network required for accurately transcribing vehicle trajectories is provided in the CAD network.
- emeryville.mxd [Arcview-Project-File] ?
  This file provides an ArcView project file. The two shapefiles provided in the data set can be opened in any shapefile viewer without the need for this project file. This file is provided only for convenience purposes for those using ArcGIS software for opening the GIS files.
- emeryville.shp [Shapefile] ?
  This file provides the geometry and attribute information of the study area for wide-area detector data from Powell Street to Gilman Avenue.
- emeryville.shx Support? for *emeryville.dwg*;
- emeryville.shx Support? for *emeryville.shp*;
- emeryville1.tfw Support? for *emeryville1.tif*;
- emeryville1.tif [Image] ?
  The tfw file coordinates are in California State Plane Coordinate System, Zone 3, NAD83 (the units are US Survey Feet).The ortho-rectified photographs are at a resolution of 1":1000' and a pixel resolution of 0.25 feet. The photographs provide a relative accuracy of 2.5 feet. Please note that due to the large size of the tif file, problems in opening the file in some photo editors may be encountered. ArcGIS software is capable of opening the file.
- emeryville2.tfw Support? for *emeryville2.tif*;
- emeryville2.tif [Image] ?
  The tfw file coordinates are in California State Plane Coordinate System, Zone 3, NAD83 (the units are US Survey Feet).The ortho-rectified photographs are at a resolution of 1":1000' and a pixel resolution of 0.25 feet. The photographs provide a relative accuracy of 2.5 feet.
- getclimate.php-April13-2005.htm Support?
  Provides the temperature, precipitation, and other weather information for April 13, 2005.
- getclimate.php-April14-2005.htm Support?
  Provides the temperature, precipitation, and other weather information for April 14, 2005.
- I-80-study-site.jpg [Image] ?
  This file illustrates the location of the detectors at the study site.
- I80EB-sign1.JPG [Image] ?
- I80EB-sign10.JPG [Image] ?
- I80EB-sign11.JPG [Image] ?
- I80EB-sign2.JPG [Image] ?
- I80EB-sign3.JPG [Image] ?
- I80EB-sign4.JPG [Image] ?
- I80EB-sign5.JPG [Image] ?
- I80EB-sign6.JPG [Image] ?

- I80EB-sign7.JPG [Image] ?
- I80EB-sign8.JPG [Image] ?
- I80EB-sign9.JPG [Image] ?
- I80WB-sign1.JPG [Image] ?
- I80WB-sign10.JPG [Image] ?
- I80WB-sign11.JPG [Image] ?
- I80WB-sign12.JPG [Image] ?
- I80WB-sign13.JPG [Image] ?
- I80WB-sign14.JPG [Image] ?
- I80WB-sign15.JPG [Image] ?
- I80WB-sign16.JPG [Image] ?
- I80WB-sign2.JPG [Image] ?
- I80WB-sign3.JPG [Image] ?
- I80WB-sign4.JPG [Image] ?
- I80WB-sign5.JPG [Image] ?
- I80WB-sign6.JPG [Image] ?
- I80WB-sign7.JPG [Image] ?
- I80WB-sign8.JPG [Image] ?
- I80WB-sign9.JPG [Image] ?
- logo-code.jpg Support? for *creative-commons-deed.html*;
- metadata.xml [XML] ?
  An XML instance for this file.
- nb-camera1-0400pm-0415pm-processed.avi [Video] ?
- nb-camera1-0400pm-0415pm.avi [Video] ?
- nb-camera1-0500pm-0515pm-processed.avi [Video] ?
- nb-camera1-0500pm-0515pm.avi [Video] ?
- nb-camera1-0515pm-0530pm-processed.avi [Video] ?
- nb-camera1-0515pm-0530pm.avi [Video] ?
- nb-camera2-0400pm-0415pm-processed.avi [Video] ?
- nb-camera2-0400pm-0415pm.avi [Video] ?
- nb-camera2-0500pm-0515pm-processed.avi [Video] ?
- nb-camera2-0500pm-0515pm.avi [Video] ?
- nb-camera2-0515pm-0530pm-processed.avi [Video] ?
- nb-camera2-0515pm-0530pm.avi [Video] ?
- nb-camera3-0400pm-0415pm-processed.avi [Video] ?
- nb-camera3-0400pm-0415pm.avi [Video] ?
- nb-camera3-0500pm-0515pm-processed.avi [Video] ?
- nb-camera3-0500pm-0515pm.avi [Video] ?
- nb-camera3-0515pm-0530pm-processed.avi [Video] ?
- nb-camera3-0515pm-0530pm.avi [Video] ?
- nb-camera4-0400pm-0415pm-processed.avi [Video] ?
- nb-camera4-0400pm-0415pm.avi [Video] ?
- nb-camera4-0500pm-0515pm-processed.avi [Video] ?
- nb-camera4-0500pm-0515pm.avi [Video] ?
- nb-camera4-0515pm-0530pm-processed.avi [Video] ?
- nb-camera4-0515pm-0530pm.avi [Video] ?
- nb-camera5-0400pm-0415pm-processed.avi [Video] ?
- nb-camera5-0400pm-0415pm.avi [Video] ?
- nb-camera5-0500pm-0515pm-processed.avi [Video] ?
- nb-camera5-0500pm-0515pm.avi [Video] ?
- nb-camera5-0515pm-0530pm-processed.avi [Video] ?
- nb-camera5-0515pm-0530pm.avi [Video] ?
- nb-camera6-0400pm-0415pm-processed.avi [Video] ?
- nb-camera6-0400pm-0415pm.avi [Video] ?

- nb-camera6-0500pm-0515pm-processed.avi [Video] ?
- nb-camera6-0500pm-0515pm.avi [Video] ?
- nb-camera6-0515pm-0530pm-processed.avi [Video] ?
- nb-camera6-0515pm-0530pm.avi [Video] ?
- nb-camera7-0400pm-0415pm-processed.avi [Video] ?
- nb-camera7-0400pm-0415pm.avi [Video] ?
- nb-camera7-0500pm-0515pm-processed.avi [Video] ?
- nb-camera7-0500pm-0515pm.avi [Video] ?
- nb-camera7-0515pm-0530pm-processed.avi [Video] ?
- nb-camera7-0515pm-0530pm.avi [Video] ?
- ngsim-license.htm [Hypertext] ?
  Provides the NGSIM specific language for the license. The actual license applicable to the data is the Common Deed - Attribution 2.0.
- ngsim-metadata.xsd [Schema] ?
  Provides a schema for this metadata file.
- powell-street-and-I80-EB-ramp.pdf [PDF] ?
  The signal timing sheet provides the controller timings for the signal at the intersection of Powell Street and I-80 EB Ramp.
- powell-street-and-I80-WB-ramp.pdf [PDF] ?
  The signal timing sheet provides the controller timings for the signal at the intersection of Powell Street and I-80 WB Ramp/Frontage Road.
- signs-and-signals.dbf Support? for *signs-and-signals.shp*;
- signs-and-signals.shp [Shapefile] ?
  This file presents the signs, signals and detector locations. The data are provided as points in the shapefile.
- signs-and-signals.shx Support? for *signs-and-signals.shp*;
- trajectories-0400-0415.txt [Text] ?
  This simple text file contains all vehicle trajectories for the entire time period, sorted by time. The accompanying data dictionary file describes the file structure more fully. The X accuracy of this data set is estimated at around 2 feet and the Y accuracy is estimated at around 4 feet.
- trajectories-0500-0515.txt [Text] ?
  This simple text file contains all vehicle trajectories for the entire time period, sorted by time. The accompanying data dictionary file describes the file structure more fully. The X accuracy of this data set is estimated at around 2 feet and the Y accuracy is estimated at around 4 feet.
- trajectories-0515-0530.txt [Text] ?
  This text file contains all vehicle trajectories for the entire time period, sorted by time. The accompanying data dictionary file describes the file structure more fully. The X accuracy of this data set is estimated at around 2 feet and the Y accuracy is estimated at around 4 feet.
- trajectory-data-dictionary.htm [Hypertext] ?
- trajectory-data-dictionary.xml [XML] ?
  An XML instance for the trajectory data dictionary.