MDT’s Official Linear Referencing System

MDT owns and maintains a Linear Referencing System (LRS) that enables a method of storing geographic locations along our routes by measuring distance from a defined location or reference. This location can be from the start of one of our existing defined routes like Corridor Routes or Departmental Routes. Or the location can be from a physical reference marker along the roadway.

Linear Referencing Methods

Corridor Route - Also called Departmental Corridor, this is a linear referencing method (LRM) in which the route ID has no meaning. Corridors must begin and end at an identifiable point such as an intersection or state boundary. Since Corridors seldom change, they are the most stable LRM to which roadway attributes are tied.

Departmental Routes - Departmental Route numbers have lettered prefixes that identify the System of the route [‘I’ = Interstate — National Highway System, ‘N’ = Non-Interstate – National Highway System, ‘P’ = Primary, ‘S’ = Secondary, ‘U’ = Urban, ‘X’ = State Highway, and ‘L’ = Local]. Departmental Routes do not always match Corridor Routes, and may change at jurisdictional boundaries such as urban limits or county lines.

Reference Markers - The physical roadway sign (used synonymously with “reference post” and commonly referred to as “milepost or “mile marker”). Reference Markers assist in identifying locations along a corridor. Reference Markers may be Physical (sign post along the roadway) or Virtual (existing only in the database).

Reference Point - A centerline location on a highway that represents a specific distance from the preceding reference marker, also called Reference Marker Offset. The Reference Point is the measure in the ascending direction from the preceding Reference Marker.
System

System is a way of categorizing routes based on eligibility for funding. The National Highway System is approved by the Secretary of Transportation as provided in Title 23, U.S.C. All other systems (Primary, Secondary and Urban) are approved by the Montana Department of Transportation and the Transportation Commission in cooperation with local governments. The State Systems are identified in MCA 60-2-125. To view an interactive map that identifies the System of Montana’s Routes, click here: Web Map. Official System Maps are held in the GeoInfo Section.

Functional Classification

The process by which highways and streets are grouped into classes according to the character of service they provide to the overall highway system. To view an interactive map that identifies the Functional Class of Montana’s Routes, click here: Web Map. Official Functional Classification Maps are held in the GeoInfo Section. For more information about Functional Classification see the MDT Guide to Functional Classification, Highway Systems and Other Route Designations in Montana: Guide.
Additional Resource: Route Location Finder App

This application includes tools that allow you to locate a route, locate mileage along a route, get location from coordinates, get coordinates from route measure, etc.