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Green Building Ordinance Overview

September, 2013



City of Dallas
Sustainable Development and Construction

2008 Task Force Recommendations

- **Two-phase** implementation strategy
- Solution **must** be market-based

Phase 1

· effective **October 1, 2009**



Phase 2

· effective **October 1, 2013**
· **originally effective October 1, 2011*



Structure

Ordinance 27131; Resolution 08-1070- adopted April 9, 2008, established the Green Building Program

Ordinance 27759; Resolution 09-2986-adopted December 9, 2009 amends water provisions and includes green roofs;

Ordinance 28386; Resolution 11-2564- adopted September 28, 2011 amends water and energy provisions; delays phase 2 and adds third-party verification;

Ordinance 28813; Resolution 12-2428- Adopted September 26, 2012 updates and delays Phase 2, and adds Chapter 61 “Dallas Green Construction Code”



2009 Changes to Building Code

Three Different Programs

- Single Family and Duplex
- Commercial Buildings under 50,000 Sq. Ft.
- Commercial Buildings over 50,000 Sq. Ft



Single Family and Duplex – Phase 1

Mandatory Measures Effective Oct. 1, 2011

(*as amended)

Energy



Water

- Reduce Water Usage by 20%
- Must utilize drip irrigation emitters for all bedding areas of the landscape plan



Phase 1 ends September 30, 2013

New Commercial \leq 50,000 sf – Phase 1

Mandatory Measures Effective **Oct. 1, 2011**

*(*as amended)*

Energy



Water

- Water use **20%** reduction over EAct 1992 baseline

Heat Island

- Roofs:
 - Cool Roofs for slopes **2:12** or less to meet EPA ENERGY STAR, or
 - Install a green/vegetated roof that covers at least **50%** of the roof area

Light Pollution

- Outdoor Lighting restriction

Phase 1 ends September 30, 2013

New Commercial > 50,000 sf – Phase 1

Mandatory Measures Effective Oct. 1, 2011 (*as amended)

85% points
for certified
level



• certification by
USGBC not
required

Water

• 20% Water Use Reduction



Phase 1 ends September 30, 2013

All New Commercial -Phase 2- Option 1

Mandatory Measures Effective Oct. 1, 2013

(*adopted September 26, 2012—Resolution 12-2428 Ordinance 28813)

Meet Min #
points for
certified level



• certification by
USGBC not required

Water

• 20% Water Use Reduction

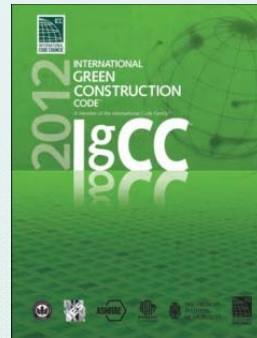


All New Commercial -Phase 2- Option 2

Mandatory Measures Effective Oct. 1, 2013

(*adopted September 26, 2012—Resolution 12-2428 Ordinance 28813)

Meet All Min.
requirements



- Chapters 3, 4, 5, 7 & 8
- Deletes Chapters 2, 6, 9, 10 & 11
- New Chapter 61 of the Dallas City Code



Dallas Modified IgCC – Chapter 61

Intent and Scope

- Will be enforced by Dallas Building Official or his designee
- Five jurisdictional requirements adopted
- Definition provisions deleted
- Applicable to the construction of
 - All **NEW** buildings, except:
 - IRC Buildings
 - R-3 Occupancies
 - R-2 and R-4 Occupancies 4 stories or less in height.



Chapter 3: Jurisdictional Requirements and Life Cycle Assessment – Chapter Amended

Proposed Jurisdictional Requirements- Table 302.1

- Chapter 1. **Scope**- recommend alternative path of compliance for new residential construction utilizing min. mandatory provisions of ICC 700.
- Chapter 4. **Site Development and Land Use**
 - **Section 402.8**- Greenfield Sites-changed to provide for sites “specifically identified as greenfields and pursuant to the authority having jurisdiction.
- Chapter 5. **Material Resource Conservation and Efficiency**
 - **Section 503.1**- Minimum percentage of waste material diverted from landfills – 50%
- Chapter 8. **Indoor Environmental Quality and Comfort**
 - **Section 804.2**-Post Construction Pre-Occupancy Baseline AIQ Testing



Chapter 4: Site Development and Land Use -

Chapter Amended

➤ Of Significance:

- Site Management and Erosion Control -site waste management plan shall be developed and implemented to divert not less than **50%** of the land-clearing debris and excavated soils.
- Walkways and bike paths
- Heat Island mitigation
- Site lighting

➤ Deletes Provisions for:

- Pre-design site inventory and assessment
- Designated protection areas
- Storm water
- Shower and changing facilities
- Bicycle parking and storage
- Preferred vehicle parking



Chapter 5: Material Resource Conservation and Efficiency- Chapter Amended

➤ Of Significance:

- Minimum percentage of waste material diverted from landfills - 50%
- Waste Management and Recycling
- Material Selection
 - 45% of materials must be:
 - Recycled,
 - Recyclable,
 - Bio-based, or
 - Indigenous (within 500 miles)
 - (Materials are permitted to have multiple attributes.)
- Mercury limits for fluorescent lamps

➤ Deletes Provisions for:

- Reference to Whole Building LCA
- Building Envelope Moisture Control



Chapter 6: Energy Conservation, Efficiency & CO₂e Emission Reduction

- Deletes Chapter 6 and requires current IECC compliance
- Keeps green code requirements separate from energy code requirements



Chapter 7: Water Conservation and Efficiency –

Amended Chapter

- **Coordinated with Plumbing Code**
- **Of Significance:**
 - Regulates Fixtures, Fittings, Equipment and Appliances
 - Condensate drainage recovery
 - Water collection tank types
 - Potable Water applications and test procedures for rainwater
 - Gray water systems for irrigation provisions
 - Rain water collection system provisions
- Metering—any source associated with the building or building site “MAY” be individually metered



Chapter 8: Indoor Environmental Quality and Comfort- Amended Chapter

➤ Of Significance:

- Indoor Air Quality Management Plan- **City to provide template**
- Air Handling system access to be unobstructed
- HVAC Systems- MERV 11 Filters- exception for multi-family filtration—MERV 6 for ≤ 30 k BTUs; MERV 8 for over

➤ Deletes:

- **Table 804.2** and requires total TVOC limits and not individual material /chemical VOC limits
- Acoustic provisions
- Daylighting provisions



Deleted Chapters

Chapter 9: Commissioning, Operations & Maintenance

Chapter 10: Existing Buildings

Chapter 11: Existing Building Site Development

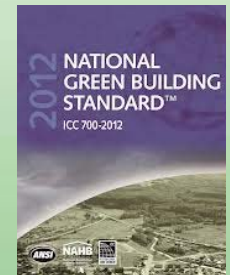


Single Family and Duplex- Phase 2 Options

Mandatory Measures Effective Oct. 1, 2013*

(*adopted September 26, 2012—Resolution 12-2428 Ordinance 28813)

1. Meet **min.** requirements of GreenBuilt TX; OR
 - 20% Water Use Reduction- only pre-requisite
2. Meet **min.** requirements of LEED for Homes; OR
 - 20% Water Use Reduction- only pre-requisite
3. Meet **min.** requirements of ICC700; OR
 - 20% Water Use Reduction- only pre-requisite
4. Meet **ALL** of the following prescriptive requirements:
 - Storm Water
 - Permeable lot . Design the lot such that at least 70% of the built environment, not including area under roof, is permeable or designed to capture water runoff for infiltration onsite.
 - Water efficiency
 - Utilize drip irrigation emitters for all bedding areas of the landscape plan; and



Single Family and Duplex- Phase 2

- **Meet water reduction strategies that include installing high-efficiency (low-flow) fixtures or fittings which meet at least three of the following requirements**
 - The average flow rate for all lavatory faucets must be ≤ 2.0 gallons per minute.
 - The average flow rate for all showerheads must be ≤ 2.0 gallons per minute.
 - The average flow rate for all toilets must be:
 - ≤ 1.3 gallons per flush;
 - Be dual-flush and meet the requirements of ASME A112.19.14; or
 - Meet the United States Environmental Protection Agency Water Sense specification and be certified and labeled accordingly.
 - Utilize ENERGY STAR labeled dishwashers that use 6.0 gallons or less per cycle.
 - Utilize ENERGY STAR labeled clothes washers with a modified energy factor (MEF) ≥ 2.0 and a water factor (WF) < 5 .

- **For additions to existing homes, meet at least two of following the water reduction strategies**
 - The average flow rate for all lavatory faucets must be ≤ 2.0 gallons per minute.
 - The average flow rate for all showerheads must be ≤ 2.0 gallons per minute.
 - The average flow rate for all toilets must be:
 - < 1.3 gallons per flush;
 - Be dual-flush and meet the requirements of ASME A112.19.14; or
 - Meet the United States Environmental Protection Agency Water specification and be certified and labeled accordingly.



Single Family and Duplex- Phase 2

➤ Energy Efficiency

- Meet the performance requirements of ENERGY STAR for Homes to achieve a HERS rating of 75; or achieve 15% over the 2009 IECC baseline.

➤ Heat Island Mitigation

- Install an ENERGY STAR Qualified roof on all roofs with slopes of 2:12 or greater.
- The use of a vegetated roof may be an acceptable alternative subject to the review and approval of the building official.

➤ Indoor Air Quality

- No HVAC equipment allowed in garage. Place all air-handling equipment and ductwork outside the fire-rated envelope of the garage.
- Minimize pollutants from Garage. If there is a garage, tightly seal shared surfaces between garage and conditioned spaces, including all of the following:
 - In conditioned spaces above the garage:
 - Seal penetrations;
 - Seal all connecting floor and ceiling joist bays; and
 - Paint walls and ceilings
 - In conditioned spaces next to the garage:
 - Weather-strip all doors;
 - Seal all penetrations; and
 - Seal all cracks at the base of the walls.
- Air filters. Install air filters with a minimum efficiency reporting value (MERV) ≥ 8 and ensure that air handlers can maintain adequate pressure and air flow. Air filter housings must be airtight to prevent bypass or leakage.



Questions

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