

Pennsylvania Asphalt Improvement Network (PASIN)

August 11, 2010

In 2004, PennDOT targeted a goal to develop, pilot, and implement an ISO 9000-2000 based Quality Management System (QMS) for asphalt pavement from pavement design through qualification, procurement, manufacture, delivery of materials, installation, acceptance testing, and maintenance.

A multidiscipline team involving representatives of the PA Department of Transportation, PA Asphalt Pavement Association, PA Aggregate and Concrete Association, Federal Highway Administration, AASHTO Materials Reference Laboratory, PA Turnpike Commission, American Council of Engineering Companies and NECEPT participated on the core team and subcommittees. A baseline assessment of the status of management practices in the industry was conducted and a QMS for asphalt pavements was developed.

The construction portion of this system was successfully piloted in two projects in 2007 following individual gap assessments 6 industry participant companies. Further pilots were constructed in 2008, and utilizing the lessons learned from the first round of pilots the implementation process improved. Templates were provided for documentation and corrective action systems. Metrics were collected to indicate the consistency of quality management processes.

In 2009, an additional pilot project was conducted linking acceptance through warranty specifications to applying the PASIN QMS. The contractor monitored their quality control closely while successfully applying the key principals within their organization. The contractor communicated marked improvement in communication, quality control, ride quality and productivity.

At the executive level, the Pennsylvania Asphalt Pavement Association (PAPA) has determined that the effort is better served as a company-wide approach versus pilot projects. The PASIN team is working with the industry to develop sessions to further this transition.

A business case demonstrating the expected quality improvement from standard specifications encouraging company wide applications of the key principals of an ISO style quality management system was presented to the executive team of PennDOT and FHWA.

The group has proposed to develop an acceptance process that utilizes the contractor's QC results with Department verification, and intend to require enhanced quality control efforts following the requirements of PASIN. Other states currently have FHWA approved specifications that are based on contractor QC results, but none require additional quality control or a QMS structure.

The project design portion of the QMS can be linked to the Standard Operating Procedure (SOP) effort being developed by a consultant to the Bureau of Design (BOD). The maintenance portion of the QMS will need to be linked with the efforts of the departments Pavement Management Strategy development to set the proper cycle maintenance processes and best practices into motion. The PASIN Core Team has communicated with these groups to encourage alignment of the efforts.

Lastly, the Department will need to evaluate the potential of applying a supply line QMS to other aspects of highway and bridge design, construction and maintenance.

* The PASIN Core Team will develop a Skeleton Template based on the outcomes of the PASIN effort to guide future groups in such an endeavor.

Key principals to a Quality Management System

- 1 Control of Documents
- 2 Control of Quality Records
- 3 Control of Nonconforming Product
- 4 Customer Complaints
- 5 Corrective and Preventative Actions
- 6 Internal Audit
- 7 Management Review
- 8 External Audits

TEAM MEMBERS

□ Core Team

Co-leader: George McAuley (10-0) and Bill Gordon (BOCM, retired)

Facilitators: Steve Marsinko (12-0) and Paul Reed (Business Review and Results Office)

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