Executive Sponsors: Tom Church, Cabinet Secretary/Tamara P. Haas, P.E., Asset Management and Planning Division Director

Business Owner: Yolanda Duran, NMDOT Data Management Bureau
Joann Girard, Business Support IT Project Manager
Project Certification for Change Request
July 27, 2016
Phase 1
FHWA Pooled Fund Study
- Create statewide LRS network that complies with MAP-21 requirements
- Combine NMDOT legacy LRS network currently housed in TIMS with the following sources:
  - E911
  - ProMiles
  - Navajo
  - Federal (BLM, USFS, BIA, NPS, USCOE, Army, BOR, DOE & FWS)
- Establish processes to identify and incorporate network changes

Project Timeline
- Start: Nov, 2014
- Complete: 5/1/2016

Project Phase
- Closed – July, 2016

Phase 2
Stand up Esri Roads & Highways and Migrate NMDOT TIMS Data
- Stand up Esri R&H test and production environments
- Migrate Phase 1 LRS to Esri environments
- Migrate TIMS asset data, including Bridge, Traffic & HPMS Data (some data sourced from Mandli)

Project Timeline
- Start: Aug, 2016
- Complete: Nov/Dec, 2017

Project Phase
- Planning

Phase 3
Connect Other NMDOT LRS-Dependent Systems and Data Sources
- Prioritize interfaces for other NMDOT systems to connect to Phase 2 Esri R&H Implementation
- Includes the following systems:
  - Pavement Management
  - Maintenance Management
  - STIP
  - Traffic
  - Bridge Management
  - Outdoor Advertising
  - Right of Way
  - Crash

Project Timeline
- Start: Oct/Nov, 2017
- Complete: TBD

Project Phase
- Not yet started
1. Full Integration and implementation of the Environmental Systems Research Institute (ESRI) Roads and Highways module of ArcGIS to meet the Federal Highway Administration (FHWA) data requirements for the federal “Moving Ahead for Progress in the 21st Century” (MAP-21) act, as well as NMDOT’s internal performance measures.

2. Migration of data from the Transportation Information Management System (TIMS) into NMDOT’s Roads and Highways Database.

**Change Request:** Name change to better reflect project intent & goals, and addition of 3 deliverables to ensure LRS created as part of Phase 1 will fully address business needs once housed in Roads and Highways module.

- Project Budget – increase by $263,840.31 (total: $740,892.31)
- Project Completion – move to Dec 2017
- Name Change – “Roadway Inventory System Replacement”
Desired Outcomes

- A continuous, statewide Linear Referencing System (LRS) that meets the MAP 21 ARNOLD requirements
- Migration away from and retirement of the existing NMDOT TIMS database (a dated and complex system)
- A more user-friendly design for database data import, query and reporting
- Ability to readily transform GPS coordinates to linear reference system mile points and vice-versa.
Meet Map 21 Highway Performance Monitoring System (HPMS) and Highway Safety Improvement Program (HSIP) Requirements

Provide an easy means to validate NM-certified mileage

Meet the expanded MAP 21 LRS requirement “to cover all public roads including representation of dual carriageways on divided highways” and related highway facilities (e.g., ramps).

Opportunity to implement the expanded requirements, based on best practices identified by other State DOTs.
Cost Savings

- Reduced staff time due to increased efficiency and productivity by utilizing a single, state-wide, well implemented linear reference system.

- Lower government service costs due to more efficient work flows and more accurate business process tracking, data entry, auditing, and reporting of information.

- Utilization of a much more familiar, user-friendly software interface will greatly reduce staff training time and costs.

- Modernization of ArcGIS and browser technologies consolidates support time and costs.
## Project Phases and Deliverables

<table>
<thead>
<tr>
<th>Project Phase</th>
<th>Milestone</th>
<th>Detail</th>
<th>Est. Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initiation – Close</td>
<td>IV&amp;V</td>
<td>IV&amp;V Support across ARNOLD Program Phase 1 and Phase 2</td>
<td>Dec, 2017</td>
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<tr>
<td>Initiation – Close</td>
<td>Project Management</td>
<td>Development of project planning documentation &amp; on-going project management through closure</td>
<td>Dec, 2017</td>
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<tr>
<td>Planning</td>
<td>Phase I Handoff &amp; Database Concept (Discovery)</td>
<td>Review of Phase 1 data &amp; initial data concept</td>
<td>Oct, 2016</td>
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<tr>
<td>Initiation</td>
<td>Project Startup Workshop</td>
<td>Project kickoff</td>
<td>Nov, 2016</td>
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<td>Implementation</td>
<td>Data Migration</td>
<td>Route and event data migrated to ESRI Roads &amp; Highways data model</td>
<td>Feb, 2017</td>
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<tr>
<td>Implementation</td>
<td>Configuration</td>
<td>ESRI Roads &amp; Highways system architecture, model finalization and configuration</td>
<td>Oct, 2017</td>
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<tr>
<td>Implementation</td>
<td>Training and support</td>
<td>Training, on-site and remote support</td>
<td>Nov, 2017</td>
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<tr>
<td>Close</td>
<td>Licensing</td>
<td>Delivery of HPMS QA/QC Toolkit</td>
<td>Nov/Dec, 2017</td>
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<td>Description</td>
<td>FFY17</td>
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<td>IV&amp;V</td>
<td>Independent Validation &amp; Verification</td>
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<td>Consulting Services</td>
<td>System Implementation</td>
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<td>Software</td>
<td>Licenses</td>
<td>ESRI R&amp;H: Included in existing ELA Agreement</td>
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<td>QA/QC Toolkit: $0.00</td>
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<tr>
<td>TOTAL</td>
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Questions?