

Georgia Experience

SHRP2

Georgene M. Geary & Genetha Rice-Singleton

January 12, 2014

Workshop Session # 175



Current Georgia DOT SHRP2 Implementation Projects

Product	GDOT Offices Involved
L01/L06 – Organizing for Reliability	Office of Traffic Operations Office of Planning
R10 – Managing Complex Projects	Office of Innovative Program Delivery
R26 – Pavement Preservation	Office of Maintenance Office of Materials and Testing
R09 – Managing Risk in Project Delivery	Office of Program Delivery GDOT Risk Manager

Georgia Experience with SHRP2 Products

L01/L06 – Organizing for Reliability

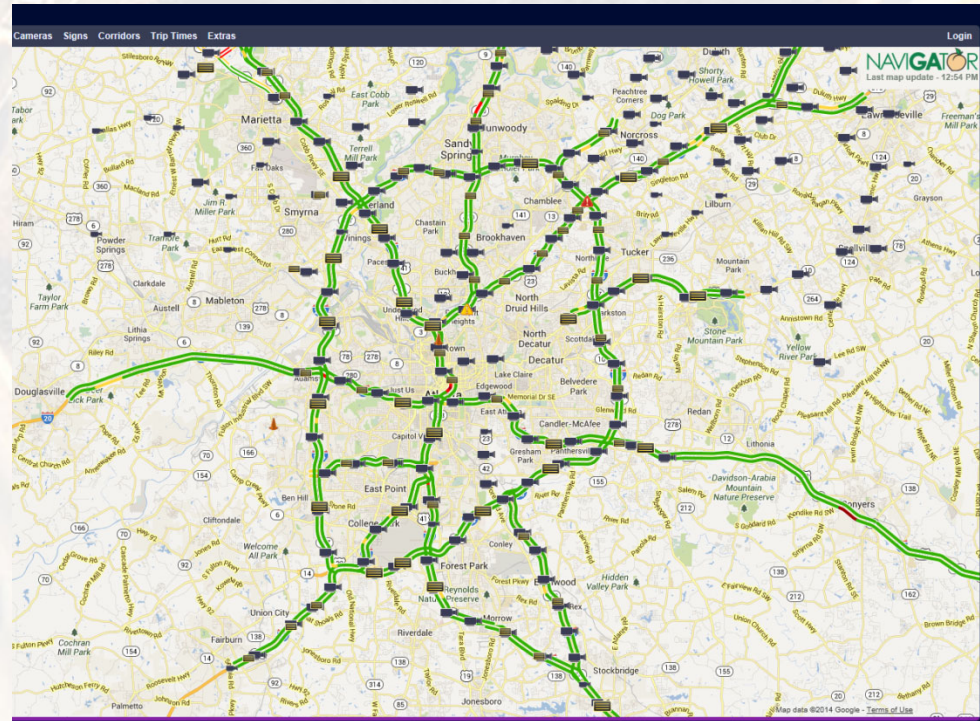
- Business Process/philosophy changes
- Capability Maturity Model
- ‘Self- Scored’
- Goal = “3”

Program and Process Capabilities	Level 1 Transitioning	Level 2 Mature	Level 3 Integrated
Scoping	Narrow and opportunistic	Needs based and standardized	Full range core program
Technical processes	Informal, undocumented	Planned, mainstreamed	Integrated, documented
Technology and systems development	Project oriented, qualitative	Rational quantitative evaluation	Standardized C/E systems/platforms
Performance measurement	Outputs reported	Outcomes used	Performance accountability
	↑	↑	↑
Institutional Architecture Elements	Level 1 Ad Hoc	Level 2 Rationalized	Level 3 Mainstreamed
Culture/leadership	Mixed, hero driven	Championed/ internalized across disciplines	Customer mobility committed
Organization and staffing	Fragmented, understaffed	Aligning, trained	Professionalized
Resource allocation	Project level	Criteria-based program	Sustainable budget line item
Partnerships	Informal, unaligned	Formal, aligned	Consolidated

Source: SHRP2 REPORT S2-L06-RR-1

L01/L06 – “Marrying Planning and Operations”

- Pilot State for Workshop in 2010
- Held SHRP2 workshop in December 2013
- Implementation Plan in development



Performance Measures



www.dot.ga.gov

Georgia Experience with SHRP2 Products

R09 – Managing Risk

- Objective of Workshop
- Workshop Analysis
- Results of the Workshop
- GDOT Moving Forward



Georgia Experience with SHRP2 Products

R09 – Managing Risk

Georgia SR 96

Workshop conducted by:
SHRP2 Consultant

Attendees:

- Federal Highway Administration
- Transportation Research Board Officials
- AASHTO Officials
- GDOT
- Georgia Tech Researchers



Georgia Experience with SHRP2 Products

R09 – Managing Risk

Georgia SR 96

Workshop

- Simplified workshop
- Develop a Risk Register
- Rank the Risk by means of severity

Unmitigated Risk Register															
Item	Risk or Opportunity (see <2b.Risks by Category> for detailed description)	Probability of Occurrence (0 to 1, or rating per rating scale*)		Assessed Impacts (if occur)									Mean Severity (escal \$M, or rating per rating scale*)	Risk Ranking (based on mean severity)	
				Mean Direct Cost Change (unesc \$M, or rating per rating scale*)			Mean Duration Change to Schedule Activity (months, or rating per rating scale*)			Mean Disruption Change (million person-hours lost, or rating per rating scale*)					
		Value	Rating	Value	Rating	Activity Affected (from list)	Value	Rating	Activity Affected (from list)	Value	Rating	Activity Affected (from list)			
EP	Environmental Permits Risks			1.17			3.74				0.00			1.65	4
EP1	Increased bear mitigation (fencing or ROW)		VL		VL	Environmental		H	Environmental					VL	43
EP2	Delay in bear study		L		L	Environmental		L	Environmental					VL	30
EP3	Environmental mitigation delays (credits)		L		L	Environmental		VL	Environmental					VL	31
EP4	Re-evaluation of environmental document (e.g. due to design changes from bear study)		M		L	Environmental Permits		M	Environmental Permits					VL	17
EP5	Delay/cost associated with migratory birds		VL		VL	Construction		VL	Construction					VL	40
EP6	Additional construction restrictions associated with boat ramp		L		L	Construction		VL	Construction					VL	27
EP7	Additional mitigation / construction restrictions for environmental		M		M	Construction		H	Environmental					M	2
EP8	Increased wetland mitigation (delineation) / noncompliance (fines)		VL		VL	Environmental		H	Environmental					VL	43
EP9	Noise mitigation (increased development)		VL		VL	Construction		H	Environmental					VL	42

Georgia Experience with SHRP2 Products

R09 – Managing Risk

Georgia SR 96

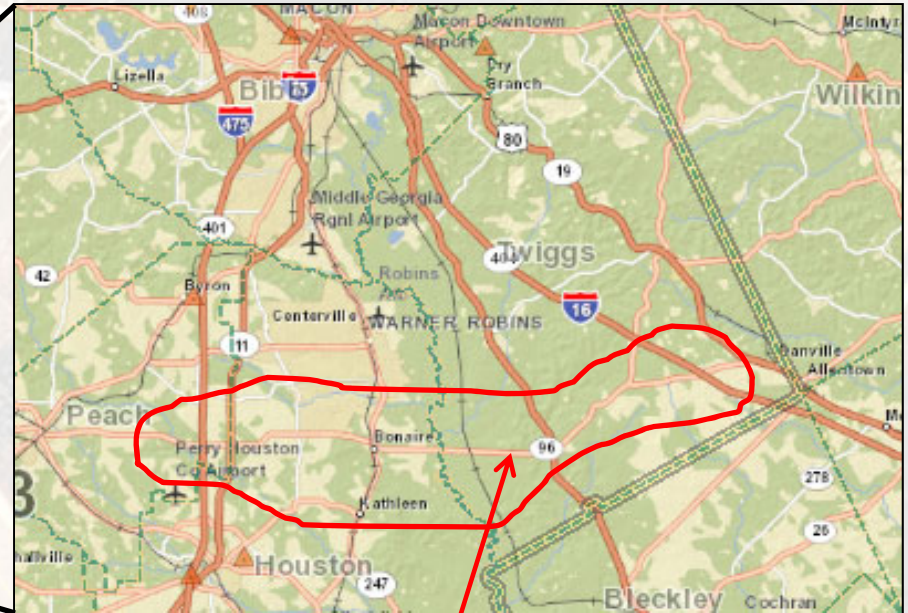
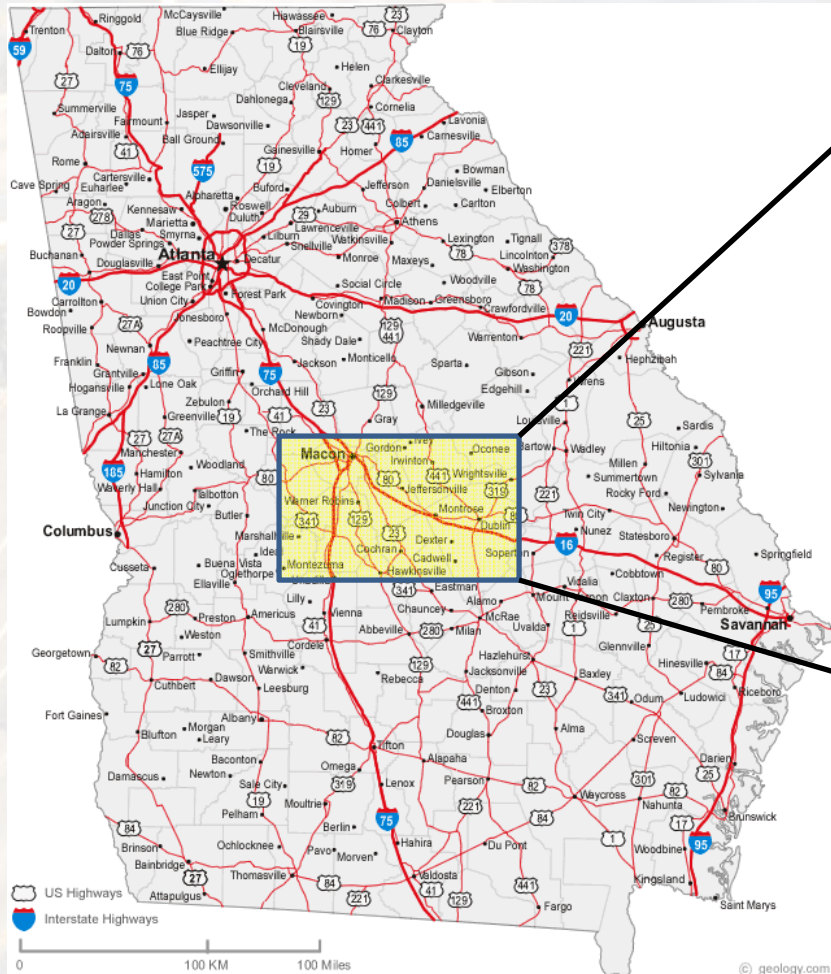
Workshop Pilot Project

- **Georgia State Route 96 widening from East of County Road 540 to West of State Route 87**
- **Existing two lanes (undivided)**
- **Proposed four lanes (divided)**
- **Roadway Classification: Rural Principal Arterial and Rural Minor Arterial**
- **Current Status: Right of Way Acquisition (53 Parcels)**
- **Project Length: 7.84 miles**

Georgia Experience with SHRP2 Products

R09 – Managing Risk

Georgia SR 96



Project Location

Georgia Experience with SHRP2 Products

R09 – Managing Risk

Georgia SR 96

Workshop Analysis

“Risks are events that cause delays”

Project Activity List

Planning

Scoping

Preliminary Design and Environmental Process

Environmental Permitting

Right-of-Way, Utilities, Railroad

Final Design

Procurement

Construction

Miscellaneous (Minor and unidentified)

Georgia Experience with SHRP2 Products

R09 – Managing Risk

Georgia SR 96

Results of Workshop

Mitigated Risk Ranking				
Risk Rank	Percentage of Total Mean Risk (%)	Item	Risk Title	Mean Severity (Equiv. Inflated \$M)
1	17%	FD5	Pavement design (kaolin trucks, "strahnet" route, alt concrete design)	M
2	5%	CN13	Supplemental agreements / allotment requests / misc COs (approval delay)	L
3	5%	FD7	Design E&O/ambiguities	L
4	5%	CN15	Poor contractor performance	L
5	5%	CN1	Foundation/subgrade failure (due to soft soils)	L
6	5%	CN2	Change in topography associated with kaolin mine properties	L
7	4%	CP6	Increased escalation	L
8	4%	CP5	Market conditions (project competition)	L
9	4%	FD4	Code/requirement changes (e.g., erosion control)	L

Georgia Experience with SHRP2 Products

R09 – Managing Risk

Georgia SR 96

GDOT Moving Forward

- ✓ **Formalizing Risk Management**
- ✓ **Increased awareness on how to Identify Risk**
- ✓ **Key players needed to Identify Risk and Opportunities**
- ✓ **Periodically update base risk performance**
- ✓ **Organizational Support – New Risk Manager**
- ✓ **Research underway with Georgia Institute of Technology -
“Streamlining Project Delivery through Risk Analysis?”
Documenting current practices**

NEED MORE INFO?

Georgene M. Geary
ggeary@dot.ga.gov
404-608-4712

Genetha Rice-Singleton
grice-singleton@dot.ga.gov
404-631-1522

www.dot.ga.gov