

# Project Ideas to Implement EDC-7 Innovations

## 1. Strategic Workforce Development

### STIC Incentive & AID Demonstration\*

*\*If planning to apply for AID Demonstration, the following should not be considered standalone activities. It is suggested they be added to another effort or grouped/bundled to be considered.*

- Develop a human capital plan to examine the future of staffing for the state DOT and the contractor's workforce.
- Coordinate a regional meeting on workforce development and youth education among several state DOTs, Departments of Education, and other partners.
- Implement a pre-apprenticeship plan for heavy highway construction careers in coordination with tribal governments.
- Establish a working group of Strategic Workforce Development partners to include representatives from the State DOT, community colleges, workforce boards, non-profits and others to develop a training program for new entrants into the heavy highway construction field.
- Develop and implement a training academy for heavy highway construction careers with an emphasis on recruiting individuals in rural communities.
- Development and implementation a workforce development plan for heavy highway construction careers in coordination with tribal governments in conjunction with a highway construction project.
- Purchase and train individuals on highway construction career simulators as a pipeline into the OJT program. Establish a working group of Strategic Workforce Development partners to include representatives from the State DOT, community colleges, workforce boards, non-profits and others to develop a training program for new entrants into the heavy highway construction field.
- Conduct an innovative training academy for heavy highway construction careers with an emphasis on recruiting individuals in rural communities and tribal communities. Purchase and train individuals on the use of highway construction equipment using career simulators as a pipeline into the OJT program.

## 2. Rethinking Design-Build DBEs

### STIC Incentive & AID Demonstration\*

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- Peer exchange to learn best practices of Open-Ended Performance Plan (OEPP) implementation and oversight
- Update STA's policies and procedures of DBE oversight and administration of the DBE program on design-build projects
- Create a sample template of an OEPP that can be submitted by proposers and a scoring template for the STA to determine if the OEPP is responsive

- Create contract provisions of contractor's responsibilities of data, information, meeting requirements, tracking
- Incorporate OEPP process into Design-Build manual
  - Instructions to Proposers – OEPP template for proposers to populate
  - Contract provisions
  - Scoring criteria – does the plan align with the expected work of the project
  - Monitoring plan and process

### 3. Integrating GHG Assessment and Reduction Targets in Transportation Planning STIC Incentive & AID Demonstration\*

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#### Peer-Exchanges

- Target audience: state transportation and environmental planners. Topic: GHG assessment and implications for transportation
- Target audience: local, regional and state agencies. Topic: How to implement GHG assessment methods
- Target audience: state and regional transportation planning experts and agencies. Topic: How to incorporate GHG assessment and planning considerations into transportation planning processes

#### Workshop

- Hold a workshop with leaders and technical experts to better understand benefits and help overcome misconceptions.

#### Training

- Develop training modules on climate change and GHG, GHG analysis methods and connections to planning and decision-making processes.
- Host training on GHG assessment and incorporation into transportation planning processes, climate change and GHG connections to transportation.

#### Other

- Develop framework on how to address GHG in statewide and regional transportation planning processes.
- Develop a GHG analysis framework among state and regional agencies (MPOs)
- Conduct scenario planning activities to examine implications and strategies related to GHG emissions.
- Pilot GHG analysis methods to support statewide and regional transportation planning efforts.
- Develop GHG emission inventories associated with surface transportation.
- Update State DOT existing policies, processes, and procedures to identify opportunities to incorporate GHG assessment and reduction efforts.

#### 4. Enhancing Performance with Internally Cured Concrete (EPIC<sup>2</sup>)

##### STIC Incentive Funds

- Develop and deploy AASHTO TP 139 testing capability to support the implementation of internally cured concrete installations.
- Host an internally cured concrete trial batch for training and development of agency standard practice for deployment.
- Develop specifications for internally cured class concrete.

##### Aid Demonstration Funds

- Pilot project demonstration of an internally cured class concrete in bridge deck(s).

#### 5. EPDs for Sustainable Project Delivery

##### STIC Incentive & AID Demonstration\*

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- Develop a process for collecting EPDs on Federal-Aid projects.
- Develop a database to collect and manage data from EPDs.
- Demonstrate the collection of EPDs on Federal-Aid projects.
- Develop a specification for the collecting EPDs.
- Develop a stakeholder outreach strategy for promoting the collection of EPDs.
- Use EPDs to benchmark embodied carbon emissions for DOT materials.
- Develop training program for DOT staff and other stakeholders to understand and collect EPDs.

#### 6. Next Gen TIM: Technology for Saving Lives

##### STIC Incentive & AID Demonstration\*

*\*If planning to apply for AID Demonstration, the following should not be considered standalone activities. It is suggested they be added to another effort or grouped/bundled to be considered.*

- Pilot demonstration or implementation of the following technologies:
  - UAS/tethered drones to support TIM
  - Debris Removal Systems
  - Advanced Emergency Vehicle preemption
  - Smart Emergency Vehicle Lighting
  - Advanced Warning Systems
  - Technology to support Emergency Medical Services (EMS)
  - Programs to further engagement of EMS with TIM programs
  - Queue Protection Tools
  - Digital Warning deployment
  - Smart Road Safety Devices deployment
  - Emerging technology for responder safety
  - Emerging technology that will support more efficient mitigation of roadway incidents.
  - Video Sharing from emergency vehicles to Traffic Management Centers
  - Integrated Incident Management systems
  - Autonomous Impact Protection vehicles

- Host TIM Training or Conferences

## 7. Nighttime Visibility for Safety

- STIC Incentive Funds
  - Apps and Tools
    - Develop an inventory tool using mobile reporting by State and Local agencies staff for street light outage and a companion tracking system for repair and replacement. This would provide timely response to out of service luminaires and ensure all users including the underserved communities can be included.
    - Develop a Nighttime RSA tool for investigating high activity locations with potential of pedestrian/motorist conflicts during nighttime activities. This will identify locations/corridors that need enhanced visibility treatment for a safer environment for pedestrians and other users.
- AID Demonstration Funds
  - Tunnel lighting replacement using LED lighting system and incorporating adaptive lighting design to improve visibility and energy savings.
  - Retrofit corridor using new LED lighting technology and evaluate the safety effect of adaptive lighting.