

February 2017

EDC4 Action Plan









Federal Highway Administration-New Mexico Division

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New Mexico Department of Transportation

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Federal Highway Administration - New Mexico Department of Transportation Every Day Counts 4 (EDC4) Dashboard			
Initiative	page	Major Accomplishments	Status
Accelerating TIM Data	4-5	TBD Following 1 st 6 months	
Road Weather Management	6-8	TBD Following 1 st 6 months	
Automated Traffic Signal Performance Measures	9-10	TBD Following 1 st 6 months	
Data Driven Safety Analysis (DDSA)	11-12	TBD Following 1 st 6 months	
Safe Transportation for Every Pedestrian (STEP)	13-14	TBD Following 1 st 6 months	
Collaborative Hydraulics Advancement	15-17	TBD Following 1 st 6 months	
Pavement Preservation	18-19	TBD Following 1 st 6 months	
Ultra High Performance Concrete (UHPC) for PBES	20-22	TBD Following 1 st 6 months	
e-Construction & Partnering	23-24	TBD Following 1 st 6 months	
Community Connections	N/A	Elected not to Pursue	
Integrating NEPA and Permitting	N/A	Not and issue in NM	

Status Key:



Institutionalized: The innovation is adopted by the State's transportation community and used regularly on projects or within the program where appropriate.



Assessment Stage: Beyond testing/piloting the innovation. Assessing the performance and the process for carrying out the innovation and/or making adjustments to prepare for full deployment.



Demonstration Stage: Testing/piloting the innovation.



Development Stage: Collecting guidance and best practices, building support with partners and stakeholders, taking training, attending Peer-to-Peer workshops, and/or developing a process necessary for implementation of the innovation. Interested in pursuing the innovation or seeking additional information on how to implement it.



Not Implementing: Chose not to implement the innovation. Not interested in pursuing the innovation.

EDC Innovation: Accelerating TIM Data

Program Need: (Why the innovation is being selected?)

The need for reliable and accurate TIM data collection that supports the existing TIM performance measures such as roadway clearance, incident clearance and secondary incidents so that they can be evaluated and thus improving incident response.

Implementation Goal: Indicate the current state of the practice of the tool or innovation in your State as of January 2017 and the implementation stage of where you want to be in two years (Goal). *Check one box in the Baseline Jan 2017 column and one box in the Goal Dec 2018 column.*

Innovation Implementation Stages		Jan 2017 (Baseline)	Dec 2018 (Goal)
Not Implementing: The State chooses not to implement the innovation. The State is not interested in the innovation.		<input type="checkbox"/>	<input type="checkbox"/>
Development Phase: The State is collecting guidance and best practices, building support with partners and stakeholders, taking training, attending Peer-to-Peer workshops, and/or developing a process necessary for implementation of the innovation. The State is interested in pursuing the innovation or seeking additional information on how to implement it.		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Demonstration Phase: The State is testing/piloting the innovation.		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Assessment Phase: The State is beyond testing/piloting the innovation. The State is assessing the performance and the process for carrying out the innovation and/or making adjustments to prepare for full deployment.		<input type="checkbox"/>	<input type="checkbox"/>
Institutionalized: The innovation is adopted by the State's transportation community and used regularly on projects or within the program where appropriate.		<input type="checkbox"/>	<input type="checkbox"/>
Description of Current Status of this innovation in your State: <ul style="list-style-type: none">• Recording of TIM data (includes roadway/incident clearance time, and secondary crashes) in the AMPA area for which TMC reports• Crash Data reporting statewide• Planned joint TMC for better coordination and data sharing for better incident response	Description of State Innovation Goal (Benefit Goal): <ul style="list-style-type: none">• Improve TraCs reporting statewide to include roadway/incident clearance time, and secondary crashes• Improve coordination with First responders• Data analytics to capture non-reoccurring incidents for AMPA		

Team Members:

State DOT Team co-chair: Charles Remkes	FHWA Team co-chair: Marilyn Valdez
Tim Brown	Sophia Roybal-Cruz
Franklin Garcia	Santiago (Jimmy) Montoya
State Police- TBD	APD-TBD

Obstacles: (What is perceived as hindering the State in meeting the implementation goal?)

- Coordination with outside agencies of NMDOT (i.e. law enforcement)

Performance Metrics: (What are the measureable targets to assess your progress?)

- Improve TIM data
 - Roadway clearance time, Incident clearance time, secondary crashes
- Using data to reduce incident clearance time and reduce crashes based on historical crashes

Implementation Plan Activities		
Activity No.	Description of Activity	Target Completion Date
1	Kick off meeting: Determine team members and complete initial implementation plan.	1/11/17
2	Outreach to Arizona (possibly Tennessee) for TraCS system	Spring 2017
3	Coordination with NMDOT working groups of crash reporting and with law enforcement	Spring 2017

EDC Innovation: Road Weather Management

Program Need: (Why the innovation is being selected?)

Due to different weather events (snow and dust), the need for implementation of this initiative for real time road condition data to maintenance crews as well as the traveling public to improve safety and mobility .

Implementation Goal: Indicate the current state of the practice of the tool or innovation in your State as of January 2017 and the implementation stage of where you want to be in two years (Goal). *Check one box in the Baseline Jan 2017 column and one box in the Goal Dec 2018 column.*

Innovation Implementation Stages	Jan 2017 (Baseline)	Dec 2018 (Goal)
Not Implementing: The State chooses not to implement the innovation. The State is not interested in the innovation.	<input type="checkbox"/>	<input type="checkbox"/>
Development Phase: The State is collecting guidance and best practices, building support with partners and stakeholders, taking training, attending Peer-to-Peer workshops, and/or developing a process necessary for implementation of the innovation. The State is interested in pursuing the innovation or seeking additional information on how to implement it.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Demonstration Phase: The State is testing/piloting the innovation.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Assessment Phase: The State is beyond testing/piloting the innovation. The State is assessing the performance and the process for carrying out the innovation and/or making adjustments to prepare for full deployment.	<input type="checkbox"/>	<input type="checkbox"/>
Institutionalized: The innovation is adopted by the State's transportation community and used regularly on projects or within the program where appropriate.	<input type="checkbox"/>	<input type="checkbox"/>

Description of Current Status of this innovation in your State: <ul style="list-style-type: none"> • Prioritization of location of RWIS stations through Station Placement Optimization Tool (SPOT) <ul style="list-style-type: none"> ○ Based on crash rate, ADT priority, historical weather events based on precipitation and national weather service information • NMRoads and Vaisala for traveler weather information • IMO-Placitas Maintenance Patrol of inventory and resource allocation during weather events 	Description of State Innovation Goal (Benefit Goal): <ul style="list-style-type: none"> • Installation of RWIS stations throughout the state • NMRoads outreach for more usage • Install IMO on other fleet vehicles
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Team Members:

State DOT Team co-chair: Charles Remkes	FHWA Team co-chair: Marilyn Valdez
Tim Brown	Adam Romero
Jeff Sanchez	Javier Martinez
Rick Padilla	John Kraul

Obstacles: (What is perceived as hindering the State in meeting the implementation goal?)

- Power/Utilities to RWIS stations
- Installation of vehicle based technology on snow plows or fleets

Performance Metrics: (What are the measureable targets to assess your progress?)

- RWIS data (currently on I-10/Lordsburg and I-40/Clines Corners)
- Predictive weather features in the roadway advisory system
- Preparing a district RWIS installation plan and identify projects in proximity for installation (D4 and D5)
 - Update ITS plan

Implementation Plan Activities		
Activity No.	Description of Activity	Target Completion Date
1	Kick off meeting: Determine team members and complete initial implementation plan.	1/11/17
2	Placitas Patrol vehicle demonstration	Feb 2017

3	Meet with District Maintenance Engineers to update District ITS plans	Summer 2017
4	Arrange a peer to peer visit from outside DOT or technology demonstration	Summer 2017

EDC Innovation: Automated Traffic Signal Performance Measures

Program Need: (Why the innovation is being selected?)

Leveraging existing signal equipment currently deployed, ATSPMs will allow for active monitoring of signal systems and promote traffic operations to reduce congestion and improve safety.

Implementation Goal: Indicate the current state of the practice of the tool or innovation in your State as of January 2017 and the implementation stage of where you want to be in two years (Goal). Check one box in the Baseline Jan 2017 column and one box in the Goal Dec 2018 column.

Innovation Implementation Stages		Jan 2017 (Baseline)	Dec 2018 (Goal)
Not Implementing: The State chooses not to implement the innovation. The State is not interested in the innovation.		<input type="checkbox"/>	<input type="checkbox"/>
Development Phase: The State is collecting guidance and best practices, building support with partners and stakeholders, taking training, attending Peer-to-Peer workshops, and/or developing a process necessary for implementation of the innovation. The State is interested in pursuing the innovation or seeking additional information on how to implement it.		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Demonstration Phase: The State is testing/piloting the innovation.		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Assessment Phase: The State is beyond testing/piloting the innovation. The State is assessing the performance and the process for carrying out the innovation and/or making adjustments to prepare for full deployment.		<input type="checkbox"/>	<input type="checkbox"/>
Institutionalized: The innovation is adopted by the State's transportation community and used regularly on projects or within the program where appropriate.		<input type="checkbox"/>	<input type="checkbox"/>
Description of Current Status of this innovation in your State: <ul style="list-style-type: none">Pilot project on Coors Blvd, City of Albuquerque Capital Outlay ProjectSome infrastructure is in place such as controllers, detection and communication on corridors.	Description of State Innovation Goal (Benefit Goal): <ul style="list-style-type: none">Apply initiative on other corridors/intersectionsObtain performance measures from pilot project		

Team Members:

State DOT Team co-chair: Andrew Gallegos	FHWA Team co-chair: Marilyn Valdez
Jill Mosher	Afshin Jian
Nancy Perea	Paul Barricklow (ACEC)
Margaret Haynes	Melissa Lozoya, Debbie Bauman (City of ABQ)

Obstacles: (What is perceived as hindering the State in meeting the implementation goal?)

Technology (Updated Controllers), Communications (Ethernet Communications), Detection Standards (Existing Infrastructure Challenges)

Performance Metrics: (What are the measureable targets to assess your progress?)

First implemented corridor initial evaluation August 2017 will be compared to baseline/existing conditions. Performance measures include travel time, phase failures, signal coordination.

Identification of future corridors for implementation (2018).

Implementation Plan Activities		
Activity No.	Description of Activity	Target Completion Date
1	Kick off meeting: Determine team members and complete initial implementation plan.	1/11/17
2	Committee member attending the UDOT Train-the-Trainer Workshop	1/18/17-1/19/17
3	Peer Exchange (Possible outreach to FHWA HQ and Resource Center)	Spring/Summer 2017
4	Pilot project, Coors Boulevard NW: RFP to obtain consultant to implement and evaluate implementation. Plan created for necessary infrastructure improvements.	Initial Report Aug 2017
5	Identify potential corridors to implement (input from CMP and ITS Subcommittee)	2018

EDC Innovation: **Data Driven Safety Analysis (DDSA)**

Program Need: (Why the innovation is being selected?)

New Mexico is in need of more real-time data for predictive modeling. Improved data impacts construction projects, workzone safety, and can be used for corridor application.

Implementation Goal: Indicate the current state of the practice of the tool or innovation in your State as of January 2017 and the implementation stage of where you want to be in two years (Goal). *Check one box in the Baseline Jan 2017 column and one box in the Goal Dec 2018 column.*

Innovation Implementation Stages	Jan 2017 (Baseline)	Dec 2018 (Goal)
Not Implementing: The State chooses not to implement the innovation. The State is not interested in the innovation.	<input type="checkbox"/>	<input type="checkbox"/>
Development Phase: The State is collecting guidance and best practices, building support with partners and stakeholders, taking training, attending Peer-to-Peer workshops, and/or developing a process necessary for implementation of the innovation. The State is interested in pursuing the innovation or seeking additional information on how to implement it.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Demonstration Phase: The State is testing/piloting the innovation.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Assessment Phase: The State is beyond testing/piloting the innovation. The State is assessing the performance and the process for carrying out the innovation and/or making adjustments to prepare for full deployment.	<input type="checkbox"/>	<input type="checkbox"/>
Institutionalized: The innovation is adopted by the State's transportation community and used regularly on projects or within the program where appropriate.	<input type="checkbox"/>	<input type="checkbox"/>
Description of Current Status of this innovation in your State: The DOT has been improving the collection and dissemination of data for analysis and has done extensive work to make the roadway inventory system and the traffic monitoring systems MIRE compliant.	Description of State Innovation Goal (Benefit Goal): Improvements to data collection and data analysis will assist the DOT in selecting the most appropriate roadway features and allocation of resources to reduce crashes.	

Team Members:

State DOT Team co-chair: Franklin Garcia	FHWA Team co-chair: Luis Melgoza
Data Management	Engineering Support
Crash Management	Traffic Technical Support
HSIP Planning	ACEC

Obstacles: (What is perceived as hindering the State in meeting the implementation goal?)

Data delays/timeliness in crash data and geometric data

- Currently crash data is at a 1 year delay.
- Geometric data is being collected and will need funding for full asset collection every 6 years.

Data quality and completeness

- Rural data quality and completeness is still an issue despite TRACS implementation being more widespread

Funding needs for crash data improvements and asset collections

- Safety Analyst software procurement and implementation
- Full asset collection
- Data collection

Performance Metrics: (What are the measureable targets to assess your progress?)

- Obtain and procure the AASHTOWare Safety Analyst program
- Coordinate with DOT IT and DOIT to set up the hardware and software requirements
- Identify an FTE who will be dedicated to learning the system and well as imputing the required information for system implementation
- Run tests to validate the information and make adjustments as needed
- Increase electronic exchange from TRACS to DOT database from 20% to 70%

Implementation Plan Activities		
Activity No.	Description of Activity	Target Completion Date
1	Request technical assistance from FHWA to identify gaps in existing databases, data management and governance	February 2017
2	Obtain and procure the AASHTOWare Safety Analysis tool for use by DOT to measure safety improvements on projects	2018
3	Expansion of TRACS crash data exchange and use by law enforcement to include up to 70% of crash data	2018
4	Highway Safety Manual (HSM) data standards to be utilized in future RFP processes	2018
5	Continue processes to ensure the roadway inventory system and the traffic monitoring system are MIRE compliant	June 2018

EDC Innovation: Safe Transportation for Every Pedestrian

Program Need: (Why the innovation is being selected?) New Mexico pedestrian fatalities are some of the highest in the nation. New Mexico is a Pedestrian Focus state.

Implementation Goal: Indicate the current state of practice of the tool or innovation in your State as of January 2017 and the implementation stage of where you want to be in two years (Goal). Check one box in the Baseline Jan 2017 column and one box in the Goal Dec 2018 column.

Innovation Implementation Stages		Jan 2017 (Baseline)	Dec 2018 (Goal)
Not Implementing: The State chooses not to implement the innovation. The State is not interested in the innovation.		<input type="checkbox"/>	<input type="checkbox"/>
Development Phase: The State is collecting guidance and best practices, building support with partners and stakeholders, taking training, attending Peer-to-Peer workshops, and/or developing a process necessary for implementation of the innovation. The State is interested in pursuing the innovation or seeking additional information on how to implement it.		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Demonstration Phase: The State is testing/piloting the innovation.		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Assessment Phase: The State is beyond testing/piloting the innovation. The State is assessing the performance and the process for carrying out the innovation and/or making adjustments to prepare for full deployment.		<input type="checkbox"/>	<input type="checkbox"/>
Institutionalized: The innovation is adopted by the State's transportation community and used regularly on projects or within the program where appropriate.		<input type="checkbox"/>	<input type="checkbox"/>
Description of Current Status of this innovation in your State: The status of this innovation is Early Stages of Implementation.		Description of State Innovation Goal (Benefit Goal): New Mexico goal is to reduce pedestrian fatalities by raising awareness of pedestrian needs through the implementation of a Design Directive.	

Team Members:

State DOT Team co-chair: Patricia Bolliger	FHWA Team co-chair: Jolena Palau
Christina Bahl	Luis Melgoza

Obstacles:

New Mexico is not unique in naming funding as one of the obstacles to fully implementing this innovation. The implementation of change that requires additional services without additional revenue streams will be a significant challenge. The funding issue also overlaps with public outreach and education. New Mexico is not a pedestrian friendly state and our culture does not encourage pedestrian friendly environments. It will be a difficult challenge moving forward in the process to find additional revenue to build unpopular improvements. Public outreach and education will be crucial in changing the culture to accept expenditures for pedestrian facilities.

Performance Matrix: (What are measureable targets to assess your progress?)

Monthly meetings with team members for task progress updates.

Implementation Plan Activities		
Activity No.	Description of Activity	Target Completion Date
1.	Develop Outline of Internal Design Directive	June 2017

EDC Innovation: Collaborative Hydraulics: Advancing to the Next Generation of Engineering (CHANGE)

Program Need: (Why the innovation is being selected?)

New Mexico riverine conditions often stretch or exceed the current software (one-dimensional modeling) practice's ability to accurately analyze and represent the true nature of flow through bridge openings. The CHANGE initiative (two-dimensional modeling) will help move the state of New Mexico into utilization of more complex hydraulic software that will provide better hydraulic results that will be used in the design of bridges and scour protection measures.

Implementation Goal: Indicate the current state of the practice of the tool or innovation in your State as of January 2017 and the implementation stage of where you want to be in two years (Goal). *Check one box in the Baseline Jan 2017 column and one box in the Goal Dec 2018 column.*

Innovation Implementation Stages	Jan 2017 (Baseline)	Dec 2018 (Goal)
Not Implementing: The State chooses not to implement the innovation. The State is not interested in the innovation.	<input type="checkbox"/>	<input type="checkbox"/>
Development Phase: The State is collecting guidance and best practices, building support with partners and stakeholders, taking training, attending Peer-to-Peer workshops, and/or developing a process necessary for implementation of the innovation. The State is interested in pursuing the innovation or seeking additional information on how to implement it.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Demonstration Phase: The State is testing/piloting the innovation.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Assessment Phase: The State is beyond testing/piloting the innovation. The State is assessing the performance and the process for carrying out the innovation and/or making adjustments to prepare for full deployment.	<input type="checkbox"/>	<input type="checkbox"/>
Institutionalized: The innovation is adopted by the State's transportation community and used regularly on projects or within the program where appropriate.	<input type="checkbox"/>	<input type="checkbox"/>

Description of Current Status of this innovation in your State: The NMDOT is familiar with the software, but has no training or experience in using it	Description of State Innovation Goal (Benefit Goal): The NMDOT goal is to be utilizing the software on highway projects by the end of 2018.
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Team Members:

State DOT Team co-chair: Nicole Friedt	FHWA Team co-chair: Thiet Nguyen
Ted Barber	Steven Morgenstern
Burke Lokey	David Trujillo

Obstacles: (What is perceived as hindering the State in meeting the implementation goal?)

- Training in use of software: This is the biggest hurdle in implementation of this initiative. If training cannot be obtained, then there is no possibility of implementation.
- Availability of topographic information needed for software: May require more survey information and/or lidar acquisition on projects. This is not an insurmountable obstacle if planned for early on in projects.

Performance Metrics: (What are the measureable targets to assess your progress?)

See the Implementation Plan Activities 1 through 9. The measureable targets will be the completion dates as listed.

Implementation Plan Activities		
Activity No.	Description of Activity	Target Completion Date
1	Identify funding for training: NHI Training Cost is \$3875 (\$775 per person * 5 DDB staff) plus travel. To host the training, the host will have commit to covering cost of any unsold seats. The last training coordinated through NHI was negotiated at a set cost to the NMDOT of \$12,000, but we were allowed to open it up to the DOT and to the Consultants.	3/2017
2	Contact & coordinate hosting NHI training session on SMS (see attached supporting information on hosting NHI training sessions).	6/2017
3	Coordinate with NMDOT to ensure proper facilities & IT equipment needs can be met.	6/2017
4	Work with FHWA Resource Center to host a showcase to inform hydraulic engineers about the software and its advantages.	6/2017

5	Schedule NHI Training, host session, and attend training.	9/2017
6	Identify 1 past/current project to use in the training.	9/2017
7	Identify 4 projects to utilize software. Begin individual testing.	12/2017
8	Assess use and coordinate with FHWA Hydraulics team for technical support.	12/2018
9	Participation in FHWA 2D Modeling forums.	On-Going

EDC Innovation: **Pavement Preservation****Program Need:** (Why the innovation is being selected?)

Implementation of SHRP2 “Guidelines for the Preservation of High-Traffic-Volume Roadways”

FHWA recognizes the importance and benefits of Pavement Preservation treatments in the pavement life cycle. Key questions to answer when applying Pavement Preservation treatments are “When, Where and How”. The “When” and “Where” pertain to the pavement life cycle and pavement distress condition, respectively, and “How” pertains to skilled construction inspection team and specifications to ensure quality construction

While NMDOT currently employs various Pavement Preservation treatments to its infrastructure, there is room for improvement in project selection (“When” and “Where”) and quality construction (“Where”).

Implementation Goal: Indicate the current state of the practice of the tool or innovation in your State as of January 2017 and the implementation stage of where you want to be in two years (Goal).

Innovation Implementation Stages		Jan 2017 (Baseline)	Dec 2018 (Goal)
Not Implementing: The State chooses not to implement the innovation. The State is not interested in the innovation.		<input type="checkbox"/>	<input type="checkbox"/>
Development Phase: The State is collecting guidance and best practices, building support with partners and stakeholders, taking training, attending Peer-to-Peer workshops, and/or developing a process necessary for implementation of the innovation. The State is interested in pursuing the innovation or seeking additional information on how to implement it.		<input type="checkbox"/>	<input type="checkbox"/>
Demonstration Phase: The State is testing/piloting the innovation.		<input type="checkbox"/>	<input type="checkbox"/>
Assessment Phase: The State is beyond testing/piloting the innovation. The State is assessing the performance and the process for carrying out the innovation and/or making adjustments to prepare for full deployment.		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Institutionalized: The innovation is adopted by the State’s transportation community and used regularly on projects or within the program where appropriate.		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Description of Current Status of this innovation in your State: Currently, NMDOT employs various Pavement Preservation treatments to its infrastructure. Project selection for Pavement Preservation treatments is inconsistent. State funds have historically been used to fund Statewide Pavement Preservation (Maintenance) Agreements.	Description of State Innovation Goal (Benefit Goal): NMDOT has an advanced Pavement Management System that could (and should) be utilized to aide in Project Selection (“When” and “Where”). Develop agreement between FHWA and NMDOT to utilize Federal Funds for Pavement Preservation treatment project.		

Team Members:

State DOT Team co-chair: Jeff Mann	FHWA Team co-chair: Luis Melgoza
Tisha Lujan	Jeremy Lujan

PDE	Elias Archuleta
Rick Padilla	Ralph Meeks (Ergon Asphalt)
Key Wiley (AMEC)	Two District Reps

Obstacles: (What is perceived as hindering the State in meeting the implementation goal?)

Currently no Directive requiring Pavement Preservation treatments have funding allocation (AD 239, CP 83) Currently PMS database used at General Office level for reporting – but not for Project Selection

Education and Exposure to benefits of Pavement Preservation treatments to Executive, Legislature, District Leadership NMDOT does not recognize Life Cycle Cost Analysis in project selection

Varying Degrees of Skilled Designers, Materials and Construction Inspection Staff Specification Expertise – Incorporated into NMDOT Specification Manual

Currently no agreement between NMDOT and FHWA to utilize Federal Funds on Pavement Preservation Treatments

Performance Metrics: (What are the measureable targets to assess your progress?) Utilizing more pavement preservation treatments at the District – level

Utilizing life cycle approach to pavement programmatic decision

Utilizing a statewide approach to 3R construction (restoration, resurfacing, rehabilitation) Integrate PMS db into Project Selection process

Implementation Plan Activities		
Activity No.	Description of Activity	Target Completion Date
1	Research on How Other States Have Implemented Pavement Preservation Treatments into STIP and Developed Agreement b/t FHWA to utilize Federal Funds	Spring 2017
2	Educate Districts on PMS Tools, Scenarios, Project Selection	Summer, Fall 2017
3	Coordinate NHI Pavement Preservation Courses	Fall 2017
4	Discussions with FHWA to Develop Agreement to Utilize Federal Funds on Pavement Preservation projects	Spring 2017 – Winter 2017

EDC Innovation: UHPC

- A. Ultra-High Performance Concrete Connections for Prefabricated Bridge Elements (**UHPC for PBE**) is the direct innovation defined by EDC-4.
- B. New Mexico is also pursuing other applications for UHPC including use in **girder** fabrication
- C. and the use of UHPC as a **bridge deck overlay**.

Program Need: (Why the innovation is being selected?)

- A. The **UHPC for PBE** innovation supports accelerated bridge construction.
- B. The **UHPC for girders** innovation supports structural longevity and specialty design applications.
- C. The **UHPC for bridge deck overlays** innovation supports bridge preservation initiatives.

Implementation Goal: Indicate the current state of the practice of the tool or innovation in your State as of January 2017 and the implementation stage of where you want to be in two years (Goal).

Innovation Implementation Stages	Jan 2017 (Baseline)	Dec 2018 (Goal)
Not Implementing: The State chooses not to implement the innovation. The State is not interested in the innovation.	<input type="checkbox"/>	<input type="checkbox"/>
Development Phase: The State is collecting guidance and best practices, building support with partners and stakeholders, taking training, attending Peer-to-Peer workshops, and/or developing a process necessary for implementation of the innovation. The State is interested in pursuing the innovation or seeking additional information on how to implement it.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Demonstration Phase: The State is testing/piloting the innovation.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Assessment Phase: The State is beyond testing/piloting the innovation. The State is assessing the performance and the process for carrying out the innovation and/or making adjustments to prepare for full deployment.	<input type="checkbox"/>	<input type="checkbox"/>
Institutionalized: The innovation is adopted by the State's transportation community and used regularly on projects or within the program where appropriate.	<input type="checkbox"/>	<input type="checkbox"/>

<u>Description of Current Status of this innovation in your State:</u>	<u>Description of State Innovation Goal (Benefit Goal):</u>
<p>A. <u>The Bridge Bureau is actively watching an appropriate project for UHPC for PBEs.</u></p> <p>B. <u>A bridge is under construction with UHPC girders. The mix design was developed using local materials (NMSU).</u></p> <p>C. <u>UHPC for bridge overlays is being researched for use in the state.</u></p>	<p>A. <u>Select , design and construct a bridge utilizing UHPC for PBEs.</u></p> <p>B. <u>Complete and monitor the UHPC girder bridge.</u></p> <p>C. <u>Develop a UHPC overlay mix design utilizing locally available materials. Select, overlay, and monitor a bridge deck with a UHPC overlay.</u></p>

Team Members:

State DOT Team co-chair: Kathy Crowell	FHWA Team co-chair: Thiet Nguyen
Dr. Brad Weldon (NMSU)	Ray Trujillo

Obstacles: (What is perceived as hindering the State in meeting the implementation goal?)

- A. **UHPC for PBE** has very specific applications – an appropriate project has yet to present itself in the State of New Mexico. Upon selection of an appropriate project, the following issues will be encountered: additional cost, lack of expertise in the Contracting community, risk management concerns associated with trying something new.
- B. **UHPC for girder** fabrication is in process. For future use, the obstacle is cost.
- C. **UHPC as an overlay** – a mix design needs to be developed and an appropriate project needs to be selected. Additional cost and lack of expertise in the Contracting community may be a hindrance.

Performance Metrics: (What are the measureable targets to assess your progress?)

- A. For **UHPC for PBE**, progress shall be measured with the following milestones:
 - 1. Select a project
 - 2. Design the project
 - 3. Construct the project
- B. For **UHPC girders**, progress is measured against the completion of construction of the project that is in progress.
- C. For **UHPC for Bridge Overlays**, progress shall be measured with the following milestones:
 - 1. Develop a mix design using locally available materials.
 - 2. Select a project.
 - 3. Complete the overlay.

Implementation Plan Activities		
Activity No.	Description of Activity	Target Completion Date
A	UHPC for PBEs <ol style="list-style-type: none"> 1. Watch for appropriate project for utilization of UHPC for PBEs. 2. Design structure that includes UHPC for PBEs. 3. Design structure that includes UHPC for PBEs. 	Project dependent
B	UHPC for girder fabrication <ol style="list-style-type: none"> 1. Project is under construction 2. Monitor performance 3. Report performance 	Project dependent
C	UHPC for bridge deck overlay <ol style="list-style-type: none"> 1. Develop mix design that utilizes locally available materials 2. Select a project 3. Design project 4. Construct project 	1. Mid-year 2017 2. Mid-year 2017 3. End of year 2017 4. 2018

EDC Innovation: e-Construction**Program Need:**

NMDOT is interested in moving forward with using electronic plan delivery, including digital Professional Engineer stamps

- Select a software for PE's to use for digital stamp and signature and ensure that training is available to all PDE's and functional groups for its use
- Ensure a process is in place to upload and share electronic plans with PS&E section

Establishing a method to address PS&E questions on the plans and ensure latest plans are published

Implementation Goal:

Innovation Implementation Stages		Jan 2017 (Baseline)	Dec 2018 (Goal)
Not Implementing: The State chooses not to implement the innovation. The State is not interested in the innovation.		<input type="checkbox"/>	<input type="checkbox"/>
Development Phase: The State is collecting guidance and best practices, building support with partners and stakeholders, taking training, attending Peer-to-Peer workshops, and/or developing a process necessary for implementation of the innovation. The State is interested in pursuing the innovation or seeking additional information on how to implement it.		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Demonstration Phase: The State is testing/piloting the innovation.		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Assessment Phase: The State is beyond testing/piloting the innovation. The State is assessing the performance and the process for carrying out the innovation and/or making adjustments to prepare for full deployment.		<input type="checkbox"/>	<input type="checkbox"/>
Institutionalized: The innovation is adopted by the State's transportation community and used regularly on projects or within the program where appropriate.		<input type="checkbox"/>	<input type="checkbox"/>
Description of Current Status of this innovation in your State: See Above	Description of State Innovation Goal (Benefit Goal): Mandatory electronic submission of PS&E package at production, including digital engineering stamp and signature.		

Team Members:

State DOT Team co-chair: Jesus Sandoval	FHWA Team co-chair: Robert Bency
Justin Gibson	Max Valerio
Mike Moehn (ACNMO)	Lawrence Lopez
Mark Salazar	Jessica Hunter
Jeff Martinez	

Obstacles: (What is perceived as hindering the State in meeting the implementation goal?)

- Training in use of software: This is the biggest hurdle in implementation of this initiative. If training cannot be obtained, then there is no possibility of implementation.
- Availability of topographic information needed for software: May require more survey information and/or lidar acquisition on projects. This is not an insurmountable obstacle if planned for early on in projects.

Performance Metrics:

Select software to use for electronic stamp/signature

Develop procedure for submittal of electronic plans to PS&E

Develop protocol for addressing PS&E questions on production plans prior to advertisement

Pick a test project from each design region to submit electronically

Survey the involved parties to determine if electronic submission is effective and trouble shoot any issues

First mandatory electronic plan submittal

Implementation Plan Activities			
Activity No.	Description of Activity	Target Completion Date	Schedule/Status
1.	Select software to use for electronic stamp/signature	March 2017	
2.	Develop procedure for submittal of electronic plans to PS&E	May 2017	
3.	Develop protocol for addressing PS&E questions on production plans prior to advertisement	July 2017	
4.	Pick a test project from each design region to submit electronically	December 2017	
5.	Survey the involved parties to determine if electronic submission is effective and trouble shoot any issues	March, 2018	
6.	First mandatory electronic plan submittal	April 2018	