



# High School Outreach Program

Reaching the future workforce in Iowa's Concrete Industry



Welcome to the ConcreteState Learning Module



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Crushing limestone (and other minerals)

Mining raw limestone (and other minerals)

Cooling clinker

Deliver cement to ready mix plant

Heating the ground limestone (and other minerals) with additive mixture to create clinker

Mix cement with gravels, sand, water creating concrete

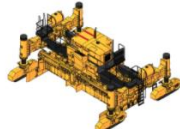
Grinding clinker, creating cement

Deliver concrete to jobsite



### Iowa Concrete Module

A closer look at the Concrete Industry in Iowa



Gomaco GP4

Five of the most advanced slipform pavers



Gurtert Paver S1500



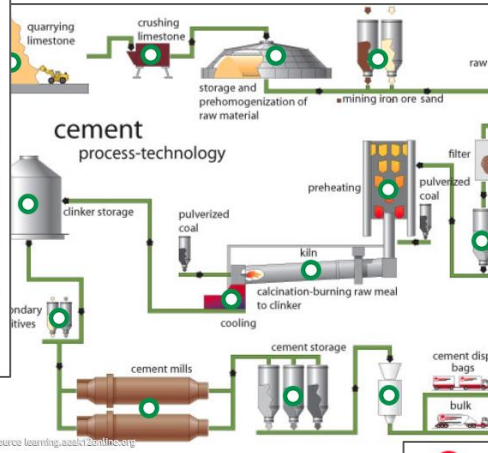
Wirtgen SP 1600



CMI Roadbuilding Autopave SF-6



Power Paver SF-3000



Source: learning.ass21.com/ia.org

Licensed Truck Drivers  
High school diploma or equivalent & Class A or B Commercial Drivers License with Air Brakes Endorsement

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Quality Control Inspector & Tester

High school diploma or equivalent, Associates Degree preferred, Certifications may also be required

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Large Equipment Operators  
High school diploma or equivalent

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Sales  
High school diploma or equivalent, Also requires extensive concrete knowledge

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#### THE PROBLEM

Wind Turbine size is currently constrained by transportation limitations



THE HEXCRETE TOWER

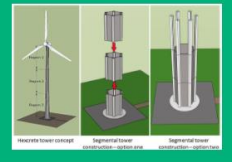


#### THE SOLUTION

Concrete panels can be built on site (or prefabricated and delivered on site) for assembly.

#### OTHER BENEFITS

- Modularized Construction
- Optional disassembly and reassembly
- Increased Safety
- Increased structure flexibility
- Increasing Tower Lifespan (from 25 to 60 years)



2011 IMPRESSIVE INTERSTATE REPLACEMENT

Towa DOT replaces 6 miles of I-680 in 94 days

www.towaindustries.com

1-888-emergency-replacements-due-to-flooding

Concrete is 43,000 jobs

Iowa is the National Leader in Concrete Overlays

> 30 Iowa Paving Contractors

Cement Manufacturing Plants

Over 200 Iowa Ready Mixed Concrete Plants

one in every county

Iowa Concrete Related Industry Contributes over \$2,200,000,000 annually to the Economy

Iowa Research Develops Concrete Technology

Iowa DOT Selects Concrete in 90% of Projects

Iowa Cement Terminals

Delivery Storage Assembling Mixing & Delivery Information

(mouse over the image and dots to learn more about the steps)

Made with thinglink. LEARN MORE

Move to the next page to learn more about the difference

STUDENT  
*personalized*  
AEA  
LEARNING SYSTEM

## Teachers

10

4 (Ames, Bondurant-Farrar, Spencer, Waukee)

"module is really good for students"

"a lot of work went into this, nice job!"

"I found the history portion to be something that I will use in the future more as it gives the kids a feeling for how concrete has evolved over the years and also the possibilities of different careers"

## Students

33 students (6-12)



88%

"It was a good learning experience"

"Very interactive and easy to pay attention to"

"I really liked how I could go at my own rate and get the information that I needed to learn."



Welcome to the ConcreteState Learning Module

- Internships
- Extended Workplace Experiences
- OSHA
- Cement Trucking
- Safety working cement
- Using Finishing Tools

