

Partners of Iowa DOT:

A Long History of Collaboration & Innovation

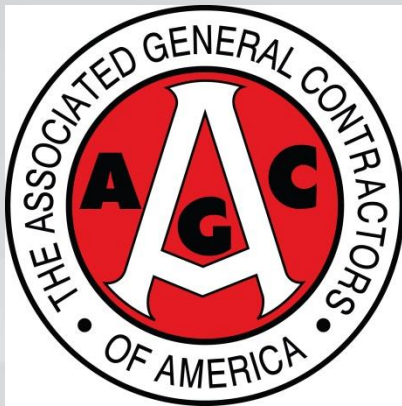
Nicole Fox, P.E.

Iowa DOT – Secondary Roads Engineer

NACo Peer Exchange

May 12, 2016

A Long History of Collaboration & Innovation



- Universities in Iowa

Beginnings: 1904-1920



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Iowa State College Surveying Class, circa 1891



Beginnings: 1904-1920



Anson Marston, First Iowa
Highway Commissioner



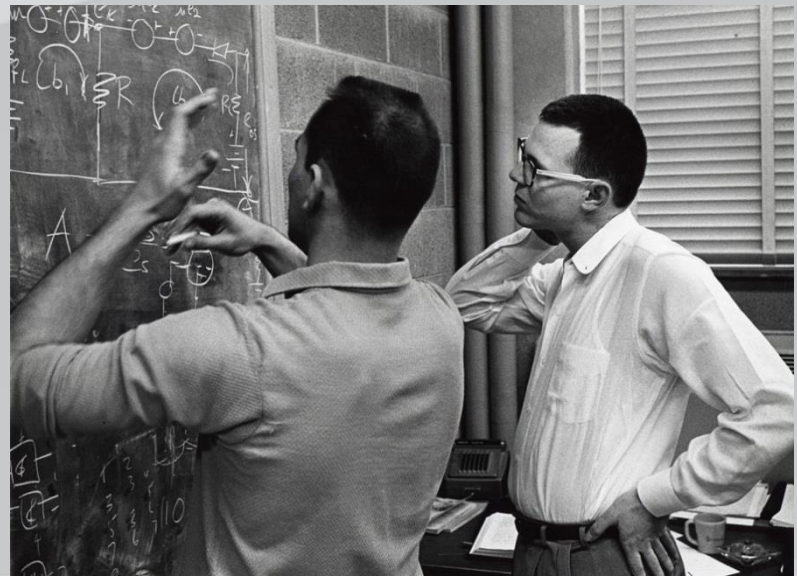
Thomas H. MacDonald,
Iowa's First Chief Highway
Engineer



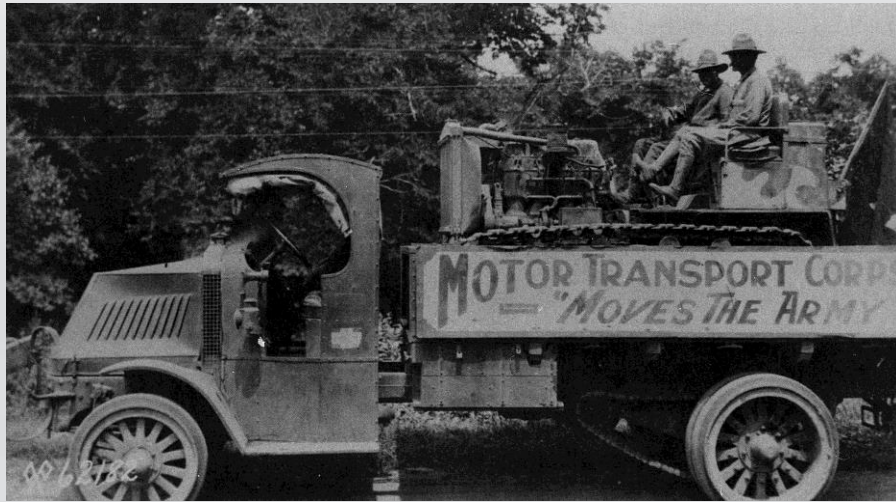
A Long History of Innovation



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A Long History of Innovation



Gaining Ground: 1920-1939



The Slip-Form Paver

Problem:

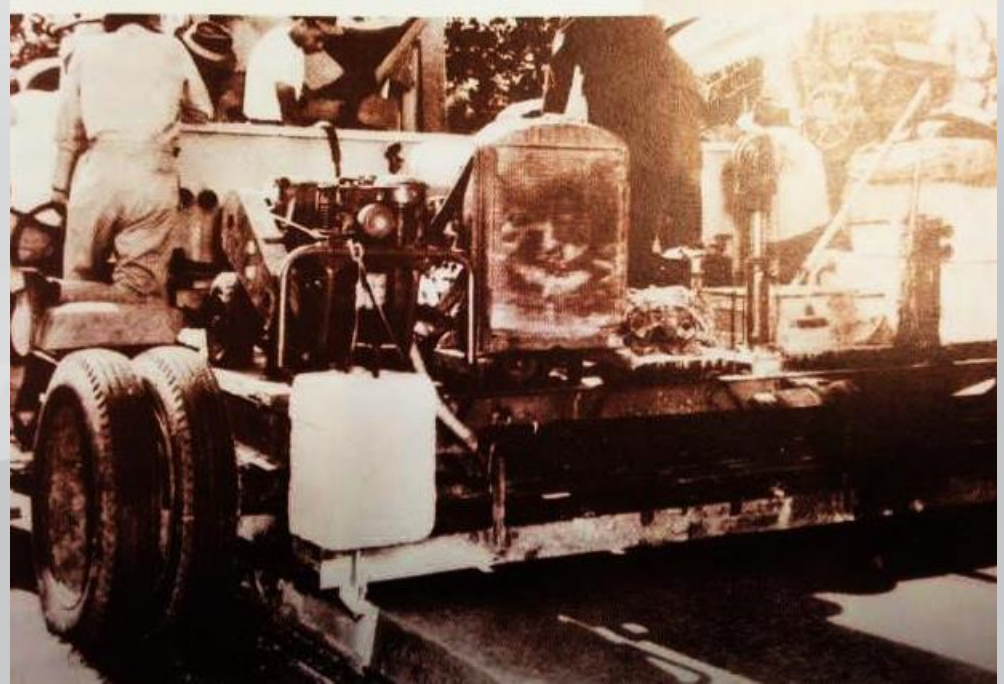
- Slow, time-consuming paving process

Research:

- Use of machinery to expedite and improve the process
- Use of vibration to settle the mixture
- Higher

Outcome & Implementation:

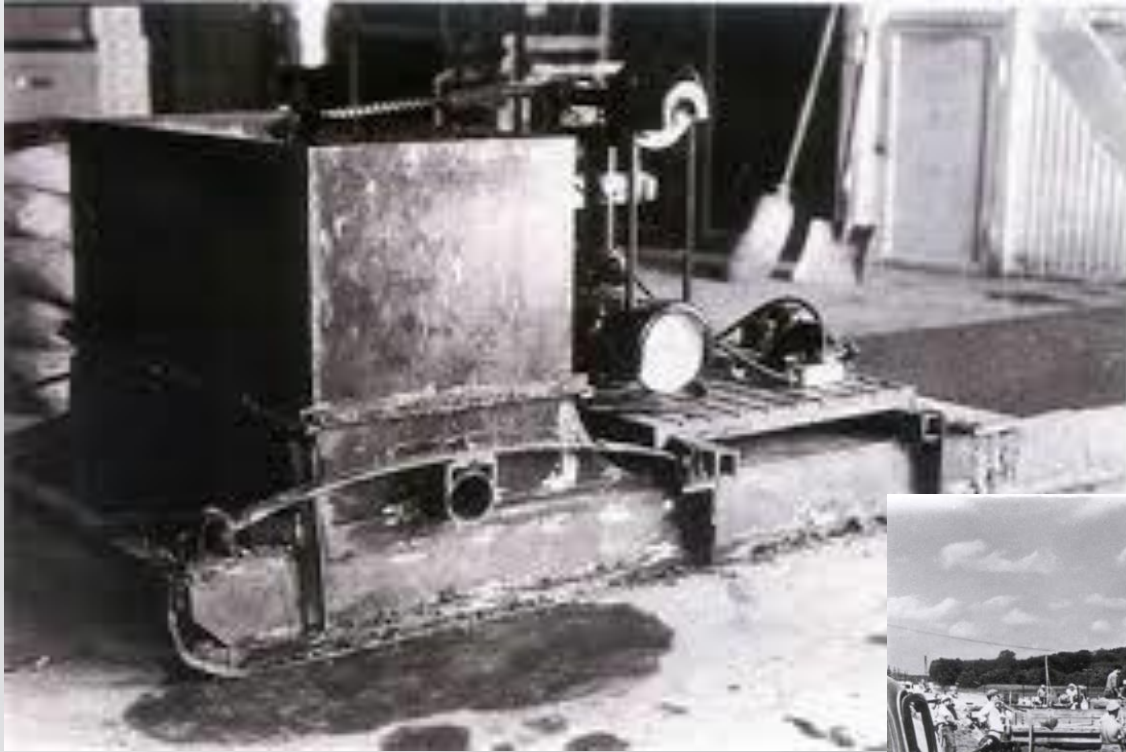
- Expedited paving process
- Set industry standard
- Implemented nationally



Slip-form paver, circa 1949



The Slip-Form Paver



Iowa DOT Game Changers

Past, Present & Future

- Portland Cement Concrete Pavements
- Bridges & Structures
 - Bridge Standard Designs
 - UHPC
- Transportation Safety
- Winter Maintenance



H24-06 THREE SPAN
PRETENSIONED PRESTRESSED
CONCRETE BEAM BRIDGE STANDARDS



Iowa DOT Game Changers

PCC Pavements



Iowa DOT Game Changers

Bridges & Structures – Launched Bridge



Iowa DOT Game Changers

Bridges & Structures – Accelerated Bridge Construction



Iowa DOT Game Changers

Bridges & Structures – GRS Abutments & UHPC



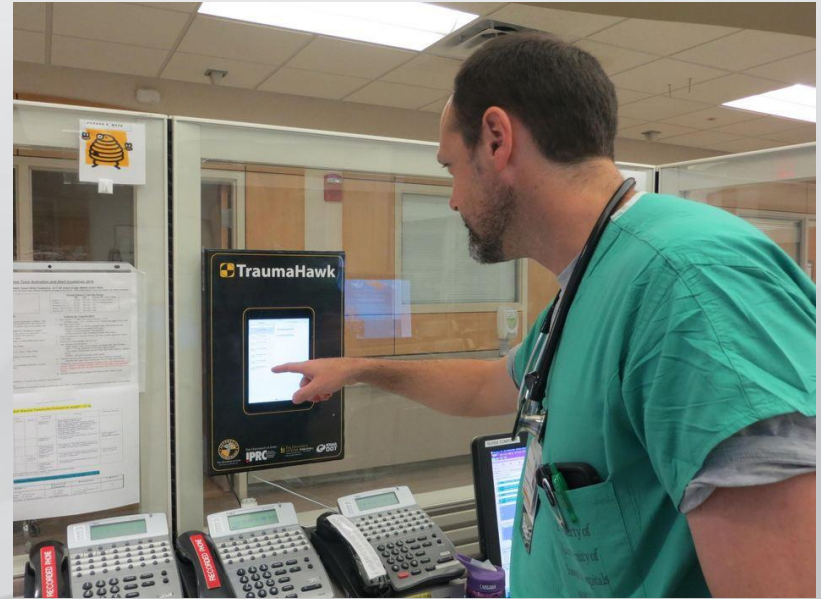
Iowa DOT Game Changers

Safety & Human Factors



Iowa DOT Game Changers

Safety & Human Factors



Carrying On the Legacy



Thank You

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