What is AASHTOWare?

• Powerful enterprise software suite
• Designed by transportation professionals for transportation professionals
• AASHTOWare advantages:
  – Cost sharing
  – Utilizes best business practices
  – Helps DOTs comply with FHWA regulations
  – Follows AASHTO national standards
  – Customizable to accommodate state-to-state differences
What is AASHTOWare Project?

- Enterprise-wide web-based software
- Manages information throughout the entire contract and construction lifecycle
- Includes cost estimation, proposal preparation, bid-letting, construction and materials management, and historical data collection & analysis
- Creates an integrated view of the contract process throughout each phase
- Provides mobile solutions for the field
- Includes external access options
AASHTOWare Project – An Integrated Solution

Cost Estimation
Engineer’s Estimate
Proposal Preparation
Project Development
Bid Letting
Contract Award
Contractor Management
Civil Rights & Labor Management
Construction & Materials Management
Decision Support

aashtoware.org
AASHTOWare Project Licensees

- 50 agencies, including Washington D.C. and two Canadian provinces
- 35 agencies licensing construction/materials modules
AASHTOWare Project At MDOT

• MDOT uses AASHTOWare Project (AP) to manage and process virtually all aspects of Michigan’s road, bridge, airport, and railroad construction project life cycles
• The software is critical to MDOT carrying out its mission
• Current legacy AP systems utilize client/server based technology which is becoming obsolete
• Major endeavor in progress to replace existing client/server based systems with a web based system
## AASHTOWare Project Systems Used By MDOT

<table>
<thead>
<tr>
<th>Module</th>
<th>Stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAMS/DSS</td>
<td>Production</td>
</tr>
<tr>
<td>Bids</td>
<td>Production</td>
</tr>
<tr>
<td>Construction &amp; Materials</td>
<td>Licensing</td>
</tr>
<tr>
<td>Construction Administration</td>
<td>Production</td>
</tr>
<tr>
<td>FieldManager Suite</td>
<td>Production</td>
</tr>
<tr>
<td>FieldManager Bridge</td>
<td>Production</td>
</tr>
<tr>
<td>FieldNet</td>
<td>Production</td>
</tr>
<tr>
<td>Mobile Inspector</td>
<td>Production</td>
</tr>
<tr>
<td>SYNC Service</td>
<td>Production</td>
</tr>
<tr>
<td>Preconstruction</td>
<td>Production</td>
</tr>
<tr>
<td>Worksheet (SAPW)</td>
<td>Production</td>
</tr>
</tbody>
</table>
Transition Analysis Project

• MDOT conducted AP transition analysis project
• Purpose of project was to identify and examine the issues involved with migrating the client/server based legacy systems to the new web based system
• Project recommended to implement the web based system and retire the client/server predecessors
  – Consistent with State of Michigan’s strategic direction
  – Web based systems are industry standard with many advantages over c/s systems
  – New AP web based system also provides:
    • New and improved functionality in many areas
    • One - unified database
    • Single standard security model
## Legacy Systems / Replacement Modules

<table>
<thead>
<tr>
<th>Legacy System</th>
<th>AP Replacement Module</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Proposal and Estimates System (PES)</td>
<td>• Preconstruction</td>
</tr>
<tr>
<td>• Letting and Awards System (LAS)</td>
<td></td>
</tr>
<tr>
<td>• Worksheet (SAPW)</td>
<td></td>
</tr>
<tr>
<td>• FieldManager Software Suite</td>
<td>• Construction &amp; Materials</td>
</tr>
<tr>
<td>• FieldNet System</td>
<td></td>
</tr>
<tr>
<td>• Construction Administration System (CAS)</td>
<td></td>
</tr>
<tr>
<td>• Materials Testing System (SampleManager)</td>
<td></td>
</tr>
<tr>
<td>• Expedite</td>
<td>• Bids</td>
</tr>
<tr>
<td>• N/A</td>
<td>• Civil Rights &amp; Labor</td>
</tr>
<tr>
<td>• Decision Support System (BAMS/DSS)</td>
<td>• TBD</td>
</tr>
</tbody>
</table>
# Projects Needed To Move Forward With Web Software

<table>
<thead>
<tr>
<th>Project</th>
<th>Actual/Est. Begin Year</th>
<th>Actual/Est. End Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preconstruction Analysis/Preparation</td>
<td>2011</td>
<td>2014</td>
</tr>
<tr>
<td>Construction/Materials Development</td>
<td>2011</td>
<td>2014</td>
</tr>
<tr>
<td>Preconstruction Implementation</td>
<td>2013</td>
<td>2014</td>
</tr>
<tr>
<td>AASHTOWare Project 3.01 Development</td>
<td>2014</td>
<td>2016</td>
</tr>
<tr>
<td>Construction/Materials Analysis/Preparation</td>
<td>2015</td>
<td>2017</td>
</tr>
<tr>
<td>Construction/Materials Implementation</td>
<td>2016</td>
<td>2019</td>
</tr>
<tr>
<td>Civil Rights &amp; Labor / LCPTTracker Gap Analysis</td>
<td>2017</td>
<td>2018</td>
</tr>
<tr>
<td>Construction/Materials Analysis/Preparation – Phase II</td>
<td>2018</td>
<td>2019</td>
</tr>
<tr>
<td>Construction/Materials Implementation – Phase II</td>
<td>2019</td>
<td>2020</td>
</tr>
<tr>
<td>Civil Rights &amp; Labor Analysis/Preparation</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>Civil Rights &amp; Labor Implementation</td>
<td>TBD</td>
<td>TBD</td>
</tr>
</tbody>
</table>
Construction & Materials Module

- Construction & Materials contains all applicable functionality in FieldManager and CAS
- New user interface
- Includes significant amount of new functionality:
  - Electronic approvals
  - Historical reports
  - Ability to go paperless in many areas
  - Event notifications
Construction & Materials Module (cont)

• Improved/reengineered functionality in many areas including:
  – IDRs
  – Material approvals/usage
  – Stockpiles

• Interfaces with Mobile Inspector app

• Web based system will streamline and eliminate:
  – FieldNet
  – Sending read-only copies of contracts to contractors
  – Client software installs and upgrades
Construction/Materials Analysis/Preparation Project

- Conducted the analysis work and tasks required to prepare the Construction & Materials module for implementation
- Projected completed in Feb, 2017
- Work included:
  - Gap analysis between Construction/Materials and predecessor systems
  - Study on MDOT’s use of breakdowns
  - Configured software for MDOT’s business processes
  - Identified and applied customizations needed
  - Prepared software for external access
  - Developed and customized reports
  - Tested software in SOM environment
  - Developed business change management plan
Construction/Materials Implementation Project

• Implements Construction & Materials into production
• Project currently in progress
• Work includes:
  – User acceptance testing
  – Load/performance testing
  – Upgrade FieldManager/CAS interface systems to interface with Construction & Materials
  – Implement MSP/DNR solution that provides MDOT vehicles with internet access statewide
  – Execute business change management plan which includes:
    • Updated business processes
    • Policy and procedure changes
    • Communication campaign
    • Training program
  – Place software in production in accordance with implementation plan
Construction & Materials Implementation Plan

- Goal is to minimize risk and disruption to user community as much as possible
- Implements in stages:
  - Stage 1: Limited Production
    - Currently scheduled for 10-1-17 to 8-31-18
  - Stage 2: Transition To Full Production For All New Contracts
    - Currently scheduled for 9-1-18 to 9-30-19
  - Stage 3: Migrate Remaining FieldManager/CAS Contracts to Construction & Materials
  - Stage 4: FieldManager Archived Contracts
  - Stage 5: Decommission FieldManager, FieldNet, CAS
Construction & Materials Implementation Impact

• Will use standardized AASHTO terminology as much as possible - changes include:
  – Contract Modification -> Change Order
  – Construction Pay Estimate Report -> Payment Estimate For Contractor
  – Contractor’s Performance Evaluation -> Contractor Evaluation

• Consultants will not have to pay license fees

• Training is still TBD
Construction & Materials Impact To Contractors

- Contractors will **not** have to pay license fees
- Authorized contractor staff will receive Login ID
- Contractors will have real time read-only access to reports & screens with information currently in FieldManager
- Eliminates receiving read-only copies of contracts via FieldNet
- Change Order (Cont. Mod.) approvals will be done in Construction & Materials
  - Contractor firms will need to specify staff authorized to approve Change Orders
- Training is still TBD
Construction & Materials Use For Non-MDOT Contracts

• State of Michigan will host Construction & Materials software for MDOT let contracts only
• FieldManager will continue to be available for non-MDOT let contracts for awhile after MDOT has implemented Construction & Materials
• Potential tools that could be used after FieldManager is no longer available
  – Michigan Tech’s Michigan Engineers’ Resource Library (MERL) software
    • See http://merl.michiganltap.org/about for information
  – Various third party tools are also available
Questions?