

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
Bureau of Maintenance and Operations, Roadway Management Division

Location Referencing System (LRS) – Definitions, Uses & Testing

The Department's LRS, implemented in 1987, is the mechanism to designate the State highway network, to define roadway lengths, locations, and route connectivity, and to serve as the basis for the collection, storage, and integration of roadway information.

An LRS key is a unique series of numbers that identifies the location of each point or feature along a State route. The fourteen digit number is an integral part of the Roadway Management System (RMS) where roadway data is stored. 07/4016/0100/0857 is an example of an LRS key, which identifies County (CO) = 07, State Route (SR) = 4016, Segment (SEG) = 0100, and Offset = 0857.

County (CO)

Each of Pennsylvania's sixty-seven counties is identified by a number.

Name	#	Name	#	Name	#	Name	#
Adams	1	Clinton	18	Lackawanna	35	Potter	52
Allegheny	2	Columbia	19	Lancaster	36	Schuylkill	53
Armstrong	3	Crawford	20	Lawrence	37	Snyder	54
Beaver	4	Cumberland	21	Lebanon	38	Somerset	55
Bedford	5	Dauphin	22	Lehigh	39	Sullivan	56
Berks	6	Delaware	23	Luzerne	40	Susquehanna	57
Blair	7	Elk	24	Lycoming	41	Tioga	58
Bradford	8	Erie	25	McKean	42	Union	59
Bucks	9	Fayette	26	Mercer	43	Venango	60
Butler	10	Forest	27	Mifflin	44	Warren	61
Cambria	11	Franklin	28	Monroe	45	Washington	62
Cameron	12	Fulton	29	Montgomery	46	Wayne	63
Carbon	13	Greene	30	Montour	47	Westmoreland	64
Centre	14	Huntingdon	31	Northampton	48	Wyoming	65
Chester	15	Indiana	32	Northumberland	49	York	66
Clarion	16	Jefferson	33	Perry	50	Philadelphia	67
Clearfield	17	Juniata	34	Pike	51		

State Route (SR)

State Routes (SR's) are identified by four-digit numbers. SR numbers are assigned as follows:

- | | |
|--|-----------|
| 1. Traffic Routes: Routes designated as Interstates, US or PA Routes | 0001-0999 |
| 2. Quadrant Routes (Non-Traffic Routes) | 1001-4999 |
| 3. Relocated Traffic Routes | 6000-6999 |
| 4. Turned Back, Abandoned, or Null Routes | 7000-7999 |
| 5. Interchanges | 8001-8999 |
| 6. WYE's | 9101-9199 |
| 7. Rest Areas | 9201-9299 |
| 8. Truck Escape Ramps | 9301-9399 |
| 9. Others | 9401-9499 |

Even/Odd Convention: Even numbers are typically given to SR's in the East/West direction, and odd numbers to SR's that run North/South. This convention applies to Interstate Routes (except those that are Beltways or Spurs), and Quadrant Routes. This convention may or may not apply to PA or US Traffic Routes.

Hierarchy: If two or more traffic routes occupy the same section of roadway, the SR number is based on the "higher" type route, according to the following hierarchy. If the traffic routes are the same hierarchy class, then the SR number is assigned the lower numbered traffic route (Figure 1).

1. Interstates
2. U.S. Routes
3. PA Routes
4. Quadrant Routes

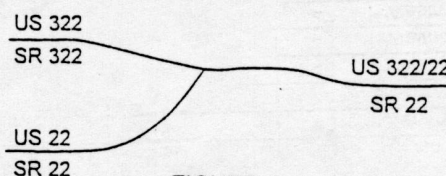


FIGURE 1

Other Numbering Conventions:

1. The first digit of a quadrant route is based on which quadrant of the county the route is located, as shown in the following diagram (Figure 2).
2. The last three digits of a Relocated Traffic Route are the same as the Traffic Route that was relocated.
3. Interchanges are numbered sequentially. Odd numbers are given to interchanges along SR's in the North/South direction; even numbers are given to interchanges along SR's in the East/West direction (Figure 3).
4. WYE's are given odd numbers if the connecting SR is odd numbered, and even numbers if the connecting SR is even numbered.
5. Rest Areas or Truck Escape Ramps are given odd numbers if they connect to the Southbound or Westbound side of an SR, and even numbers if they connect to the Northbound or Eastbound side.

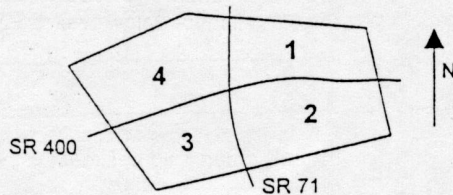


FIGURE 2

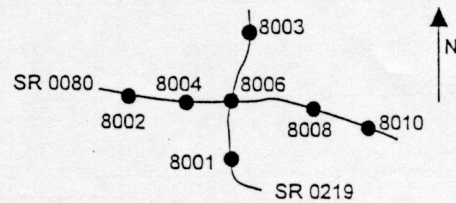


FIGURE 3

Segment (SEG)

State routes are divided into segments, which are approximately one-half mile long, and are identified by a four-digit number. Segment begin and end points are placed at physical features where possible. Segment numbers increase in the North or East direction, and typically by 10's (Figure 4). Segments are even numbered on undivided roadways, and in the Northbound or Eastbound direction of divided roadways. Segments are odd numbered in the Southbound or Westbound direction of divided roadways (Figure 5). Interstate segments are associated with the mile posts (Figure 6).

Undivided Roadways

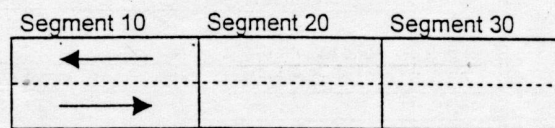


FIGURE 4

Divided Roadways

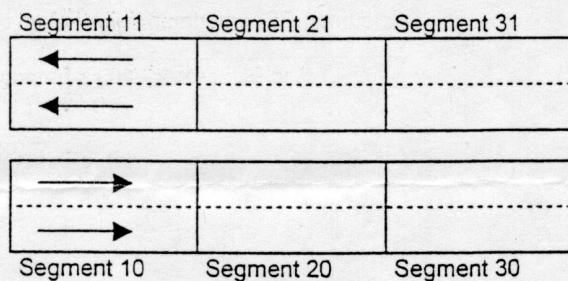


FIGURE 5

Interstate Roadways

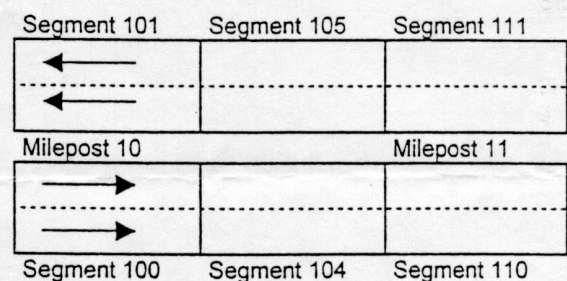


FIGURE 6

Turned Back, Abandoned, and Null Segments are given numbers in the range of 7000-7999. For two coincident State routes, the route with "lower" hierarchy is "nulled."

Segment numbering restarts on Traffic Routes at County boundaries, except Interstates (Figure 7).

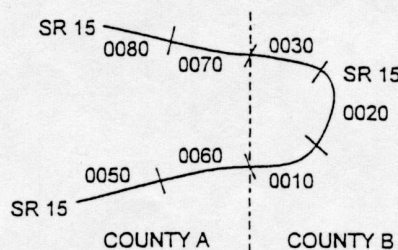


FIGURE 7