ADOT Research Center
presentation to
Research On-call Consultants
November 2011
On-call contract
All disciplines

• **On-call contract** established in January 2011
  – 9 disciplines:
    • Research
      – Conduct studies in 7 emphasis areas
    • Technical editing
      – Edit and format reports for publication
    • Product evaluation
      – Evaluate products for ADOT use in construction and maintenance
Consultant selection process
Research
Consultant selection process

Research

• Task assignment issued for each project
• Task assignment contains:
  • project scope, schedule, and budget
  • evaluation criteria
  • instructions for submitting proposals
  • administrative requirements
Consultant selection process

Research

- Three or more firms from the appropriate discipline selected to receive the task assignment; no guarantee of work
- After release of a task assignment, firms may submit questions to ADOT MPD contract administrator; cannot directly contact PM
- A firm that receives a task assignment may submit a proposal
Consultant selection process

Research

- Contract administrator assesses proposal for compliance with contract and task assignment
- Selection panel evaluate qualified proposals and make selection
- Purchase order and notice to proceed issued to selected firm
- Firms not selected may contact ADOT MPD administration to review winning proposal
Upcoming projects

Research
• **Driver Attitudes on Managed Lanes**
  – Investigate personal decision making on transportation investments to identify funding scenarios (toll roads, congestion pricing, etc.) with the greatest potential to gain public support
  – Budget: $120,000
  – Project manager: Dianne Kresich
    • dkresich@azdot.gov; 602-712-3134
Planning and administration

• Impact of Arizona Highways Magazine’s Facebook Page on Tourism
  – Examine the relationship between the use of AHM’s Facebook page and the decisions of potential visitors to travel to Arizona
  – Budget: $31,000
  – Project manager: Dianne Kresich
    • dkresich@azdot.gov; 602-712-3134
Traffic and safety

• An Analysis and Optimization of Diamond Interchange Phasing
  – Using simulation techniques and field testing, identify the optimal phasing and timing of diamond interchanges with various characteristics
  – Budget: $200,000
  – Project manager: Jason Harris
    • jharris@azdot.gov, 602-712-6927
Traffic and safety

- **State-specific Crash Prediction Models**
  - Evaluate Safety Performance Functions (SPFs) for rural two-lane roads, rural multilane highways, and urban and suburban arterials; determine need for development of state-specific SPFs for use in the Highway Safety Manual
  - Budget: $125,000
  - Project manager: Jason Harris
    - [jharris@azdot.gov](mailto:jharris@azdot.gov), 602-712-6927
Traffic and safety

**Data Analysis Methodology for Highway Safety**
- Develop a data analysis method to assess progress in meeting highway safety goals, and to target outreach effectively
- Budget: $200,000
- Project manager: Jason Harris
  - jharris@azdot.gov, 602-712-6927
Traffic and safety

• Data Management System for Safety Assessment
  – Identify safety data needs, examine the existing data collection program, determine gaps, and recommend a framework for a comprehensive data collection program
  – Budget: $200,000
  – Project manager: Jason Harris
• jharris@azdot.gov, 602-712-6927
Traffic and safety

- **Safety Effectiveness of Pavement Markings**
  - Evaluate the effectiveness of systematic improvements to pavement markings in reducing crashes, and identify thresholds for pavement marking retro-reflectivity
  - Budget: $100,000
  - Project manager: Jason Harris
    - [jharris@azdot.gov](mailto:jharris@azdot.gov), 602-712-6927
• **Warm-mix Technology**
  – Determine the compatibility of warm-mix asphalt technologies with ADOT’s mix design methods and asphalt rubber
  – Budget: $135,000
  – Project Manager: Christ Dimitroplos
    • cdimitroplos@azdot.gov; 602-712-7850
Materials and construction

• **Pavement Forecasting**
  – Evaluate, recommend, and provide software to enable real-time access to pavement condition and design data, and enhance operations of the ADOT Pavement Management section
  – Budget: $400,000
  – Project Manager: Christ Dimitroplos
    • cdimitroplos@azdot.gov; 602-712-7850
Materials and construction

• Sound Walls
  – Analyze the effectiveness of new sound wall technologies and designs in mitigating roadside noise; develop recommendations for field testing
  – Budget: $300,000
  – Project Manager: Christ Dimitroplos
    • cdimitroplos@azdot.gov; 602-712-7850
• QP3 Policy Report
  – Examine the impact of ADOT’s quiet pavement program in the Phoenix metro area on noise mitigation and policy decisions
  – Budget: $25,000
  – Project Manager: Christ Dimitroplos
    • cdimitroplos@azdot.gov; 602-712-7850
• **Binder Protocol**
  – Develop protocols for performance grade testing that will develop the performance grade (PG) rating for asphalt rubber binders
  – Budget: $40,000
  – Project Manager: Christ Dimitroplos
    • cdimitroplos@azdot.gov; 602-712-7850
Structures

• **Fiber-reinforced Concrete**
  – Conduct field testing of fiber-reinforced concrete on a bridge on the state highway system; evaluate effectiveness compared with current methods
  – Budget: $170,000
  – Project Manager: Christ Dimitroplos
    • [cdimitroplos@azdot.gov](mailto:cdimitroplos@azdot.gov); 602-712-7850
Structures

• Bridge Scour
  – Conduct field evaluation of bridge scour for selected bridges on the state highway system
  – Budget: $125,000
  – Project Manager: Christ Dimitroplos
    • cdimitroplos@azdot.gov; 602-712-7850
Intelligent transportation systems

• ADOT Test Intersection for New Traffic Signal Technology Evaluation – Phase 1
  – Test various types of signal control products, advanced traffic controller features, emerging traffic control algorithms, phasing plans, and personnel training on an existing intersection
  – Budget: $160,400
  – Project Manager: Frank DiBugnara
    • fdibugnara@azdot.gov; 602-712-3137
Environment

• Climate Adaptation Issues for Arizona’s Transportation System
  – Identify areas within the state’s transportation system that are vulnerable to potential impacts of climate change; develop framework for adaptation
  – Budget: $40,000
  – Project Manager: Tom Kombe
  – ekombe@azdot.gov; 602-712-3135
Environment

• **Stormwater Enhancement Study**
  – Investigate methodologies for handling the oxygenation of stormwater discharged from ADOT highways by comparing the effectiveness of riprap spillways, structures designed to aerate runoff, and no management of runoff
  – Budget: $25,000
  – Project Manager: Tom Kombe
  – [ekombe@azdot.gov](mailto:ekombe@azdot.gov); 602-712-3135
Environment

• Wildlife-Vehicle Collision Mitigation: SR 260
  – Assess elk and, potentially, deer movement in relation to collisions, traffic volume, and water sources; develop recommendations for reducing collisions and allowing wildlife movement across the highway
  – Budget: $275,000
  – Project Manager: Tom Kombe
  – ekombe@azdot.gov; 602-712-3135
Environment

• Effectiveness of Bighorn Sheep Overpasses: US 93
  – Long-term evaluation of the effectiveness of overpasses in reducing vehicle-bighorn sheep collisions and in promoting permeability
  – Budget: $245,000
  – Project Manager: Tom Kombe
  – ekombe@azdot.gov; 602-712-3135
Consultant selection process
Technical Editing
Consultant selection process
Technical Editing

• Task assignment is issued for each project to be edited and formatted by a contract editor
• Task assignment contains:
  • Scope – description of editing and formatting tasks
  • Request for budget and schedule
  • Instructions for submitting proposals
  • Administrative requirements
Consultant selection process
Technical Editing

- Project manager selects one or more tech editing firms to receive the task assignment; no guarantee of work
- Contract administrator assesses proposal for compliance with contract and task assignment
- Project manager evaluates proposal, budget, and schedule
  - Negotiation of budget may be necessary
  - Proposal may be accepted
  - If proposal is rejected, a new task assignment may be issued
- Purchase order and notice to proceed issued to selected firm
• New manual: Instructions and Specifications for Preparing ADOT Research Reports
  – Detailed instruction on editing and formatting requirements

• Manual available at:
  http://www.azdot.gov/reportsspecs
Consultant selection process
Product Evaluation
Consultant selection process
Product Evaluation

• Task assignment is issued for one or more products to be evaluated

• Task assignment contains:
  • Scope – description of evaluation tasks
  • Request for budget and schedule
  • Instructions for submitting proposals
  • Administrative requirements
Consultant selection process

Product Evaluation

- Project manager selects one product evaluation firm to receive the task assignment; no guarantee of work
- Contract administrator assesses proposal for compliance with contract and task assignment
- Project manager evaluates proposal, budget, and schedule
  - Negotiation of budget may be necessary
  - Proposal may be accepted
  - If proposal is rejected, a new task assignment may be issued
- Purchase order and notice to proceed issued to selected firm
Product evaluation resources

• Web page:  [http://azdot.gov/apl](http://azdot.gov/apl)

• Contains useful resources:
  – Approved Products List
  – Product Evaluation Program Annual Report
  – FAQs and much more

• Program Manager: Stephanie Huang
  – apl@azdot.gov; 602-712-6430
Questions