




TRANSPORTATION DATA MANAGEMENT AND SPATIAL ANALYSIS

DAMA Consultants, Inc., have a long history with conducting database analysis, GIS spatial analysis, identifying data integrity issues, and developing data quality solutions. DAMA projects involve combining data from multiple sources and creating methods to extract and transform data sets calculate performance measurements, identify important locations and times, and understand how mitigation approaches can improve traffic flow.

DAMA uses the HEAR National Performance Management Research Data Set (NPMRDS) to identify how traffic conditions are affected by road conditions, time of day, functional class, geometry, and other factors. This data set includes up to 29 million records per month and refers to a roadway network structure often does not match networks created for other agencies.

DAMA developed methods to transform this data set into more usable values and match segments between the NPMRDS and roadway segment inventories provided by the Illinois Department of Transportation and the Federal Highway Administration.



| | NPMRDS | Average Speed Dataset | CMAP Regional Archive | IDOT Shapefiles | Getting Around Illinois | RTAMS | MS2 Data Portal | Weather | NTA | NTD |
|-------------------------|--------|-----------------------|-----------------------|-----------------|-------------------------|-------|-----------------|---------|------|--------|
| NPMRDS | Green | Green | Blue | Orange | Red | Red | Red | Blue | Blue | Orange |
| Average Speed Dataset | Orange | Green | Blue | Red | Red | Red | Red | Blue | Blue | Blue |
| CMAP Regional Archive | Blue | Green | Blue | Red | Red | Red | Red | Blue | Blue | Blue |
| IDOT Shapefiles | Orange | Green | Blue | Green | Red | Red | Red | Blue | Blue | Blue |
| Getting Around Illinois | Orange | Green | Blue | Red | Red | Red | Red | Blue | Blue | Blue |
| RTAMS | Orange | Green | Blue | Red | Red | Red | Red | Blue | Blue | Blue |
| MS2 Data Portal | Orange | Green | Blue | Red | Red | Red | Red | Blue | Blue | Blue |
| Weather | Blue | Green | Blue | Red | Red | Red | Red | Blue | Blue | Blue |
| NTA | Blue | Green | Blue | Red | Red | Red | Red | Blue | Blue | Blue |
| NTD | Orange | Green | Blue | Red | Red | Red | Red | Blue | Blue | Blue |

