

Advanced Site Development for Stormwater Using Existing Programs

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-Stormwater Management and Erosion Control Education
Center



Builders Challenge Partner

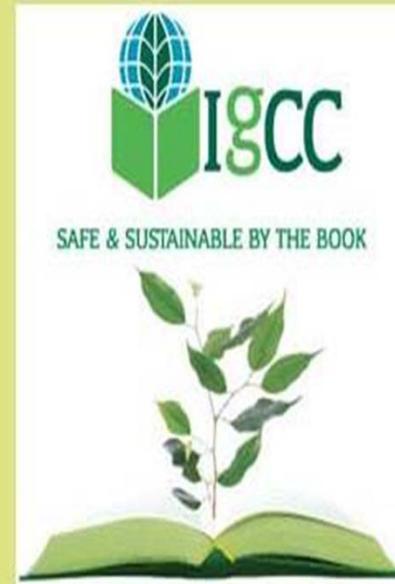
The National Green Building Standard (ANSI ICC-700)

- Released;
January, 2009
- Nomenclature same
as ICC Codes
- Chapter #4 Site
Design and
Development
- Revision Late 2012

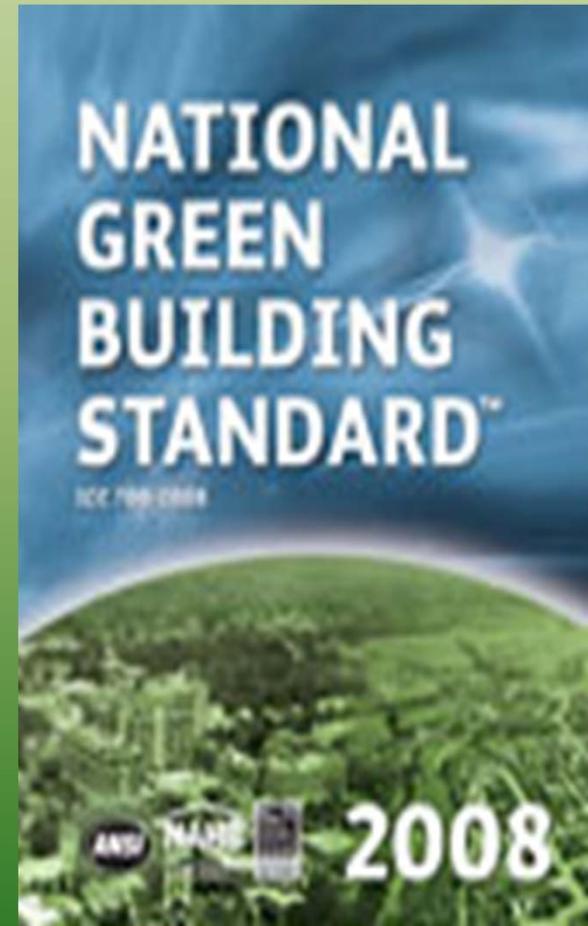


International Green Construction Code

Early 2012



The National Green Building Standard (ANSI ICC-700)



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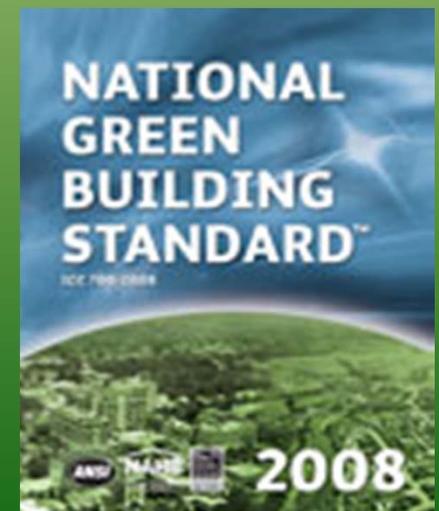
ANSI ICC-700

Chapter #4 Site Design and Development

Chapter #5 Lot Design, Preparation & Development

Promotes;

- Inventory and Preservation of Natural Resources
- Minimizing Slope Disturbance
- Minimizing Soil Disturbance and Erosion
- Storm Water Management using techniques that mimic natural process

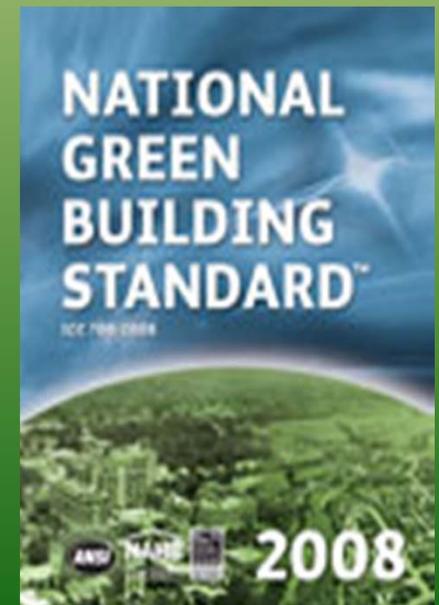


ANSI ICC-700

Chapter #4 Site Design and Development

Promotes;

- Inventory and Preservation of Natural Resources
- Minimizing Slope Disturbance
- Minimizing Soil Disturbance and Erosion
- Efficient Storm Water Management
- Preserving natural drainage features



ANSI ICC-700

Chapter #4 Site Design and Development

Promotes;

-Inventory and Preservation of Natural Resources

-Minimizing Slope Disturbance

-Minimizing Soil Disturbance and Erosion

-Better Storm Water Management

- Preserving natural drainage features
- Developing Stormwater management Plans to minimize concentrated flows and mimic natural hydrology using BMPs



ANSI ICC-700

Chapter #4 Site Design and Development

Promotes;

-Inventory and Preservation of Natural Resources

-Minimizing Slope Disturbance

-Minimizing Soil Disturbance and Erosion

-Better Storm Water Management

- Preserving natural drainage features

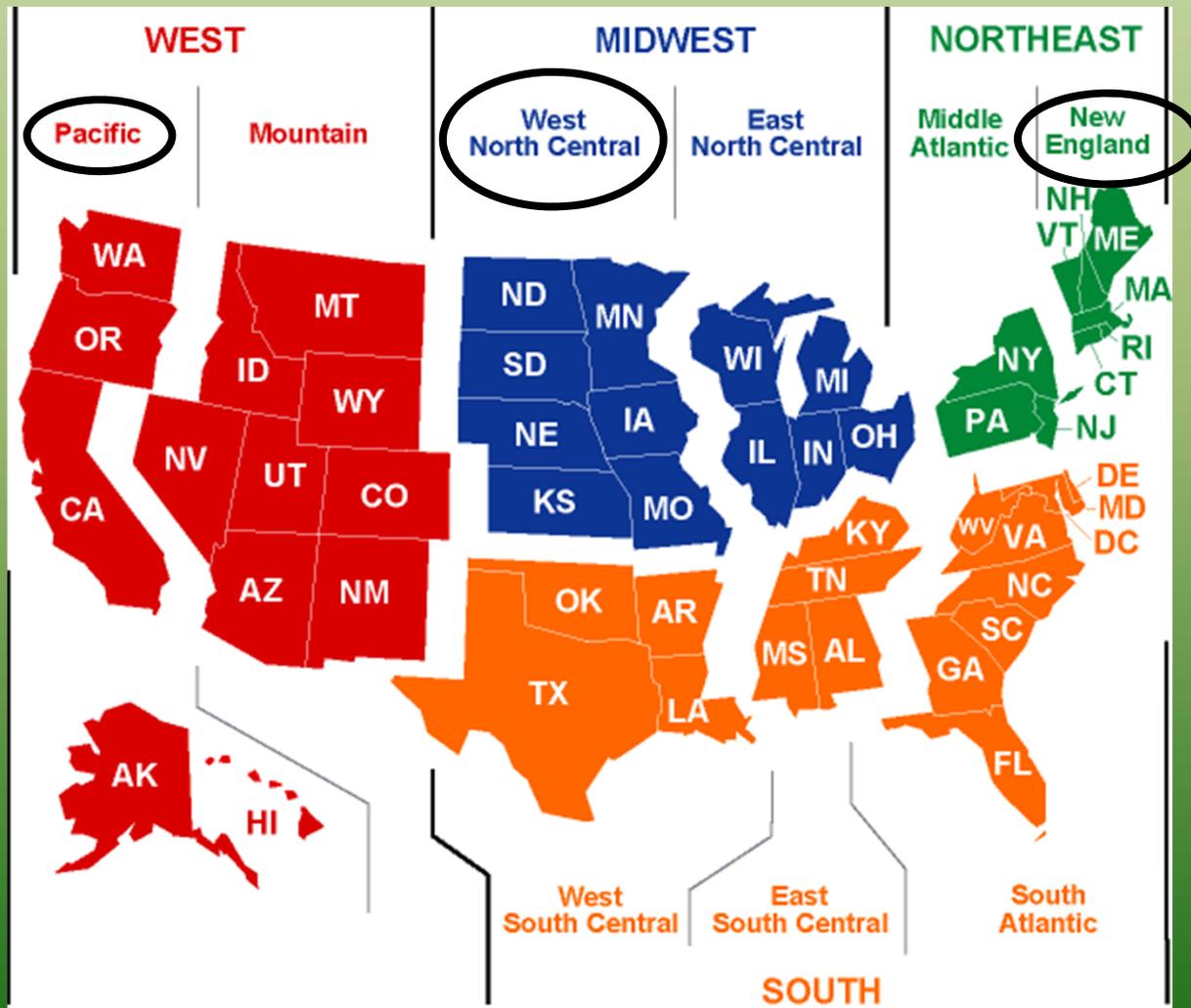
- Developing Stormwater management Plans to minimize concentrated flows and mimic natural hydrology using BMPs

- ✓ Operation and Maintenance plan

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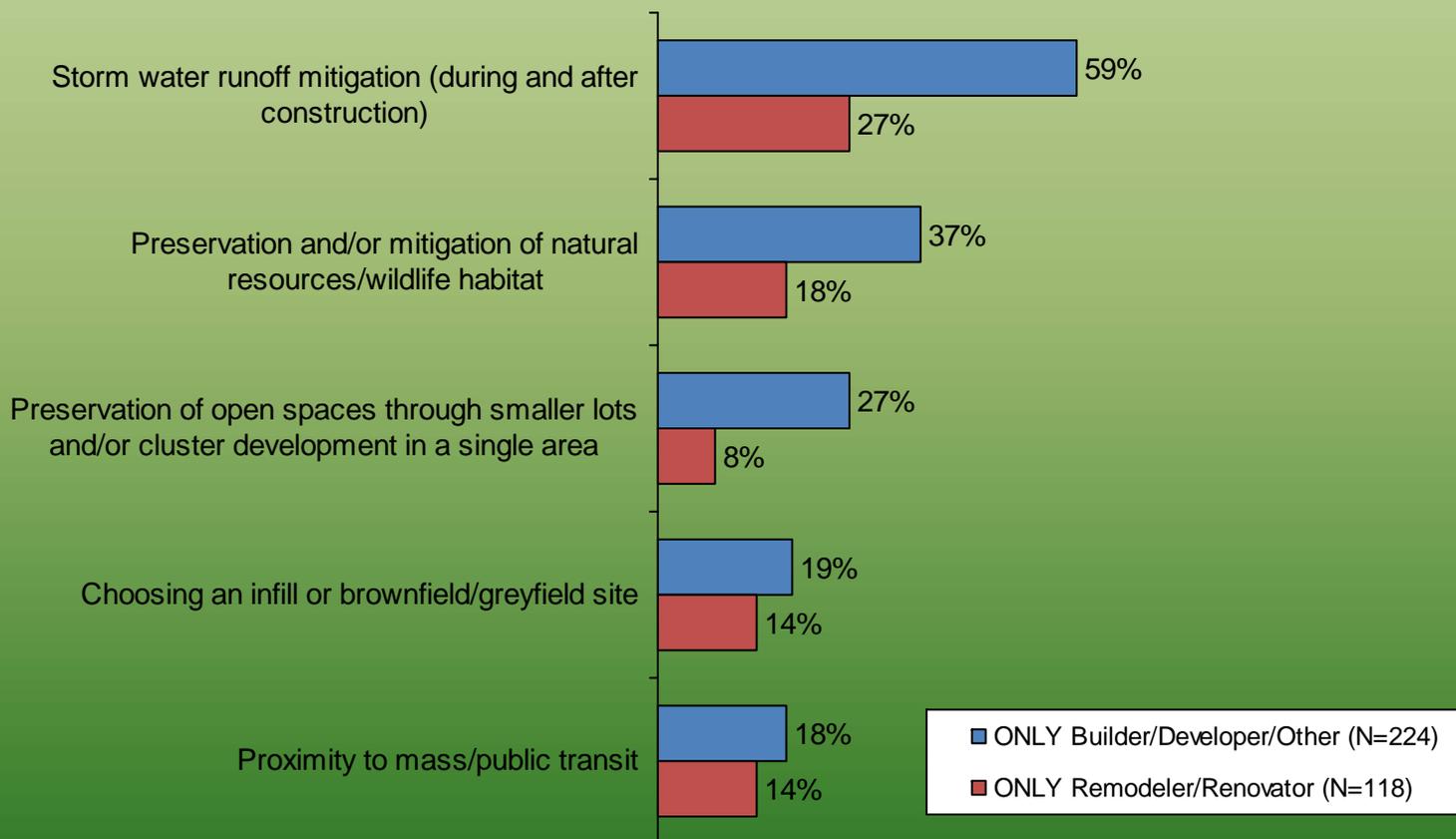
3 Regions with Greatest “Green” Opportunity by Builders and Remodelers



- **Pacific: #1**
 - 81% builders
 - 85% remodelers
- **West North Central: #2**
 - 76% builders
 - 79% remodelers
- **New England: #3**
 - 75% builders
 - 64% remodelers

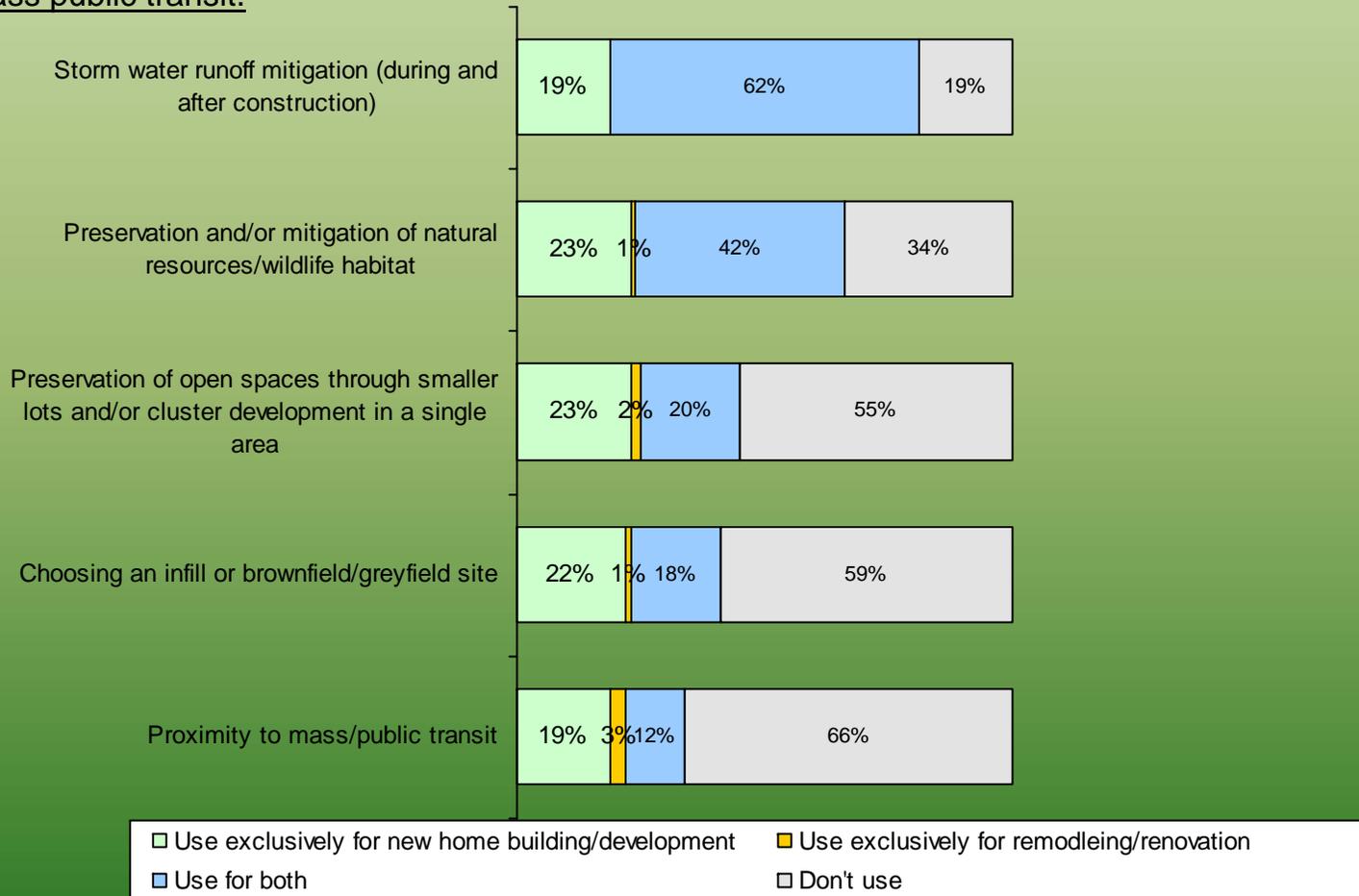
Materials & Methods Used: Lot Design, Preparation & Development

- Expectedly use of lot design /preparation/development practices is much higher among builders. Storm water runoff mitigation is used the most by builders.



Usage Pattern among Both (Builders & Remodelers/Renovators): Lot Design, Preparation & Development

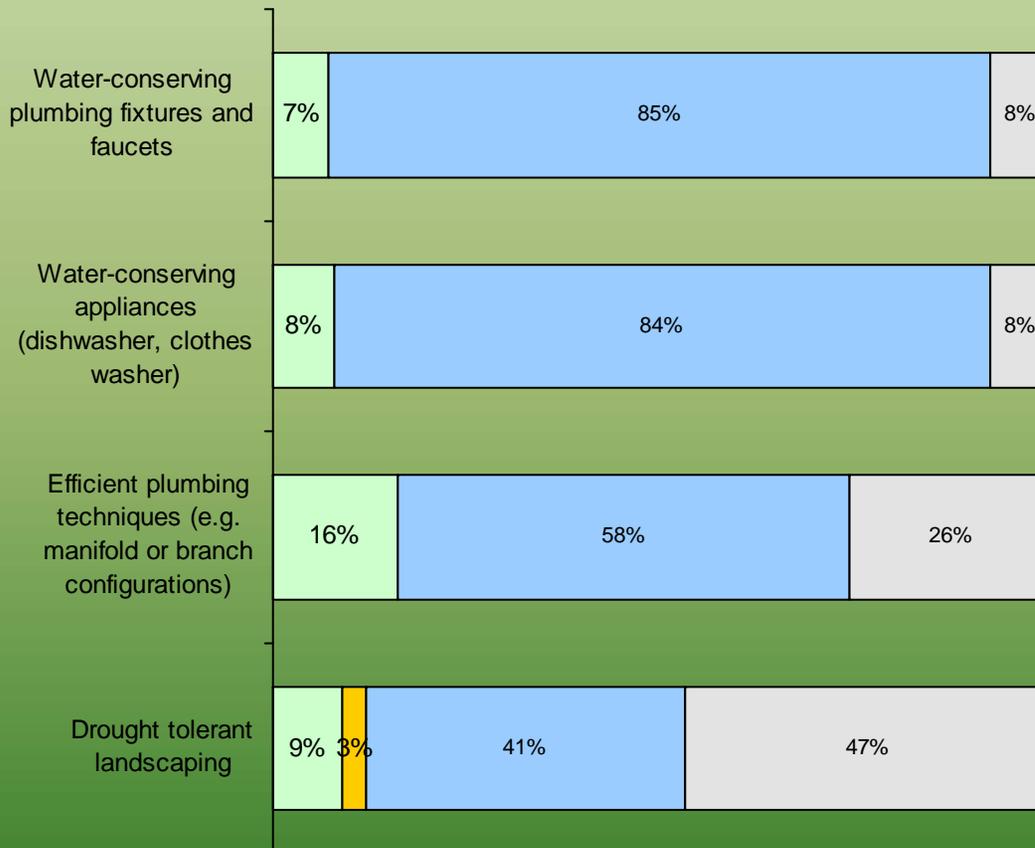
- Certain lot design/development/preparation techniques are applied more when building as opposed to remodeling – preservation of open spaces, choosing an infill/brownfield/grayfield site and proximity to mass public transit.



BOTH Builder/Developer/Other & Remodeler /Renovator

Usage Pattern among Both (Builders & Remodelers/ Renovators): Water Conservation

- The pattern is no different in case of water conservation methods/materials – When used, they are applied for mostly both building and remodeling. Some exclusive use in building is seen for efficient plumbing techniques and drought tolerant landscaping.



Use exclusively for new home building/development
 Use exclusively for remodeling/renovation
 Use for both
 Don't use

BOTH Builder/Developer/Other & Remodeler/Renovator

N=74

Moving Forward

(Costs per developed lot have increased Approximately 200% per front foot)

- S/W Issues: EPA Rule Changes
- Entitling land/Time=\$\$
 - Green Taping
 - NIMBYs
- Gain more lots
- Phase II Compliant
- Decreased sewer, street, grading, clearing costs
- Increased lot premiums
- More perceived landscaping
- Saves trees → reduce utility loads on homes → higher sales price
- Embraced by municipalities
 - must collaborate with engineers/developers

First to Last

- Used to be the primary point for stormwater to get to.
- Now it merely collects what our site BMPs cannot handle.
- S/W vs. Flood Control



Pervious Strip in Driveway



Conclusion:

***Not a linear process,
integrated systems***

(Affordability = Sustainability!)



Thank You!
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