Driving Innovation with 21st Century Solutions

EDC and Tribal Transportation Program
Gila River Indian Community, Sacaton, Arizona
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Federal Highway Administration

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Every Day Counts

Round 1

- Adaptive Signal Control
- Clarifying the Scope of Preliminary Design
- Construction Manager/General Contractor
- Design Build
- Enhanced Technical Assistance with Ongoing EISs
- Flexibilities in ROW
- Flexibilities in Utility Accommodation and Relocation
- **Geosynthetic Reinforced Soil-Integrated Bridge System**
- **Prefabricated Bridge Elements and Systems**
- Planning and Environmental Linkages
- Safety Edge[SM]
- Use of In-Lieu Fee
- Mitigation Banking
- Warm Mix Asphalt
- **Expanding the Use of Programmatic Agreements**

Round 2

- Alternative Technical Concepts
- Construction Manager/General Contractor
- Design Build
- Geospatial Data Collaboration
- **3D Engineered Models for Construction**
- High Friction Surfaces
- **Implementing Quality Environmental Documents**
- Intelligent Compaction and Construction
- Intersection and Interchange Geometrics
- **Geosynthetic Reinforced Soil-Integrated Bridge System**
- **Prefabricated Bridge Elements and Systems**
- Slide-in Bridge Construction
- Locally-Administered Federal Aid Projects
- **Expanding the Use of Programmatic Agreements**
- First Responder Training

Round 3

- Regional Models of Cooperation
- Improving Collaboration and **Quality Environmental Documentation** (eNEPA and IQED)
- **3D Engineered Models: Schedule, Cost, and Post-Construction**
- e-Construction
- Locally Administered Federal-Aid Projects: Stakeholder Partnering
- Improving DOT and Railroad Coordination (SHRP2 R16)
- **Geosynthetic Reinforced Soil – Integrated Bridge System**
- Smarter Work Zones
- Data-Driven Safety Analysis
- Road Diets (Roadway Reconfiguration)
- Ultra-High Performance Concrete Connections for Prefabricated Bridge Elements

Federal Lands Highway Tribal Transportation Program

Funding Tribal Transportation Facilities thru the Highway Trust Fund for:

- Transportation Planning
- Research
- Maintenance
- Engineering
- Rehabilitation
- Restoration
- Construction
- Reconstruction

Programs

- Bridge
- Safety
- Administration

Federal Lands Highway Tribal Transportation Program

- Provide access to basic community services to enhance the quality of life for 566 Indian Nations

- $450,000,000 per year
  - 60,446 miles of Roads
  - 1,488,665 People
  - BIA Region

- Needs ⇧ Resources ⇩

Tribal Bridge Needs

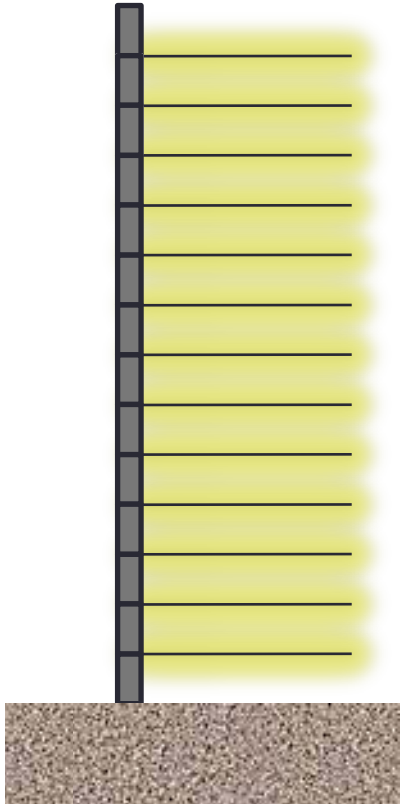
- 7,713 bridges
  - 1,270 structurally deficient
- From 2005-2012
  - 188 bridges for $131,556,622
    - $87,500 average

EDC Opportunities to S T R E T C H $$

- ***GRS-IBS (Geosynthetic Reinforced Soil - Integrated Bridge System)***
  - Easier to design
  - Costs less to build
  - Easy for local staff to build

Simplicity of GRS

- Three Main Materials
  - A row of facing block
  - A layer of geosynthetic
  - Well compacted granular backfill



EDC Opportunities to S T R E T C H $$

- ***CM/GC (Construction Manager / General Contractor)***
  - 25 – 35% savings thru innovation and reduced risk
  - Deliver more work
  - Reinvest into the community

Top Ten Reasons for CM/GC

1. Innovation
2. Reduction of Risk
3. Aggressive Delivery
4. Cost Control
5. Team Selection
6. Constructability
7. Streamlined Plans
8. Quality
9. Early Work Packages
10. Flexibility in Changing Project Scope

Tribal Projects

GRS-IBS

- Kaw Nation
- Navajo Nation
- Ohkay Owingeh Tribe
- Jicarilla Apache Nation
- Chickaloon Native Village

CM/GC

- Gila River Indian Community
- Pueblo of Acoma*
- Navajo Nation*

* considering it

Conclusions

- FHWA Federal Lands Highway project goals
  - BETTER
  - FASTER
  - SMARTER
- Delivering ***Every Day Counts*** across Tribal Lands: ***GRS-IBS & CM/GC***
- Saving time and money, and creating jobs