

# Robert M. Henderson

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## PROFESSIONAL SUMMARY

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Detailed Asphalt Laboratory Technician with over 10 years of experience in high volume production environments. Proven expert in AASHTO and ASTM testing protocols, with a track record of reducing material waste by 12% through precise mix adjustments. Dedicated to maintaining 100% compliance with state DOT safety and quality regulations.

## WORK EXPERIENCE

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### **Senior Quality Control Technician | Lone Star Paving Group | Houston, TX**

*May 2018 - Present*

- Spearheaded the Marshall and Superpave mix design programs, resulting in a 14% increase in pavement durability across 50+ local municipal projects.
- Oversaw daily quality control for three asphalt plants producing over 1 million tons of mix annually.
- Reduced laboratory operational costs by \$25,000 per year by implementing a rigorous preventative maintenance schedule for testing equipment.
- Managed a team of 4 junior technicians, providing mentorship that led to all members achieving high-level state certifications within 12 months.
- Resolved critical mix segregation issues at a major airport runway project, preventing a potential \$200k rework penalty.

### **Materials Laboratory Technician | Texas Department of Transportation (TxDOT) | Austin, TX**

*Aug 2012 - Apr 2018*

- Performed over 2,000 independent compliance audits on private contractors to ensure adherence to state road construction specifications.
- Conducted advanced binder testing using Dynamic Shear Rheometers to evaluate high-temperature performance of modified asphalts.
- Achieved 100% accuracy in annual AMRL proficiency testing cycles for six consecutive years.
- Authored 150+ technical reports documenting material failures and proposing engineering solutions for district managers.
- Verified aggregate quality from 12 separate quarries, ensuring all raw materials met strict hardness and absorption criteria.

### **Asphalt Plant Technician | Vulcan Materials Company | San Antonio, TX**

*Jun 2009 - Jul 2012*

- Optimized hot-mix asphalt formulas that reduced liquid asphalt cement consumption by 3% while maintaining all structural parameters.
- Facilitated the transition to Warm Mix Asphalt (WMA) technology, reducing plant fuel consumption by 11%.
- Monitored moisture levels in aggregate stockpiles daily to adjust plant burner settings, improving thermal efficiency.
- Conducted on-site density testing using nuclear gauges for residential paving projects.

## EDUCATION

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### **Texas A&M University | Bachelor of Science | Civil Engineering Technology**

*Aug 2005 - May 2009*

### **Austin Community College | Associate of Applied Science | Construction Management**

*Aug 2003 - May 2005*

## SKILLS

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AASHTO / ASTM Standards, Superpave Mix Design, Marshall Stability Testing, Binder Rheology, Aggregate Gradation, Equipment Calibration, Quality Control (QC), Data Analysis, Statistical Process Control, MS Excel & Laboratory Information Systems (LIMS), Site Troubleshooting, Project Management, Safety Compliance (OSHA), Technical Reporting, Contractor Relations

## CERTIFICATIONS

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HMA Plant Production Specialist | NAPA (2020)  
Level 1A Asphalt Plant Technician | TxDOT (2010)

## LANGUAGES

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English (Native)  
Spanish (Professional Working Proficiency)

## ACTIVITIES

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### **NAPA Annual Convention**

Regular attendee and contributor to technical sessions regarding sustainable paving materials.

### **ASCE Roadway Innovation Committee**

Volunteer member providing insights on material testing for urban infrastructure developments.