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BERKELEY, CA 6-12 JULY 2020

28th ANNUAL CONFERENCE OF THE
INTERNATIONAL GROUP FOR LEAN CONSTRUCTION

Lean Construction Quality Assurance Opportunities In Highway Construction

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Agenda



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- Quality assurance in highway construction
- Components of QA procedures
- Survey design
- Analysis of data and results
- Concluding comments

Quality Assurance in Highway Construction



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- Value of US transportation infrastructure
- QA program in highway construction
- Applications of lean principles in highway construction QA program

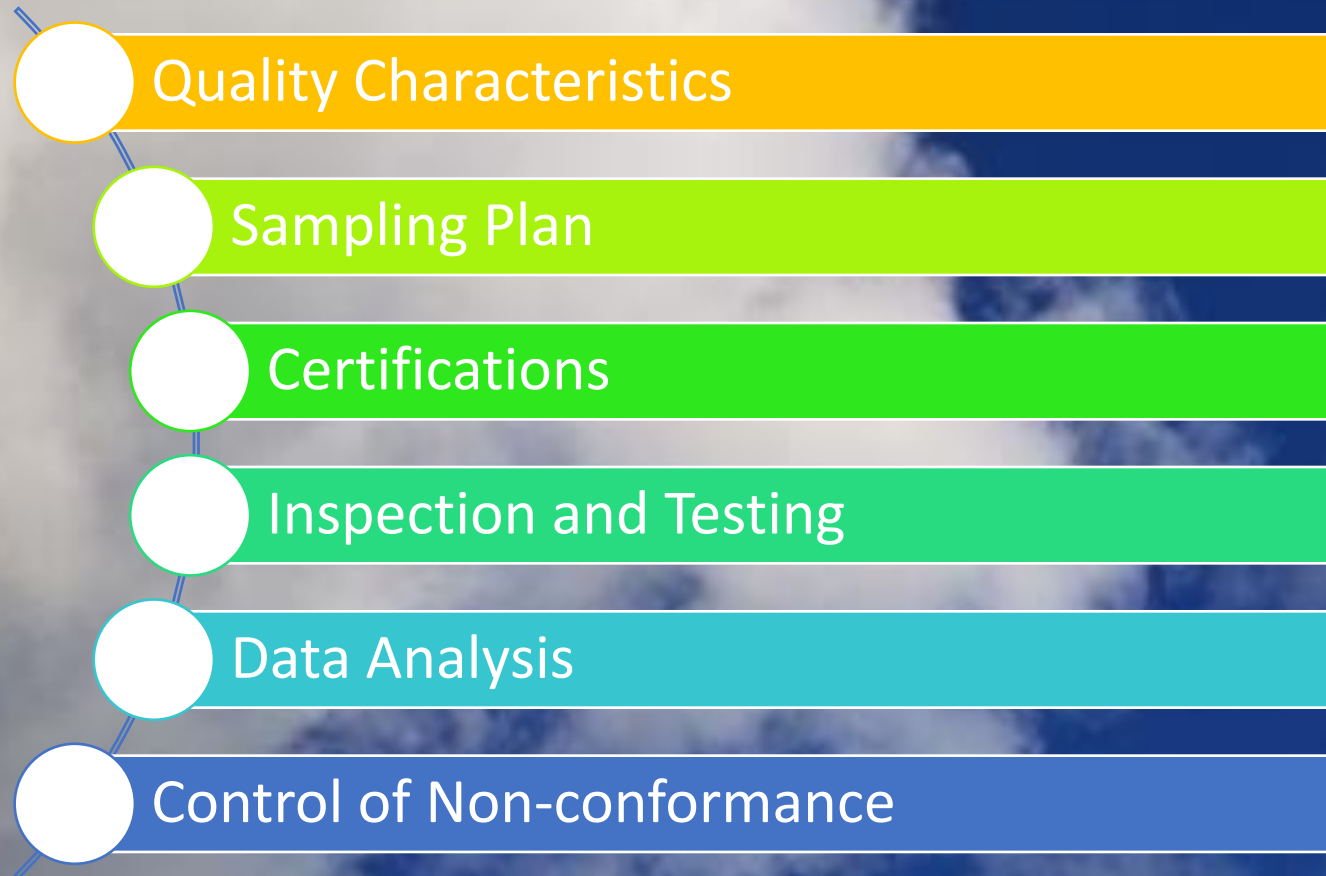
Components of QA Procedures



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Survey Design

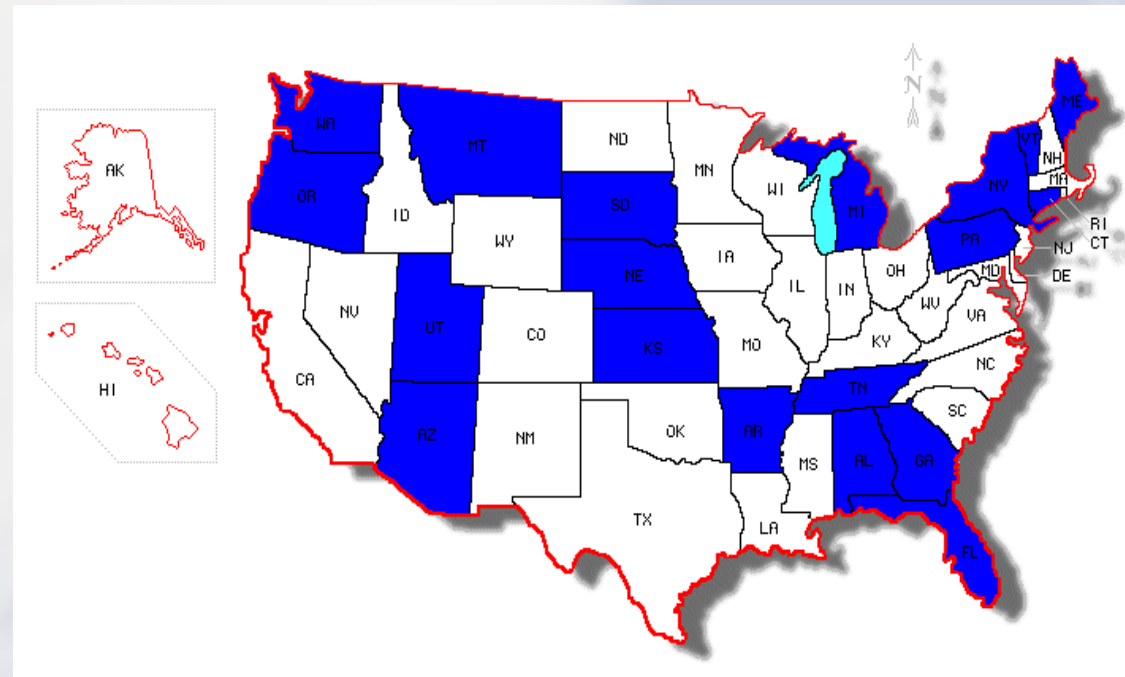


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- An online survey and interviews with STAs' quality assurance managers



Data Analysis and Results

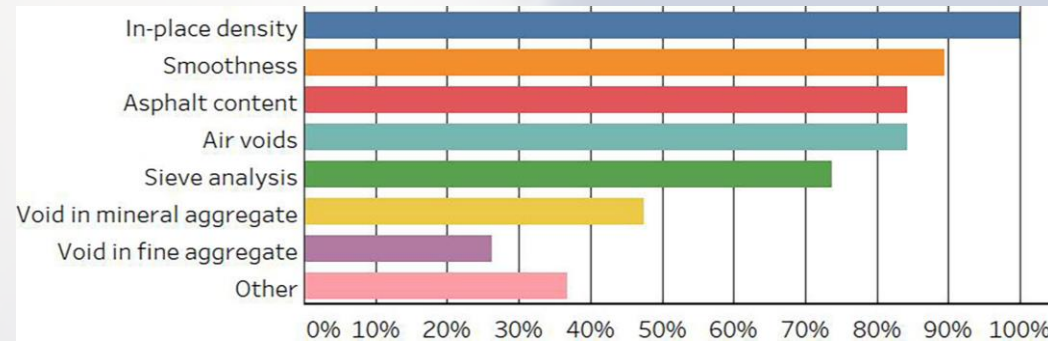


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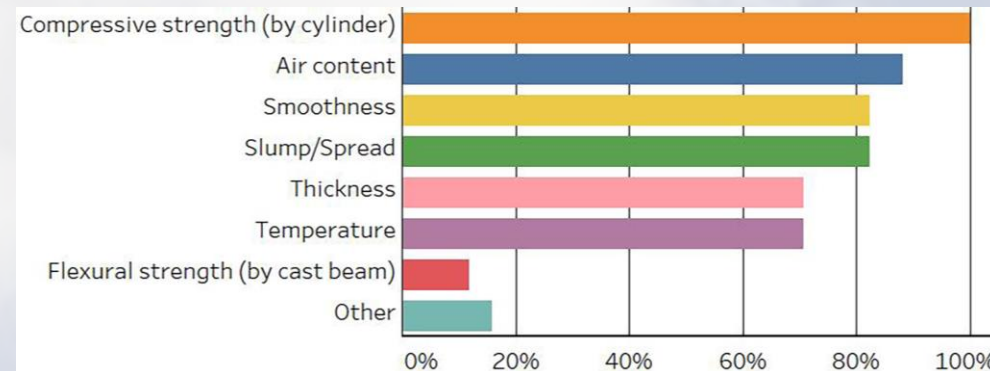
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- HMA



- PCCP



Data Analysis and Results



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- Failure Statistics in Acceptance Testing



Data Analysis and Results

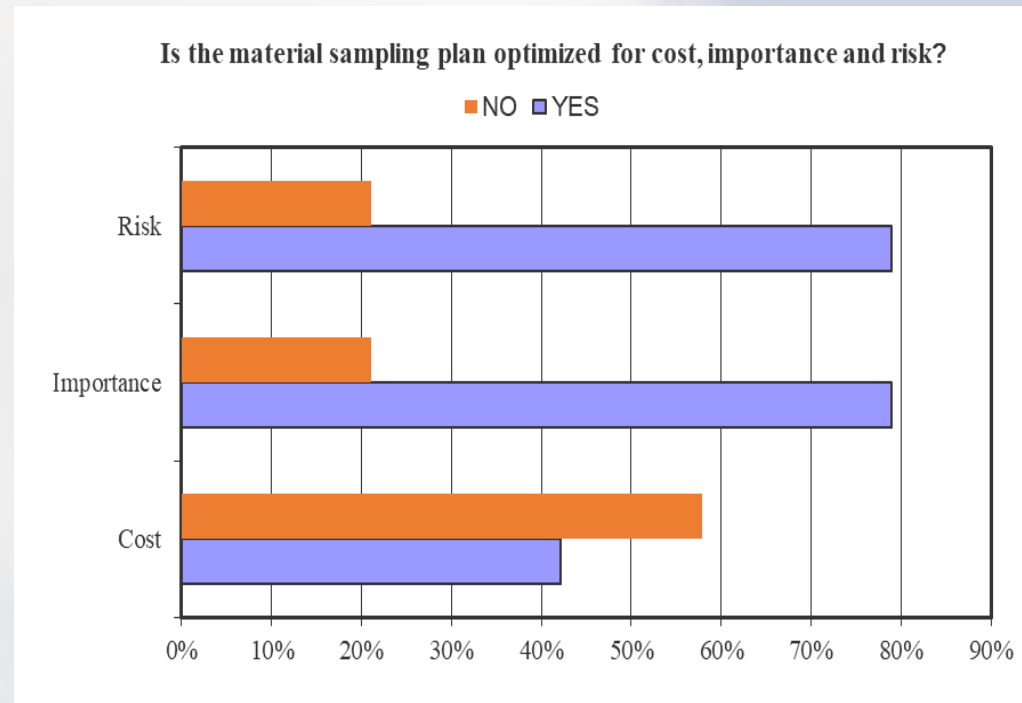


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- Optimization of Material Testing Plan



Data Analysis and Results

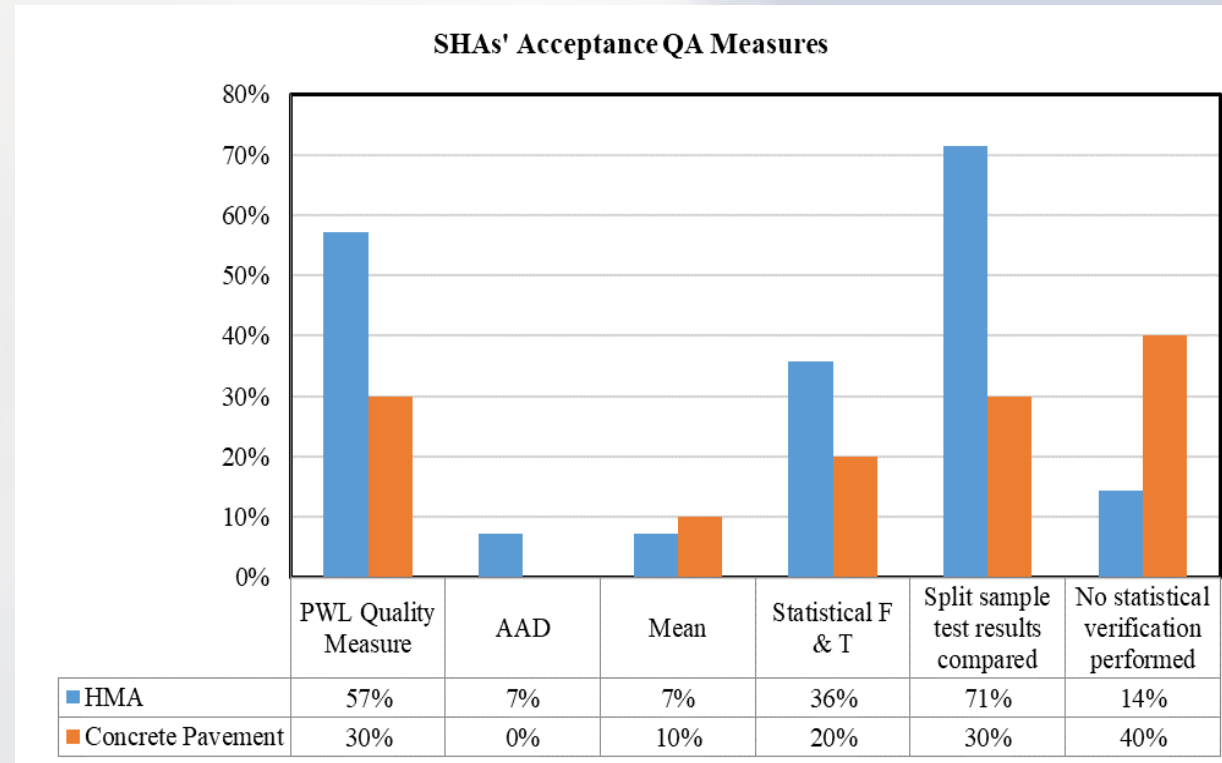


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- QA Acceptance Measures



Data Analysis and Results



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- Use of Innovative Quality Assurance test methods
 - About 58% of SHAs responded that they use innovative quality assurance test methods to reduce cost, save time, or produce more accurate results



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Data Analysis and Results

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Data Analysis and Results



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- Review of QA Procedures
 - Most SHAs (65%) responded that their review frequencies vary and are typically conducted on an as needed basis
 - Failure to review QA practices routinely can be deemed as a wasted opportunity as new technologies can be introduced which may conduct rapid data collection making old practice wasteful

Data Analysis and Results



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- A Framework To Implement Lean Principle In QA





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Conclusions

- Successful implementation of lean construction principles in QA program can cut costs, reduce construction and increase productivity

Questions?



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Thank you