

# Practicing in a Challenging Economy

## *Construction Outlook for 2008-2009, and Implications for the Design Professions*

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Designing Economics  
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Presentation can be accessed at:  
[http://www.aia.org/econ\\_presentations](http://www.aia.org/econ_presentations)

## Agenda

- Business Trends in Design and Construction
- Residential and Nonresidential Construction Outlook for 2008
- Issues Facing the Profession

## Economic Environment Has Weakened Recently

- Housing downturn undermines consumer confidence.
- Business payrolls have declined each month this year.
- Rising oil prices and weak dollar stoke inflationary pressures.
- Credit problems extend beyond housing to threaten other sectors.
- Security threats / international tensions continue.

### Outlook for Economic Expansion

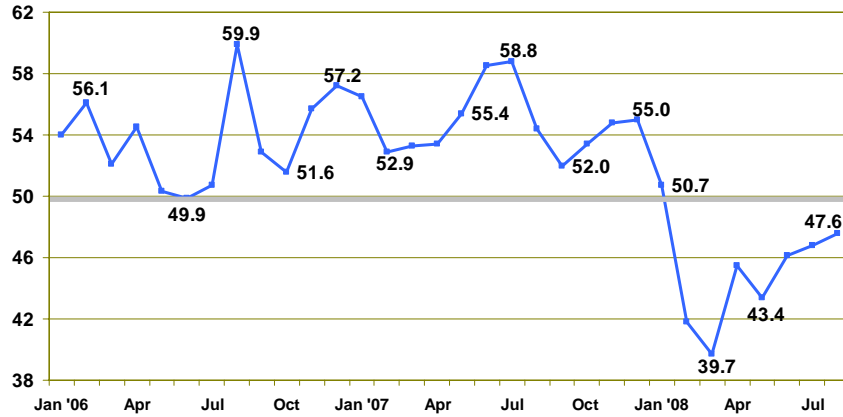
Annual GDP	<u>2007</u>	<u>2008(f)</u>	<u>2009(f)</u>
	2.0%	1.7%	0.9%

## Business Conditions at Design Firms: AIA Architectural Billings Index



## Architecture Firm Billings Have Dramatically Declined So Far this Year

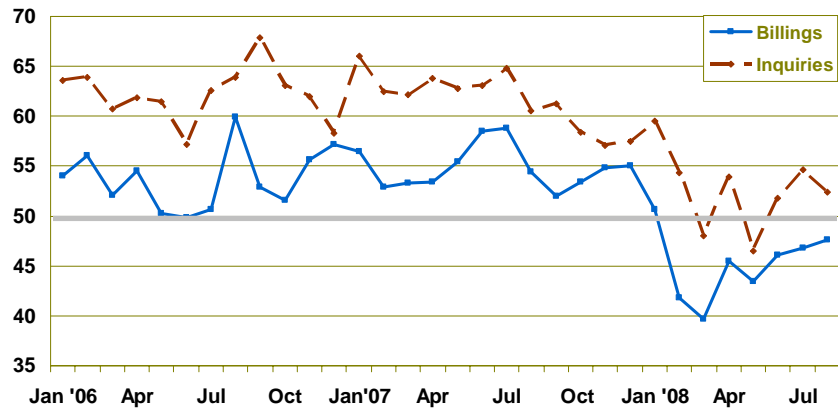
billings scores since 2006  
index: 50 = no change from previous month



Source: AIA Architecture Billings Index

## Inquiries for New Projects, Likewise, Have Softened Considerably

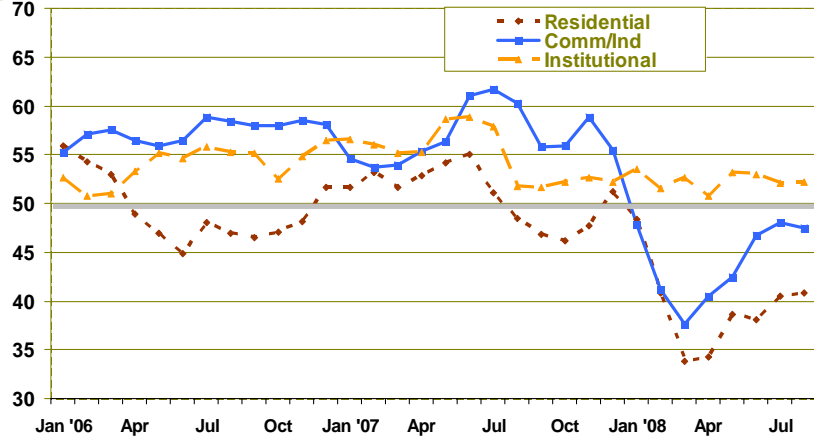
billings scores since 2006  
index: 50 = no change from previous month



Source: AIA Architecture Billings Index

## While Residential and Commercial/Industrial Billings Have Fallen, Institutional Activity Has Held Its Own

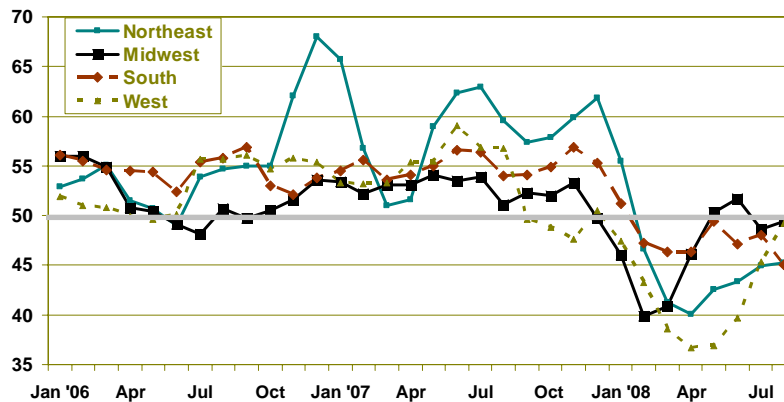
billings scores by firm specialization; Index: 50 = no change from previous month



Source: AIA Architecture Billings Index

## While the Midwest Region Has Been the Weakest in Recent Years, it is the First to Show Signs of Recovery

billings scores by region; Index: 50 = no change from previous month



Source: AIA Architecture Billings Index

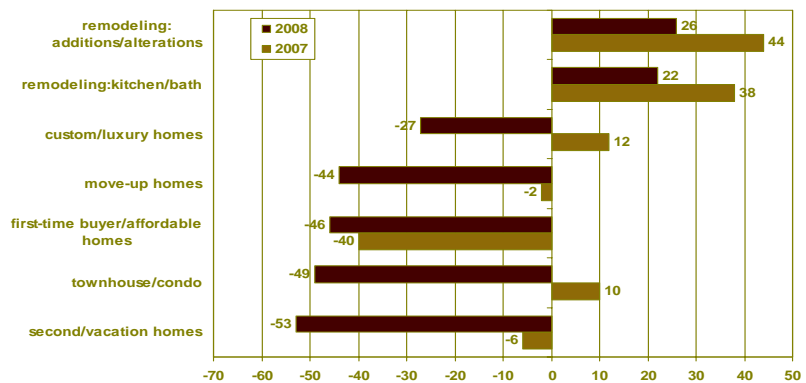
## The Construction Outlook:

- Residential
- Nonresidential



## Residential Construction Sectors Uniformly Softening While Remodeling Faring Better

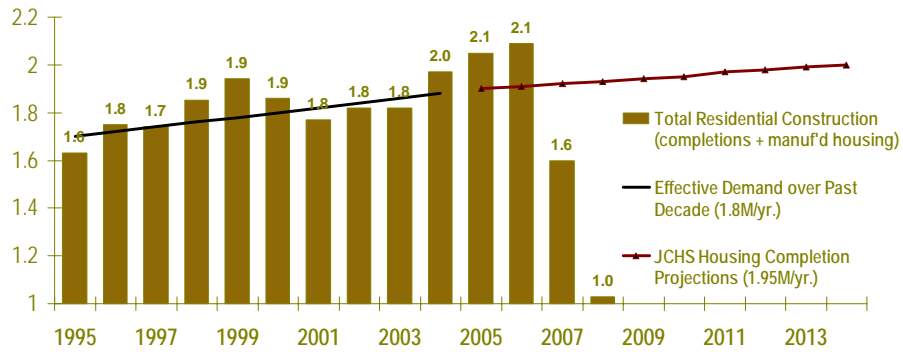
% of respondents reporting sector "improving" minus % reporting "weakening"; Q2



Source: The American Institute of Architects Home Design Trends Survey

## Recent Levels of Housing Completions Have Overshot Market Demand

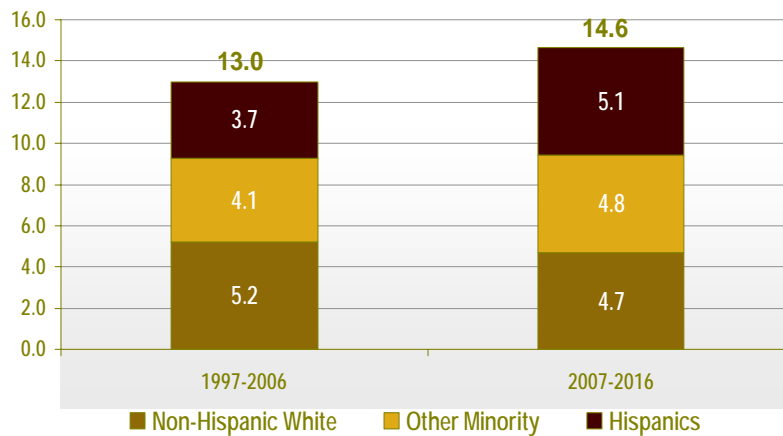
Total housing completions, in millions



Source: U.S. Department of Commerce; Joint Center Projections

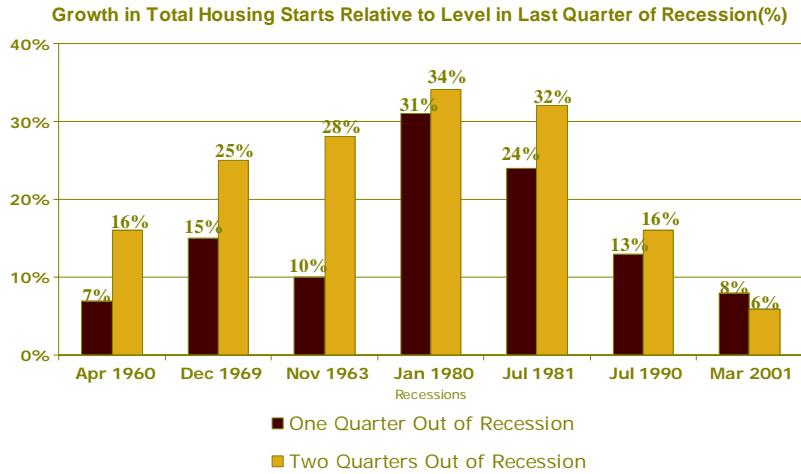
## Household Growth in the Current Decade Should Be Even Greater Than the Last

Household growth (millions)



Source: Census Bureau, Housing Vacancy Survey; JCHS Research Note N06-1, March 2006

## Once Recession Ends, Housing Snap Back Has Traditionally Been Strong and Quick



Sources: US Census Bureau; NBER

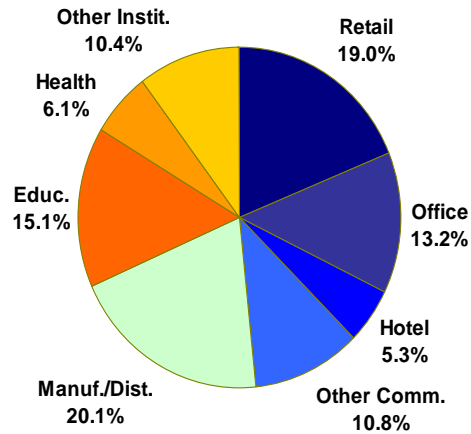
## Nonresidential Construction Outlook:

2008-2009



## Commercial/Industrial Const. Accounts for 2/3's of Nonresidential Market

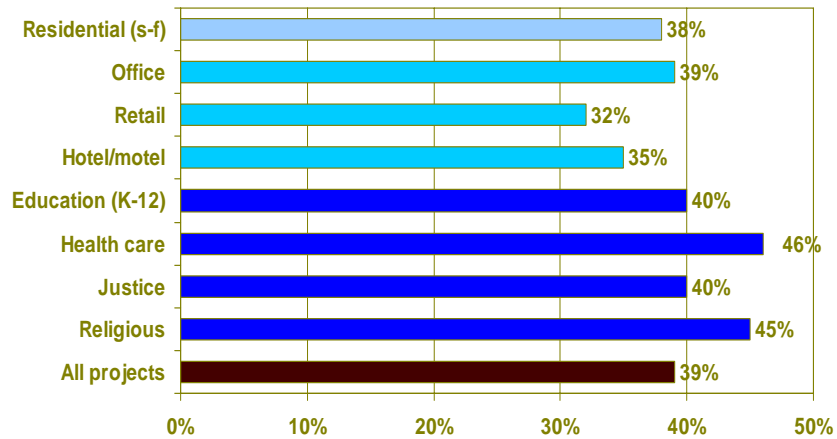
Distribution of construction activity by sector, 2007 (square feet)



Source: McGraw-Hill Construction

## Rehab Share Typically Higher for Institutional Buildings

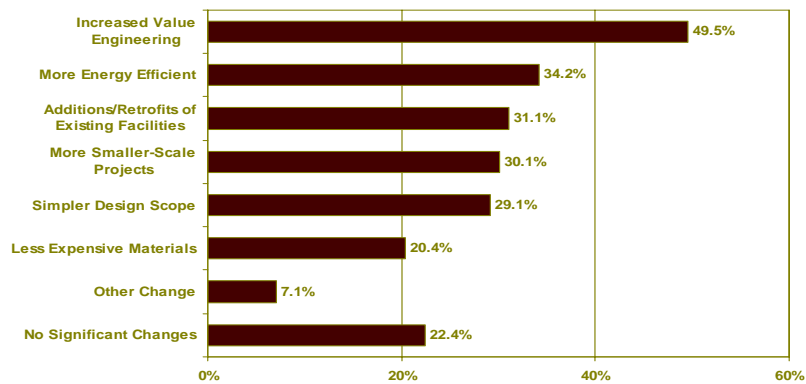
% of architecture firm billings for rehabilitation or additions



Source: AIA The Business of Architecture, 2003

## Most Architecture Firms Reporting Changes in Characteristics of Buildings Designed Due to Weakness in Design Activity

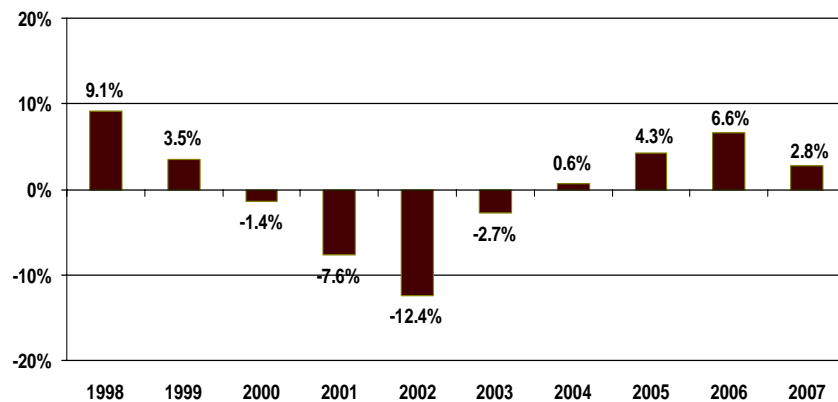
% of respondents reporting change in specified building characteristic



Source: AIA Work-on-the-Boards, June, 2008

## Recent Upturn in Nonresidential Activity Following Major Recession Earlier this Decade

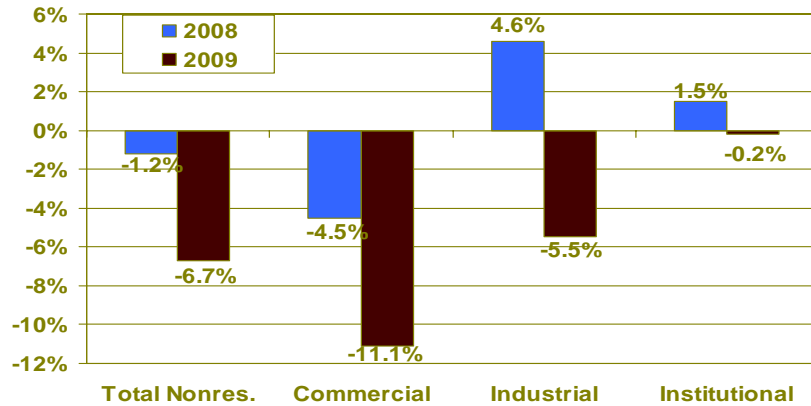
Value of nonresidential construction contract awards, annual % change, 2000\$



Source: McGraw-Hill Construction

## AIA Forecast Panel Sees Modest Decline in 2008 for Nonresident. Construction, with Steeper Drop in 2009

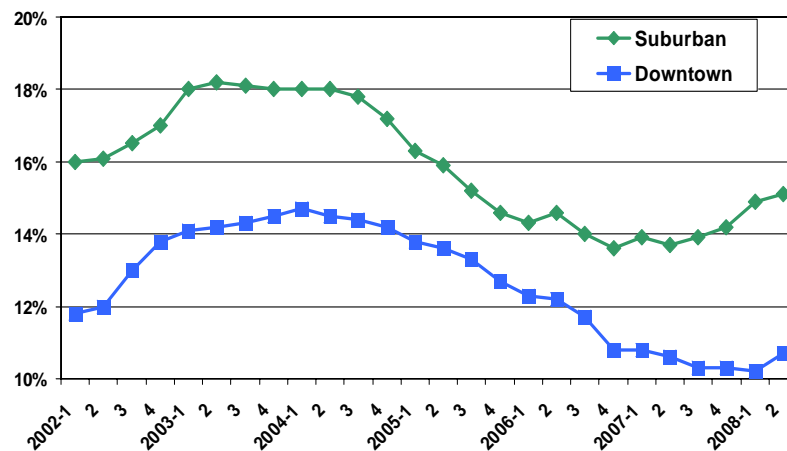
annual % change; 2000 \$



Source: AIA Consensus Construction Forecast Survey for 2008 and 2009 conducted in June, 2008.

## In Recent Quarters, Office Vacancy Rates Have Been Inching Up

Office vacancy rates (%)



Source: CB Richard Ellis

## Office Vacancy Rates Lowest in Coastal Markets

Second Quarter 2008

### Lowest Metropolitan Vacancy Rates

- Manhattan  
5.8%
- Honolulu  
8.3%
- Miami  
9.2%
- San Francisco  
9.6%
- Los Angeles  
9.7%

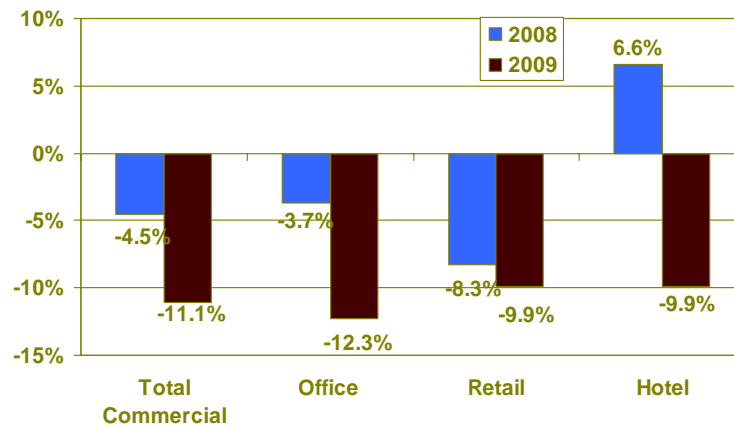
### Highest Metropolitan Vacancy Rates

- Detroit  
24.5%
- Dallas/Ft. Worth  
21.4%
- New Jersey Central  
19.6%
- Atlanta; Phoenix  
18.7%
- Cincinnati;  
18.7%

Source: CB Richard Ellis

## Construction Outlook: Projected Declines in 2008 for Commercial Facilities to Accelerate in 2009

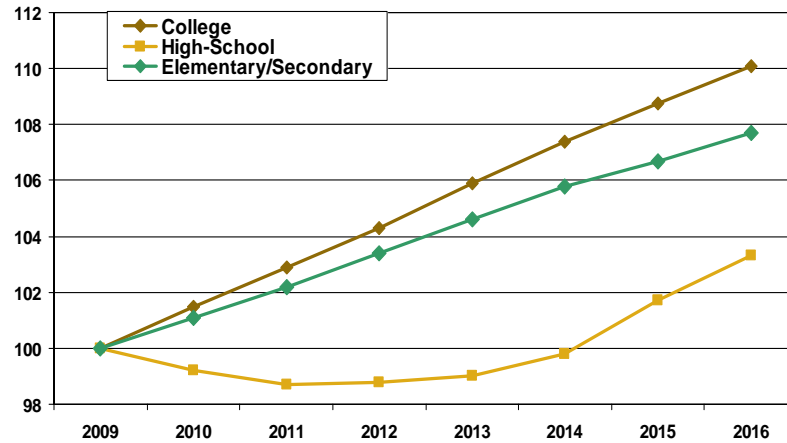
annual % change; 2000 \$



Source: AIA Consensus Construction Forecast Survey for 2008 and 2009 conducted in June, 2008

## Growth in College Enrollments to Outpace High-School Projections

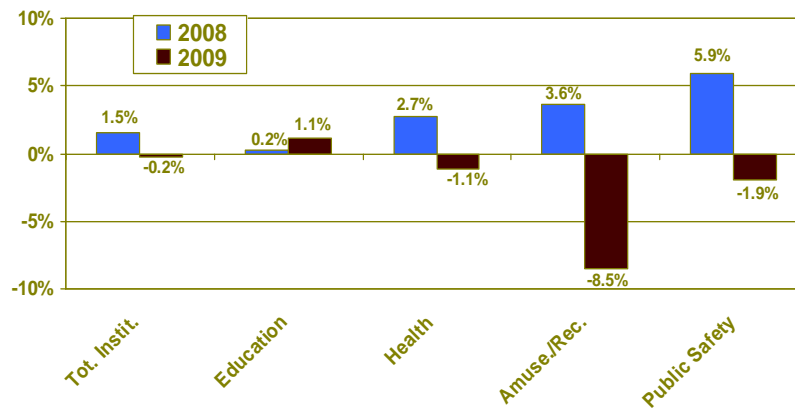
National Enrollments; index: 2009 = 100



Source: U.S. Census Bureau

## Relatively Stable Levels of Construction Projected for Most Major Institutional Categories

annual % change; 2000\$



Source: AIA Consensus Construction Forecast Survey for 2008 and 2009 conducted in June, 2008

## Issues Facing the Design and Construction Industries

- Continued industry concentration and consolidation
- Rising costs of building materials
- Technological investments to increase productivity (e.g. BIM)
- Integrated project delivery to coordinate design/construction process
- Longer-term market demand for sustainable design

## Larger Firms Account for Large Share of Activity and Growth in Architectural Profession

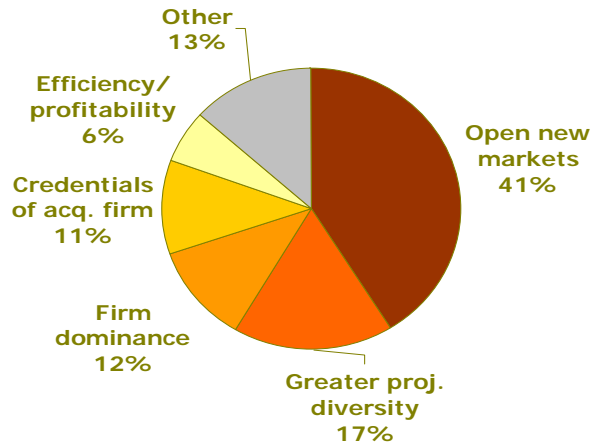
share of total staff and billings in the profession in 2005 at all firms by firm size

Firm size (#emp.)	Share of Firms	Share of Staff	Share of Billings
1	23%	2%	2%
2 to 4	38%	11%	6%
5 to 9	19%	12%	8%
10 to 19	11%	14%	12%
20 to 49	6%	19%	20%
50 to 99	2%	15%	18%
100 or more	2%	27%	34%

Source: The American Institute of Architects - *The Business of Architecture*, 2006.

## Opportunities to Open New Markets Top Reason for Recent M&A Activity

Most important reason for recent interest in merger and acquisition activity, % of firms



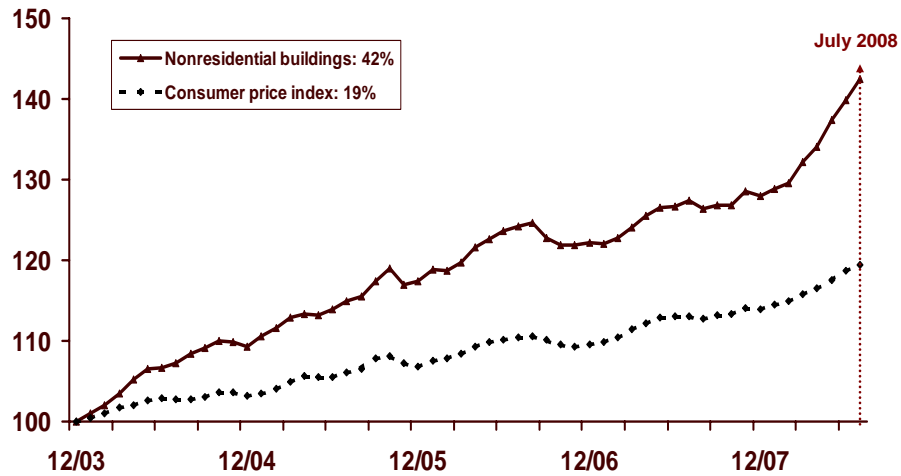
AIA Work-on-the-Boards, July 2007

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## Materials Used in Nonresidential Construction Rising Faster Than Overall Inflation in Recent Years

(All Producer Price Indexes = 100 in 12/03)



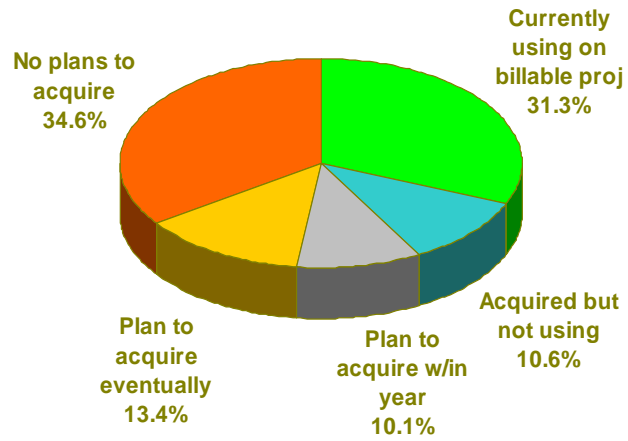
Source: U.S. Department of Labor; prepared by AGC Economics Dept.

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## BIM Has Had Strong Levels of Adoption, But Many Have No Plans to Implement

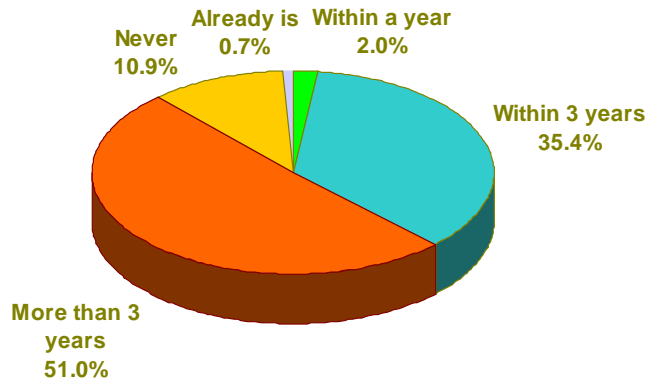
*Firm's use of virtual design/ building information modeling, % of firms*



Source: AIA Work-on-the-Boards Survey, February 2008

## Most Firms Believe BIM Will Become the Industry Standard, Although Timetable Varies

*When will BIM become the industry standard, % of firms*



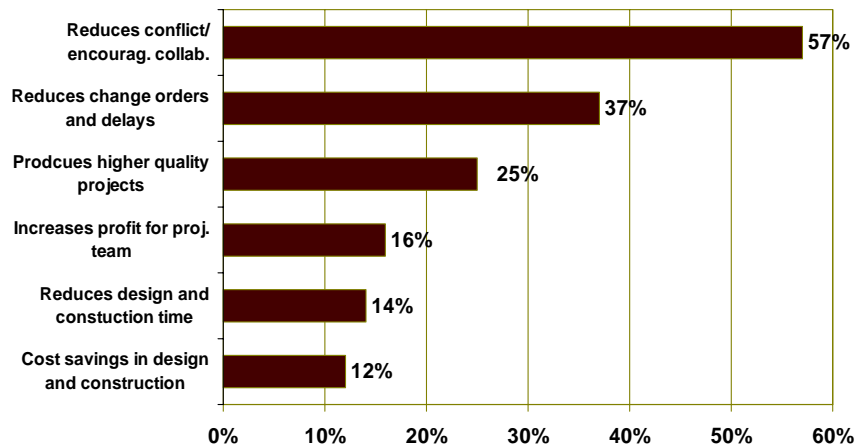
Source: AIA Work-on-the-Boards Survey, February 2008

## Issues Facing the Design and Construction Industries

- Continued industry concentration and consolidation
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- Technological investments to increase productivity (e.g. BIM)
- **Integrated project delivery to coordinate design/construction process**
- Longer-term market demand for sustainable design

## Greater Collaboration – w/ Reduced Conflict in Project Team – Seen as Greatest Benefit of Integrated Project Delivery

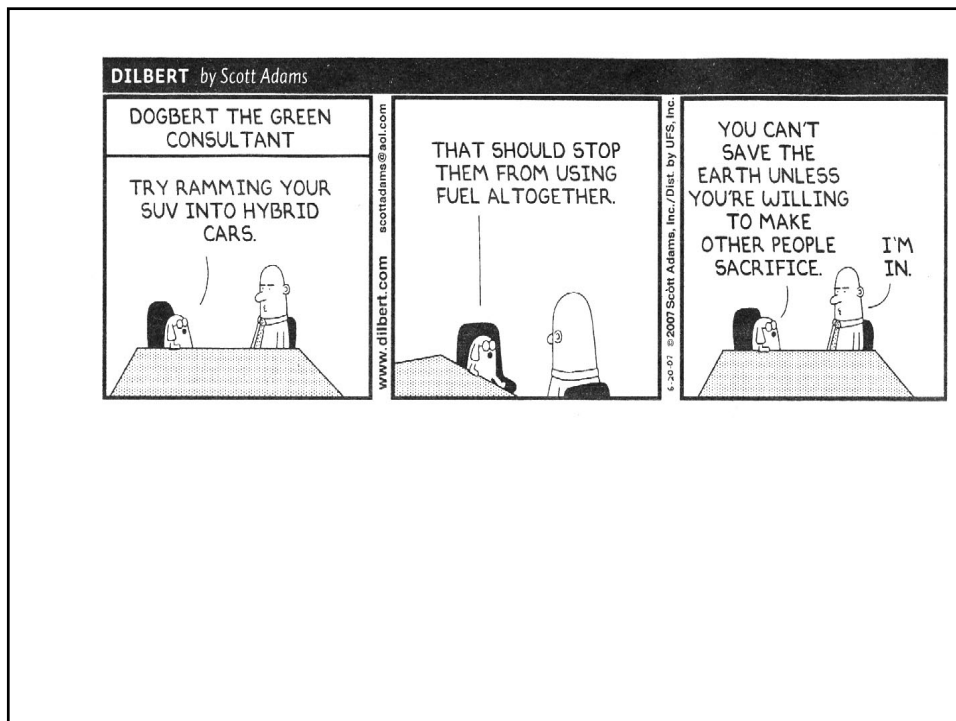
*% of respondents rating as major benefit*



Source: AIA Work-on-the-Boards Survey, August 2008

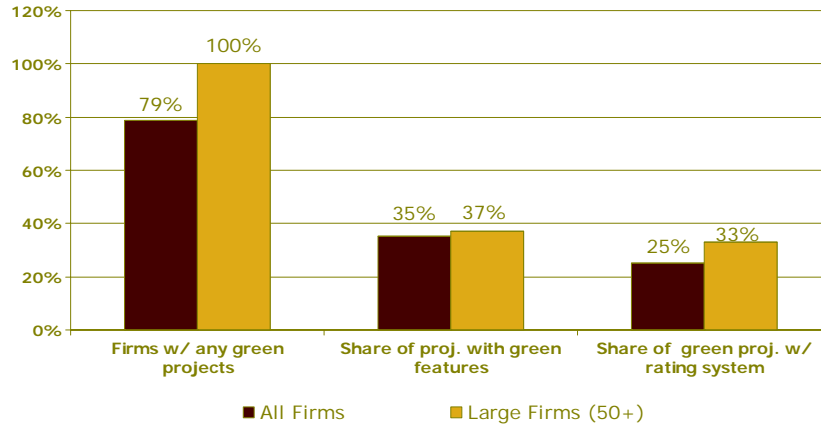
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## Almost All Firms Work On "Green" Projects; But Share of Projects That are Green Much Lower

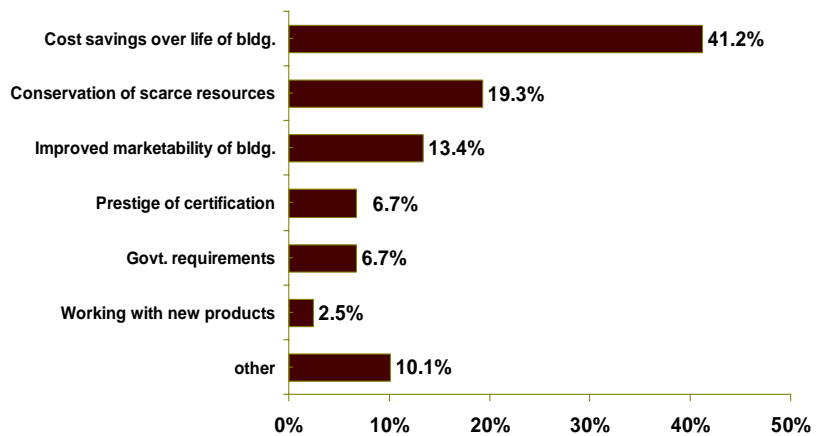
Share of firms; share of projects



Source: AIA Work-on-the Boards Survey; April, 2008

## Lifecycle Cost Savings Seen as Key Motivation for Sustainable Construction

% of respondents ranking as greatest motivation by businesses



Source: AIA Work-on-the-Boards Survey, May 2007

## Summing Up

- Condition of broader economy key determinant of residential and nonresidential outlook.
- Housing downturn nearing cyclical trough; weak economy has slowed absorption of excess inventory; longer-term prospects remain favorable.
- Commercial facilities soften with weakening economy; demographics drive institutional bldgs.; nonres. activity to slow and remain weak through 2009.
- Profession seeing more focus on productivity gains; technology investment; sustainability features.