



City of Dallas

Green Building Program ORIENTATION







Outline

- Purpose
- Background
- Requirements
- Procedures and Processes





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Purpose

- To conserve our natural resources
- Conventional

Green

- 39% primary energy use
- 72% electricity consumption
- 38% CO2 emissions
- 14% potable water
- consumption

26% energy use reduction
40% water use reduction
70% solid waste reduction
13% reduction in
maintenance costs







BACKROUND

As of October 1, 2009, all new structures and additions are required to meet Green building requirements in Ordinance #27131, found in Chapter 52, Subchapter 10, of the Dallas City Code - "Green Building Program"





What is Green Building?

Green Da

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- Green Building means structures and their surrounding landscapes;
- designed, constructed, and maintained to decrease energy and water usage and costs;
- to improve the efficiency and longevity of building systems,
- and to decrease the burdens imposed on the environment and public health.



Environmental Benefits

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- Enhance and protect ecosystems and biodiversity
- Improve air and water quality
- Reduce solid waste
- Conserve natural resources





Economic Benefits

- Reduce operating costs
- Enhance asset value and profits
- Improve employee productivity and satisfaction
- Optimize life-cycle economic performance





Health and Community Benefits

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- Improve air, thermal, and acoustic environments
- Enhance occupant comfort and health
- Minimize strain on local infrastructure
- Contribute to overall quality of life





las



Requirements

REGISTRATION PROCESS

- Contractor number
- PIN number (\$30 Charge to reset PIN)
- E-mail







Permitting

- Master Permit (All permit fees are paid)
- Validate as a Third Party Green Provider / Responsible Party
- Trade Permit (Permit fee due)
- Third Party Green Provider







Plan Review

- Single Family Dwelling
- Commercial < 50K
- Commercial > 50K







Inspections

(Beginning September 01, 2011)

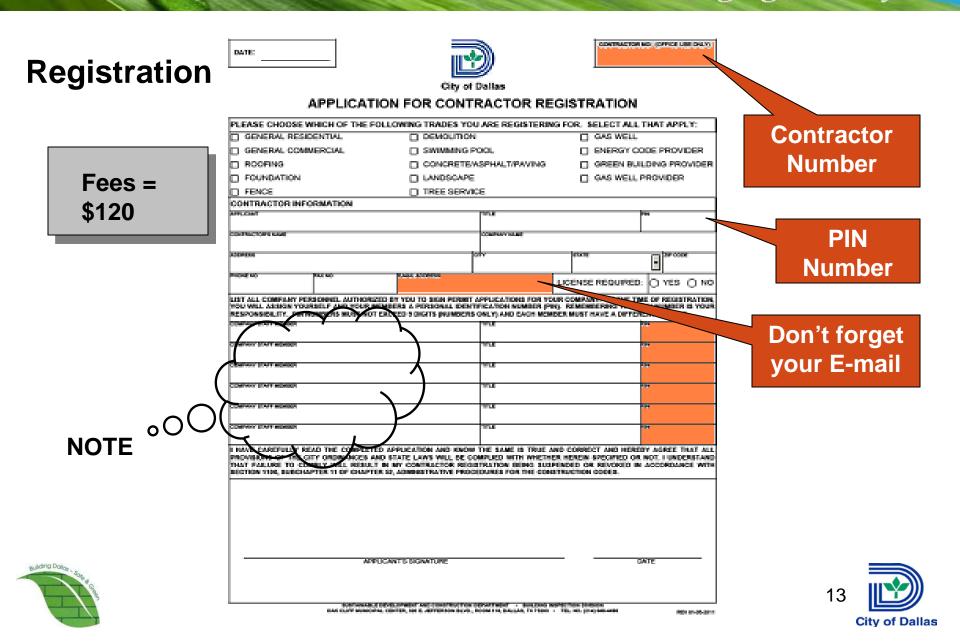
- Third Party Provider
- Submittals

(Copy of Affidavit)









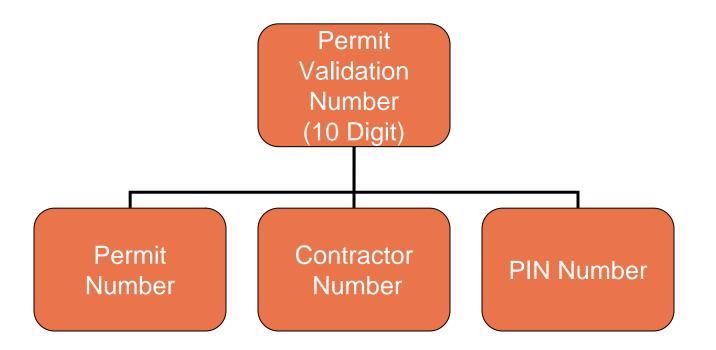
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Fees = \$100	ADDRESS OF THE STATE OF THE STA	RED PROJECT E ESTABLISHMEN CHECK BOX IF TI	TTS REQUIRE A GR	REASE INTERCEPTI		WE ADDRESS (OF TOWN WE ADDRESS (OF TOWN WE ADDRESS (OF TOWN TOWN COMPT PERMON PERMON PERMON	Material Contraction	E VALUATION		
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Louiste Validete en e Mester Demoit

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How to Validate on a Master Permit









What to Submit for Permit

Third Party Information



Building Inspection



Green Buildings





www.dallascityhall.com







Plan Review Compliance Affidavit



Dallas Green Building Program Plan Review Compliance Affidavit

	Type of construction: 🗆 <u>Residential</u> Commercial under 50K 🗆 Commercial over 50K
	1. Address of construction: Permit #
DDINIT	2. Provider name:
PRINT	3. Provider registration #:
	Registered as (check.all.that.apply):
	□ Residential provider
	Commercial under 50K provider
	Commercial over 50K provider
	I have reviewed the plans for this project and confirm
SIGN	I, have reviewed the plans for this project and confirm that it meets or exceeds the green building requirements of the Dallas Building Code or the
	Dallas One- and Two-Family Dwelling Code, as applicable.
	Provider's Signature
	STATE OF TEXAS
	STATE OF TEXAS
	COUNTY OF
	This affidavit was acknowledged before me on by



NOTARY PUBLIC

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Building Permit #

Yes

No No

Dallas Green Building Program Application Checklist 1 & 2 Family Dwelling Projects

*			I Dwellings, Chapter 57		-		
OJECT NAME: CONTACT PERSON:							
			PROJECT NUMBER:			-	+
DJECTADDRESS	•		PROJECT NOMBER:				
	1	Water Efficien	су				
2.1.2 Water Use - Se	ection 326, Green Building Progra	im	Required Submittal Documents To Be F	Review	ed:		
all high efficiency, I 6 options (listed on	ow flow fixtures or fittings which the right).	meet at least 4 of	This section does not apply.				
			1. Average flow rate for all lavatory faucets must be 2.0 gpm		Yes		J
Applicant	Da	ate	2). Average flow rate for all showerheads must be 2.0 gpm.		Yes		I
			3). Average flow rate for all toilets must be:				
Reviewer		Date	3.1 1.3 gallons per flush; or		Yes		i
r tener		Sate	3.2 Dual flush and meet				Ì
			requirements of ASME A112.19.14; or		Yes		
			3.3 Meet the United States EPA Watersense specifications	ш	Yes	ш	l
			and be certified and labeled accordingly.				
			4). Utilize ENERGY STAR labeled dishwashers that use 6.0 gallons or less per cycle		Yes		
			5). Utilize ENERGY STAR labeled clothes washer with modified energy > 2.0 and water factor < 5.5		Yes		
			6). <u>Note:</u> Must utilize drip irrigation emitters for all bedding areas of the landscape plan (Sec: 326.2.1.2.2).		Yes		ĺ
			Meet a 20% water use reduction design strategy using calculations based on the Dallas Plumbing Code plumbing fixture baseline.		Yes		1
			OR				
			1). Green Built Texas efficiency requirements		Yes		J
			2). LEED for Homes - minimum 6 points		Yes		I
e: The use of GE	BT or LEED for Homes comp	liance paths mu	st provide the supplemental checklist.				
		Energy & Atm	osphere				ĺ
2.1.1 Energy Use - S	ection 326, Green Building Progra	am	Required Submittal Documents To Be F	Review	ed:		
t meet the minimum	n provisions of Chapter 4 of the Da hapter 11 of the IRC.		1). Use of IC3 Software by Energy Systems Laboratory; or		Yes		I
			2. Use of accredited energy code compliance software and the results of a HERS index of 85 or less; or		Yes		
Applicant	Date		3. Installing systems that have been certified				

Date

by a national, state or located accredited

energy efficiency program and approved by

Energy Systems Laboratory EPA's ENERGY STAR Program certification of energy code

program.

equivalency shall be considered an approved



Reviewer

9/26/2011



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Dallas Green
Building Program
Application
<u>Checklist</u>
Commercial
Projects < 50 K
Square Feet

	COMMERCIAL < 50,000 SQUARE FEET			
	Per Dallas Ordinance 27131 - Submittal Documents Required NOTE: ALL REQUIREMENTS ARE MANDATORY			
Section	JURISDICTIONAL REQUIREMENTS SECTION 4303	YES	NO	N/A
4303.3.2	ENERGYUSE			
	Energy use for proposed projects must meet the minimum provisions of Chapter 5 of the Dallas Energy Code as shown by:			
	1. Energy code compliance modeling through Energy Systems Laboratory approved software or COMcheck; or			
	 Installing systems that have been certified by a national, state or local accredited energy program and approved by the Energy Systems Laboratory. The United States Environmental Protection Agency's ENERGY STAR Program certification of energy code equivalency shall be considered an approved program 			
4303.3.3	WATER USEProposed projects must use 20 percent less water than the water use baseline calculated for the building's total interior water fixture use as required by the Dallas Plumbing Code. Water efficiency requirements of LEED shall be considered as approved strategy for compliance with this section.	YES	NO	N/A









SRI (_) is
calculated using a	-
materials	
and	

Black paint has SRI of ?







<u>Answer</u>



SRI (<u>Solar Reflective</u> <u>Index</u>) is calculated using a materials <u>Reflectivity</u> and <u>Emittance.</u>

Black paint has SRI of ? 0





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Dallas Green Building Program Application Checklist Commercial Projects >or equal to 50K S.F

	COMMERCIAL <u>></u> 50,000 SQUARE	FEEI		
Responsible Party	DESCRIPTION AND REQUIRED DOCUMENTS TO BE REVIEWED	MANDATORY	Enter points for each option selected	Allowable Points
	SITE DEVELOPMENT AND LAND USE 15 POINTS			
	STE DEVELOFMENT AND LAND USE 13FOINTS			
Design Professional (Civil)	Construction Activity Pollution Prevention (SWPPP Plan)			1
	1. SWPPP Plan			
	2. Affidavit for less than 1 acre			
Owner	Site Selection			1
	Confirmation letter from the owner that the project has met these requirements. Not on prime farmland. Not on previous undeveloped land that is below 5 feet above the 100 year flood elevation per FEMA. Not on a habitat for any endangered or critical species. Not within 100 feet of any wetlands. Not within 50 feet of water body (lakes or rivers) per Clean Water Act or not on public parkland.			
Owner or				
Design Professional	Development Density & Community Connectivity			1
	OPTION 1: Development Density - provide a site plan			
	showing the site and adjacent buildings. Include density			
	OPTION 2: Community Connectivity - provide site plan or aerial photo within 1/2 mile radius with 10 basic services			
	indicated on drawing. Include complete listing of each			
	business name and type for services. Show residential			
	zone or neighborhood			
Owner or				
Design Professional	Brownfield Redevelopment			1
	Letter from EPA or City verifying the site was a Brownfield			







An office project has 250 people working a total of 640 hours each day. What is the total number of FTE for the project ?







<u>Answer</u>



An office project has 250 people working a total of 640 hours each day. What is the total number of FTE for the project ? 80





Inspection Checklist-SFD

Green inspection by City of Dallas: Single Family or Duples Structures Builder and in spector Checklist

The following are the specific tilens necessary to pass each element associated with a Green Inspection by the City of Datas for a single thrity or dupies shuckure. See Ontenaces #21131 and #27799 for de bits

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	Requirement	Specific docum entation	Prepared a	nd on-site?
1.	Lavatory faucet :	Check aerator for gallons per minite (GPM) notation; <u>or</u> Check packing box for GPM	Yes	No
2.	Showerhe ad :	Cleckshower lead for GPM; <u>or</u> Cleck packing box for GPM; <u>or</u> Cleck cut-sheet for GPM	Yes	No
3.	Tollets	Verfly friftxture is dual finsh; <u>or</u> Verfly friftxture is <u>WaterSense</u> ; <u>or</u> Verfly gallons per finsh from Information etched inside tank; <u>or</u> Verfly gallons per finsh from outsheet, and verfly that outsheet matches fixfure	Yes	No
4.	Dish wash er	Verffy Energy Starseal; <u>or</u> Verffy model number and verffy gallons per cycle from website	Yes	No
5.	Clothes washer	Verfly Energy Starseal; <u>or</u> Verfly model number and verfly gallons per cycle from website	Yes	No
6.	Drip Irrigation	Verify that dripemitters are in all plant bedding are as	Yes	N
7.	Bhergy	Verhy ble submittal documents for: IC3; <u>or</u> HERS; <u>or</u> EPA's ENERGY STAR Program	Yes	No

<u>Note:</u> Verify that <u>post construction</u> certification has been provided

A set of City-approved plans must be on site at he time of he inspection.

4 of 6 waler effidency-reliabilitiems must be met

The acceptability of each item is subjectilo fre City of Datas feld inspector's approval

Alternale forms of certification must identify equivalencies to be above ordinance requirements







Green Inspection by City of Dallas: Commercial Structures upder 50.000.4.1. Builder and in spector Checkilst

The following are the liens required is pass a Green inspection by the City of Dalas for a commencial building upder \$0,0004.0. Gee Ordinances #27131 and #277.59 for de bits

	Requirement	Specific docum entation	Prepared a	nd on-site
1.	Cool roof	Warranty for materials, hold ding docume station of solar reflective lude x (SR)	Yes	No
		Invoice for specified rooting materials	Yes	No
2.	Light pollution reduction	Fixture specification sheets should be on file from plan review. Otherwise, provide specisheets at time of inspection	Yes	No
		Verify that his talle dexterior lights match fixtures kientified by specishee to	Yes	No
		Verify that fixtures are almed correctly	Yes	No
3.	Water use reduction	Design professional (architect, engineer) certification	Yes	No
	C.S.	Verify that fixtures match those kientified or plans and listed in certification paperwork	Yes	No
4.	Optimize en erg y performance	Verify the submittal documents for: Energy modeling using ESL approved software or <u>CompCheck</u> : <u>or</u> EPA's ENERGY STAR Program	Yes	No

<u>Note:</u> Verify that <u>post construction</u> certification has been provided.

- A set of City-approved plans must be on site at he line of he inspection.
- The acceptability of each item is subject to the City of Datas feld inspector's approval.
- Alternale forms of certification must identify equivalencies to the above ordinance requirements.



<u>Inspection</u> Checklist < 50K





	ed water use reduction is the difference calculated						
	case and a case. The						
percentage is	s determined by						
dividing the _	case use by						
the	use. The						
case is determined by							
using thestandard							
for plumbing	fixtures.						

What is the water use reduction percentage?





<u>Answer</u>

The calculated water use reduction for a project is the difference between the calculated <u>baseline</u> case and a <u>design</u> case. The percentage is determined by dividing the <u>baseline</u> case use by the <u>design</u> use. The <u>baseline</u> case is determined by using the <u>Dallas</u> <u>Plumbing Code</u> standard for plumbing fixtures.

What is the water use reduction percentage? 20%





Inspection Compliance Affidavit

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Dallas Green Building Program Inspection Compliance Affidavit

	Type of construction: 🗆 <u>Residential</u> 🖂 Comm	nercial under 50K 🗆 Commercial over 50K
	1. Address of construction:	Permit #
PRINT	2. Provider name:	
	3. Provider registration #:	
	Registered as (check.all.that.apply):	
	Residential provider	
	Commercial under 50K provider	
	☐ Commercial over 50K provider	
SIGN		
SIGN	I have i	inspected this project and confirm that it is
	I, have i consistent with the approved plans and that it mee	ts or exceeds the green building requirements
	of the Dallas Building Code or the Dallas One- an	d Two-Family Dwelling Code, as applicable.
	<u> </u>	
	Provider's Signature	
	STATE OF TEXAS	
	COUNTY OF	
	This affidavit was acknowledged before n	ne on by



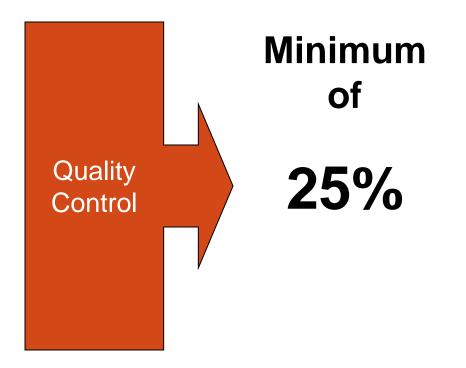
NOTARY PUBLIC

[NOTARY PUBLIC STAMP]





There will be QC







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City of Dallas Website

www.dallascityhall.com



City Departments



Building Inspections



Contractors / Designers

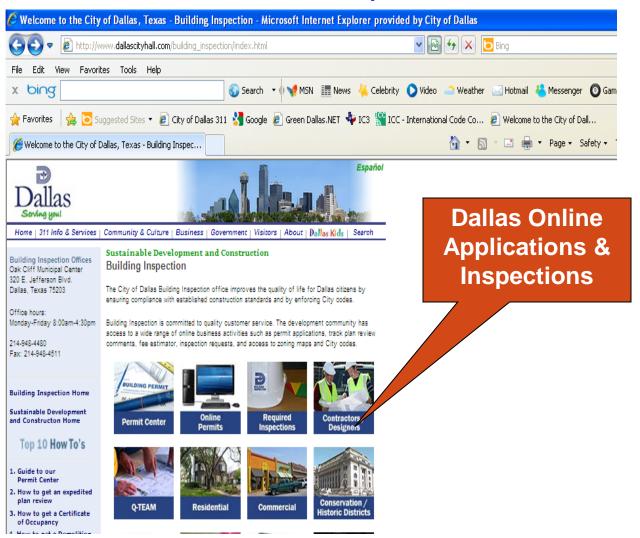


Online Services for Contractors





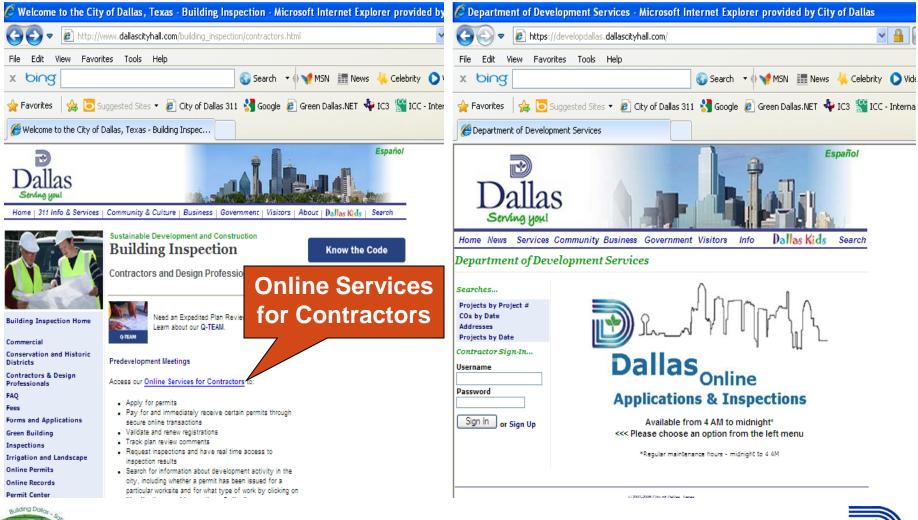
www.dallascityhall.com







Online Services for Contractors











Which label on appliances indicates the product reduces energy use ?







<u>Answer</u>



Which label on appliances indicates the product reduces energy use ?

- Energy Star





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Review / Questions

- Registration Contractor #, PIN #, E-mail address
- Permitting Master Permit, Trade Permit, Validation
- Plan Review Affidavit, Checklist
- Inspection Scheduling, Results
- Final / Completion Affidavit, Checklist, Documents







Contact Information

The Green Building Program will be administered by Building Inspection of the Department of Sustainable Development and Construction.

Meenal Chauk 214.948.4091 <u>meenal.chauk@dallascityhall.com</u> Or Mark Daniel 214.948.4464 <u>mark.daniel@dallascityhall.com</u>







Questions



