

LEAD STATES TEAM SYNOPSIS

Linear Referencing Systems (LRS) Team



LST Members

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Iowa DOT

Oscar Jarquin,
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Thomas Martin,
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Jonathan DuChateau,
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David Blackstone,
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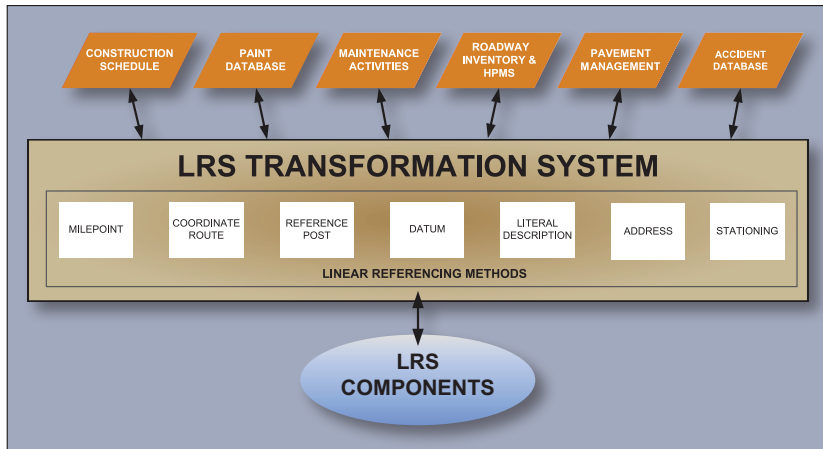
Dave Fletcher,
*Geographic Paradigm
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Tim Bisch,
Bentley Systems, Inc.

Mark Sarmiento,
*Federal Highway
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Activity Period
2008–2012

Cost of LST Effort
\$12,100



The above graphic illustrates the NCHRP 20-27 model LRS components.

What the LST Did

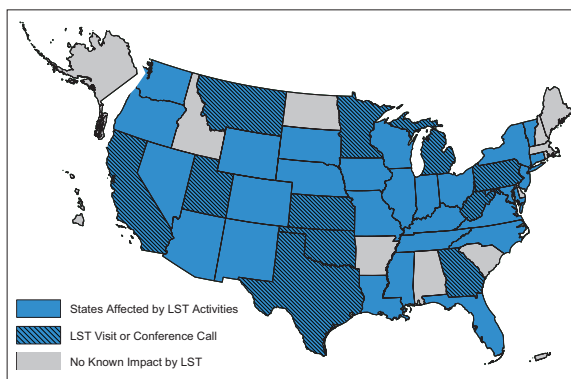
The Iowa linear referencing system (LRS) was designed using the results of the National Cooperative Highway Research Program (NCHRP) 20-27(2) project. The NCHRP model was developed in an effort to address the need to integrate increasing amounts of data used by the transportation community. In 2008, the Executive Committee of the AASHTO Technical Implementation Group (TIG) selected LRS as a focus technology and formed a Lead States Team (LST) from among states already benefiting from these systems. The objective of the LRS LST was to inform, educate and provide available resources and information regarding the benefits of implementing an LRS that integrates information from different data sources within a department of transportation (DOT).

As part of its marketing efforts over a four-year period, the LST surveyed the states to determine extent of LRS use, developed and distributed a brochure summarizing LRS benefits, reached out to other states through conference presentations and webinars, and also provided web meetings and on-site visits to individual states upon request.

A unique undertaking of the LRS team was authorizing a formal value analysis to estimate monetary benefits available to a state DOT investing the necessary capital to develop an LRS. The value analysis found a 2 to 1 return on investment from developing and implementing the base LRS. Implementing additional options were shown to have up to 20 to 1 returns on investment.

For more information on the available resources developed by the LRS LST, please visit the AASHTO TIG website at <http://tig.transportation.org/Pages/LinearReferencingSystem.aspx>

What the LST Accomplished



The nationwide LST impact shown on the map is based on responses to a State DOT survey in 2012

Proven benefits of linear referencing systems:

A linear referencing system aligns the location data so information from crash statistics, pavement management, and other asset data can be integrated, mapped, and analyzed. The benefits from these systems include:

- Improved data integration and access.
- Improved accuracy.
- Minimized redundancy in the databases.
- Minimized data maintenance activities.
- Inclusion of all public roads.