

The National Ready Mixed Concrete Association

The only national association representing the ready mixed concrete industry

**Prepared Virginia Ready Mixed Concrete Association
September 2017**





Ready Mixed Concrete Industry Data Report

A benchmarking tool for planning, evaluating and directing
the financial activities of your organization.

2017 Edition
(2016 data)

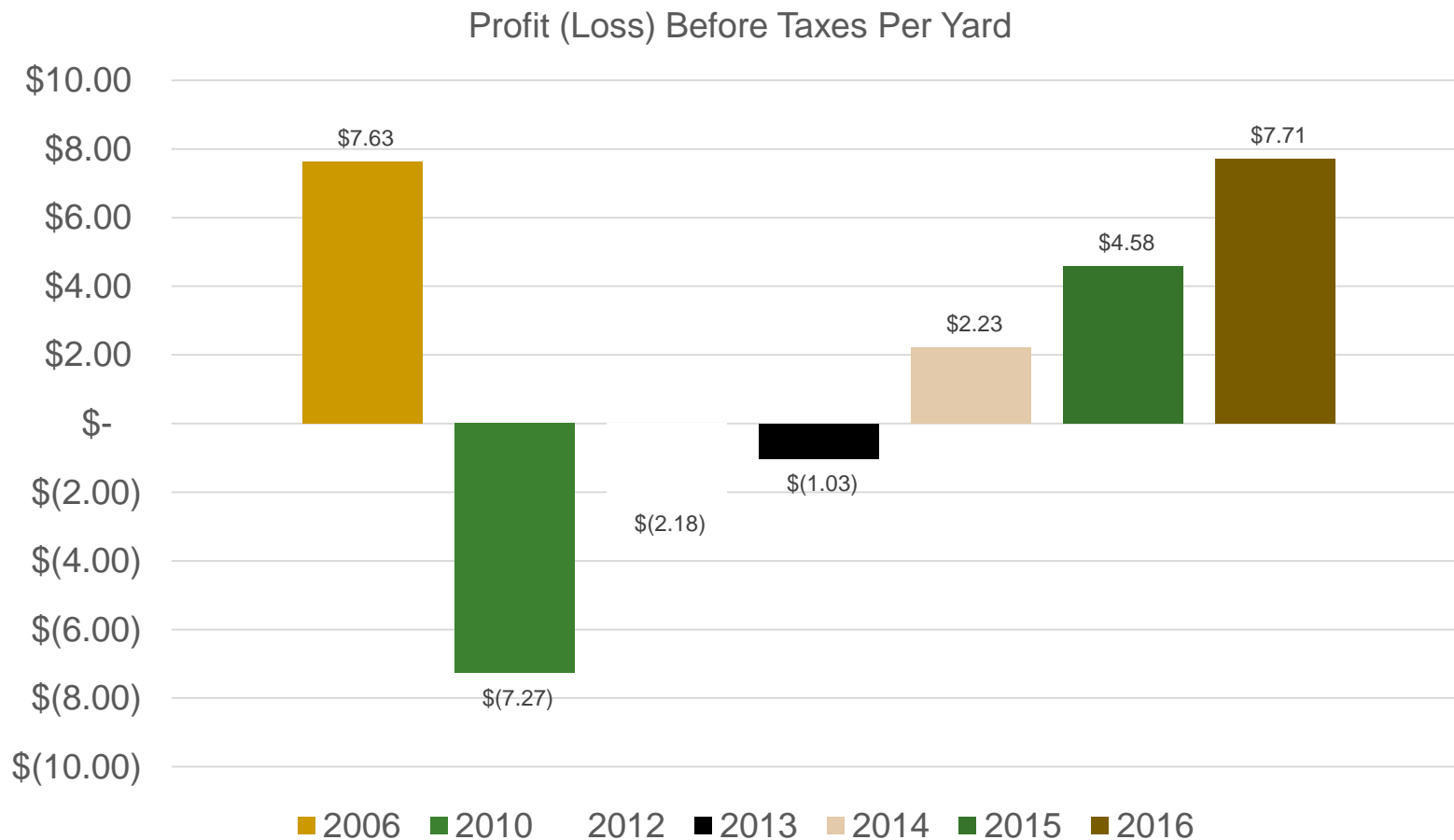
Prepared by:
T & F Certified Public Accountants LLC

2017 Survey
(2016 DATA)

187 Companies

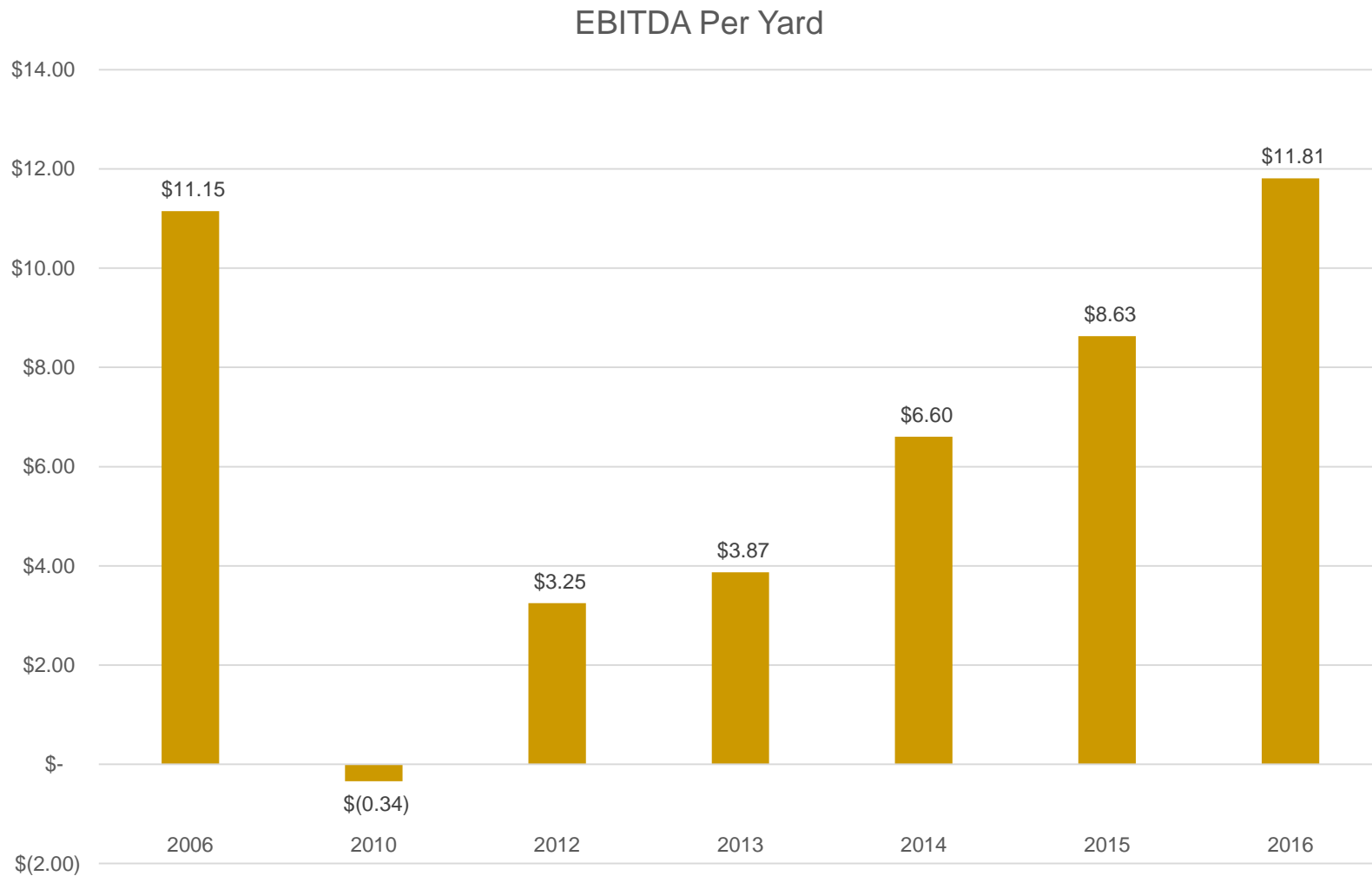
34% of US Ready
Mixed Concrete
Production

Producers' Profitability Continues to Grow

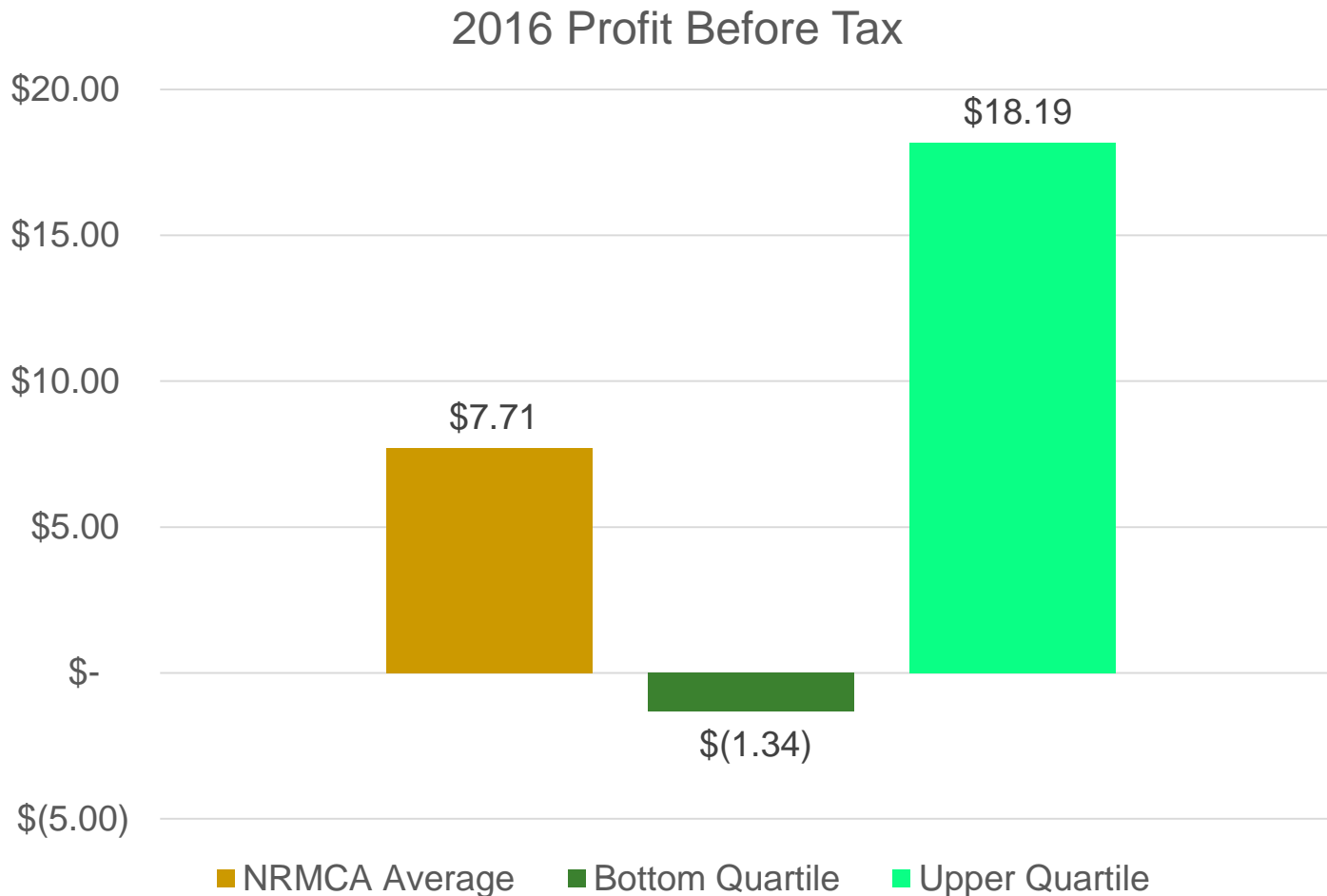


The average participant made \$7.71 per yard in 2016 before taxes

Producers' Profitability Continues to Grow



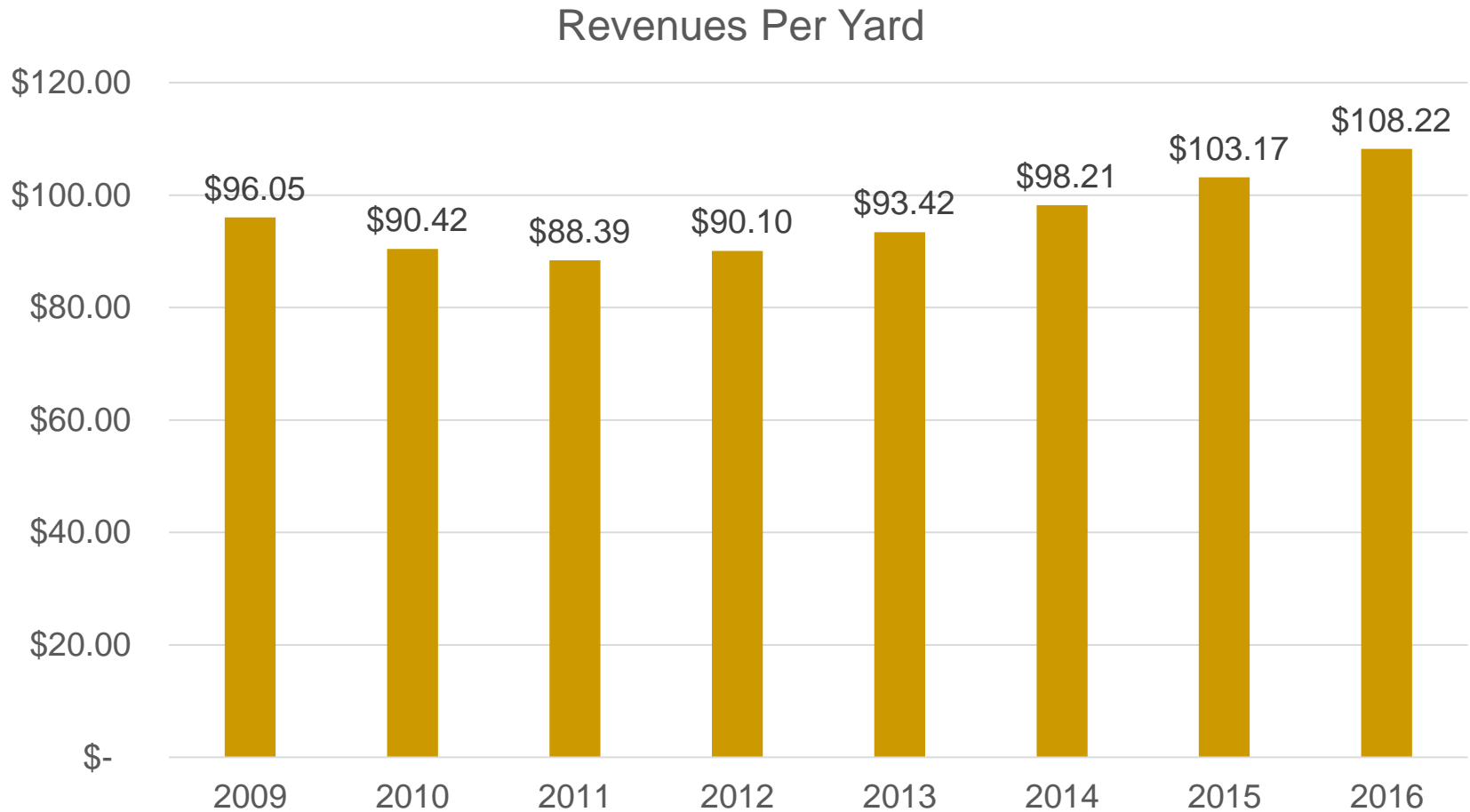
Not everyone is average



The gap in profitability between the bottom and top quartile of \$19.53 per yard decreased by \$2.54 from 2015.

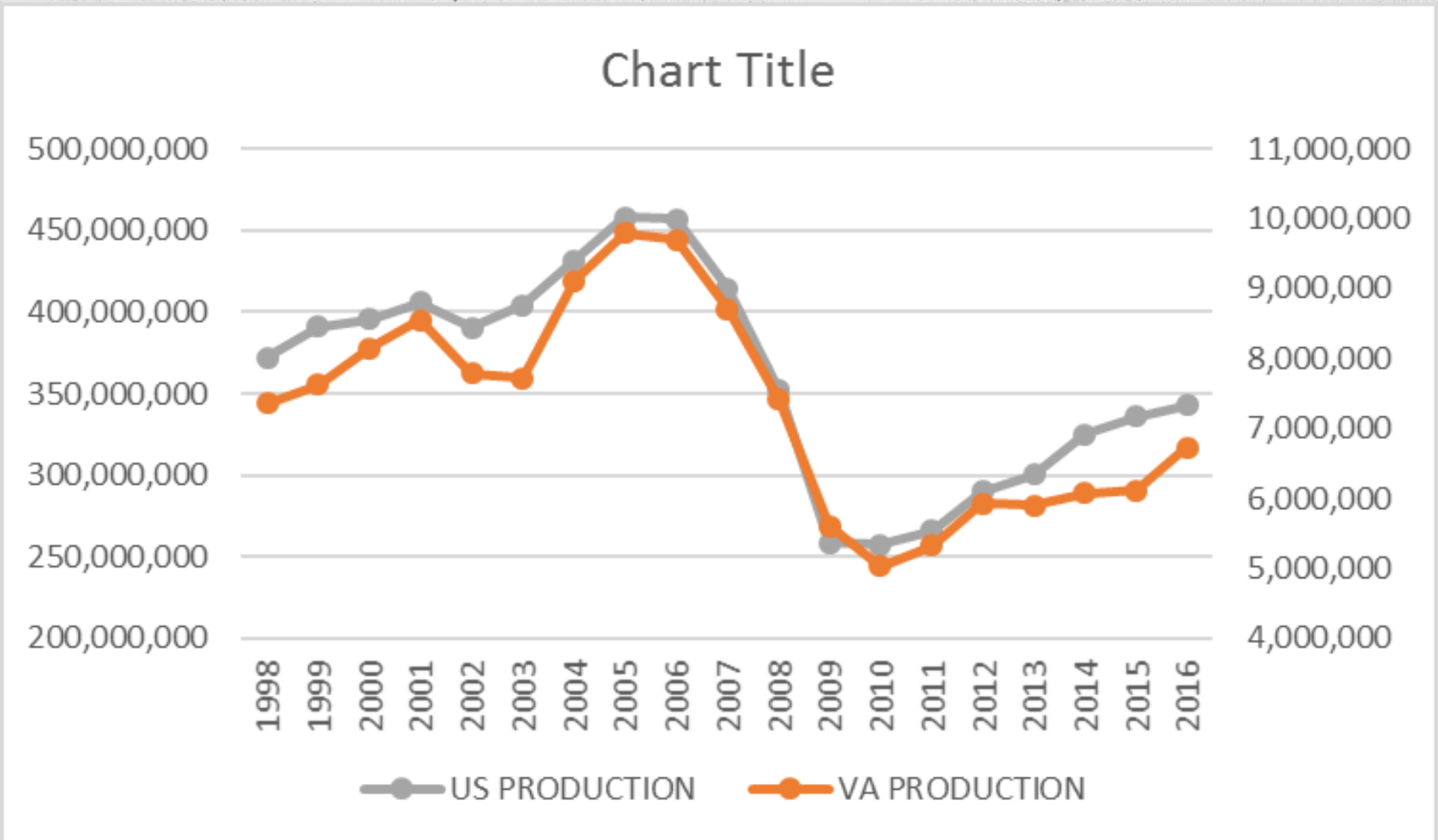
The top quartile was significantly more profitable

Trends – top line revenues



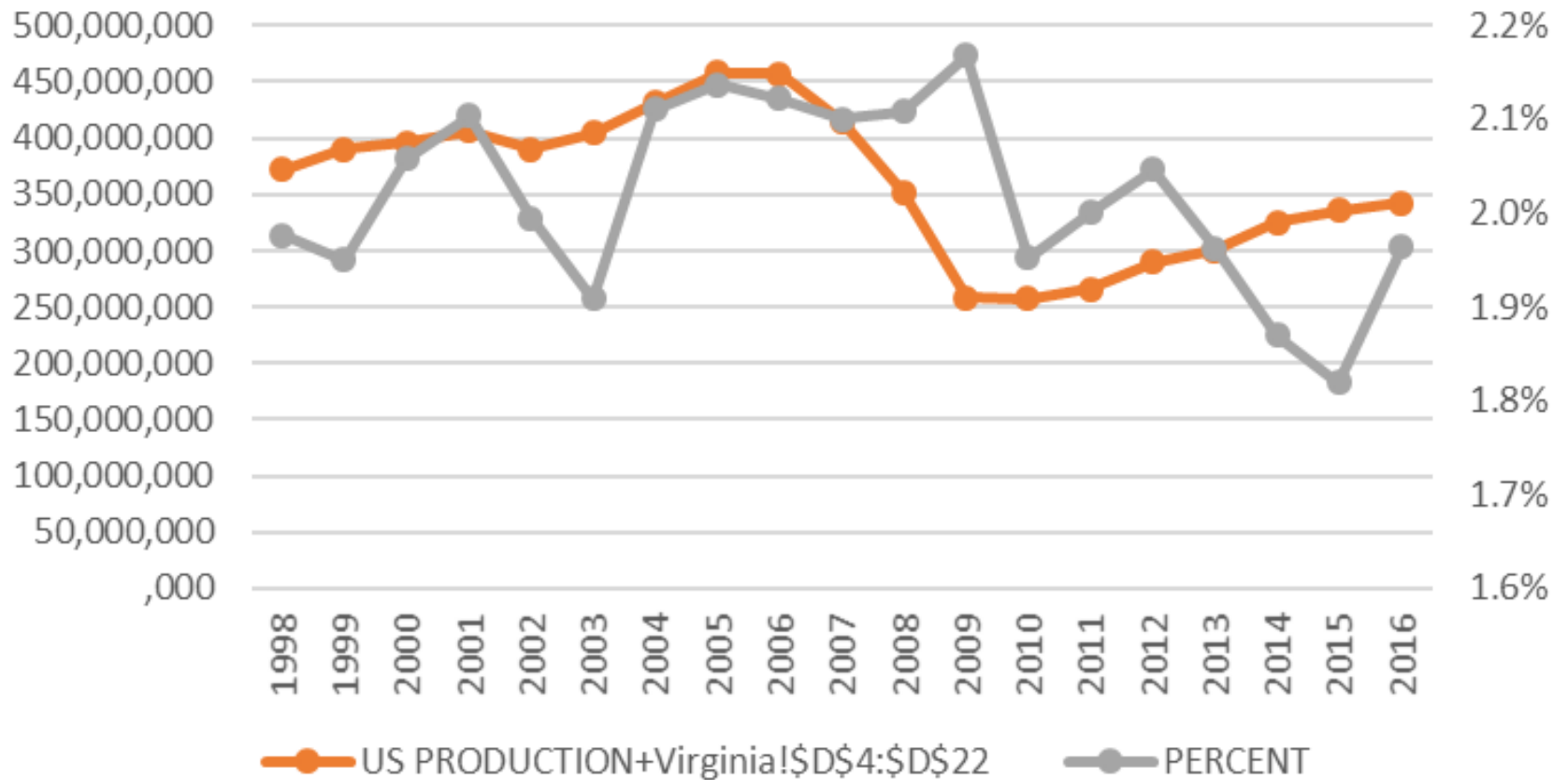
Revenue per yard up 12.7% since 2009

U.S. vs. VA Production

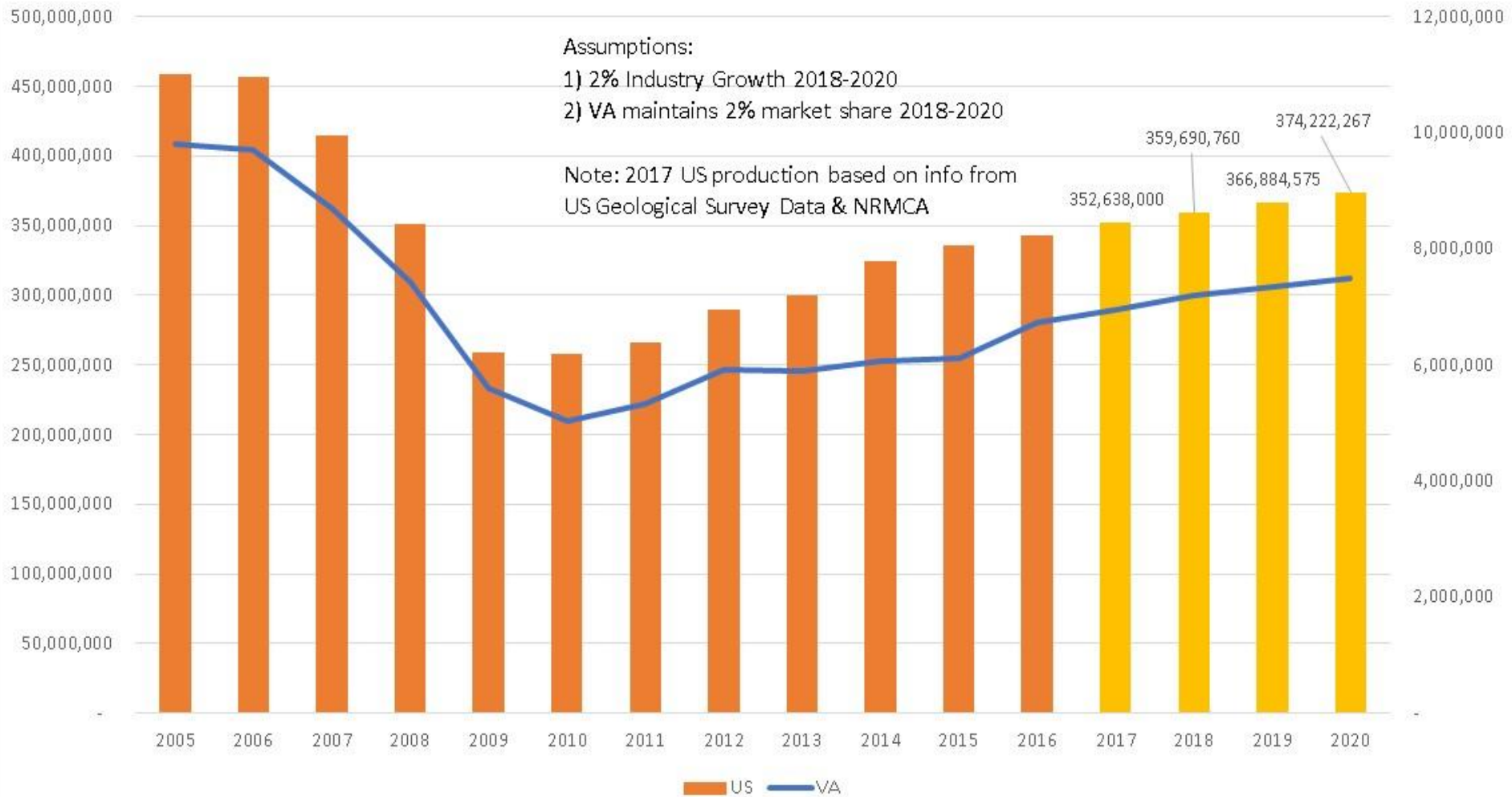


Per Capita Use

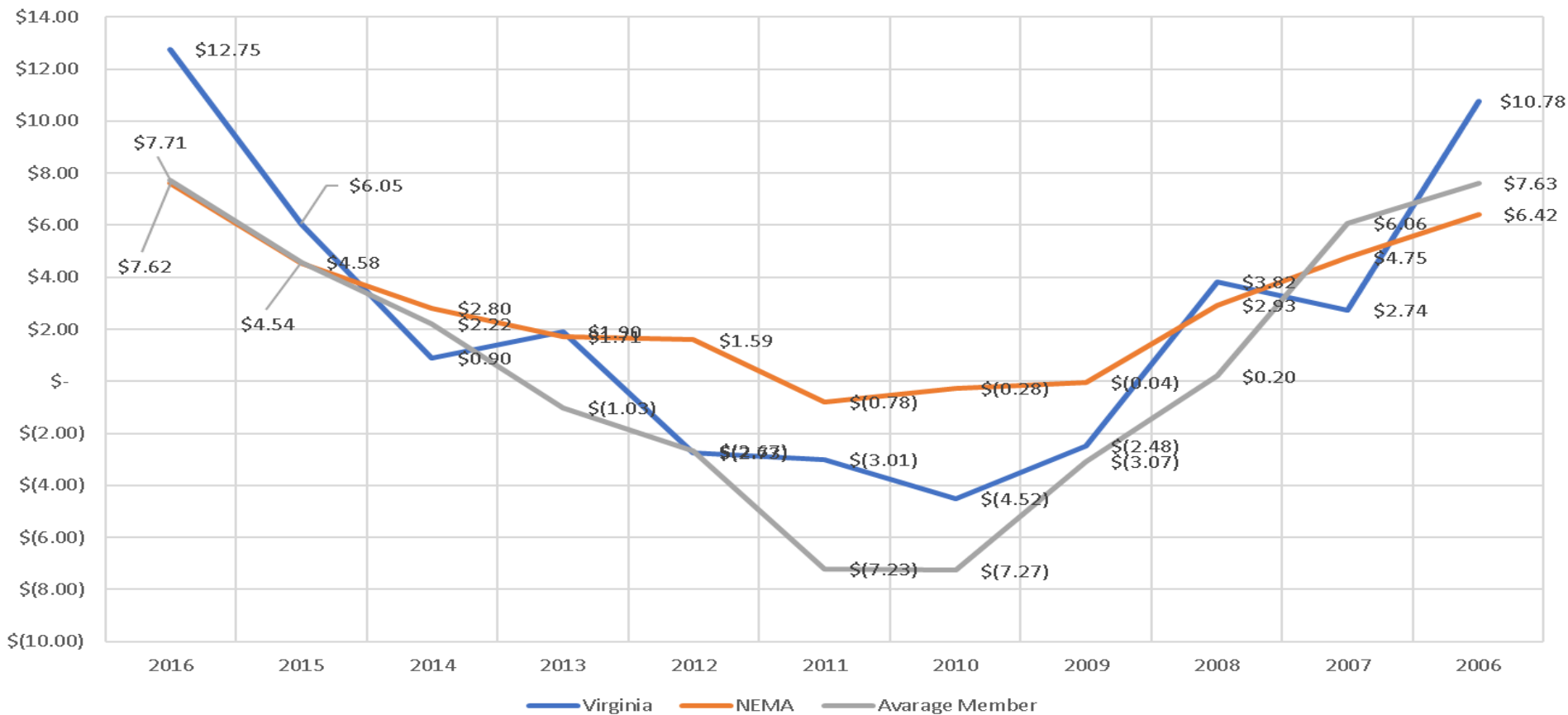
Chart Title



Virginia vs. US Production 2005 - 2020



Profit (Loss) Before Taxes



	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
Virginia	\$ 12.75	\$ 6.05	\$ 0.90	\$ 1.90	\$ (2.73)	\$ (3.01)	\$ (4.52)	\$ (2.48)	\$ 3.82	\$ 2.74	\$ 10.78
NEMA	\$ 7.62	\$ 4.54	\$ 2.80	\$ 1.71	\$ 1.59	\$ (0.78)	\$ (0.28)	\$ (0.04)	\$ 2.93	\$ 4.75	\$ 6.42
Average Member	\$ 7.71	\$ 4.58	\$ 2.22	\$ (1.03)	\$ (2.67)	\$ (7.23)	\$ (7.27)	\$ (3.07)	\$ 0.20	\$ 6.06	\$ 7.63

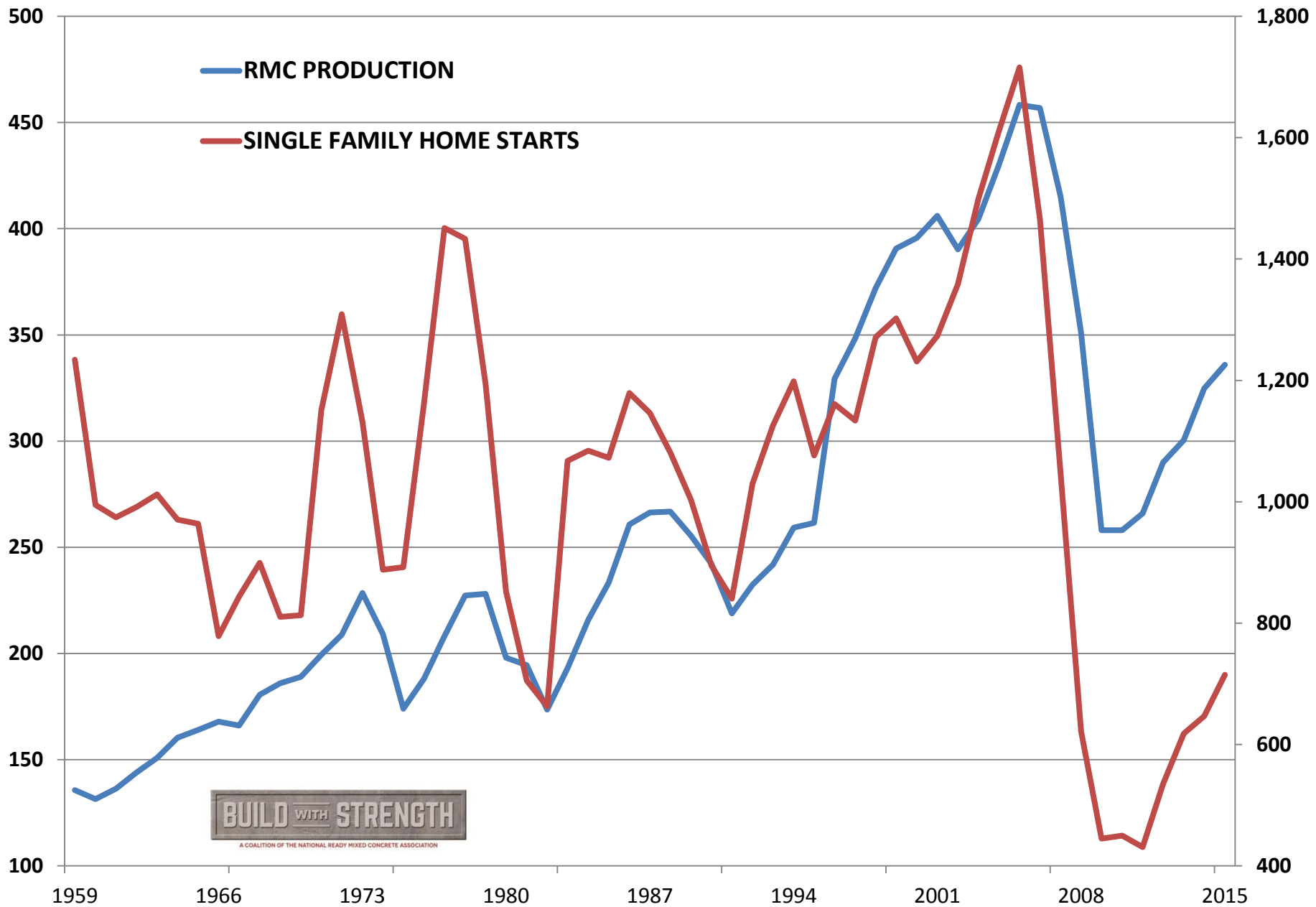


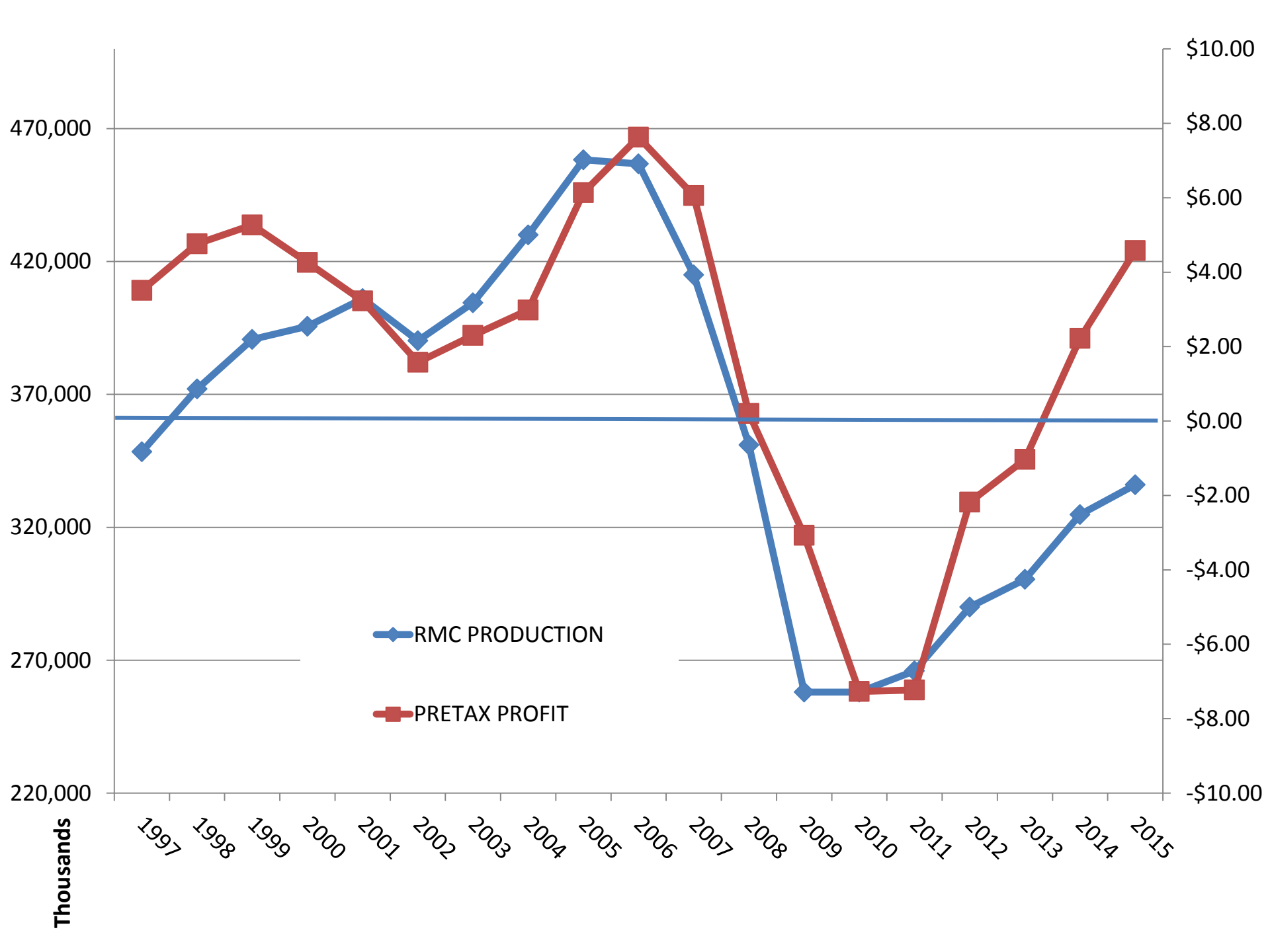
Millions

Thousands

RMC PRODUCTION

SINGLE FAMILY HOME STARTS





Concrete Industry Revenue at Stake

Change in Market Shares' Impact on Industry Revenues = \$23B

	1% Share Gain Impact on Annual Revenue	Cumulative Past Revenue Loss (2007-2015)	Cumulative Projected 25-Year Revenue Loss
Cement	\$ 79,400,000	\$ 927,137,136	\$ 3,964,557,400
Ready-Mix*	\$ 241,766,778	\$ 2,823,059,922	\$ 12,071,766,593
Brick & Block	\$ 51,915,809	\$ 606,210,011	\$ 2,592,231,819
Other Concrete**	\$ 93,329,020	\$ 1,089,783,384	\$ 4,660,053,635
Total Industry	\$ 466,411,608	\$ 5,446,190,454	\$ 23,288,609,447

Source: U.S. Census Bureau's ASM; PCA

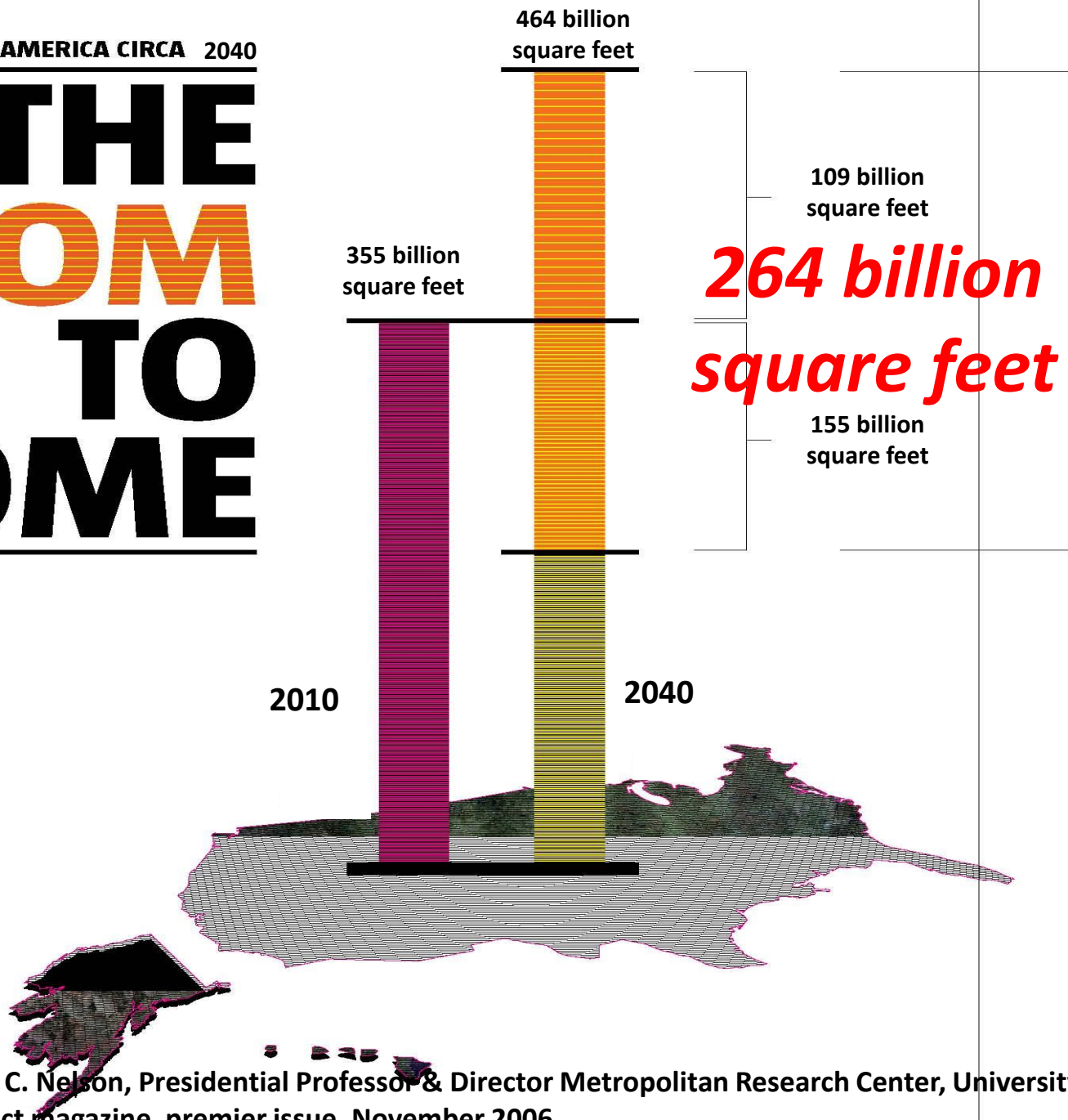
*Methodology employed may lead to a modest underestimation of Ready-Mix

**Primarily Precast Concrete

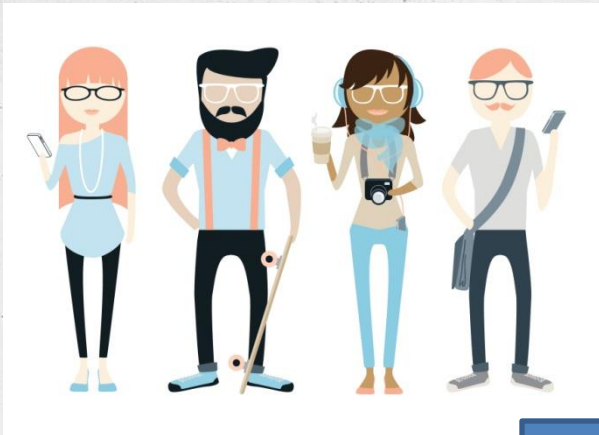
NOTE: An implied annual market reflects an average of the projected 25-year outlook horizon; Market share erosion relative to 2000-2006 average market share

AMERICA CIRCA 2040

THE BOOM TO COME



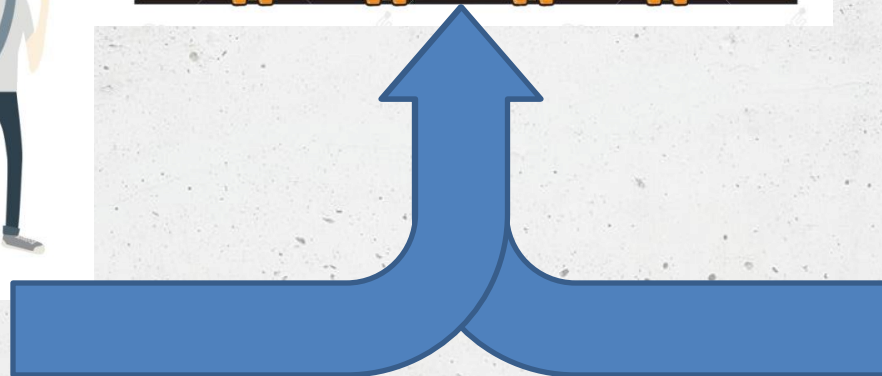
Source: Data from Arthur C. Nelson, Presidential Professor & Director Metropolitan Research Center, University of Utah. Image from Architect magazine, premier issue, November 2006.



Millennial



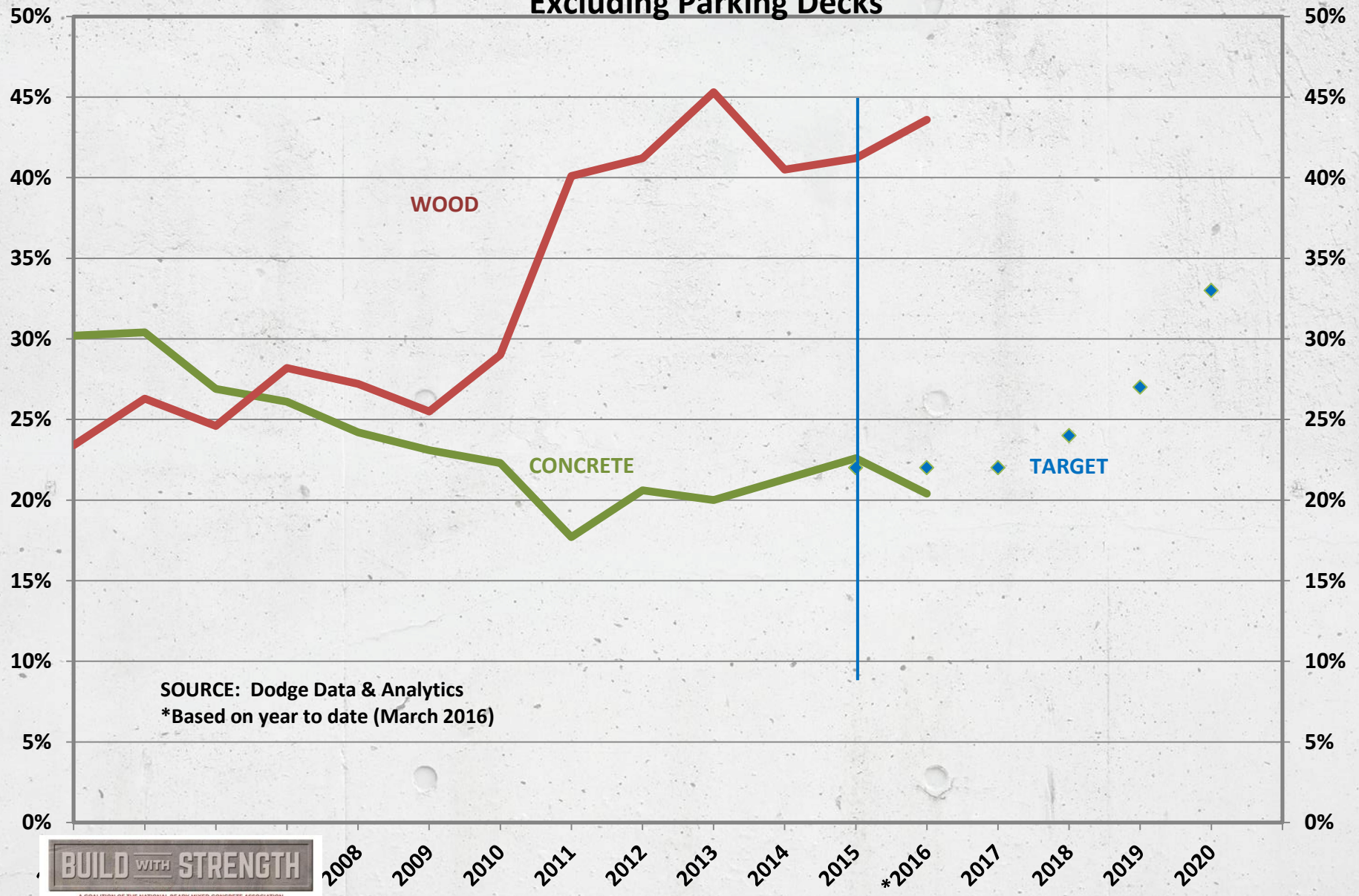
Baby Boomers















The Marselle – Seattle, WA – PB Architects

% Share of Floor Area of Mid-Rise (4-7 Stories) Excluding Parking Decks





INSULATED CONCRETE FORMS

INSULATED CONCRETE FORMS	VS.	CONVENTIONAL WOOD FRAMING
RESILIENT  ICFs create concrete walls that are reinforced with rebar, resulting in a structure that's strong, durable and can stand up to fire, floods and wind. ¹		LIMITED DURABILITY  Wood can't stand up to natural or man-made disasters. Wood buildings burn, rot and are blown apart in tornadoes and hurricanes.
EFFICIENT  ICFs create a solid concrete wall with continuous insulation that enhances energy-efficiency and makes it ideal for multi-residential, school and commercial buildings.		LACKS CONTINUOUS INSULATION  Wood framing has little thermal storage capacity and about half the insulation value of ICFs. You would have to build walls with 2x12s to get the same energy performance. ²
SAFE  ICFs are fire-safe, durable, mold and rot resistant—and the solid concrete construction provides air tightness which results in improved air quality and is also a barrier between you and dangerous weather.		RISKY  Wood burns quickly, leaving little time for occupants to escape. Wood frame is notorious for shrinking, warping and rotting with little protection from rain and wind.
FAST AND SIMPLE  Buildings made with ICFs can go up quickly and efficiently because they cover 6 steps in one. In many cases they can even go up faster than wood.		FAST AND QUESTIONABLE  Wood frame may go up quickly, but it also requires more labor than ICFs, which can increase first costs.
LOWER GREENHOUSE EMISSIONS  ICF buildings actually save 3-5% in reduced greenhouse gas emissions over the building's lifecycle compared to wood frame construction. ³		SIGNIFICANT ENVIRONMENTAL IMPACT  Deforestation causes 12% of the world's greenhouse gas emissions. ⁴ Impacts of wood (forestry) are 250-325% higher than concrete. ⁵

If you're not building with ICFs, it might be time to start.
Learn more at buildwithstrength.com

BUILD WITH STRENGTH

A COALITION OF THE NATIONAL READY MIXED CONCRETE ASSOCIATION

1. Safe Rooms for Tornadoes and Hurricanes: Guidance for Community and Residential Safe Rooms, FEMA P-361, Third Edition / March 2015; 2. Gopal, John. Energy Use of Single-Family Houses With Various Exterior Walls, C2020, Portland Cement Association, Skokie, IL, 2020; 3. Ottensmeyer, J., et al. Methods, Impacts and Opportunities in the Concrete Building Life Cycle, Massachusetts Institute of Technology Concrete Sustainability Hub, Cambridge, MA, 2017; 4. CO2 emissions from forest uses, G. R. van der Werf, et al. Nature Geoscience, VOL. 2, November 2009; 5. Assessing the Relative Ecological Carrying Capacity Impacts of Resource Extraction, Athens Sustainable Materials Institute, August 1994.

Insulated Concrete Forms. The building blocks of strength.

Insulated Concrete Forms (ICFs) are quickly becoming a fundamental building technique for multi-family residential, school and commercial buildings due to their strength, energy efficiency and ease of use. Take a look at how ICFs work—and find out what makes them the best choice for your next building project.

SETTING THE STAGE

The outer shell consists of foam insulation blocks that are stacked together like legos.

ADDING STRENGTH

Concrete is poured throughout the block structure, making it strong, safe, soundproof and energy efficient.

REINFORCING THE STRUCTURE

Steel rebar runs through the middle of the insulated concrete form, acting as the backbone.



Build With Strength

July 22 · 🌐

Stronger. More efficient. Easy to use. These are the benefits of insulated concrete forms (ICFs). Learn more about the advantages of building with ICFs: bit.ly/2ae7OIW



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If you're not building with ICFs, it might be time to start.
Learn more at BuildWithStrength.com.

MIT SUSTAINABILITY HUB



At a Glance



Build With Strength

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Long Term Values



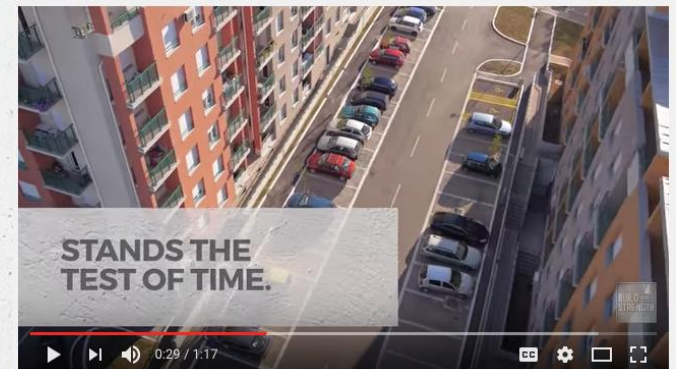
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Strength



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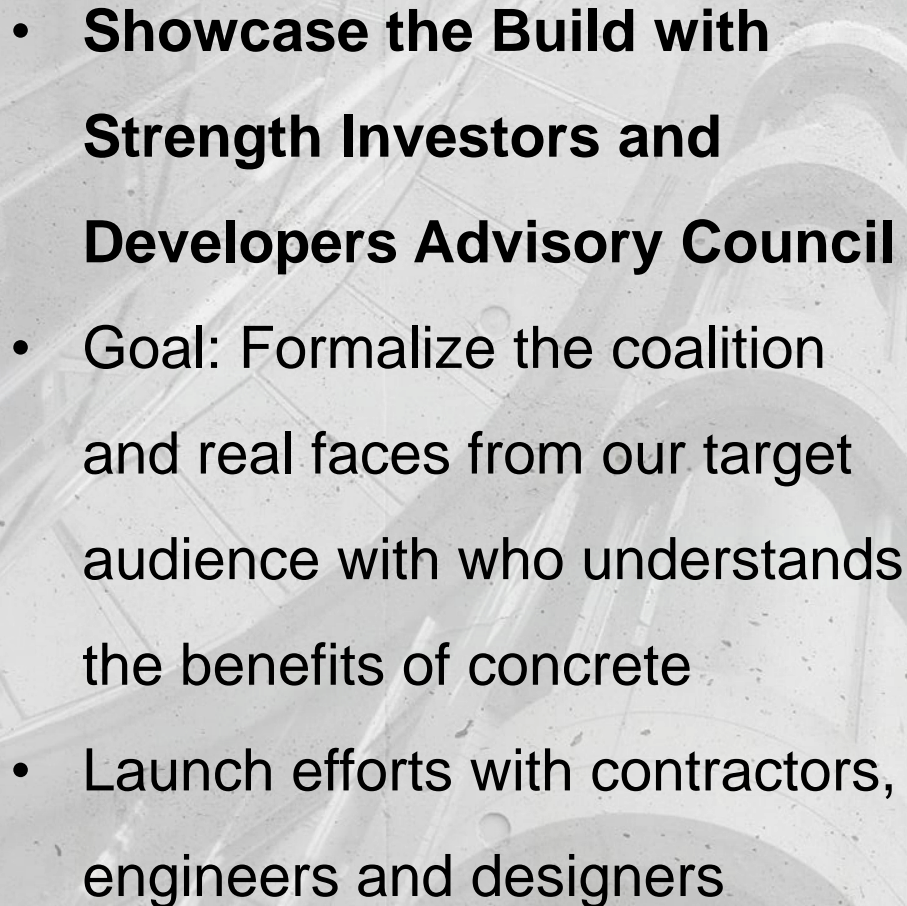
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INVESTORS & DEVELOPERS PACKET

- 
- **Showcase the Build with Strength Investors and Developers Advisory Council**
 - Goal: Formalize the coalition and real faces from our target audience with who understands the benefits of concrete
 - Launch efforts with contractors, engineers and designers



SURROGATE PACKET

Build and launch a surrogate network

- Develop a bullpen of voices who can participate in rapid response activities
- Leverage voices for pro-active activities
- Provide media training and educational activities



DESIGN CENTER

BUILD WITH STRENGTH

A COALITION OF THE NATIONAL READY MIXED CONCRETE ASSOCIATION

MENU

DESIGN CENTER

Free concrete project design and technical assistance is available through the National Ready Mixed Concrete Association's Design Center. The Design Center can assist you in choosing the right concrete solution for a wide variety of projects, from multi-family residential/mixed use to industrial and health care facilities.

NRMCA's expert team of engineers and architects are available to help you select the most appropriate concrete system, including:

- Concrete frame and post-tension flat plate systems
- Voided slab systems
- Insulating concrete forming (ICF) systems
- Tilt-up concrete wall systems

Get started today by submitting the following form:

FIRST NAME

LAST NAME

COMPANY

EMAIL

PHONE

A BRIEF DESCRIPTION OF THE PROJECT

NUMBER OF FLOORS

PROJECT LOCATION

I NEED ASSISTANCE WITH

☐ Structural design

☐ Cost estimating

☐ Durability

☐ Fire resistance

☐ Noise reduction

☐ Sustainability and green building

☐ Architectural design

☐ Specifications

☐ Disaster resilience

☐ Vibration and deflection

☐ Energy efficiency

☐ Life cycle assessment

SUBMIT

ABOUT US

RESOURCES

EVENTS

MEDIA

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Get off to a solid start with our
professional design team

Our team
cost effective

- Multi
- Dorr
- Long

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of conc
• Conc
• Value

Cost
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supply
meet y

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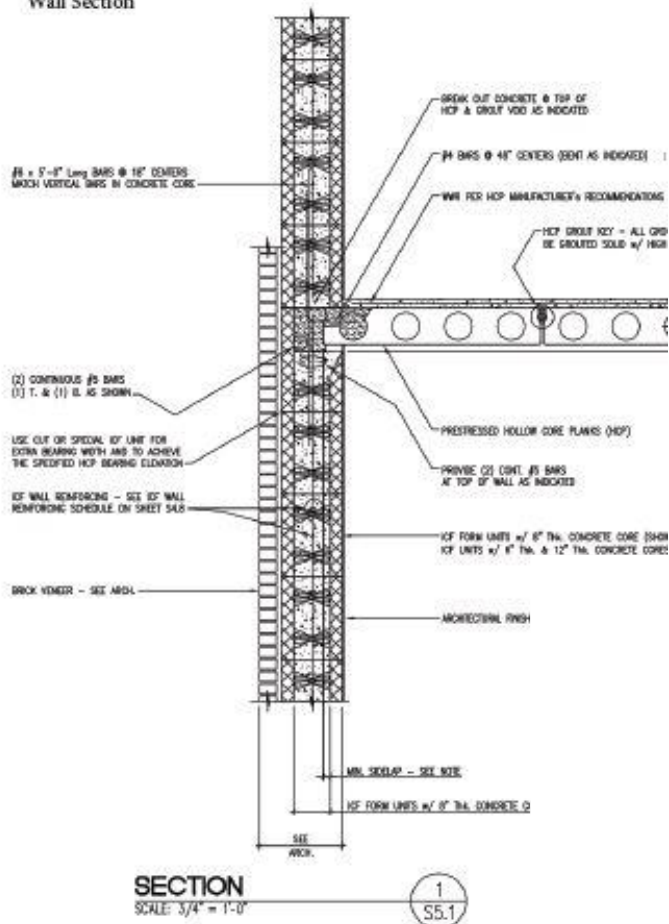
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26+
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CONCRETE DESIGN CENTER

Recommendations

Recommended
Wall Section



Structural Design
Cost Estimates
Energy Analysis
LEED Optimization
Whole Building LCA

Promotional Resources

READY MIXED CONCRETE. READY FOR ANYTHING.

Strength. It's a term that gets used a lot. And while it's one of the most essential components of any building, it's more than the strength itself that's important. It's the benefits of strength that make a difference in what you build.

5 Key Elements to Building with Strength:

Stands the test of time

Concrete structures are designed to last for centuries. Unlike other materials, concrete only gets stronger over time.

Sustainable

Concrete's strength, durability and energy efficiency make it an environmentally friendly material—especially when you consider the entire lifecycle of the building.

Simple to use

If a material isn't easy to use, it doesn't matter how strong it is. Good thing concrete can be molded into any shape, size or design you can imagine.

Safe and strong

Building with concrete gives you a fire resistant structure. When combined with other

Concrete. Choose it first—to last. Learn more at BuildWithStrength.com.

A COALITION OF THE NATIONAL READY

BUILD WITH STRENGTH

CONCRETE CASE STUDY: STRENGTH AND DURABILITY

RICHARD L. HARRIS BUILDING 8 NW 8th Ave, Portland, OR 97209

Completed: 2004
Height: 152 feet
Floors: 12

Owner: Central City Concern
Architect: SERA Architects
Urban Planning: Studio Jeffreys



BUILT TO LAST. BUILT WITH CONCRETE.

To keep their new structure standing tall into the next century, the architects and builders of the Richard L. Harris Building in Portland, Oregon, chose concrete. The 12-story high rise provides transitional housing for low-income and special-needs individuals and incorporates a highly efficient concrete frame with long spans, post-tensioned concrete slabs and a resulting minimal column layout.

01. Minimal column layout.

To combat an institutional facility look, the architects used a minimal column layout, which creates a warm and inviting feel.

Concrete's superior strength allows for long spans, thus eliminating the need for large columns and bearing walls.

02. External walls built for strength and durability.

External walls incorporate high-performance "rain screen" construction with in-cavity insulation supported by the concrete floor system.

With the Northwest's rainy weather, it's important to keep rain out. But even if water does get in, the concrete structure is unaffected.

03. Highly efficient concrete frame.

Built in one of the most active earthquake zones in the world, the ductile concrete frame will withstand seismic loading.

AWARDS

Donald Turner Prize
for Innovation and
Leadership in Affordable
Housing, 2007

ODDA Downtown
Housing Award, 2006

OCAPA Excellence in
Concrete Institutional
Residential Award, 2007

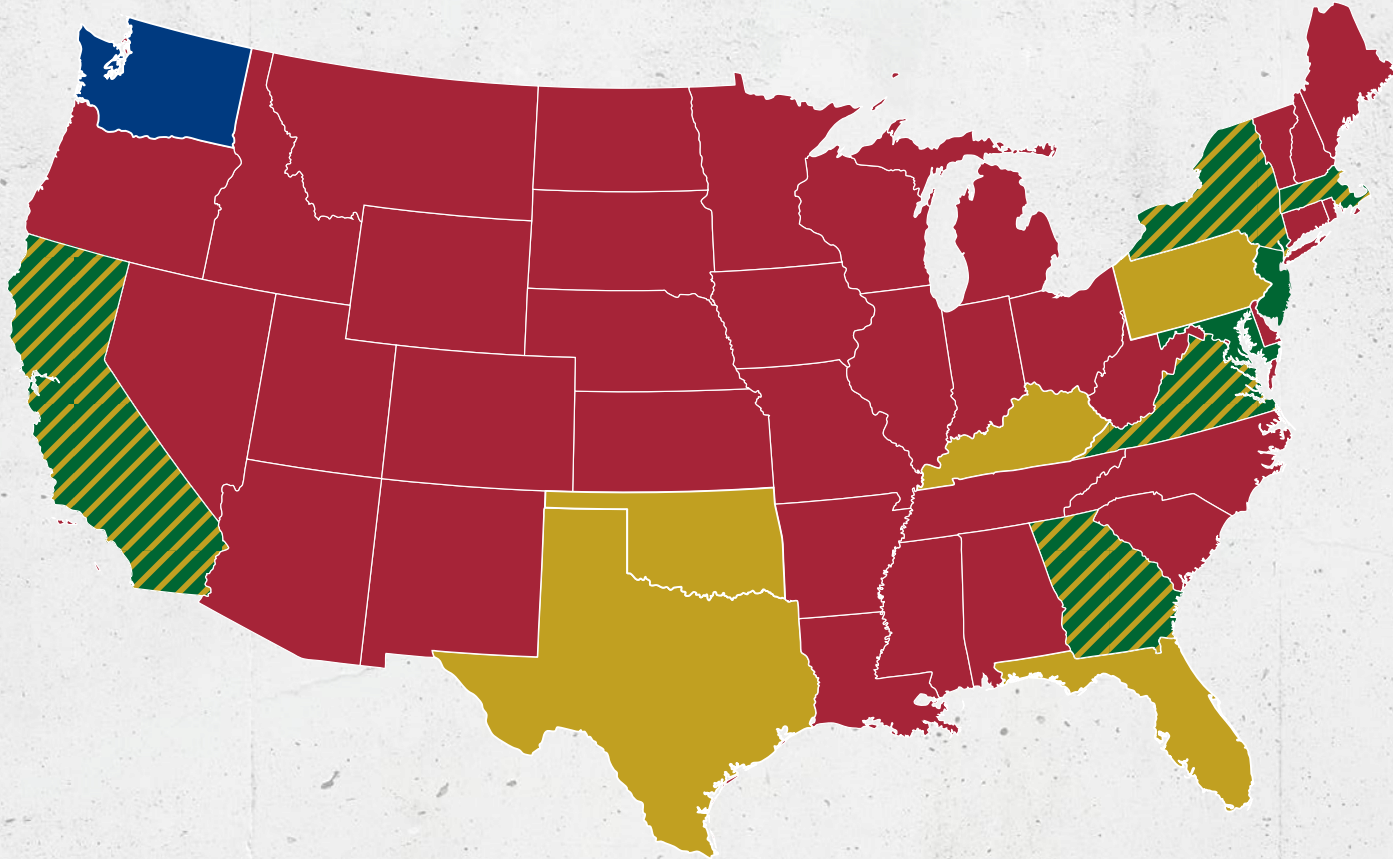


This project is the result of the collaborative efforts of Central City Concern, Downtown Community Housing, Portland City Council, and the Portland Development Commission.

A Coalition of the National Ready Mixed Concrete Association | BuildWithStrength.com

Library of fact sheets
Library of case studies

CHANGING LOCAL CODES

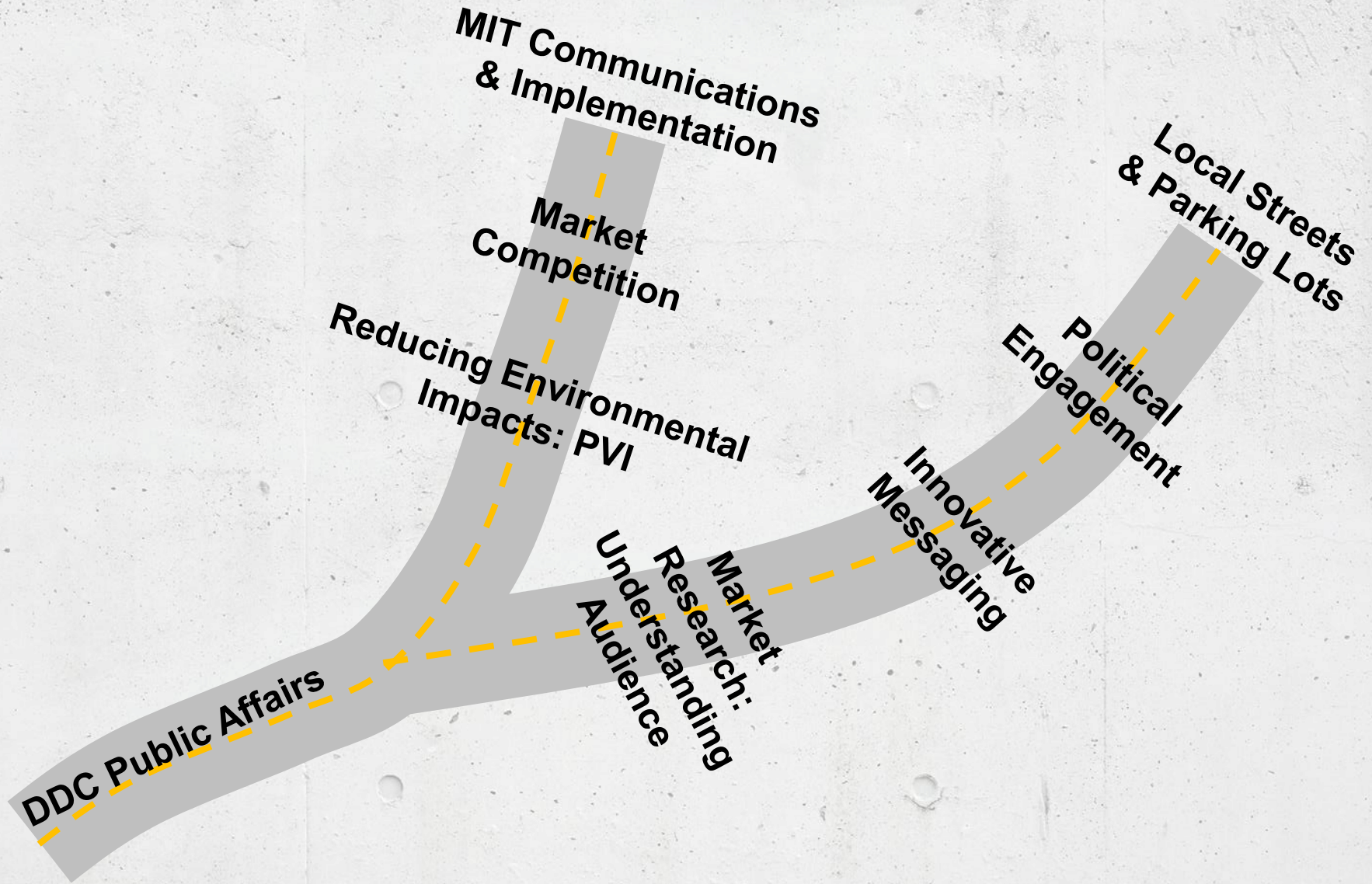


Disaster Resilience

Fire Safety

Green Building

Pavement Communications Strategies



Local Partnerships = More Effective Results





NRMCA Design Assistance Program



- 1 R/M Producer
- 1 Contractor
- Cement/Admix/Fiber
- 10-hours

Year # of Boot Camps

2013 = 1

2014 = 5

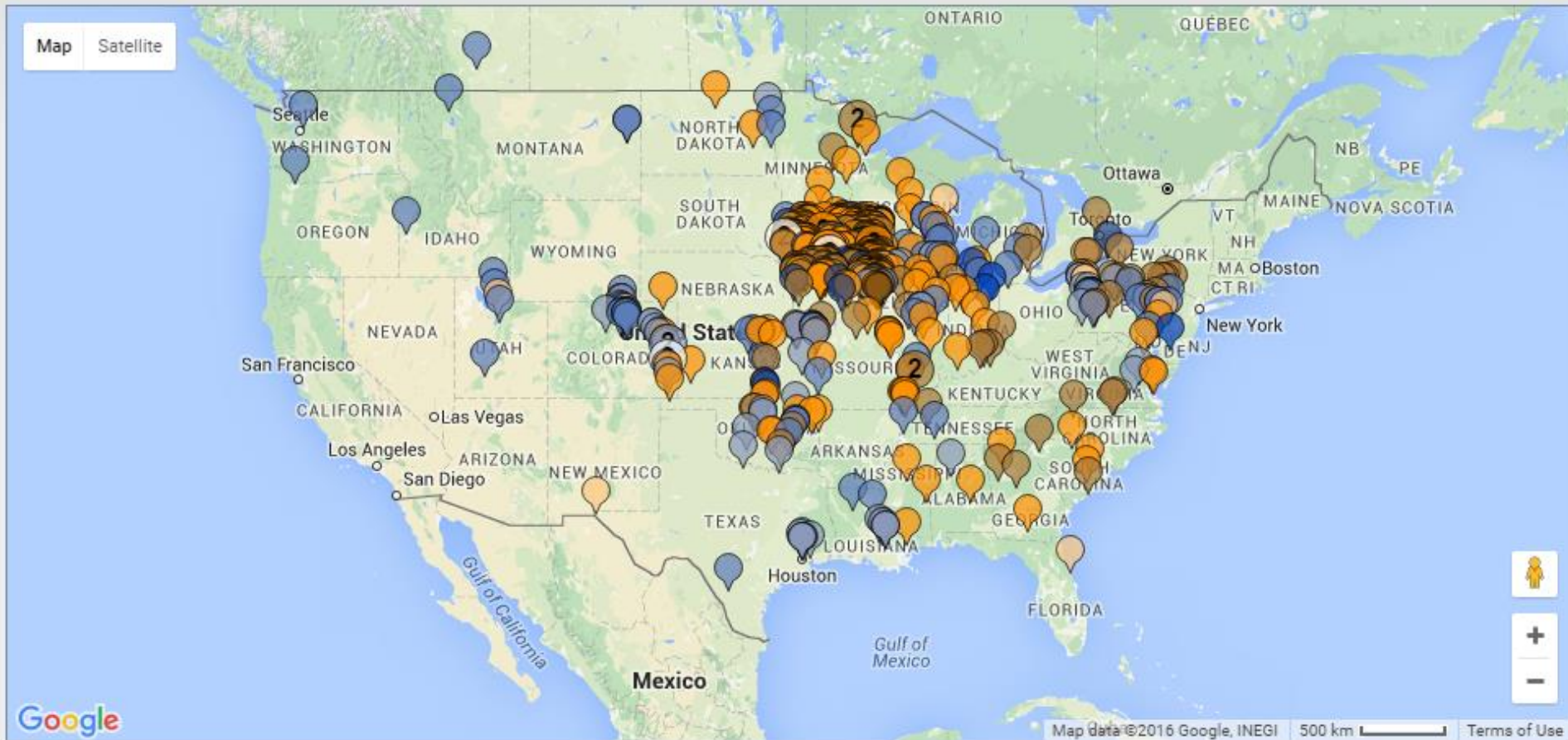
2015 = 4

2016 = 7

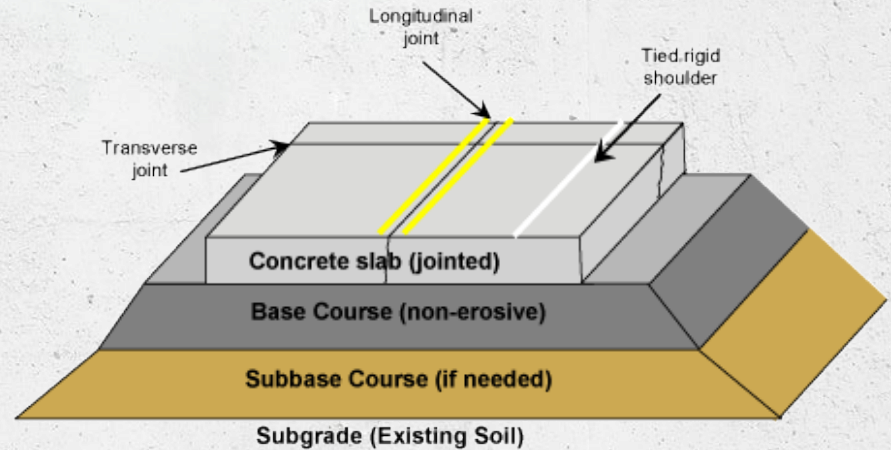
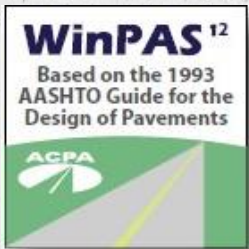
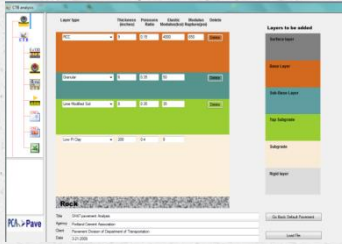
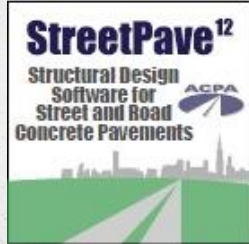


--Boot Camp at ASCC (Sept 2016)

ConcreteTracker



Concrete Pavement Design Website: Joint Project With ACPA, NRMCA, & PCA



~\$400,000 with 9-12 month development

JPCP

OVERLAYS

CMS-CTB-FDR

RCC

CRCP

Volunteer Leaders

Randell Riley, IL Chap. – ACPA/IRMCA | pccman@ilacpa.com

Jim Mack, CEMEX | jamesw.mack@cemex.com

Lori Tiefenthaler, LEHIGH HANSON, INC. | lori.tiefenthaler@lehighhanson.com

Jim Render, ESSROC-ITALCEMENTI GROUP | Jim.Render@essroc.com

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Wayne Adaska, PCA | wadaska@cement.org

Sustainability & Life-Cycle Thinking



MIT Pavement Focus On:

- Concrete Durability (Modeling and Testing)
- Life-Cycle Thinking (Economics & Environment)
- Communication and Implementation