



The Colorado Department of Transportation (CDOT) is a leading department of transportation focused on providing freedom, connectivity and experience through travel. The Colorado Department of transportation pushes the edge of transportation further with their ROADX initiative that focuses on a vision of the future for transportation; leading to projects like the hyperloop and autonomous and interconnected vehicles.

CDOT and the State of Colorado Chief Data Analytics Challenge - Overview of Relevant Datasets

The Colorado Department of Transportation provides a number of Datasets that can be used to identify problems, increase knowledge and provide insights. The CDOT Project Systems data set contains roadway (highways and local) projects that might be utilized in a Smart City ecosystem. CDOT's Signs datasets provides information about the signs and their representation that could be utilized to identify recreational activity areas. Highway traffic counts and highway quality data sets are produced annually, with the newest as of 2016! You will find many fine grain details in the CDOT Roads and Roads Attributes dataset. If you are interested in different forms of transportation take a look at the CDOT Multi-Modal Dataset. For more data related details please look below.

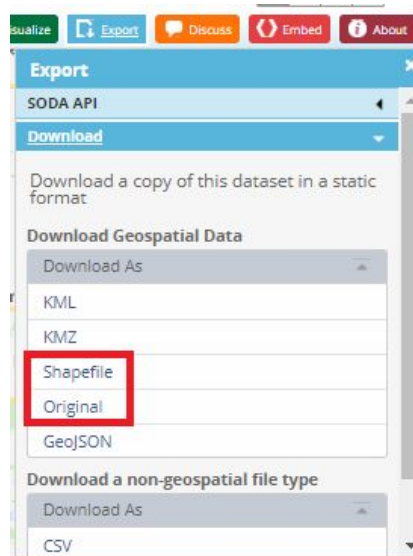
State and Local Roads - Working with GIS Data

The Colorado Department of Transportation maintains three separate shapefiles for roads in Colorado:

1. [Local Roads in Colorado](#)
2. [Major Roads in Colorado](#)
3. [Highways in Colorado](#)

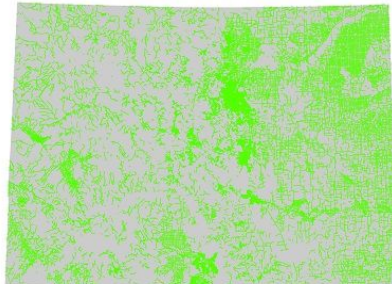
These three options allow for different analysis and/or cartographic purposes which is why they are published separately. The process is simple for creating a shapefile with all roads combined.

1. Export each dataset as “Original” if the original projection (NAD83_UTM_Zone_13N) is desired, otherwise export as “Shapefile” for a WGS84 geographic coordinate system

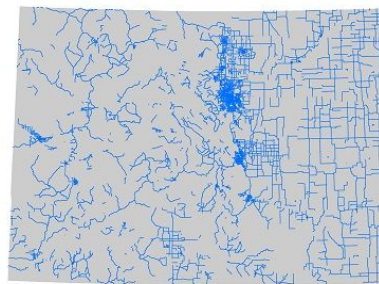


2. Load each dataset into the desired geospatial software
3. Run a Merge on all three of Major_Roads, Local_Roads, and Highways to combine for analysis
-or-
4. Symbolize all three layers using the same symbology for cartographic purposes

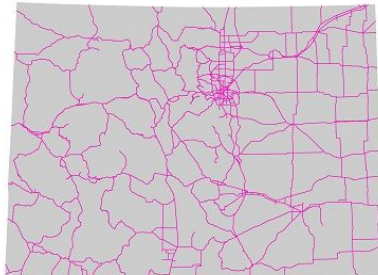
Local Roads in Colorado



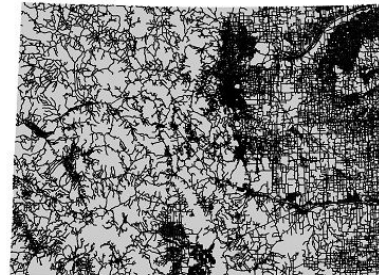
Major Roads in Colorado



Highways in Colorado



All Roads in Colorado



Active and Historic Construction Projects

Colorado Department of Transportation Projects Systems data set is created by combining a tabular export from the project management database and joining it to the related road segments in the Highway and Local Roads shapefiles. The geography represents a subset of Highway Mileposts as beginning and ending points of road segments in [Construction Project Endpoints for Funded Roads in Colorado](#). These road segments in [Construction Project Line Segments for Funded Roads in Colorado](#) correspond to line segments extracted and joined for data completeness. There are multiple date fields in this data set because of the process of obtaining funding and funding construction projects through multiple phases and QA checkpoints to completion

Highway Signs - Search for Signals in Text Field

Sign data sets are created by combining data from the five Department of Transportation regions to create three data sets: [Sign Locations](#), [Sign Panels](#) and [Sign Posts](#). These contain information for signs and their representation. They are linked through the sign locations SignLocationGId column. The Panel data set contains very interesting information, including the color columns, which can be used to determine the Type of Sign (e.g., informational, traffic sign, warning sign). There is a code with a corresponding name. There are also two descriptive columns that have parks/tourism value: signsPanelLegend and signsPanelSpecLegend. They contain text about the area of the sign and the legend of the sign. For example, there are some entries for kayak signs, implying that there is a spot for kayaks to put in at this area/exit. Whereas the information is not standardized or perfect, it is a useful indicator for the data consumer who is up to the challenge

Traffic Counts - Average Annual

There is updated information for data sets that are gathered annually. First, [Highway Traffic Counts for 2015](#), is a geospatial data set that has information on vehicle traffic numbers along certain stretches of highway. There is also a 2014 version, published previously. Second, [Highway Quality for 2016](#), is a tabular data set that has information on quality of sections of Colorado highways. There are two previous versions of this dataset: 2014 and 2015.

Road & Roads Attributes

This is a suite of five data sets that give characterization to the statewide road and highway data sets. This includes surface finishes, [curves/grades](#), [speed limits and lane directions](#), [HOV lanes](#), [ADA curb ramps](#), and a variety of other characteristics,

in addition to proposed construction plans for state roads projected out four years: [Milepoints](#), [GPS Mileposts](#), [Noxious Weeds](#), [Highways](#), [Local Roads](#), [Major Roads](#) and [Routes](#). NEW in 2016 [Highway Traffic Counts in Colorado](#) and [Road Traffic Counts in Colorado](#). Each row in these tables represents a stretch of highway or road with traffic counts for a specific time frame. Data have been collected at a variety of locations dating back to 1999 and are factored in to produce the annual average.

Examples of Planimetrics data include Edges of Pavement, Driveways, Sidewalks, Building Roofprints, Trails, Parking Lots and...

For the Denver Region

- Municipal Boundaries in the Denver Region
- 1-Foot Contours for the Denver Region
- Transportation Data for the Denver Region

Multimodal Data

Transit data sets include [Airports](#), [Railroads](#), [Streams](#) and [Lakes](#), Also included is the [Bicycle and Pedestrian Count](#) data set with data for 16 counties in Colorado: Adams, Arapahoe, Boulder, Denver, Douglas, Eagle, El Paso, Garfield, Jefferson, La Plata, Larimer, Mesa, Pueblo, Routt, Summit and Weld.

Looking for Even More Data?

In addition to the datasets above more CDOT datasets may be found at : data.colorado.gov

CDOT Metadata and Other Resources

CDOT does provide a [metadata catalog](#) for some of their available datasets.

CDOT [Help Page](#) if you have trouble exploring with the metadata catalog.