Quality Management
Performance-Based Asset Maintenance Programs
What is Performance-based Asset Maintenance?

- Customer-centric
- Long-term Contracts
- Lump-sum, At-risk
- Bundled Services
- Performance Criteria
- Qualifications-based
Building Blocks of Asset Management

- From the FHWA on Transportation Asset Management Plans:
  Asset Management Plan— a plan for managing the asset base over a period of time in order to deliver the agreed LOS and Performance Targets in the most cost-effective way.
Asset Management Cycle

Quality Control Inspections
Performance Standards & Measures
Performance Verification & Reporting

Quality Management Program
Business Case for New Quality Management Program

- Evolving contract requirements
  - Complex quality management requirements
  - Multi-layered Key Performance Indicators
  - Client resource shift
  - Self monitoring and performance measurement
  - Deductions for non-performance

- Existing QMP methods were outdated
  - Manual reporting and sampling are labor intensive and error prone
Quality Management Program - Characteristics

Statistically significant and random sampling

Assess performance using routine inspections and through verification of work plans

Result-oriented contract compliance via accurate performance measurement

Final verification of quality control through quality assurance review and certification
Onramp: Fill QMP Need

- Integrated QA/QC management
- Inventory project assets and assign performance criteria (KPI)
- Automated alert system
- Work plan analysis and work accomplishment reports
- Client-facing portal
- Program management dashboard
- Mobile device deployment
Management Dashboard

- Subcontractor resource management
- Customer Service
- Labor resource management
- Performance tracking of KPI's
- Assessments– building and facility performance tracking
Automated Alert System

- Internal process
  - Alerts for needed internal or external resource allocation
  - Alerts for due dates – 25%, 50% time remaining
- Internal and external process
  - Alerts for performance deficiencies
  - Notification of performance deductions
### Reporting

- QC Manager generates reports to audit performance versus key performance indicators

<table>
<thead>
<tr>
<th>WO#</th>
<th>Activity Group Desc</th>
<th>Activity Code</th>
<th>Activity Desc</th>
<th>County Desc</th>
<th>Code</th>
<th>Desc</th>
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<td>15</td>
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### Interchange: Client Portal View

#### Data Filter Options
- **WO** or **CSR**
- **County:** [All Counties]
- **Facility:** [All facilities]
- **Activity:** [All Activities]
- **Begin:** 10/25/2014
- **End:** 4/16/2015

#### Note:
- TAT "L" prefix = late items.
- "E" prefix = early items.

#### Work Order Details
- **WO:** 7590
- **Incident Date:** 2/17/2014 8:30:00 AM
- **Location:** I-275
- **Activity:** 000527: FENCE REPAIR
- **Completed:** 2/20/2014 12:00:00 AM

#### Work Order Details Table

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<thead>
<tr>
<th>WO #</th>
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From Quality Management to Asset Management

Time Span: February 2014 – Present
Damage Type:
- Guardrail hit: 16
- Sign hit: 7
- Attenuator replacement: 2
- Multiple delineator hit: 3
- Fence hit: 1
- Total Incidents: 29
## Condition Assessments, Planning, and Preservation

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<tr>
<th>Issue</th>
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<td>Shoulder Deterioration</td>
<td>Westbound I-4 at MM 10.3</td>
<td><img src="image2.png" alt="Image" /></td>
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<tr>
<td>Shoulder Deterioration</td>
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<td><img src="image3.png" alt="Image" /></td>
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<tr>
<td>End Treatment Type</td>
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<td>Image</td>
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<tr>
<td>End anchorage assembly Type II</td>
<td>I-4 Westbound at MM 13.9</td>
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<tr>
<td>End anchorage assembly Type II</td>
<td>I-4 Westbound at MM 8.6</td>
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<tr>
<td>End anchorage assembly Type II</td>
<td>I-4 Eastbound at MM 14</td>
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</tbody>
</table>
Thank you
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