



City of Lake Dallas

City Council

Regular Meeting

City Hall

212 Main Street, Lake Dallas, TX 75065

Thursday, December 14, 2017 at 7:00 p.m.

Agenda

Section I – Presentations

- 1. Call to Order & Determination of Quorum**
- 2. Invocation & Pledges of Allegiance**
- 3. Announcements & Special Recognitions**
 - A. Fire Safety Poster Proclamation**
 - B. Recognitions Lake Dallas Student Council for Holiday Decorations**
 - C. City Manager's Report**

The City Manager's Report may provide information on status of current city projects and other projects affecting the City, meetings and actions of the city's boards and commissions, upcoming local community events, including, but not limited to, departmental operations and capital improvement project status. No action will be taken with respect to this report.

4. Citizen Agenda & Public Comment

An opportunity for citizens to address the Mayor and City Council on matters which are not scheduled for consideration by the City Council or another City Board or Commission at a later date. In order to address the Council, please complete a Public Meeting Appearance Card and present it to the City Secretary prior to the start of the Council meeting. The Texas Open Meeting Act prohibits deliberation by the City Council of any subject which is not on the posted agenda, therefore the Council will not be able to discuss or take any action on items brought up during the citizen presentations. Citizen presentation will be limited to five (5) minutes per person.

Section II – Consent Agenda

All items listed below are considered to be routine by the City Council and will be enacted with one motion. There will be no separate discussion of the items unless a Councilmember so requests, in which event the item will be removed from the consent agenda and considered in its normal sequence.

5. Consider and Act on the Consent Agenda

- A. Receive Monthly Budget & Financial Report
- B. Approval of Minutes of the Regular Meeting held November 9, 2017.
- C. Approval of Resolution authorizing the Interim City Manager to negotiate and sign an Interlocal Cooperation Agreement with SPAN, Inc. to provide Demand Response Transit Services.
- D. Approval of resolution approving adjustment rates for solid waste collection services pursuant to agreement with Waste Management of Texas, Inc..

Section III – Planning & Development- No items

- 6. Conduct a discussion on a request to change the zoning designation for 5.03 acres of land from C-1 Retail District to a Planned Development (PD) District for all uses permitted in the C-1 District with the inclusion of a mini-warehouse storage facility. (Case ZN171001).
- 7. Conduct a discussion on a request for a non-residential masonry exception for the use of concrete plank siding on an existing wood paneled building previously used as a residence, located on a 0.24 acre tract of land in the S. McCarroll Survey, Abstract No. 958, Denton County, Lake Dallas, Texas. (Case ME171001)
- 8. Conduct a discussion regarding adoption of the 2015 editions of the International Building Code, International Residential Code, International Energy Conservation Code, International Plumbing Code, International Mechanical Code, and International Fuel Gas Code, and the 2017 edition of the National Electrical Code and local amendments thereto (Case TA171201)

Section IV- General Items

- 9. Receive a presentation from iChoosr.
- 10. Consider and act on a Resolution exercising their right to cast votes for election of Denton Central Appraisal District.

11. Consider and act on a Resolution authorizing negotiation and execution of contracts for replacement of heating and air conditioning units at City Hall and the Library.
12. Consider and Act on a Resolution appointing members to various positions on the Board of Directors of the Lake Dallas Community Development Corporation.
13. Consider and Act on a Resolution appointing members to various positions of the Library Advisory Board.
14. Consider and Act on a Resolution appointing members to various positions of the Board of Adjustment.
15. Consider and Act on a Resolution appointing members to various positions of the Parks and Recreation Board.
16. Consider and Act on a Resolution appointing members to various positions of the Planning and Zoning Commission.
17. Receive a report, hold a discussion, and give staff directions on various storm water drainage issues
18. Discussion regarding the Parks and Recreation Board recommendation to alter the fee schedule rental of Willow Grove Park Pavilion facilities.

Section V – Elected Official Requested Items

19. Mayor & Council Member Announcements

The City Council may hear or make reports of community interest provided no action is taken or discussed. Community interest items may include information regarding upcoming schedules of events, honorary recognitions, and announcements involving imminent public health and safety threats to the city. Any deliberation shall be limited a proposal to place the subject on an agenda for a subsequent meeting.

Section VI – Executive Session As authorized by Section 551.071 of the Texas Government Code, this meeting may be convened into closed executive session for the purpose of seeking confidential legal advice from the City Attorney on any agenda item listed above or herein.

20. Executive Session: Conduct a closed meeting pursuant to the Texas Government Code section 551.074 to:
 - a. deliberate the appointment and employment of the Interim City Manager and/or City Manager;

Section VII – Return to Open Session

21. Discuss and take action, if any, regarding matters discussed in Closed Session (Item 15).

Section VIII – Adjournment

I certify that the above notice of this meeting posted on the bulletin board at City Hall of the City of Lake Dallas, Texas on or before December 8, 2017 at 5:00 p.m.



Codi Delcambre, TRMC
City Secretary

As authorized by Section 551.071 of the Texas Government Code, this meeting may be convened into closed executive session for the purpose of seeking confidential legal advice from the City Attorney on any agenda item listed above or herein.

If you plan to attend this public meeting and you have a disability that requires special arrangements at this meeting, please contact City Secretary's Office at (940) 497-2226 ext. 118 or fax (940) 497-4485 at least two (2) working days prior to the meeting so that appropriate arrangements can be made.

Financial Reports

November 2017

City of Lake Dallas
Monthly Financial Summary
November 2017

	Current Month	Year to Date	Amended Budget
Revenues	\$ 313,371.61	\$ 542,463.61	\$4,536,131.00
Expenses	344,587.16	653,921.60	4,519,761.00
Net	(31,215.55)	(111,457.99)	16,370.00

Sales Tax Revenue for the month of November was \$118,415.52 with \$59,207.76 going to the General Fund. This is approx a 7.7% increase over November 2016. The portion going to the Road Maintenance & Repair Fund is \$14,801.94.

The General Fund has the following cash available as of November 30, 2017:

Texpool Investment Account	540,976.03
Northstar Checking Account	141,444.08
Total funds available	\$ 682,420.11

Property Tax Revenue received in November was \$156,509.64 an increase of approx. 18.5% over November 2016.

Willow Grove Park revenue for the month of November 2017 was \$1,045 for park use and \$4,462.38 for camping.

**Special Revenue Funds
November 2017**

	Budgeted Revenue	Revenues YTD	Budgeted Expenses	Expenses YTD	Net
Debt Service	\$659,764.00	\$30,773.19	\$659,764.00	\$0.00	\$30,773.19
Street Maintenance	\$156,250.00	\$13,143.48	\$290,000.00	\$0.00	\$13,143.48
Hotel Occupancy Tax	\$75,000.00	\$20,025.37	\$75,695.00	\$342.00	\$19,683.37
Court Technology	\$7,400.00	\$742.66	\$11,000.00	\$810.07	(\$67.41)
Court Security	\$5,500.00	\$606.77	\$13,000.00	\$0.00	\$606.77
LEOSE	\$1,575.00	\$20.09	\$5,000.00	\$826.22	(\$806.13)
Child Safety	\$2,600.00	\$8,221.20	\$20,960.00	\$0.00	\$8,221.20
Juvenile Case Mgmt	\$1,255.00	\$377.85	\$4,000.00	\$0.00	\$377.85
Drug Seizure	\$0.00	\$12.76	\$6,000.00	\$1,386.99	(\$1,374.23)
Kids N Cops	\$10,000.00	\$510.38	\$10,000.00	\$0.00	\$510.38
Police Auction	\$0.00	\$0.00	\$25,870.00	\$4,066.07	(\$4,066.07)
Forensic Testing	\$0.00	\$0.71	\$405.00	\$0.00	\$0.71
Willow Grove Park	\$115,000.00	\$14,271.13	\$117,000.00	\$4,930.21	\$9,340.92
Animal Rescue	\$10,000.00	\$3,190.62	\$12,000.00	\$0.00	\$3,190.62
Library Donations	\$2,000.00	\$228.53	\$1,000.00	\$0.00	\$228.53
Park Improvements	\$4,500.00	\$703.39	\$7,000.00	\$0.00	\$703.39

Lake Dallas Community Development Corporation
Monthly Financial Summary
November 2017

	Current Month	Year to Date	Original Budget
Revenues	\$29,964.42	\$55,552.43	\$ 315,000.00
Expenses	7,252.09	14,019.01	479,880.00
Net	22,712.33	41,533.42	(164,880.00)

Sales Tax Revenue for the month of November was \$29,603.88.

CDC has the following cash available as of November 30, 2017:

CDC Investment Account	340,069.29
CDC Checking Account	177,630.85
Net Funds	<u>\$ 517,700.14</u>
Projects Pending:	
Main Street Lights	77,638.21
BIG Grant	10,000.00

Available Fund Balance \$ 430,061.93

City of Lake Dallas

Sales Tax Receipts

2011-2018

Sales Tax Revenue									
	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	
October	38,283	41,157	45,460	55,628	56,149	47,379	49,777	50,436	
November	58,801	62,465	56,033	73,019	70,441	71,533	54,937	59,208	
December	34,991	40,404	52,254	55,242	50,061	47,251	48,394		
January	35,554	37,690	57,786	51,333	49,207	37,737	49,924		
February	51,454	56,784	70,254	71,087	69,095	52,453	60,766		
March	36,251	43,391	45,641	48,738	56,219	48,138	47,525		
April	35,380	40,338	49,569	50,774	45,453	42,501	53,447		
May	47,890	56,161	65,314	66,407	68,453	63,202	60,564		
June	42,608	41,516	49,867	55,722	46,817	45,574	55,437		
July	38,386	48,200	53,715	57,866	47,871	44,088	48,659		
August	53,624	55,137	68,962	62,936	53,926	53,208	59,434		
September	40,330	49,402	53,034	54,545	54,292	48,323	51,505		
Total	513,551	572,646	667,890	703,298	667,984	601,386	640,368	109,643	

12/1/2017

Date	2013	2014	2015	2016	2017
29-Oct		\$4,387.20			
30-Oct		\$2,755.85			
31-Oct	\$2,660.48				
1-Nov	\$1,203.73			1892.42	\$11,895.96
2-Nov		\$14,195.93	\$4,595.30	2195.56	\$6,460.82
3-Nov	\$3,546.74	\$3,274.44	\$4,346.57	\$9,776.28	
4-Nov	\$2,711.28	\$4,720.92	\$5,184.91	\$8,229.95	
5-Nov	\$7,182.08	\$3,529.89	\$2,532.94		\$3,940.50
6-Nov	\$5,736.08	\$12,734.81		\$10,185.54	\$10,771.92
7-Nov	\$3,897.77			\$2,516.85	\$3,683.88
8-Nov			\$9,953.58	\$5,587.97	\$4,278.68
9-Nov			\$3,112.61	\$16,673.06	
10-Nov	\$5,577.78	\$2,751.32	\$6,713.28		
12-Nov	\$2,076.63	\$2,591.59	\$7,010.20		\$9,825.15
13-Nov	\$5,464.24	\$4,586.73		\$1,950.77	\$22,215.85
14-Nov	\$5,749.46			\$4,186.99	\$17,075.97
15-Nov	\$2,760.04			\$1,084.66	\$7,900.22
16-Nov			\$4,644.26	\$15,213.01	\$4,417.04
17-Nov	\$10,587.23	\$3,457.35	\$4,712.82	\$3,755.61	
18-Nov	\$5,945.86	\$3,067.16	\$6,664.02		
19-Nov	\$8,195.65	\$2,084.31	\$9,800.89		\$5,412.95
20-Nov	\$4,706.48	\$3,969.53		\$14,182.13	\$4,960.65
21-Nov	\$1,375.87			\$3,451.98	\$10,572.73
22-Nov			\$8,423.73	\$1,842.60	
23-Nov		\$2,446.43	\$3,198.25		
24-Nov	\$10,724.97	\$30,275.39	\$3,053.62		
25-Nov	\$28,862.79				
26-Nov					\$13,409.72
27-Nov				\$18,134.62	\$11,728.55
28-Nov				\$7,272.24	\$7,959.05
29-Nov			\$7,034.87	\$4,285.41	
30-Nov					\$156,509.64
29-Oct	\$103,206.83	\$116,108.15	\$120,482.65	\$132,417.65	
31-Oct					

Willow Grove Park Revenue Trending: 2017

Pay Station -- Park Day Use and Boat Launch

	Cash	Credit Card	Total
2016			
December	\$110.00	\$85.00	\$195.00
January	\$261.00	\$158.00	\$419.00
February	\$518.00	\$282.00	\$800.00
March	\$1,573.00	\$701.00	\$2,274.00
April	\$1,936.00	\$891.00	\$2,827.00
May	\$2,478.00	\$1,469.00	\$3,947.00
June	\$2,195.00	\$1,055.00	\$3,250.00
July	\$2,579.00	\$1,516.00	\$4,095.00
2017			
August	\$1,231.00	\$832.00	\$2,063.00
September	\$1,287.00	\$787.00	\$2,074.00
October	\$881.00	\$716.00	\$1,597.00
November	\$650.00	\$395.00	\$1,045.00
	YTD Total	YTD Total	\$24,586.00

Total

Source: VenTek 'Monthly Transactions Summary' Report

Camping	December	\$4,296.81
2016	January	\$5,554.37
	February	\$7,755.00
	March	\$10,502.10
	April	\$7,751.53
	May	\$7,051.41
	June	\$6,620.49
2017	July	\$6,250.67
	August	\$6,087.94
	September	\$7,943.35
	October	\$8,538.80
	November	\$4,462.38
	YTD Total	\$82,814.85

Budget Summary

Revenue and Expenditures
by Month and Year to Date
Compared to Budget

City of Lake Dallas

Statement of Revenue and Expenditures

Revised Budget
For General Fund (01)
For the Fiscal Period 2018-2 Ending November 30, 2017

Account Number	Current Budget	Current Actual	Annual Budget	YTD Actual	Remaining Budget Amount
Revenues					
Revenues					
Undefined Sub-Type Revenues					
01-00-41006 Property Taxes-Current	\$ 0.00	\$ 130,214.72	\$ 2,447,478.00	\$ 161,494.00	\$ 2,285,984.00
01-00-41007 Property Taxes-Delinquent	0.00	1,259.13	10,503.00	13,074.46	(2,571.46)
01-00-41009 Property Taxes-P & I	0.00	562.01	10,992.00	4,264.04	6,727.96
01-00-41010 Property Tax I&S Delinquent	0.00	95.92	0.00	95.92	0.00
01-00-42108 Sales Tax-General	0.00	74,009.70	625,000.00	124,445.37	500,554.63
01-00-42110 Sales Tax-Mixed Beverage	0.00	0.00	20,000.00	4,962.29	15,037.71
01-00-42116 Sales Tax - Property Tax Reduction	0.00	14,801.94	156,250.00	27,410.86	128,839.14
01-00-44214 Franchise Fees - ATMOS	0.00	0.00	47,500.00	0.00	47,500.00
01-00-44215 Franchise Fees - Century Tel	0.00	2,693.36	7,700.00	2,693.36	5,006.64
01-00-44216 Franchise Fees - TXU Electric	0.00	0.00	209,000.00	0.00	209,000.00
01-00-44217 Franchise Fees - Charter Communicati	0.00	15,663.21	56,000.00	15,663.21	40,336.79
01-00-44218 Franchise Fees - Waste Management	0.00	3,716.21	75,000.00	15,536.17	59,463.83
01-00-44219 Franchise Fees - Miscellaneous	0.00	1,597.88	2,000.00	1,672.34	327.66
01-00-45235 Shady Shores Funding	0.00	14,523.00	29,046.00	14,523.00	14,523.00
01-00-45320 Animal Services	0.00	2,510.00	13,000.00	4,365.00	8,635.00
01-00-45321 Application Fees - Admin/PZ/BOA	0.00	0.00	6,000.00	500.00	5,500.00
01-00-45322 Permits - Mobile Home	0.00	0.00	400.00	0.00	400.00
01-00-45323 Fees - Health Department	0.00	950.00	8,000.00	965.00	7,035.00
01-00-45324 Permits - Building	0.00	2,775.00	30,000.00	4,863.45	25,136.55
01-00-45325 Licenses - Beer/Wine/Liquor	0.00	0.00	1,500.00	0.00	1,500.00
01-00-45326 Permits - Alarms	0.00	250.00	8,000.00	300.00	7,700.00
01-00-45328 Permits - Other	0.00	1,215.00	3,900.00	1,885.00	2,015.00
01-00-45329 Fees - Park Improvement	0.00	0.00	3,000.00	0.00	3,000.00
01-00-45349 Permits - Subcontractors	0.00	3,208.00	30,000.00	4,058.00	25,942.00
01-00-45350 Permits - Business	0.00	3,200.00	2,000.00	3,325.00	(1,325.00)
01-00-45351 Registration - Contractor	0.00	1,200.00	12,000.00	2,400.00	9,600.00
01-00-45352 Fees - Drainage Improvements	0.00	0.00	3,000.00	0.00	3,000.00
01-00-45353 Plan Review	0.00	2,447.25	19,500.00	2,879.25	16,620.75
01-00-45463 Rentals - Parks	0.00	0.00	2,000.00	240.00	1,760.00

City of Lake Dallas

Statement of Revenue and Expenditures

Revised Budget
For General Fund (01)
For the Fiscal Period 2018-2 Ending November 30, 2017

Account Number	Current Budget	Current Actual	Annual Budget	YTD Actual	Remaining Budget Amount
01-00-45464 Fees- Vendors	0.00	90.00	4,600.00	90.00	\$ 4,510.00
01-00-45465 Fees - Entry	0.00	0.00	300.00	0.00	\$ 300.00
01-00-45466 Proceeds - Events	0.00	0.00	4,600.00	0.00	\$ 4,600.00
01-00-45467 Sponsorships - Events	0.00	700.00	15,000.00	2,450.00	\$ 12,550.00
01-00-45473 Police Reports	0.00	45.00	900.00	72.18	\$ 827.82
01-00-45474 Rental Fees - Community Room	0.00	(550.00)	3,000.00	375.00	\$ 2,625.00
01-00-45802 Rental Income	0.00	7,432.74	44,675.00	7,432.74	\$ 37,242.26
01-00-46233 Library Fines	0.00	139.00	3,600.00	300.55	\$ 3,299.45
01-00-46330 Court Fines/Bonds	0.00	12,027.16	320,000.00	27,368.09	\$ 292,631.91
01-00-46331 Administrative Fees	0.00	874.80	30,066.00	4,286.96	\$ 25,779.04
01-00-46332 Arrest/Warrant/Fees	0.00	710.00	31,817.00	1,709.00	\$ 30,108.00
01-00-46337 MVBA Collections	0.00	912.30	40,000.00	1,514.43	\$ 38,485.57
01-00-46338 OMNI Collections	0.00	172.00	0.00	(65.72)	\$ 0.00
01-00-46339 Omni/City	0.00	110.67	0.00	253.75	\$ 0.00
01-00-47476 Interest Income - General FD	0.00	777.11	1,644.00	1,686.41	\$ (42.41)
01-00-47528 Interest Income - Reserve FD	0.00	0.00	4,110.00	0.00	\$ 4,110.00
01-00-48234 Library Memberships	0.00	50.00	2,000.00	95.00	\$ 1,905.00
01-00-48461 SRO Reimbursement	0.00	0.00	50,000.00	63,285.00	\$ (13,285.00)
01-00-48468 Fireworks	0.00	0.00	20,600.00	0.00	\$ 20,600.00
01-00-48475 Other Revenue	0.00	6,988.50	6,000.00	7,994.50	\$ (1,994.50)
01-00-48480 Sale of Assets	0.00	0.00	3,000.00	0.00	\$ 3,000.00
01-00-49403 Trf from CDC - Parks	0.00	6,000.00	72,000.00	12,000.00	\$ 60,000.00
01-00-49404 Admin Fees - Willow Grove Park	0.00	0.00	15,000.00	0.00	\$ 15,000.00
01-00-49615 Trf from CDC - Comp Plan	0.00	0.00	24,450.00	0.00	\$ 24,450.00
Total Undefined Sub-Type Revenues	0.00	313,371.61	4,536,131.00	542,463.61	3,993,667.39
Total Revenues	0.00	313,371.61	4,536,131.00	542,463.61	3,993,667.39
Total General Fund Revenues	\$ 0.00	\$ 313,371.61	\$ 4,536,131.00	\$ 542,463.61	\$ 3,993,667.39

City of Lake Dallas

Statement of Revenue and Expenditures

Revised Budget
For General Fund (01)
For the Fiscal Period 2018-2 Ending November 30, 2017

Account Number	Current Budget	Current Actual	Annual Budget	YTD Actual	Remaining Budget Amount
Expenditures					
Tourism Expenditures					
Supplies Expenditures					
01-05-52221 Community Events	\$ 0.00	\$ 182.78	\$ 500.00	\$ 182.78	\$ 317.22
Total Supplies Expenditures	0.00	182.78	500.00	182.78	317.22
Contractual Services Expenditures					
01-05-53350 Fireworks	0.00	0.00	25,000.00	0.00	25,000.00
Total Contractual Services Expenditures	0.00	0.00	25,000.00	0.00	25,000.00
Total Tourism Expenditures	0.00	182.78	25,500.00	182.78	25,317.22
City Council Expenditures					
Supplies Expenditures					
01-07-52000 Office Supplies	0.00	0.00	0.00	98.52	0.00
01-07-52204 Uniforms	0.00	0.00	600.00	0.00	600.00
01-07-52206 Travel & Training	0.00	2,251.31	6,000.00	2,969.76	3,030.24
01-07-52212 Flowers/Gifts/Plaques	0.00	29.98	500.00	29.98	470.02
Total Supplies Expenditures	0.00	2,281.29	7,100.00	3,098.26	4,001.74
Total City Council Expenditures	0.00	2,281.29	7,100.00	3,098.26	4,001.74
Development Services Expenditures					
Personnel & Benefits Expenditures					
01-08-51000 Salaries-Full Time	0.00	6,131.54	148,460.00	12,263.08	136,196.92
01-08-51101 Overtime	0.00	827.17	1,000.00	1,211.96	(211.96)
01-08-51102 Certification Pay	0.00	0.00	1,200.00	0.00	1,200.00
01-08-51103 Stipend/Auto Allowance	0.00	0.00	600.00	0.00	600.00
01-08-51104 Longevity	0.00	468.00	468.00	468.00	0.00
01-08-51105 FICA/Medicare Tax	0.00	107.41	2,170.00	201.61	1,968.39
01-08-51106 Unemployment Tax	0.00	0.00	28.00	0.00	28.00
01-08-51107 Worker's Compensation	0.00	29.08	431.00	47.74	383.26

City of Lake Dallas

Statement of Revenue and Expenditures

Revised Budget
For General Fund (01)
For the Fiscal Period 2018-2 Ending November 30, 2017

Account Number	Current Budget	Current Actual	Annual Budget	YTD Actual	Remaining Budget Amount
01-08-51108 Group Health Insurance	0.00	1,523.49	32,821.00	3,047.98	\$ 29,773.02
01-08-51109 Retirement/TMRS	0.00	845.28	20,556.00	845.28	\$ 19,710.72
Total Personnel & Benefits Expenditures	0.00	9,931.97	207,734.00	18,085.65	189,648.35
Supplies Expenditures					
01-08-52000 Office Supplies	0.00	96.87	600.00	199.85	\$ 400.15
01-08-52201 Operating Supplies	0.00	0.00	400.00	0.00	\$ 400.00
01-08-52202 Postage & Shipping	0.00	0.00	1,000.00	0.00	\$ 1,000.00
01-08-52203 Printing	0.00	0.00	1,500.00	48.99	\$ 1,451.01
01-08-52204 Uniforms	0.00	0.00	300.00	0.00	\$ 300.00
01-08-52205 Advertising	0.00	93.70	1,000.00	365.50	\$ 634.50
01-08-52206 Travel & Training	0.00	75.00	2,000.00	75.00	\$ 1,925.00
01-08-52207 Dues & Memberships	0.00	35.00	950.00	35.00	\$ 915.00
01-08-52208 Vehicle Fuel	0.00	68.15	2,600.00	68.15	\$ 2,531.85
01-08-52209 Office Equipment	0.00	0.00	300.00	0.00	\$ 300.00
01-08-52211 Safety Equipment & Supplies	0.00	0.00	300.00	0.00	\$ 300.00
01-08-52213 Subscriptions & Publications	0.00	0.00	400.00	0.00	\$ 400.00
01-08-52216 Telephone-Mobile	0.00	49.38	600.00	98.67	\$ 501.33
Total Supplies Expenditures	0.00	418.10	11,950.00	891.16	11,058.84
Contractual Services Expenditures					
01-08-53305 Engineering	0.00	0.00	10,000.00	0.00	\$ 10,000.00
01-08-53309 Consultants & Professionals	0.00	765.00	0.00	1,870.00	\$ 0.00
01-08-53317 Inspection Services	0.00	1,824.80	28,000.00	3,616.73	\$ 24,383.27
01-08-53326 Health Inspections	0.00	360.00	4,500.00	360.00	\$ 4,140.00
Total Contractual Services Expenditures	0.00	2,949.80	42,500.00	5,846.73	36,653.27
Maintenance Expenditures					
01-08-54402 Vehicle Maintenance	0.00	0.00	1,500.00	0.00	\$ 1,500.00
01-08-54406 Software Maintenance	0.00	0.00	0.00	493.00	\$ 0.00
Total Maintenance Expenditures	0.00	0.00	1,500.00	493.00	1,007.00
Capital Outlay Expenditures					
01-08-55504 Capital Outlay-Information Technology	0.00	0.00	1,200.00	0.00	\$ 1,200.00

City of Lake Dallas

Statement of Revenue and Expenditures

Revised Budget
For General Fund (01)
For the Fiscal Period 2018-2 Ending November 30, 2017

Account Number	Current Budget	Current Actual	Annual Budget	YTD Actual	Remaining Budget Amount
01-08-55507 Capital Outlay Property Abatements	0.00	0.00	10,000.00	0.00	\$ 10,000.00
01-08-55508 Capital Outlay-Comprehensive Plan	0.00	6,036.02	24,450.00	6,036.02	\$ 18,413.98
Total Capital Outlay Expenditures	0.00	6,036.02	35,650.00	6,036.02	29,613.98
Total Development Services Expenditures	0.00	19,335.89	299,334.00	31,352.56	267,981.44
Municipal Court Expenditures					
Personnel & Benefits Expenditures					
01-09-51000 Salaries-Full Time	0.00	6,887.84	87,602.00	13,775.68	\$ 73,826.32
01-09-51101 Overtime	0.00	264.10	500.00	382.90	\$ 117.10
01-09-51102 Certification Pay	0.00	115.40	1,200.00	207.72	\$ 992.28
01-09-51104 Longevity	0.00	408.00	408.00	408.00	\$ 0.00
01-09-51105 FICA/Medicare Tax	0.00	112.09	1,283.00	218.10	\$ 1,064.90
01-09-51106 Unemployment Tax	0.00	0.00	18.00	0.00	\$ 18.00
01-09-51107 Worker's Compensation	0.00	13.23	255.00	21.59	\$ 233.41
01-09-51108 Group Health Insurance	0.00	1,497.30	21,278.00	2,994.60	\$ 18,283.40
01-09-51109 Retirement/TMRS	0.00	981.08	12,156.00	981.08	\$ 11,174.92
Total Personnel & Benefits Expenditures	0.00	10,279.04	124,700.00	18,989.67	105,710.33
Supplies Expenditures					
01-09-52000 Office Supplies	0.00	5.89	800.00	93.71	\$ 706.29
01-09-52202 Postage & Shipping	0.00	0.00	1,500.00	0.00	\$ 1,500.00
01-09-52203 Printing	0.00	0.00	500.00	0.00	\$ 500.00
01-09-52204 Uniforms	0.00	0.00	100.00	0.00	\$ 100.00
01-09-52206 Travel & Training	0.00	389.20	2,000.00	507.95	\$ 1,492.05
01-09-52207 Dues & Memberships	0.00	0.00	200.00	0.00	\$ 200.00
Total Supplies Expenditures	0.00	395.09	5,100.00	601.66	4,498.34
Contractual Services Expenditures					
01-09-53318 MVBA fees	0.00	599.13	40,000.00	2,029.81	\$ 37,970.19
01-09-53319 Municipal Judge/Magistrate	0.00	1,200.00	14,400.00	2,400.00	\$ 12,000.00
01-09-53320 Prosecutor	0.00	541.57	10,000.00	1,423.14	\$ 8,576.86
01-09-53321 Jury Fee	0.00	0.00	1,000.00	0.00	\$ 1,000.00

City of Lake Dallas

Statement of Revenue and Expenditures

Revised Budget
For General Fund (01)
For the Fiscal Period 2018-2 Ending November 30, 2017

Account Number	Current Budget	Current Actual	Annual Budget	YTD Actual	Remaining Budget Amount
Total Contractual Services Expenditures	0.00	2,340.70	65,400.00	5,852.95	59,547.05
Total Municipal Court Expenditures	0.00	13,014.83	195,200.00	25,444.28	169,755.72
Administration Expenditures					
Personnel & Benefits Expenditures					
01-11-51000 Salaries-Full Time	0.00	10,589.82	227,899.00	21,179.64	206,719.36
01-11-51102 Certification Pay	0.00	184.64	2,400.00	369.28	2,030.72
01-11-51103 Stipend/Auto Allowance	0.00	0.00	4,000.00	0.00	4,000.00
01-11-51104 Longevity	0.00	612.00	612.00	612.00	0.00
01-11-51105 FICA/Medicare Tax	0.00	165.19	3,353.00	321.51	3,031.49
01-11-51106 Unemployment Tax	0.00	0.00	27.00	0.00	27.00
01-11-51107 Worker's Compensation	0.00	30.50	666.00	58.24	607.76
01-11-51108 Group Health Insurance	0.00	834.73	30,317.00	1,669.46	28,647.54
01-11-51109 Retirement/TMRS	0.00	1,463.51	31,736.00	1,463.51	30,272.49
01-11-51111 Physicals & Evaluations	0.00	0.00	100.00	0.00	100.00
Total Personnel & Benefits Expenditures	0.00	13,880.39	301,110.00	25,673.64	275,436.36
Supplies Expenditures					
01-11-52000 Office Supplies	0.00	166.95	4,000.00	265.65	3,734.35
01-11-52201 Operating Supplies	0.00	157.89	3,500.00	876.17	2,623.83
01-11-52202 Postage & Shipping	0.00	78.57	3,000.00	157.14	2,842.86
01-11-52203 Printing	0.00	589.17	4,200.00	1,045.20	3,154.80
01-11-52204 Uniforms	0.00	0.00	500.00	0.00	500.00
01-11-52205 Advertising	0.00	0.00	3,000.00	57.70	2,942.30
01-11-52206 Travel & Training	0.00	829.36	9,600.00	1,653.29	7,946.71
01-11-52207 Dues & Memberships	0.00	175.00	5,500.00	175.00	5,325.00
01-11-52209 Office Equipment	0.00	0.00	300.00	0.00	300.00
01-11-52212 Flowers/Gifts/Plaques	0.00	81.00	1,000.00	182.00	818.00
01-11-52213 Subscriptions & Publications	0.00	0.00	1,000.00	0.00	1,000.00
01-11-52216 Telephone-Mobile	0.00	120.12	1,160.00	197.09	962.91
Total Supplies Expenditures	0.00	2,198.06	36,760.00	4,609.24	32,150.76

City of Lake Dallas

Statement of Revenue and Expenditures

Revised Budget
For General Fund (01)
For the Fiscal Period 2018-2 Ending November 30, 2017

Account Number	Current Budget	Current Actual	Annual Budget	YTD Actual	Remaining Budget Amount
Contractual Services Expenditures					
01-11-53301 Utilities	0.00	3,138.39	36,400.00	5,197.47	\$ 31,202.53
01-11-53303 Accounting & Auditor	0.00	0.00	15,500.00	0.00	\$ 15,500.00
01-11-53304 Legal Services	0.00	3,963.57	42,000.00	11,607.14	\$ 30,392.86
01-11-53309 Consultants & Professionals	0.00	12,483.50	52,200.00	24,548.35	\$ 27,651.65
01-11-53311 Elections	0.00	0.00	7,000.00	0.00	\$ 7,000.00
01-11-53312 Denton County Tax	0.00	0.00	20,000.00	0.00	\$ 20,000.00
01-11-53313 Property & Liability Insurance	0.00	0.00	40,000.00	12,574.75	\$ 27,425.25
01-11-53314 Fire Contract	0.00	80,085.42	961,025.00	160,170.84	\$ 800,854.16
01-11-53325 Janitorial Services	0.00	942.00	11,500.00	1,884.00	\$ 9,616.00
01-11-53327 Franklin Legal Services	0.00	0.00	4,000.00	0.00	\$ 4,000.00
01-11-53328 Shredder Services	0.00	0.00	4,000.00	0.00	\$ 4,000.00
01-11-53329 SPAN	0.00	0.00	3,400.00	0.00	\$ 3,400.00
01-11-53330 Email Hosting Services	0.00	1,068.36	6,000.00	1,068.36	\$ 4,931.64
01-11-53331 Civic Plus	0.00	0.00	4,300.00	4,375.82	\$ (75.82)
01-11-53332 Financial Advisory Services	0.00	0.00	3,500.00	0.00	\$ 3,500.00
01-11-53333 Higginbotham	0.00	50.00	600.00	100.00	\$ 500.00
Total Contractual Services Expenditures	0.00	101,731.24	1,211,425.00	221,526.73	989,898.27
Maintenance Expenditures					
01-11-54400 Facilities Maintenance	0.00	4,142.77	10,000.00	4,142.77	\$ 5,857.23
01-11-54406 Software Maintenance	0.00	2,180.64	20,050.00	6,033.73	\$ 14,016.27
Total Maintenance Expenditures	0.00	6,323.41	30,050.00	10,176.50	19,873.50
Total Administration Expenditures	0.00	124,133.10	1,579,345.00	261,986.11	1,317,358.89
Police Expenditures					
Personnel & Benefits Expenditures					
01-13-51000 Salaries-Full Time	0.00	64,540.82	937,608.00	130,051.02	\$ 807,556.98
01-13-51101 Overtime	0.00	3,062.30	30,000.00	7,917.67	\$ 22,082.33
01-13-51102 Certification Pay	0.00	530.84	6,809.00	1,061.68	\$ 5,747.32
01-13-51104 Longevity	0.00	5,808.00	5,808.00	5,808.00	\$ 0.00
01-13-51105 FICA/Medicare Tax	0.00	1,051.73	13,694.00	2,059.83	\$ 11,634.17

City of Lake Dallas

Statement of Revenue and Expenditures

Revised Budget
For General Fund (01)
For the Fiscal Period 2018-2 Ending November 30, 2017

Account Number	Current Budget	Current Actual	Annual Budget	YTD Actual	Remaining Budget Amount
01-13-51106 Unemployment Tax	0.00	0.00	155.00	0.00 \$	155.00
01-13-51107 Worker's Compensation	0.00	1,589.62	24,216.00	2,677.80 \$	21,538.20
01-13-51108 Group Health Insurance	0.00	9,911.73	180,780.00	20,495.51 \$	160,284.49
01-13-51109 Retirement/TMRS	0.00	9,801.06	129,721.00	9,801.06 \$	119,919.94
01-13-51111 Physicals & Evaluations	0.00	0.00	1,700.00	0.00 \$	1,700.00
01-13-51116 Psychological Services	0.00	0.00	1,500.00	0.00 \$	1,500.00
Total Personnel & Benefits Expenditures	0.00	96,296.10	1,331,991.00	179,872.57	1,152,118.43
Supplies Expenditures					
01-13-52000 Office Supplies	0.00	205.11	4,000.00	382.93 \$	3,617.07
01-13-52201 Operating Supplies	0.00	367.49	6,500.00	449.94 \$	6,050.06
01-13-52202 Postage & Shipping	0.00	17.14	100.00	17.14 \$	82.86
01-13-52203 Printing	0.00	156.14	3,600.00	216.12 \$	3,383.88
01-13-52205 Advertising	0.00	0.00	800.00	0.00 \$	800.00
01-13-52206 Travel & Training	0.00	218.00	3,000.00	336.75 \$	2,663.25
01-13-52207 Dues & Memberships	0.00	0.00	2,400.00	0.00 \$	2,400.00
01-13-52208 Vehicle Fuel	0.00	1,224.25	21,115.00	1,265.68 \$	19,849.32
01-13-52211 Safety Equipment & Supplies	0.00	121.80	8,500.00	121.80 \$	8,378.20
01-13-52212 Flowers/Gifts/Plaques	0.00	0.00	500.00	0.00 \$	500.00
01-13-52213 Subscriptions & Publications	0.00	0.00	4,548.00	0.00 \$	4,548.00
01-13-52216 Telephone-Mobile	0.00	779.07	11,200.00	1,490.92 \$	9,709.08
01-13-52219 Emergency Response Supplies	0.00	37.20	3,300.00	87.16 \$	3,212.84
Total Supplies Expenditures	0.00	3,126.20	69,563.00	4,368.44	65,194.56
Contractual Services Expenditures					
01-13-53304 Legal Services	0.00	0.00	5,000.00	0.00 \$	5,000.00
01-13-53306 Communications	0.00	0.00	60,458.00	0.00 \$	60,458.00
01-13-53309 Consultants & Professionals	0.00	1,250.00	24,000.00	2,800.00 \$	21,200.00
01-13-53315 Jail Services	0.00	0.00	5,000.00	400.00 \$	4,600.00
Total Contractual Services Expenditures	0.00	1,250.00	94,458.00	3,200.00	91,258.00
Maintenance Expenditures					
01-13-54400 Facilities Maintenance	0.00	0.00	1,600.00	0.00 \$	1,600.00
01-13-54402 Vehicle Maintenance	0.00	7,423.39	18,505.00	8,517.86 \$	9,987.14

City of Lake Dallas

Statement of Revenue and Expenditures

Revised Budget
For General Fund (01)
For the Fiscal Period 2018-2 Ending November 30, 2017

Account Number	Current Budget	Current Actual	Annual Budget	YTD Actual	Remaining Budget Amount
01-13-54403 Equipment Maintenance	0.00	0.00	3,600.00	0.00	\$ 3,600.00
01-13-54406 Software Maintenance	0.00	9,934.01	30,116.00	13,674.79	\$ 16,441.21
01-13-54410 Property Loss	0.00	0.00	500.00	0.00	\$ 500.00
Total Maintenance Expenditures	0.00	17,357.40	54,321.00	22,192.65	32,128.35
Capital Outlay Expenditures					
01-13-55503 Capital Outlay-Vehicles	0.00	0.00	58,427.00	0.00	\$ 58,427.00
01-13-55506 Capital Outlay-Buildings/Facilities	0.00	0.00	5,000.00	0.00	\$ 5,000.00
Total Capital Outlay Expenditures	0.00	0.00	63,427.00	0.00	63,427.00
Total Police Expenditures	0.00	118,029.70	1,613,760.00	209,633.66	1,404,126.34
Library Expenditures					
Personnel & Benefits Expenditures					
01-14-51000 Salaries-Full Time	0.00	3,242.98	87,296.00	16,751.34	\$ 70,544.66
01-14-51104 Longevity	0.00	0.00	174.00	0.00	\$ 174.00
01-14-51105 FICA/Medicare Tax	0.00	248.09	3,518.00	645.35	\$ 2,872.65
01-14-51106 Unemployment Tax	0.00	1.01	37.00	2.09	\$ 34.91
01-14-51107 Worker's Compensation	0.00	10.80	291.00	41.49	\$ 249.51
01-14-51108 Group Health Insurance	0.00	10.00	11,064.00	794.04	\$ 10,269.96
01-14-51109 Retirement/TMRS	0.00	1,415.86	7,002.00	1,415.86	\$ 5,586.14
Total Personnel & Benefits Expenditures	0.00	4,928.74	109,382.00	19,650.17	89,731.83
Supplies Expenditures					
01-14-52000 Office Supplies	0.00	0.00	1,000.00	39.90	\$ 960.10
01-14-52201 Operating Supplies	0.00	170.01	2,000.00	170.01	\$ 1,829.99
01-14-52202 Postage & Shipping	0.00	47.82	1,000.00	124.55	\$ 875.45
01-14-52203 Printing	0.00	0.00	6,000.00	153.01	\$ 5,846.99
01-14-52204 Uniforms	0.00	0.00	150.00	0.00	\$ 150.00
01-14-52205 Advertising	0.00	0.00	500.00	0.00	\$ 500.00
01-14-52206 Travel & Training	0.00	0.00	1,500.00	0.00	\$ 1,500.00
01-14-52207 Dues & Memberships	0.00	0.00	4,500.00	2,463.00	\$ 2,037.00
01-14-52215 Library Books/Materials	0.00	470.00	10,000.00	1,092.96	\$ 8,907.04
01-14-52216 Telephone-Mobile	0.00	49.38	800.00	98.67	\$ 701.33

City of Lake Dallas

Statement of Revenue and Expenditures

Page 10

Revised Budget
For General Fund (01)
For the Fiscal Period 2018-2 Ending November 30, 2017

Account Number	Current Budget	Current Actual	Annual Budget	YTD Actual	Remaining Budget Amount
Total Supplies Expenditures	0.00	737.21	27,450.00	4,142.10	23,307.90
Contractual Services Expenditures					
01-14-53301 Utilities	0.00	825.92	12,750.00	1,509.49	11,240.51
01-14-53307 Rentals	0.00	202.00	2,400.00	202.00	2,198.00
01-14-53323 Security System	0.00	61.25	840.00	122.50	717.50
Total Contractual Services Expenditures	0.00	1,089.17	15,990.00	1,833.99	14,156.01
Maintenance Expenditures					
01-14-54400 Facilities Maintenance	0.00	6,775.90	2,500.00	6,775.90	(4,275.90)
01-14-54406 IT Maintenance	0.00	1,224.76	10,341.00	4,579.48	5,761.52
Total Maintenance Expenditures	0.00	8,000.66	12,841.00	11,355.38	1,485.62
Capital Outlay Expenditures					
01-14-55504 Capital Outlay-Information Technology	0.00	0.00	8,500.00	0.00	8,500.00
01-14-55506 Capital Outlay-Buildings/Facilities	0.00	0.00	30,000.00	0.00	30,000.00
Total Capital Outlay Expenditures	0.00	0.00	38,500.00	0.00	38,500.00
Total Library Expenditures	0.00	14,755.78	204,163.00	36,981.64	167,181.36
Animal Services Expenditures					
Personnel & Benefits Expenditures					
01-15-51000 Salaries-Full Time	0.00	4,693.62	85,104.00	9,993.04	75,110.96
01-15-51101 Overtime	0.00	1,692.61	1,000.00	3,367.46	(2,367.46)
01-15-51104 Longevity	0.00	138.00	138.00	138.00	0.00
01-15-51105 FICA/Medicare Tax	0.00	171.28	3,892.00	392.84	3,499.16
01-15-51106 Unemployment Tax	0.00	1.24	32.00	2.71	29.29
01-15-51107 Worker's Compensation	0.00	218.97	3,094.00	431.87	2,662.13
01-15-51108 Group Health Insurance	0.00	741.75	10,520.00	1,483.50	9,036.50
01-15-51109 Retirement/TMRS	0.00	680.37	5,800.00	680.37	5,119.63
01-15-51111 Physicals & Evaluations	0.00	135.00	0.00	135.00	0.00
Total Personnel & Benefits Expenditures	0.00	8,472.84	109,580.00	16,624.79	92,955.21

City of Lake Dallas

Statement of Revenue and Expenditures

Revised Budget
For General Fund (01)
For the Fiscal Period 2018-2 Ending November 30, 2017

Account Number	Current Budget	Current Actual	Annual Budget	YTD Actual	Remaining Budget Amount
Supplies Expenditures					
01-15-52000 Office Supplies	0.00	0.00	300.00	49.90	\$ 250.10
01-15-52201 Operating Supplies	0.00	0.00	2,500.00	109.80	\$ 2,390.20
01-15-52202 Postage & Shipping	0.00	0.00	50.00	0.00	\$ 50.00
01-15-52203 Printing	0.00	0.00	500.00	0.00	\$ 500.00
01-15-52204 Uniforms	0.00	332.95	1,200.00	332.95	\$ 867.05
01-15-52205 Advertising	0.00	0.00	50.00	0.00	\$ 50.00
01-15-52206 Travel & Training	0.00	0.00	2,000.00	0.00	\$ 2,000.00
01-15-52207 Dues & Memberships	0.00	0.00	35.00	0.00	\$ 35.00
01-15-52208 Vehicle Fuel	0.00	63.72	2,600.00	63.72	\$ 2,536.28
01-15-52210 Equipment-Field	0.00	0.00	100.00	0.00	\$ 100.00
01-15-52211 Safety Equipment & Supplies	0.00	0.00	300.00	0.00	\$ 300.00
01-15-52212 Flowers/Gifts/Plaques	0.00	0.00	200.00	0.00	\$ 200.00
01-15-52216 Telephone-Mobile	0.00	87.37	1,200.00	174.65	\$ 1,025.35
01-15-52218 Land Lease	0.00	0.00	1,250.00	0.00	\$ 1,250.00
Total Supplies Expenditures	0.00	484.04	12,285.00	731.02	11,553.98
Contractual Services Expenditures					
01-15-53301 Utilities	0.00	833.15	9,300.00	1,552.71	\$ 7,747.29
01-15-53309 Consultants & Professionals	0.00	0.00	500.00	0.00	\$ 500.00
Total Contractual Services Expenditures	0.00	833.15	9,800.00	1,552.71	8,247.29
Maintenance Expenditures					
01-15-54400 Facilities Maintenance	0.00	57.90	2,000.00	57.90	\$ 1,942.10
01-15-54402 Vehicle Maintenance	0.00	0.00	1,800.00	0.00	\$ 1,800.00
01-15-54406 Software Maintenance	0.00	0.00	3,340.00	401.46	\$ 2,938.54
Total Maintenance Expenditures	0.00	57.90	7,140.00	459.36	6,680.64
Capital Outlay Expenditures					
01-15-55504 Capital Outlay-Information Technology	0.00	0.00	1,000.00	0.00	\$ 1,000.00
01-15-55510 Capital Outlay-Landscaping	0.00	0.00	1,000.00	0.00	\$ 1,000.00
Total Capital Outlay Expenditures	0.00	0.00	2,000.00	0.00	2,000.00

City of Lake Dallas

Statement of Revenue and Expenditures

Revised Budget
For General Fund (01)
For the Fiscal Period 2018-2 Ending November 30, 2017

Account Number	Current Budget	Current Actual	Annual Budget	YTD Actual	Remaining Budget Amount
Total Animal Services Expenditures	0.00	9,847.93	140,805.00	19,367.88	121,437.12
Park and Facilities Expenditures					
Personnel & Benefits Expenditures					
01-16-51000 Salaries-Full Time	0.00	2,533.84	42,947.00	4,877.48	38,069.52
01-16-51101 Overtime	0.00	399.39	1,080.00	992.62	87.38
01-16-51104 Longevity	0.00	186.00	186.00	186.00	0.00
01-16-51105 FICA/Medicare Tax	0.00	45.23	504.00	87.81	416.19
01-16-51106 Unemployment Tax	0.00	0.00	9.00	0.00	9.00
01-16-51107 Worker's Compensation	0.00	190.98	2,055.00	374.32	1,680.68
01-16-51108 Group Health Insurance	0.00	736.40	10,492.00	1,472.80	9,019.20
01-16-51109 Retirement/TMRS	0.00	405.88	4,185.00	405.88	3,779.12
Total Personnel & Benefits Expenditures	0.00	4,497.72	61,458.00	8,396.91	53,061.09
Supplies Expenditures					
01-16-52000 Office Supplies	0.00	34.83	0.00	54.78	0.00
01-16-52201 Operating Supplies	0.00	11.95	1,500.00	11.95	1,488.05
01-16-52204 Uniforms	0.00	90.94	1,400.00	110.80	1,289.20
01-16-52206 Travel & Training	0.00	0.00	800.00	0.00	800.00
01-16-52208 Vehicle Fuel	0.00	227.40	2,500.00	227.40	2,272.60
01-16-52210 Equipment-Field	0.00	305.00	2,000.00	305.00	1,695.00
01-16-52211 Safety Equipment & Supplies	0.00	0.00	500.00	0.00	500.00
01-16-52216 Telephone-Mobile	0.00	15.66	600.00	31.28	568.72
Total Supplies Expenditures	0.00	685.78	9,300.00	741.21	8,558.79
Maintenance Expenditures					
01-16-54402 Vehicle Maintenance	0.00	0.00	3,000.00	0.00	3,000.00
01-16-54403 Equipment Maintenance	0.00	0.00	3,000.00	0.00	3,000.00
01-16-54405 Park Maintenance	0.00	531.83	2,000.00	570.96	1,429.04
Total Maintenance Expenditures	0.00	531.83	8,000.00	570.96	7,429.04
Total Park and Facilities Expenditures	0.00	5,715.33	78,758.00	9,709.08	69,048.92

City of Lake Dallas
Statement of Revenue and Expenditures

12/6/2017 3:29pm

Page 13

Revised Budget
For General Fund (01)
For the Fiscal Period 2018-2 Ending November 30, 2017

Account Number	Current Budget	Current Actual	Annual Budget	YTD Actual	Remaining Budget Amount
Streets and Drainage Expenditures					
Personnel & Benefits Expenditures					
01-17-51000 Salaries-Full Time	0.00	9,349.88	155,662.00	18,699.76	\$ 136,962.24
01-17-51101 Overtime	0.00	621.84	2,218.00	967.74	\$ 1,250.26
01-17-51104 Longevity	0.00	636.00	636.00	636.00	\$ 0.00
01-17-51105 FICA/Medicare Tax	0.00	153.19	2,200.00	293.15	\$ 1,906.85
01-17-51106 Unemployment Tax	0.00	0.00	37.00	0.00	\$ 37.00
01-17-51107 Worker's Compensation	0.00	672.66	9,659.00	1,151.98	\$ 8,507.02
01-17-51108 Group Health Insurance	0.00	2,304.03	43,542.00	4,608.06	\$ 38,933.94
01-17-51109 Retirement/TMRS	0.00	1,339.96	19,667.00	1,339.96	\$ 18,327.04
Total Personnel & Benefits Expenditures	0.00	15,077.56	233,621.00	27,696.65	205,924.35
Supplies Expenditures					
01-17-52000 Office Supplies	0.00	0.00	500.00	27.73	\$ 472.27
01-17-52201 Operating Supplies	0.00	136.91	2,500.00	168.95	\$ 2,331.05
01-17-52203 Printing	0.00	0.00	100.00	0.00	\$ 100.00
01-17-52204 Uniforms	0.00	257.57	2,500.00	286.76	\$ 2,213.24
01-17-52206 Travel & Training	0.00	218.00	2,500.00	336.75	\$ 2,163.25
01-17-52208 Vehicle Fuel	0.00	383.69	4,500.00	383.69	\$ 4,116.31
01-17-52210 Equipment-Field	0.00	305.00	2,000.00	305.00	\$ 1,695.00
01-17-52211 Safety Equipment & Supplies	0.00	0.00	1,200.00	0.00	\$ 1,200.00
01-17-52216 Telephone-Mobile	0.00	149.07	1,900.00	280.88	\$ 1,619.12
01-17-52217 Sign Maintenance	0.00	0.00	5,000.00	0.00	\$ 5,000.00
Total Supplies Expenditures	0.00	1,450.24	22,700.00	1,789.76	20,910.24
Contractual Services Expenditures					
01-17-53301 Utilities	0.00	225.51	3,820.00	466.82	\$ 3,353.18
01-17-53302 Street Lighting	0.00	4,432.91	53,000.00	8,771.16	\$ 44,228.84
01-17-53305 Engineering	0.00	0.00	3,705.00	0.00	\$ 3,705.00
Total Contractual Services Expenditures	0.00	4,658.42	60,525.00	9,237.98	51,287.02
Maintenance Expenditures					
01-17-54400 Facilities Maintenance	0.00	0.00	2,000.00	0.00	\$ 2,000.00

City of Lake Dallas
Statement of Revenue and Expenditures

Revised Budget
For General Fund (01)
For the Fiscal Period 2018-2 Ending November 30, 2017

Account Number	Current Budget	Current Actual	Annual Budget	YTD Actual	Remaining Budget Amount
01-17-54402 Vehicle Maintenance	0.00	43.94	9,000.00	559.62	\$ 8,440.38
01-17-54403 Equipment Maintenance	0.00	215.42	8,000.00	215.42	\$ 7,784.58
01-17-54406 IT Maintenance	0.00	120.97	1,650.00	441.94	\$ 1,208.06
01-17-54408 Tree Maintenance	0.00	0.00	5,000.00	500.00	\$ 4,500.00
01-17-54417 Sign Maintenance	0.00	557.98	(5,000.00)	557.98	\$ (5,557.98)
01-17-54422 Drainage Maintenance	0.00	15,166.00	10,000.00	15,166.00	\$ (5,166.00)
Total Maintenance Expenditures	0.00	16,104.31	30,650.00	17,440.96	13,209.04
Capital Outlay Expenditures					
01-17-55503 Capital Outlay-Vehicles	0.00	0.00	10,000.00	0.00	\$ 10,000.00
01-17-55504 Capital Outlay-Information Technology	0.00	0.00	3,300.00	0.00	\$ 3,300.00
01-17-55506 Capital Outlay-Buildings/Facilities	0.00	0.00	15,000.00	0.00	\$ 15,000.00
Total Capital Outlay Expenditures	0.00	0.00	28,300.00	0.00	28,300.00
Total Streets and Drainage Expenditures	0.00	37,290.53	375,796.00	56,165.35	319,630.65
Total General Fund Expenditures	\$ 0.00	\$ 344,587.16	\$ 4,519,761.00	\$ 653,921.60	\$ 3,865,839.40
General Fund Excess of Revenues Over Expenditures	\$ 0.00	\$ (31,215.55)	\$ 16,370.00	\$ (111,457.99)	\$ 127,827.99

City of Lake Dallas

Statement of Revenue and Expenditures

Revised Budget
For Debt Service Fund (04)
For the Fiscal Period 2018-2 Ending November 30, 2017

Account Number	Current Budget	Current Actual	Annual Budget	YTD Actual	Remaining Budget Amount
Revenues					
Revenues					
Undefined Sub-Type Revenues					
04-00-41006 Property Taxes-Current	\$ 0.00	\$ 20,907.28	\$ 450,284.00	\$ 26,661.95	\$ 423,622.05
04-00-41007 Property Taxes-Delinquent	0.00	289.26	0.00	2,927.96	0.00
04-00-41009 Property Taxes-P & I	0.00	120.74	0.00	928.89	0.00
04-00-47701 Interest Income - I&S	0.00	133.49	0.00	254.39	0.00
04-00-49617 CDC Debt Payment Reimbursement	0.00	0.00	209,480.00	0.00	209,480.00
Total Undefined Sub-Type Revenues	0.00	21,450.77	659,764.00	30,773.19	628,990.81
Total Revenues	0.00	21,450.77	659,764.00	30,773.19	628,990.81
Total Debt Service Fund Revenues	\$ 0.00	\$ 21,450.77	\$ 659,764.00	\$ 30,773.19	\$ 628,990.81
Expenditures					
Administration Expenditures					
Debt Service Expenditures					
04-11-56515 Paying Agent Fees	\$ 0.00	\$ 0.00	\$ 400.00	\$ 0.00	\$ 400.00
04-11-56953 1998 Street Bond Principal	0.00	0.00	150,000.00	0.00	150,000.00
04-11-56954 1998 Street Bond Interest	0.00	0.00	5,063.00	0.00	5,063.00
04-11-56957 2009 CO Bond Principal	0.00	0.00	55,000.00	0.00	55,000.00
04-11-56958 2009 CO Bond Interest	0.00	0.00	34,080.00	0.00	34,080.00
04-11-56961 2006 CO Bonds Principal	0.00	0.00	85,000.00	0.00	85,000.00
04-11-56962 2006 CO Bonds Interest	0.00	0.00	38,584.00	0.00	38,584.00
04-11-56965 2008 Street GO Bonds Principal	0.00	0.00	50,000.00	0.00	50,000.00
04-11-56966 2008 Street Bonds Interest	0.00	0.00	27,997.00	0.00	27,997.00
04-11-56972 2008 FS/AS Bonds Principal	0.00	0.00	40,000.00	0.00	40,000.00
04-11-56973 2008 FS/AS Bonds Interest	0.00	0.00	23,520.00	0.00	23,520.00
04-11-56974 2012 Refunding Bonds Principal	0.00	0.00	140,000.00	0.00	140,000.00
04-11-56975 2012 Refunding Bonds Interest	0.00	0.00	10,120.00	0.00	10,120.00
Total Debt Service Expenditures	0.00	0.00	659,764.00	0.00	659,764.00

City of Lake Dallas
Statement of Revenue and Expenditures

Page 16

Revised Budget
 For Debt Service Fund (04)
 For the Fiscal Period 2018-2 Ending November 30, 2017

Account Number	Current Budget	Current Actual	Annual Budget	YTD Actual	Remaining Budget Amount
Total Administration Expenditures	0.00	0.00	659,764.00	0.00	659,764.00
Total Debt Service Fund Expenditures	\$ 0.00	\$ 0.00	\$ 659,764.00	\$ 0.00	\$ 659,764.00
Debt Service Fund Excess of Revenues Over Expenditu	\$ 0.00	\$ 21,450.77	\$ 0.00	\$ 30,773.19	\$ 0.00

City of Lake Dallas

Statement of Revenue and Expenditures

Revised Budget
For Street Maintenance Sales Tax (20)
For the Fiscal Period 2018-2 Ending November 30, 2017

Account Number	Current Budget	Current Actual	Annual Budget	YTD Actual	Remaining Budget Amount
Revenues					
Revenues					
Undefined Sub-Type Revenues					
20-00-42115 Sales Tax - Road Maintenance	\$ 0.00	\$ 0.00	\$ 156,250.00	\$ 12,608.92	\$ 143,641.08
20-00-47470 Interest Income - Special Revenue DF	0.00	270.55	0.00	534.56	0.00
Total Undefined Sub-Type Revenues	0.00	270.55	156,250.00	13,143.48	143,106.52
Total Revenues	0.00	270.55	156,250.00	13,143.48	143,106.52
Total Street Maintenance Sales Tax Revenues	\$ 0.00	\$ 270.55	\$ 156,250.00	\$ 13,143.48	\$ 143,106.52
Expenditures					
Streets and Drainage Expenditures					
Maintenance Expenditures					
20-17-54407 Sidewalk Maintenance	\$ 0.00	\$ 0.00	\$ 5,000.00	\$ 0.00	\$ 5,000.00
20-17-54409 Streets Repair Maintenance	0.00	0.00	210,000.00	0.00	210,000.00
Total Maintenance Expenditures	0.00	0.00	215,000.00	0.00	215,000.00
Capital Outlay Expenditures					
20-17-55505 Capital Outlay-Heavy Equipment	0.00	0.00	75,000.00	0.00	75,000.00
Total Capital Outlay Expenditures	0.00	0.00	75,000.00	0.00	75,000.00
Total Streets and Drainage Expenditures	0.00	0.00	290,000.00	0.00	290,000.00
Total Street Maintenance Sales Tax Expenditures	\$ 0.00	\$ 0.00	\$ 290,000.00	\$ 0.00	\$ 290,000.00
Street Maintenance Sales Tax Excess of Revenues Over \$	0.00	\$ 270.55	\$ (133,750.00)	\$ 13,143.48	\$ (146,893.48)

City of Lake Dallas

Statement of Revenue and Expenditures

12/6/2017 3:29pm

Page 18

Revised Budget
For Hotel Occupancy Tax (21)
For the Fiscal Period 2018-2 Ending November 30, 2017

Account Number	Current Budget	Current Actual	Annual Budget	YTD Actual	Remaining Budget Amount
Revenues					
Revenues					
Undefined Sub-Type Revenues					
21-00-43114 Hotel Occupancy Tax	\$ 0.00	\$ 0.00	\$ 75,000.00	\$ 20,025.37	\$ 54,974.63
Total Undefined Sub-Type Revenues	0.00	0.00	75,000.00	20,025.37	54,974.63
Total Revenues	0.00	0.00	75,000.00	20,025.37	54,974.63
Total Hotel Occupancy Tax Revenues	\$ 0.00	\$ 0.00	\$ 75,000.00	\$ 20,025.37	\$ 54,974.63

Expenditures					
Tourism Expenditures					
Personnel & Benefits Expenditures					
21-05-51105 FICA/Medicare Tax	\$ 0.00	\$ 0.00	\$ 294.00	\$ 0.00	\$ 294.00
21-05-51115 Contract Labor	0.00	0.00	42,000.00	0.00	42,000.00
Total Personnel & Benefits Expenditures	0.00	0.00	42,294.00	0.00	42,294.00
Supplies Expenditures					
21-05-52000 Office Supplies	0.00	0.00	769.00	0.00	769.00
21-05-52203 Printing	0.00	0.00	2,361.00	0.00	2,361.00
21-05-52205 Advertising	0.00	0.00	1,228.00	0.00	1,228.00
21-05-52207 Dues & Memberships	0.00	0.00	500.00	342.00	158.00
21-05-52216 Telephone-Mobile	0.00	0.00	281.00	0.00	281.00
21-05-52221 Community Events	0.00	0.00	27,585.00	0.00	27,585.00
Total Supplies Expenditures	0.00	0.00	32,724.00	342.00	32,382.00
Contractual Services Expenditures					
21-05-53309 Consultants & Professionals	0.00	0.00	677.00	0.00	677.00
Total Contractual Services Expenditures	0.00	0.00	677.00	0.00	677.00
Total Tourism Expenditures	0.00	0.00	75,695.00	342.00	75,353.00

City of Lake Dallas

Statement of Revenue and Expenditures

Revised Budget
For Hotel Occupancy Tax (21)
For the Fiscal Period 2018-2 Ending November 30, 2017

Account Number	Current Budget	Current Actual	Annual Budget	YTD Actual	Remaining Budget Amount
Total Hotel Occupancy Tax Expenditures	\$ 0.00 \$	0.00 \$	75,695.00 \$	342.00 \$	75,353.00

Hotel Occupancy Tax Excess of Revenues Over Expend \$ 0.00 \$ (695.00) \$ 19,683.37 \$ (20,378.37)

City of Lake Dallas

Statement of Revenue and Expenditures

Revised Budget
For Court Technology (22)
For the Fiscal Period 2018-2 Ending November 30, 2017

Account Number	Current Budget	Current Actual	Annual Budget	YTD Actual	Remaining Budget Amount
Revenues					
Revenues					
Undefined Sub-Type Revenues					
22-00-46322 Municipal Court Technology Fees	\$ 0.00	\$ 269.75	\$ 7,400.00	\$ 694.08	\$ 6,705.92
22-00-47470 Interest Income - Special Revenue DF	0.00	23.67	0.00	48.58	0.00
Total Undefined Sub-Type Revenues	0.00	293.42	7,400.00	742.66	6,657.34
Total Revenues	0.00	293.42	7,400.00	742.66	6,657.34
Total Court Technology Revenues	\$ 0.00	\$ 293.42	\$ 7,400.00	\$ 742.66	\$ 6,657.34
Expenditures					
Municipal Court Expenditures					
Contractual Services Expenditures					
22-09-53308 Information Technology	\$ 0.00	\$ 112.09	\$ 11,000.00	\$ 810.07	\$ 10,189.93
Total Contractual Services Expenditures	0.00	112.09	11,000.00	810.07	10,189.93
Total Municipal Court Expenditures	0.00	112.09	11,000.00	810.07	10,189.93
Total Court Technology Expenditures	\$ 0.00	\$ 112.09	\$ 11,000.00	\$ 810.07	\$ 10,189.93
Court Technology Excess of Revenues Over Expenditur	\$ 0.00	\$ 181.33	\$ (3,600.00)	\$ (67.41)	\$ (3,532.59)

City of Lake Dallas

Statement of Revenue and Expenditures

Revised Budget
For Court Security (23)
For the Fiscal Period 2018-2 Ending November 30, 2017

Account Number	Current Budget	Current Actual	Annual Budget	YTD Actual	Remaining Budget Amount
Revenues					
Revenues					
Undefined Sub-Type Revenues					
23-00-46323 Municipal Court Security Fees	\$ 0.00	\$ 202.32	\$ 5,500.00	\$ 520.55	\$ 4,979.45
23-00-47470 Interest Income - Special Revenue DF	0.00	42.78	0.00	86.22	0.00
Total Undefined Sub-Type Revenues	0.00	245.10	5,500.00	606.77	4,893.23
Total Revenues	0.00	245.10	5,500.00	606.77	4,893.23
Total Court Security Revenues	\$ 0.00	\$ 245.10	\$ 5,500.00	\$ 606.77	\$ 4,893.23
Expenditures					
Municipal Court Expenditures					
Supplies Expenditures					
23-09-52015 Office Expenses	\$ 0.00	\$ 0.00	\$ 13,000.00	\$ 0.00	\$ 13,000.00
Total Supplies Expenditures	0.00	0.00	13,000.00	0.00	13,000.00
Total Municipal Court Expenditures	0.00	0.00	13,000.00	0.00	13,000.00
Total Court Security Expenditures	\$ 0.00	\$ 0.00	\$ 13,000.00	\$ 0.00	\$ 13,000.00
Court Security Excess of Revenues Over Expenditures	\$ 0.00	\$ 245.10	\$ (7,500.00)	\$ 606.77	\$ (8,106.77)

City of Lake Dallas

Statement of Revenue and Expenditures

12/6/2017 3:29pm

Page 22

Revised Budget
For LEOSE (24)
For the Fiscal Period 2018-2 Ending November 30, 2017

Account Number	Current Budget	Current Actual	Annual Budget	YTD Actual	Remaining Budget Amount
Revenues					
Revenues					
Undefined Sub-Type Revenues					
24-00-46324 LEOSE Revenue	\$ 0.00	\$ 0.00	\$ 1,505.00	\$ 0.00	\$ 1,505.00
24-00-47470 Interest Income - Special Revenue DF	0.00	9.62	70.00	20.09	49.91
Total Undefined Sub-Type Revenues	0.00	9.62	1,575.00	20.09	1,554.91
Total Revenues	0.00	9.62	1,575.00	20.09	1,554.91
Total LEOSE Revenues	\$ 0.00	\$ 9.62	\$ 1,575.00	\$ 20.09	\$ 1,554.91
Expenditures					
Police Expenditures					
Supplies Expenditures					
24-13-52206 Travel & Training	\$ 0.00	\$ 444.97	\$ 5,000.00	\$ 826.22	\$ 4,173.78
Total Supplies Expenditures	0.00	444.97	5,000.00	826.22	4,173.78
Total Police Expenditures	0.00	444.97	5,000.00	826.22	4,173.78
Total LEOSE Expenditures	\$ 0.00	\$ 444.97	\$ 5,000.00	\$ 826.22	\$ 4,173.78
LEOSE Excess of Revenues Over Expenditures	\$ 0.00	\$ (435.35)	\$ (3,425.00)	\$ (806.13)	\$ (2,618.87)

City of Lake Dallas
Statement of Revenue and Expenditures

12/6/2017 3:29pm

Page 23

Revised Budget
For Child Safety (25)
For the Fiscal Period 2018-2 Ending November 30, 2017

Account Number	Current Budget	Current Actual	Annual Budget	YTD Actual	Remaining Budget Amount
Revenues					
Revenues					
Undefined Sub-Type Revenues					
25-00-46325 Municipal Court Child Safety Fees	\$ 0.00	\$ 8,147.39	\$ 2,600.00	\$ 8,166.93	\$ (5,566.93)
25-00-47470 Interest Income - Special Revenue DF	0.00	26.86	0.00	54.27	0.00
Total Undefined Sub-Type Revenues	0.00	8,174.25	2,600.00	8,221.20	(5,621.20)
Total Revenues	0.00	8,174.25	2,600.00	8,221.20	(5,621.20)
Total Child Safety Revenues	\$ 0.00	\$ 8,174.25	\$ 2,600.00	\$ 8,221.20	\$ (5,621.20)
Expenditures					
Municipal Court Expenditures					
Contractual Services Expenditures					
25-09-53390 Mun Ct Child Safety Program	\$ 0.00	\$ 0.00	\$ 20,960.00	\$ 0.00	\$ 20,960.00
Total Contractual Services Expenditures	0.00	0.00	20,960.00	0.00	20,960.00
Total Municipal Court Expenditures	0.00	0.00	20,960.00	0.00	20,960.00
Total Child Safety Expenditures	\$ 0.00	\$ 0.00	\$ 20,960.00	\$ 0.00	\$ 20,960.00
Child Safety Excess of Revenues Over Expenditures	\$ 0.00	\$ 8,174.25	\$ (18,360.00)	\$ 8,221.20	\$ (26,581.20)

City of Lake Dallas

Statement of Revenue and Expenditures

Revised Budget

For Juvenile Case Management (26)

For the Fiscal Period 2018-2 Ending November 30, 2017

Account Number	Current Budget	Current Actual	Annual Budget	YTD Actual	Remaining Budget Amount
Revenues					
Revenues					
Undefined Sub-Type Revenues					
26-00-46340 Juvenile Case Mgt Fees	\$ 0.00	\$ 35.94	\$ 1,255.00	\$ 60.94	\$ 1,194.06
26-00-47470 Interest Income - Special Revenue DF	0.00	156.46	0.00	316.91	0.00
Total Undefined Sub-Type Revenues	0.00	192.40	1,255.00	377.85	877.15
Total Revenues	0.00	192.40	1,255.00	377.85	877.15
Total Juvenile Case Management Revenues	\$ 0.00	\$ 192.40	\$ 1,255.00	\$ 377.85	\$ 877.15
Expenditures					
Municipal Court Expenditures					
Contractual Services Expenditures					
26-09-53396 Mun Ct JCM Program	\$ 0.00	\$ 0.00	\$ 4,000.00	\$ 0.00	\$ 4,000.00
Total Contractual Services Expenditures	0.00	0.00	4,000.00	0.00	4,000.00
Total Municipal Court Expenditures	0.00	0.00	4,000.00	0.00	4,000.00
Total Juvenile Case Management Expenditures	\$ 0.00	\$ 0.00	\$ 4,000.00	\$ 0.00	\$ 4,000.00
Juvenile Case Management Excess of Revenues Over E	\$ 0.00	\$ 192.40	\$ (2,745.00)	\$ 377.85	\$ (3,122.85)

City of Lake Dallas

Statement of Revenue and Expenditures

Revised Budget
For Drug Seizure (27)
For the Fiscal Period 2018-2 Ending November 30, 2017

Account Number	Current Budget	Current Actual	Annual Budget	YTD Actual	Remaining Budget Amount
Revenues					
Revenues					
Undefined Sub-Type Revenues					
27-00-47470 Interest Income - Special Revenue DF	\$ 0.00	\$ 4.52	\$ 0.00	\$ 12.76	\$ 0.00
Total Undefined Sub-Type Revenues	0.00	4.52	0.00	12.76	0.00
Total Revenues	0.00	4.52	0.00	12.76	0.00
Total Drug Seizure Revenues	\$ 0.00	\$ 4.52	\$ 0.00	\$ 12.76	\$ 0.00
Expenditures					
Police Expenditures					
Contractual Services Expenditures					
27-13-53397 Pub Saf Seizure Program	\$ 0.00	\$ 1,386.99	\$ 6,000.00	\$ 1,386.99	\$ 4,613.01
Total Contractual Services Expenditures	0.00	1,386.99	6,000.00	1,386.99	4,613.01
Total Police Expenditures	0.00	1,386.99	6,000.00	1,386.99	4,613.01
Total Drug Seizure Expenditures	\$ 0.00	\$ 1,386.99	\$ 6,000.00	\$ 1,386.99	\$ 4,613.01
Drug Seizure Excess of Revenues Over Expenditures	\$ 0.00	\$ (1,382.47)	\$ (6,000.00)	\$ (1,374.23)	\$ (4,625.77)

City of Lake Dallas

Statement of Revenue and Expenditures

Revised Budget
For Kids N Cops (28)
For the Fiscal Period 2018-2 Ending November 30, 2017

Account Number	Current Budget	Current Actual	Annual Budget	YTD Actual	Remaining Budget Amount
Revenues					
Revenues					
Undefined Sub-Type Revenues					
28-00-47470 Interest Revenue DF \$	0.00 \$	5.36 \$	0.00 \$	10.38 \$	0.00
28-00-48200 Donations	0.00	500.00	10,000.00	500.00	9,500.00
Total Undefined Sub-Type Revenues	0.00	505.36	10,000.00	510.38	9,489.62
Total Revenues	0.00	505.36	10,000.00	510.38	9,489.62
Total Kids N Cops Revenues	\$ 0.00 \$	\$ 505.36 \$	\$ 10,000.00 \$	\$ 510.38 \$	\$ 9,489.62
Expenditures					
Police Expenditures					
Contractual Services Expenditures					
28-13-53398 Kids N Cops Program	\$ 0.00 \$	0.00 \$	10,000.00 \$	0.00 \$	10,000.00
Total Contractual Services Expenditures	0.00	0.00	10,000.00	0.00	10,000.00
Total Police Expenditures	0.00	0.00	10,000.00	0.00	10,000.00
Total Kids N Cops Expenditures	\$ 0.00 \$	0.00 \$	\$ 10,000.00 \$	0.00 \$	\$ 10,000.00
Kids N Cops Excess of Revenues Over Expenditures	\$ 0.00 \$	\$ 505.36 \$	0.00 \$	\$ 510.38 \$	0.00

City of Lake Dallas
Statement of Revenue and Expenditures

Page 27

Revised Budget
 For Police Auction (29)
 For the Fiscal Period 2018-2 Ending November 30, 2017

12/6/2017 3:29pm

Account Number	Current Budget	Current Actual	Annual Budget	YTD Actual	Remaining Budget Amount
Expenditures					
Police Expenditures					
Contractual Services Expenditures					
29-13-53399 Pub Saf Sale of Assets Program	\$ 0.00	\$ 626.52	\$ 25,870.00	\$ 4,066.07	\$ 21,803.93
Total Contractual Services Expenditures	0.00	626.52	25,870.00	4,066.07	21,803.93
Total Police Expenditures	0.00	626.52	25,870.00	4,066.07	21,803.93
Total Police Auction Expenditures	\$ 0.00	\$ 626.52	\$ 25,870.00	\$ 4,066.07	\$ 21,803.93
Police Auction Excess of Revenues Over Expenditures \$ (25,870.00) \$ (4,066.07) \$ (21,803.93)					

City of Lake Dallas
Statement of Revenue and Expenditures

12/6/2017 3:29pm

Page 28

Revised Budget
 For Forensic Testing (30)
 For the Fiscal Period 2018-2 Ending November 30, 2017

Account Number	Current Budget	Current Actual	Annual Budget	YTD Actual	Remaining Budget Amount
Revenues					
Revenues					
Undefined Sub-Type Revenues					
30-00-47470 Interest Income - Special Revenue DF	\$ 0.00	\$ 0.35	\$ 0.00	\$ 0.71	\$ 0.00
Total Undefined Sub-Type Revenues	0.00	0.35	0.00	0.71	0.00
Total Revenues	0.00	0.35	0.00	0.71	0.00
Total Forensic Testing Revenues	\$ 0.00	\$ 0.35	\$ 0.00	\$ 0.71	\$ 0.00
Expenditures					
Police Expenditures					
Contractual Services Expenditures					
30-13-53341 Pub Saf Forensics	\$ 0.00	\$ 0.00	\$ 405.00	\$ 0.00	\$ 405.00
Total Contractual Services Expenditures	0.00	0.00	405.00	0.00	405.00
Total Police Expenditures	0.00	0.00	405.00	0.00	405.00
Total Forensic Testing Expenditures	\$ 0.00	\$ 0.00	\$ 405.00	\$ 0.00	\$ 405.00
Forensic Testing Excess of Revenues Over Expenditure	\$ 0.00	\$ 0.35	\$ (405.00)	\$ 0.71	\$ (405.71)

City of Lake Dallas

Statement of Revenue and Expenditures

Revised Budget
For Willow Grove Park (31)
For the Fiscal Period 2018-2 Ending November 30, 2017

Account Number	Current Budget	Current Actual	Annual Budget	YTD Actual	Remaining Budget Amount
Revenues					
Revenues					
Undefined Sub-Type Revenues					
31-00-45331 Fees - Willow Grove Park	\$ 0.00	\$ 4,583.19	\$ 115,000.00	\$ 14,201.29	\$ 100,798.71
31-00-47470 Interest Income - Special Revenue DF	0.00	33.77	0.00	69.84	0.00
Total Undefined Sub-Type Revenues	0.00	4,616.96	115,000.00	14,271.13	100,728.87
Total Revenues	0.00	4,616.96	115,000.00	14,271.13	100,728.87
Total Willow Grove Park Revenues	\$ 0.00	\$ 4,616.96	\$ 115,000.00	\$ 14,271.13	\$ 100,728.87
Expenditures					
Park and Facilities Expenditures					
Maintenance Expenditures					
31-16-54405 Park Maintenance	\$ 0.00	\$ 2,918.17	\$ 22,000.00	\$ 4,930.21	\$ 17,069.79
Total Maintenance Expenditures	0.00	2,918.17	22,000.00	4,930.21	17,069.79
Capital Outlay Expenditures					
31-16-55531 Capital Outlay-Park Improvements	0.00	0.00	80,000.00	0.00	80,000.00
Total Capital Outlay Expenditures	0.00	0.00	80,000.00	0.00	80,000.00
Transfers Expenditures					
31-16-59001 Transfer to General Fund	0.00	0.00	15,000.00	0.00	15,000.00
Total Transfers Expenditures	0.00	0.00	15,000.00	0.00	15,000.00
Total Park and Facilities Expenditures	0.00	2,918.17	117,000.00	4,930.21	112,069.79
Total Willow Grove Park Expenditures	\$ 0.00	\$ 2,918.17	\$ 117,000.00	\$ 4,930.21	\$ 112,069.79
Willow Grove Park Excess of Revenues Over Expenditures	\$ 0.00	\$ 1,698.79	\$ (2,000.00)	\$ 9,340.92	\$ (11,340.92)

City of Lake Dallas

Statement of Revenue and Expenditures

12/6/2017 3:29pm

Page 30

Revised Budget
For Animal Rescue (32)
For the Fiscal Period 2018-2 Ending November 30, 2017

Account Number	Current Budget	Current Actual	Annual Budget	YTD Actual	Remaining Budget Amount
Revenues					
Revenues					
Undefined Sub-Type Revenues					
32-00-47470 Interest Income - Special Revenue DF	0.00 \$	4.51 \$	0.00 \$	8.35 \$	0.00
32-00-48235 Donations Animal Rescue	0.00	3,047.37	10,000.00	3,182.27	6,817.73
Total Undefined Sub-Type Revenues	0.00	3,051.88	10,000.00	3,190.62	6,809.38
Total Revenues	0.00	3,051.88	10,000.00	3,190.62	6,809.38
Total Animal Rescue Revenues	\$ 0.00	\$ 3,051.88	\$ 10,000.00	\$ 3,190.62	\$ 6,809.38
Expenditures					
Animal Services Expenditures					
Contractual Services Expenditures					
32-15-53342 Animal Rescue Expenses	0.00 \$	0.00 \$	12,000.00 \$	0.00 \$	12,000.00
Total Contractual Services Expenditures	0.00	0.00	12,000.00	0.00	12,000.00
Total Animal Services Expenditures	0.00	0.00	12,000.00	0.00	12,000.00
Total Animal Rescue Expenditures	\$ 0.00	\$ 0.00	\$ 12,000.00	\$ 0.00	\$ 12,000.00
Animal Rescue Excess of Revenues Over Expenditures	\$ 0.00	\$ 3,051.88	\$ (2,000.00)	\$ 3,190.62	\$ (5,190.62)

City of Lake Dallas
Statement of Revenue and Expenditures

12/6/2017 3:29pm

Page 31

Revised Budget
For Library Donations (33)
For the Fiscal Period 2018-2 Ending November 30, 2017

Account Number	Current Budget	Current Actual	Annual Budget	YTD Actual	Remaining Budget Amount
Revenues					
Revenues					
Undefined Sub-Type Revenues					
33-00-47470 Interest Revenue DF	\$ 0.00	\$ 74.18	\$ 0.00	\$ 228.53	\$ 0.00
33-00-48230 Library Contributions	0.00	0.00	2,000.00	0.00	2,000.00
Total Undefined Sub-Type Revenues	0.00	74.18	2,000.00	228.53	1,771.47
Total Revenues	0.00	74.18	2,000.00	228.53	1,771.47
Total Library Donations Revenues	\$ 0.00	\$ 74.18	\$ 2,000.00	\$ 228.53	\$ 1,771.47
Expenditures					
Library Expenditures					
Contractual Services Expenditures					
33-14-53344 Library Donations Expenses	\$ 0.00	\$ 0.00	\$ 1,000.00	\$ 0.00	\$ 1,000.00
Total Contractual Services Expenditures	0.00	0.00	1,000.00	0.00	1,000.00
Total Library Expenditures	0.00	0.00	1,000.00	0.00	1,000.00
Total Library Donations Expenditures	\$ 0.00	\$ 0.00	\$ 1,000.00	\$ 0.00	\$ 1,000.00
Library Donations Excess of Revenues Over Expenditures	\$ 0.00	\$ 74.18	\$ 1,000.00	\$ 228.53	\$ 771.47

City of Lake Dallas

Statement of Revenue and Expenditures

Revised Budget
For Park Improvements (34)
For the Fiscal Period 2018-2 Ending November 30, 2017

Account Number	Current Budget	Current Actual	Annual Budget	YTD Actual	Remaining Budget Amount
Revenues					
Revenues					
Undefined Sub-Type Revenues					
34-00-45329 Fees - Park Improvement	\$ 0.00 \$	661.30 \$	4,500.00 \$	703.39 \$	3,796.61
Total Undefined Sub-Type Revenues	0.00	661.30	4,500.00	703.39	3,796.61
Total Revenues	0.00	661.30	4,500.00	703.39	3,796.61
Total Park Improvements Revenues	\$ 0.00 \$	661.30 \$	4,500.00 \$	703.39 \$	3,796.61
Expenditures					
Park and Facilities Expenditures					
Capital Outlay Expenditures					
34-16-55531 Capital Outlay-Park Improvements	\$ 0.00 \$	0.00 \$	7,000.00 \$	0.00 \$	7,000.00
Total Capital Outlay Expenditures	0.00	0.00	7,000.00	0.00	7,000.00
Total Park and Facilities Expenditures	0.00	0.00	7,000.00	0.00	7,000.00
Total Park Improvements Expenditures	\$ 0.00 \$	0.00 \$	7,000.00 \$	0.00 \$	7,000.00
Park Improvements Excess of Revenues Over Expendit	\$ 0.00 \$	661.30 \$	(2,500.00) \$	703.39 \$	(3,203.39)

City of Lake Dallas
Statement of Revenue and Expenditures
 Revised Budget

For the Fiscal Period 2018-2 Ending November 30, 2017

Account Number	Current Budget	Current Actual	Annual Budget	YTD Actual	Remaining Budget Amount
Total Revenues	\$ 0.00	\$ 352,922.27	\$ 5,586,975.00	\$ 635,291.74	\$ (160,488.58)
Total Expenditures	\$ 0.00	\$ 350,075.90	\$ 5,778,455.00	\$ 666,283.16	\$ 0.88
Total Excess of Revenues Over Expenditures	\$ 0.00	\$ 2,846.37	\$ (191,480.00)	\$ (30,991.42)	\$ (160,488.58)

Accounts Payable Check Register

**Checks Processed During
Posting
Of
Accounts Payable**

Accounts Payable Check Register Report - IB-General Fund-1002007*For The Date Range From 11/1/2017 To 11/30/2017**For All Vendors And For Outstanding Checks - Computer Generated*

Check # / eCheck ID	Type	Date	Vendor	Name	Amount	Status
60100	C	11/1/2017	8	Aflac	\$154.32	O
60101	C	11/1/2017	26	Blue Cross Blue Shield	\$17,890.86	O
60102	C	11/1/2017	81	Card Service Center	\$2,572.11	O
60103	C	11/1/2017	41	Charter Communications	\$283.05	O
60104	C	11/1/2017	55	City of Corinth	\$80,085.42	O
60105	C	11/1/2017	79	Don't Let It Break, LLC	\$365.00	O
60106	C	11/1/2017	207	Fidelity Security Life Insurance Co.	\$142.66	O
60107	C	11/1/2017	228	Renee O'Neill	\$171.20	O
60108	C	11/1/2017	190	Special Insurance Services	\$797.60	O
60117	C	11/1/2017	196	Stephanie Berry	\$1,200.00	O
60118	C	11/1/2017	198	Sun Life Financial	\$660.14	O
60119	C	11/1/2017	216	Texas First Group	\$4,880.50	O
60120	C	11/1/2017	209	The Hartford	\$908.19	O
60121	C	11/1/2017	229	Thomas Ybarra	\$120.00	O
60122	C	11/1/2017	175	US Storage Centers-Corinth	\$202.00	O
60123	C	11/9/2017	21	Atmos Energy	\$135.75	O
60124	C	11/9/2017	35	Cash	\$47.82	O
60125	C	11/9/2017	43	Cher Malik	\$784.62	O
60126	C	11/9/2017	52	Colonial Life & Accident Insurance Company	\$91.85	O
60127	C	11/9/2017	59	Dawn M Sawyer	\$230.77	O
60128	C	11/9/2017	81	Card Service Center	\$2,780.89	O
60129	C	11/9/2017	83	Eddie Peacock, PLLC	\$935.00	O
60130	C	11/9/2017	87	Faith Jackson	\$114.00	O
60131	C	11/9/2017	94	New Benefits, Ltd	\$285.49	O
60132	C	11/9/2017	132	Kevin Lasher	\$765.00	O
60133	C	11/9/2017	139	Leaha Forshee	\$391.38	O
60134	C	11/9/2017	142	Nationwide Retirement Solution	\$175.00	O
60135	C	11/9/2017	160	TMRS	\$25,509.77	O
60136	C	11/9/2017	179	Vanieca Taylor	\$73.85	O
60137	C	11/9/2017	185	Sarah Farrell	\$595.86	O
60138	C	11/9/2017	216	Texas First Group	\$4,880.50	O
60139	C	11/9/2017	230	Land S Construction	\$5,876.00	O
60140	C	11/9/2017	231	FIT	\$610.00	O
60141	C	11/15/2017	4	A To T Lamps	\$906.00	O
60142	C	11/15/2017	6	ADT Security Services	\$61.25	O

Accounts Payable Check Register Report - IB-General Fund-1002007

For The Date Range From 11/1/2017 To 11/30/2017

For All Vendors And For Outstanding Checks - Computer Generated

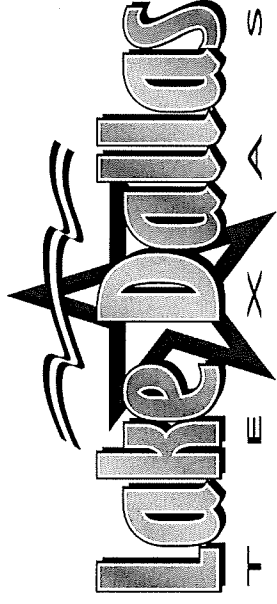
Check # / eCheck ID	Type	Date	Vendor	Name	Amount	Status
60143	C	11/15/2017	81	Card Service Center	\$82.13	O
60144	C	11/15/2017	33	Carrot-Top Industries, Inc.	\$112.19	O
60145	C	11/15/2017	35	Cash	\$17.14	O
60146	C	11/15/2017	39	Centurylink	\$1,101.29	O
60147	C	11/15/2017	41	Charter Communications	\$418.53	O
60148	C	11/15/2017	32	City of Carrollton Public Works Department	\$579.00	O
60149	C	11/15/2017	236	City of Lewisville	\$179.97	O
60150	C	11/15/2017	58	Dash Medical Gloves	\$121.80	O
60151	C	11/15/2017	63	Defender Supply	\$165.00	O
60152	C	11/15/2017	233	Denton County Auditor	\$8,210.29	O
60153	C	11/15/2017	72	Denton Publishing Company	\$93.70	O
60154	C	11/15/2017	232	DFW Automatic Doors, Inc.	\$9,845.99	O
60155	C	11/15/2017	34	Express Car Wash	\$5.00	O
60156	C	11/15/2017	170	GE Capital c/o Ricoh USA Prog.	\$153.01	O
60157	C	11/15/2017	100	GT Distributors	\$461.00	O
60158	C	11/15/2017	101	Halff Associates, Inc	\$6,036.02	O
60159	C	11/15/2017	112	Higginbotham & Associates, Inc.	\$50.00	O
60160	C	11/15/2017	114	Home Depot Credit Services	\$47.96	O
60161	C	11/15/2017	124	John Glover	\$360.00	O
60162	C	11/15/2017	234	Junior Library Guild	\$470.00	O
60163	C	11/15/2017	137	Lake Cities Municipal Utility Authority	\$1,157.47	O
60164	C	11/15/2017	1	Lake Dallas Hardware	\$792.71	O
60165	C	11/15/2017	230	Land S Construction	\$9,290.00	O
60166	C	11/15/2017	141	Leisure Interactive, LLC	\$753.37	O
60167	C	11/15/2017	64	Local Circuit	\$3,134.53	O
60168	C	11/15/2017	73	Lowery Motor Service	\$71.55	O
60169	C	11/15/2017	235	Lucas Pinckard	\$182.78	O
60170	C	11/15/2017	78	MailFinance	\$78.57	O
60171	C	11/15/2017	84	McCreary, Veselka, Bragg & Allen	\$599.13	O
60172	C	11/15/2017	237	Melissa Williamson	\$450.00	O
60173	C	11/15/2017	92	Mickey's Florist	\$81.00	O
60174	C	11/15/2017	111	Nichols, Jackson, Dillard	\$541.57	O
60175	C	11/15/2017	127	O'Reilly Auto Parts	\$22.19	O
60176	C	11/15/2017	154	Precepts Janitorial Service	\$942.00	O
60177	C	11/15/2017	155	Primacare Medical Centers	\$135.00	O

Accounts Payable Check Register Report - IB-General Fund-1002007*For The Date Range From 11/1/2017 To 11/30/2017**For All Vendors And For Outstanding Checks - Computer Generated*

Check # / eCheck ID	Type	Date	Vendor	Name	Amount	Status
60178	C	11/15/2017	238	Quill Corporation	\$100.97	O
60179	C	11/15/2017	167	RED The Uniform Tailor	\$376.57	O
60180	C	11/15/2017	168	Reliant	\$7,005.89	O
60181	C	11/15/2017	176	Sam Houston State University	\$1,250.00	O
60182	C	11/15/2017	226	Sirchie	\$37.20	O
60183	C	11/15/2017	192	Staples Advantage	\$820.36	O
60184	C	11/15/2017	144	TCC-NW Campus	\$185.00	O
60185	C	11/15/2017	162	Unifirst Holdings, L.P.	\$200.70	O
60186	C	11/15/2017	169	United Site Services	\$101.00	O
60187	C	11/15/2017	220	United Systems Technology, Inc.	\$735.00	O
60188	C	11/15/2017	181	VenTek International	\$357.09	O
60189	C	11/15/2017	183	Verizon Wireless	\$1,222.37	O
60190	C	11/15/2017	184	Walmart Community	\$78.62	O
60191	C	11/15/2017	186	WiFiAA	\$313.73	O
60192	C	11/15/2017	83	Eddie Peacock, PLLC	\$962.50	O
60193	C	11/15/2017	111	Nichols, Jackson, Dillard	\$3,963.57	O
60194	C	11/15/2017	239	Justin McMath	\$197.00	O
60195	C	11/22/2017	4	A To T Lamps	\$308.10	O
60196	C	11/22/2017	16	Amigo Energy	\$404.10	O
60197	C	11/22/2017	108	AutoLove Car Wash	\$12.00	O
60198	C	11/22/2017	97	Bureau Veritas North America	\$1,824.80	O
60199	C	11/22/2017	43	Cher Malik	\$784.62	O
60200	C	11/22/2017	49	Collin College	\$80.00	O
60201	C	11/22/2017	52	Colonial Life & Accident Insurance Company	\$95.32	O
60202	C	11/22/2017	59	Dawn M Sawyer	\$230.77	O
60203	C	11/22/2017	63	Defender Supply	\$720.00	O
60204	C	11/22/2017	87	Faith Jackson	\$114.00	O
60205	C	11/22/2017	170	GE Capital c/o Ricoh USA Prog.	\$414.35	O
60206	C	11/22/2017	136	Lake Cities Education Foundation	\$400.00	O
60207	C	11/22/2017	139	Leaha Forshee	\$391.38	O
60208	C	11/22/2017	140	Legal Shield	\$51.80	O
60209	C	11/22/2017	242	Modern Outfitters	\$1,386.99	O
60210	C	11/22/2017	142	Nationwide Retirement Solution	\$175.00	O
60211	C	11/22/2017	240	Open Arms Church	\$100.00	O
60212	C	11/22/2017	241	Praxair Distribution, Inc.	\$143.87	O

Accounts Payable Check Register Report - IB-General Fund-1002007*For The Date Range From 11/1/2017 To 11/30/2017**For All Vendors And For Outstanding Checks - Computer Generated*

Check # / eCheck ID	Type	Date	Vendor	Name	Amount	Status
60213	C	11/22/2017	182	Sam's Club	\$166.60	O
60214	C	11/22/2017	185	Sarah Farrell	\$271.01	O
60215	C	11/22/2017	192	Staples Advantage	\$154.45	O
60216	C	11/22/2017	227	Superion	\$500.00	O
60217	C	11/22/2017	243	Syd Grant	\$121.90	O
60218	C	11/22/2017	150	Thomson Reuter - West	\$96.00	O
60219	C	11/22/2017	244	TLS	\$69.04	O
60220	C	11/22/2017	162	Unifirst Holdings, L.P.	\$51.30	O
60221	C	11/22/2017	179	Vanieca Taylor	\$73.85	O
60222	C	11/22/2017	83	Eddie Peacock, PLLC	\$825.00	O
60223	C	11/29/2017	246	Caliber Collision	\$6,574.64	O
Cleared					\$0.00	
Outstanding					\$236,874.20	
Void					\$0.00	



Community Development Corporation

Financial Reports

November 2017

Lake Dallas Community Development Corporation
Monthly Financial Summary
November 2017

	<u>Current Month</u>	<u>Year to Date</u>	<u>Original Budget</u>
Revenues	\$29,964.42	\$55,552.43	\$ 315,000.00
Expenses	7,252.09	14,019.01	479,880.00
Net	22,712.33	41,533.42	(164,880.00)

Sales Tax Revenue for the month of November was \$29,603.88.

CDC has the following cash available as of November 30, 2017:

CDC Investment Account	340,069.29
CDC Checking Account	<u>177,630.85</u>
Net Funds	\$ 517,700.14
Projects Pending:	
Main Street Lights	77,638.21
BIG Grant	10,000.00

Available Fund Balance \$ 430,061.93

City of Lake Dallas

Statement of Revenue and Expenditures

Revised Budget
For Community Development Corporation (11)
For the Fiscal Period 2018-2 Ending November 30, 2017

Account Number	Current Budget	Current Actual	Annual Budget	YTD Actual	Remaining Budget Amount
Revenues					
11-00-42112 4B Sales Tax	\$ 0.00	\$ 29,603.88	\$ 312,500.00	\$ 54,821.71	\$ 257,678.29
11-00-47482 Interest Income - 4B	0.00	360.54	2,500.00	730.72	1,769.28
Total Community Development Corporation Revenues	\$ 0.00	\$ 29,964.42	\$ 315,000.00	\$ 55,552.43	\$ 259,447.57

Expenditures					
11-11-52000 Office Supplies	\$ 0.00	\$ 0.00	\$ 50.00	\$ 47.92	\$ 2.08
11-11-52205 Advertising	0.00	0.00	300.00	0.00	300.00
11-11-52206 Travel & Training	0.00	400.00	3,000.00	400.00	2,600.00
11-11-52207 Dues & Memberships	0.00	0.00	100.00	0.00	100.00
11-11-53301 Utilities	0.00	852.09	12,500.00	1,571.09	10,928.91
11-11-53303 Accounting & Auditor	0.00	0.00	3,000.00	0.00	3,000.00
11-11-53305 Engineering	0.00	0.00	15,000.00	0.00	15,000.00
11-11-53380 Downtown Development	0.00	0.00	80,000.00	0.00	80,000.00
11-11-53381 CDC Downtown BIG Grants	0.00	0.00	20,000.00	0.00	20,000.00
11-11-55520 Capital Outlay-CDC Projects	0.00	0.00	40,000.00	0.00	40,000.00
11-11-59001 Transfer to General Fund	0.00	0.00	24,450.00	0.00	24,450.00
11-11-59111 Transfer to General Fund Parks & Ad	0.00	6,000.00	72,000.00	12,000.00	60,000.00
11-11-59119 Transfer to Debt Service Fund	0.00	0.00	209,480.00	0.00	209,480.00
Total Community Development Corporation Expendit	\$ 0.00	\$ 7,252.09	\$ 479,880.00	\$ 14,019.01	\$ 465,860.99

Community Development Corporation Excess of Reven \$ 0.00 \$ 22,712.33 \$ (164,880.00) \$ 41,533.42 \$ (206,413.42)

City of Lake Dallas
Statement of Revenue and Expenditures
 Revised Budget

For the Fiscal Period 2018-2 Ending November 30, 2017

Account Number	Current Budget	Current Actual	Annual Budget	YTD Actual	Remaining Budget Amount
Total Revenues	\$ 0.00	\$ 29,964.42	\$ 315,000.00	\$ 55,552.43	\$ (206,413.42)
Total Expenditures	\$ 0.00	\$ 7,252.09	\$ 479,880.00	\$ 14,019.01	\$ 0.97
Total Excess of Revenues Over Expenditures	\$ 0.00	\$ 22,712.33	\$ (164,880.00)	\$ 41,533.42	\$ (206,413.42)

Accounts Payable Check Register Report - IB-Community Development Corporation-1061976*For The Date Range From 11/1/2017 To 11/30/2017**For All Vendors And For Outstanding Checks - Computer Generated*

Check # / eCheck ID	Type	Date	Vendor	Name	Amount	Status
3004	C	11/9/2017	3	City of Lake Dallas-Regular	\$6,000.00	O
3005	C	11/9/2017	137	Lake Cities Municipal Utility Authority	\$234.17	O
3006	C	11/9/2017	168	Reliant	\$617.92	O
3007	C	11/16/2017	136	Lake Cities Education Foundation	\$400.00	O
Cleared					\$0.00	
Outstanding					\$7,252.09	
Void					\$0.00	

Proclamation

by the

Mayor of the City of Lake Dallas, Texas

WHEREAS, every October in honor of Fire Prevention Month, the Lake Cities Fire Department teaches k-5th graders about fire prevention at all of the Lake Dallas ISD elementary campuses; and

WHEREAS, 2nd graders are invited to participate in a poster contest with this year's theme for the posters being "What I have learned about Fire Safety"; and

WHEREAS, the Lake Cities mayors, or their appointee, pick the winners for all of the campuses, and each campus winner earns food and movie vouchers, gift cards, a ride to school on the fire engine and a pizza party at the fire station with their homeroom class; and

WHEREAS, this year's winner for Lake Dallas Elementary School is Jayden Potts, a 2nd Grader in Ms. Simpson class, and son of Kristoffer and Arely Potts.

**NOW, THEREFORE, I, Michael Barnhart, Mayor of the City of Lake Dallas, Texas
do hereby proclaim**

**December 14, 2017 to be
"Jayden Potts Day"
in Lake Dallas, Texas**

IN WITNESS WHEREOF, I have hereunto set my hand and caused
the official seal of the City of Lake Dallas, Texas to be affixed this
the _____ day of _____, 2017.

MICHAEL BARNHART, MAYOR

ATTEST:
CODI DELCAMBRE, CITY SECRETARY

**State of Texas
County of Denton
City of Lake Dallas**

The Lake Dallas City Council met in a regular meeting on November 9, 2017 in the Lake Dallas City Hall, 212 Main Street, with notice of the meeting given, as required by Title 5, Chapter 551.041 of the Texas Government Code. Mayor Barnhart called the meeting to order at 7:00 p.m.

1. Roll Call

Michael Barnhart	Mayor
Megan Ray	Councilmember 1
Kathy Brownlee	Councilmember 2
Cheryl McClain	Councilmember 3
Charlie Price	Councilmember 4
Andi Nolan	Councilmember 5

Absent

None

Staff Present: Interim City Manager John Cabrales, City Secretary Codi Delcambre, Finance/HR Director Donna Bonner, Animal Services Director Julien Peralta, Deputy City Secretary-Administrative Assistant Renee O'Neill, Interim Library Director Tina Hager, Administrative Assistant Donna Butler, City Attorney Kevin Lasher, Court Clerk Jennifer Garcia, Public Works Manager Devin Shields, and Police Chief Carolla.

2. Invocation and Pledges of Allegiance

Mangel Remo from the VFW led the invocation and Mayor Barnhart the pledges.

3. Announcements & Special Recognitions

- A. Proclamation for Municipal Court Week -Presented to Judge Berry and Court Clerk Jennifer Garcia
- B. 1000 Books Before Kindergarten Award – Presented to Jonathan Moore
- C. Recognitions of the Trunk or Treat Committee
- D. City Manager's Report

4. Citizen Agenda & Public Comments

Mayor Barnhart opened the Visitors/Citizens Agenda.

James Bragg of 712 Lake Drive, stated that he was following up on the drainage issue on Lake Drive. He stated that several Councilmember had be out to look at the area. Mr. Bragg stated that he was hopeful that the issues would be addressed.

John Michael Welch of 1036 Colony Street, Flower Mound, TX 75028, spoke in favor of his boss, James Doolin and his use of Willow Grove Park.

James Doolin, 1402 N. Valley Parkway, #1515, Lewisville, TX 75077, spoke regarding his use of Willow Grove Park to rent jet skis and motorboats.

Mayor Barnhart closed the Visitors/Citizens Agenda.

5. Consider and Act on the Consent Agenda

- a. Approval of the Monthly Budget and Financial Report.
- b. Approval of the Minutes for October 12, 2017.
- c. Approval of an Ordinance cancelling the regular City Council meeting for November 23, 17 and December 28, 2017; and providing an effective date.
- d. Approval of a Resolution authorizing contracts for repairs to the roofs of the Lake Dallas Animal Shelter and Public Library buildings.
- e. Approval of an Ordinance amending the Code of Ordinances Section 2-171 to Add an Ex-Officio Non-Voting Member who resides in the Town of Shady Shores and Section 2-179 relating to the terms of the initial appointees.
- f. Approval of a Resolution authorizing a change order with Quality Excavation. LTD. relating to the Main Street reconstruction project.

Motion to approve the Consent agenda items A, C, D, E, and F. was made by Councilmember Nolan and second by Councilmember Ray.

Ayes: Councilmembers Ray, McClain, Price, Nolan, and Brownlee

Noes: None

Motion Passed 5-0.

Motion to approve the October 26, 2017 minutes was made by Councilmember Price and second by Councilmember Cheryl McClain.

Ayes: Councilmembers Ray, McClain, Price, Nolan, and Brownlee

Noes: None

Motion Passed 5-0.

6. Received a presentation from Deborah Robertson of SPAN, Inc.

Council received a presentation from Deborah Robertson of SPAN, Inc.

7. Received a report from Rob Jordon and James Murphy by the US Army Corps of Engineers' mission to develop and manage Lake Lewisville's water resources, and guidelines for uses of Corps property.

Council received a presentation from Rob Jordon and James Murphy by the US Army Corps of Engineers' mission to develop and manage Lake Lewisville's water resources, and guidelines for uses of Corps property. No action was taken.

- 8. Received a report from Chief Carolla, held a discussion, and gave staff direction regarding holding special events, City sponsored events, and allowing vendors in Willow Grove Park.**

Council received a presentation from Chief Carolla regarding holding special events, City sponsored events and allowing vendors in Willow Grove Park. Council directed staff move forward with ordinance amendments.

- 9. Received a report and hold a discussion to repair Shady Shores Road provided by Halff Engineering.**

Council received a report from Brian Haynes with Halff Engineering regarding repairs to Shady Shores Road.

- 10. Received a report from Donna Butler, held a discussion, and gave staff direction on amendments to the City of Lake Dallas sign ordinance relative to abandoned signs.**

Council received a presentation from Donna Bulter regarding amendments to the City of Lake Dallas sign ordinance relative to abandoned signs. No action was taken.

- 11. Consider and Act on a Resolution authorizing negotiation and execution of an agreement with the Lake Dallas Community Development Corporation to fund the Installation of Street Lighting for the Main Street Project.**

Motion to approve the Resolution authorizing negotiation and execution of an agreement with the Lake Dallas Community Development Corporation to fund the Installation of Street Lighting for the Main Street Project was made by Councilmember Nolan and second by Councilmember Ray.

Ayes: Councilmembers Ray, McClain, Price, Nolan, and Brownlee

Noes: None

Motion Passed 5-0.

- 12. Consider and Act on a Resolution authorizing a professional services agreement between the City of Lake Dallas and Regina L. Sobieski.**

Motion to approve the Resolution authorizing a professional services agreement between the City of Lake Dallas and Regina L. Sobieski not to exceed \$6,000.00 was made by Councilmember Ray and second by Councilmember McClain.

Ayes: Councilmembers Ray, McClain, Price, Nolan, and Brownlee

Noes: None

Motion Passed 5-0.

13. Received a report, held a discussion, and acted to confirm the Interim City Manager's appointment and employment of a Director of Library Services.

Motion to confirm the Interim City Manager's appointment and employment of Natalie N. McAdams as the Director of Library Services for the Lake Dallas Library was made by Councilmember Nolan and second by Councilmember Ray.

Ayes: Councilmembers Ray, McClain, Price, Nolan, and Brownlee

Noes: None

Motion Passed 5-0.

14. Mayor & Council Member Announcements:

Mayor Barnhart – Saturday is the Chili Cook Off

Councilmember Price - \$10,000 Waste Management settlement use to purchase portable movie screen and projector for the park.

15. Executive Session:

Conduct a closed meeting pursuant to the Texas Government Code section 551.074 deliberate the appointment and employment of the Interim City Manager and/or City Manager.

Council convened into Executive Session at 11:02 p.m.

Council reconvened in Open Session at 11:45 p.m.

No action was taken.

16. Adjournment

Mayor Barnhart adjourned the meeting at 11:46 p.m.

Approved:

Michael Barnhart, Mayor

Attest:

Codi Delcambre, City Secretary



**CITY COUNCIL
AGENDA MEMO**

Prepared By: John Cabrales Jr, Interim City Manager

December 14, 2017

Span, Inc. of Denton County

DESCRIPTION:

Approval of a Resolution authorizing the Interim City Manager to negotiate an Interlocal Agreement with Span, Inc. of Denton County (SPAN), for door-to-door demand response transit services to Lake Dallas citizens.

BACKGROUND INFORMATION:

Since 1974, nonprofit Span, Inc. has enabled people in Denton County to live as fully and independently as possible by providing nutrition, transportation and social services to older persons, those with disabilities, veterans, and the general public. Span's main areas of programming include senior nutrition and public transportation (see www.spandentoncounty.org).

Last year, Span, Inc. of Denton County provided the following:

1. Hot, nutritious noon meals delivered to homebound seniors and persons with disabilities
 - a. Delivering more than 76,000 meals each year
 - b. Home delivery permits volunteers to check on the well-being of those who are homebound
2. Congregate (group) lunches at six senior centers throughout Denton County
 - a. Serve an additional 13,200 meals annually
 - b. Added benefit of socialization for our seniors
3. Nutrition education — an important service of both meals programs
4. Monthly pet food to homebound clients who can't afford it and might otherwise share their home-delivered meals with their pets through our Senior Paws program.
5. Span Denton County provides transit services, by appointment, for residents of Denton County that live outside of the Denton/Lewisville corridor. All vehicles are equipped

with wheelchair lifts. Span drivers are trained to assist individuals who may have mobility impairment or uses assistive devices.

It is the policy of Span Inc. that no person shall, on the grounds of race, religion, color, national origin, sex, age or disability be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any Span programs or activities.

The City has contracted with Span, Inc. of Denton County for several years for the Meals on Wheels Program. This program provides nutritionally balanced, home-delivered meals to homebound elderly and disabled citizens. Meals are delivered Monday through Friday from 10:30 a.m. to 12:00 noon, by trained volunteers. For Fiscal Year 2017-18, the City has budgeted \$1,300 for this service.

On March 29, 2017, the City sent a letter of support to Span, Inc. of Denton County committing our support of their application for a North Central Council of Government (NCTCOG) grant to provide affordable transportation for seniors and people with disabilities in the Lake Cities area. The Lake Dallas City Council approved the 20% funding match (\$2,100) to the grant if SPAN is successful.

SPAN did land the NCTCOG grant and obtained some transportation credits that resulted in SPAN not needing the local match funds. However, the grant does not begin until April, so the Lake Cities municipalities agreed to begin the program in Jan. 2018 and use the budget amounts to pay for any expenses until the grant kicks in. SPAN has submitted an Interlocal Agreement to all the Lake Cities for their consideration and adoption.

FINANCIAL CONSIDERATION:

For Fiscal Year 2017-18, the City has budgeted \$1,300 for the Meals on Wheels program. Also, the City has committed to \$2,100 in local match funding for a NCTCOG affordable transportation for seniors and people with disabilities grant.

RECOMMENDED MOTIONS:

I move to approve/deny a Resolution authorizing the Interim City Manager to negotiate an Interlocal Agreement with Span, Inc. of Denton County (SPAN), for door-to-door demand response transit services to Lake Dallas citizens.

ATTACHMENT(S):

1. SPAN Interlocal Agreement
2. Lake Cities 5310 Grant Proposal
3. City of Lake Dallas Letter of Support (Mar. 29, 2017)
4. Resolution

**CITY OF LAKE DALLAS, TEXAS
RESOLUTION NO. _____**

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LAKE
DALLAS, TEXAS AUTHORIZING THE INTERIM CITY MANAGER TO
NEGOTIATE AND SIGN AND INTERLOCAL COOPERATION
AGREEMENT WITH SPAN, INC. TO PROVIDE DEMAND RESPONSE
TRANSIT SERVICES; AND PROVIDING AN EFFECTIVE DATE**

WHEREAS, SPAN, Inc. is a designated rural transportation provider operating in Denton County that provides door-to-door demand response transportation services (“Transit Services”) to certain eligible residents in Denton County who live outside of areas services by the Denton County Transportation Authority; and

WHEREAS, SPAN, Inc. has offered to provide the Transit Services to residents of the City of Lake Dallas under an interlocal cooperation agreement with the City; and

WHEREAS, the City Council of the City of Lake Dallas finds it to be in the public interest to enter into a agreement with SPAN, Inc. to provide the Transit Services;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LAKE DALLAS, TEXAS, THAT:

SECTION 1. The Interim City Manager is authorized to negotiate and sign on behalf of the City an interlocal cooperation agreement with SPAN, Inc. to provide demand response transit services to residents of the City who are (a) sixty years of age or older and/or (b) determined to have an eligible disability in accordance with SPAN, Inc.’s policies and state and federal regulations, with the maximum City expenditures not to exceed \$2100.00.

SECTION 2. This Resolution shall be effective immediately upon approval.

PASSED AND APPROVED this the 14th day of December, 2017.

ATTEST:

APPROVED:

Codi Delcambre, City Secretary

Michael Barnhart, Mayor

APPROVED AS TO FORM:

Kevin B. Laughlin, City Attorney
(kbl:12/6/17:93830)

STATE OF TEXAS §

COUNTY OF DENTON §

INTERLOCAL AGREEMENT FOR SERVICES

THIS SERVICE AGREEMENT ("Agreement") is entered into by and between Lake Dallas, Texas, acting by and through its duly authorized City Manager (hereinafter referred to as "CITY") and SPAN, Inc., (hereinafter referred to as "SPAN"), a Texas non-profit corporation operating in Denton County, Texas as an organization described in Section 501(c)(3) of the Internal Revenue Code, acting by and through its duly authorized Executive Director.

WHEREAS, SPAN enables people to live as fully and independently as possible by providing nutrition, transportation and social services to older persons, persons with disabilities, veterans, and the general public; and

WHEREAS, the success of or failure of the SPAN's purposes and objectives has a direct impact on the health and welfare of the citizens of the City; and

WHEREAS, the City is charged with the responsibility of promoting and preserving the health, safety, peace, good government, and welfare of its citizens; and

WHEREAS, SPAN transportation services were developed to provide safe and efficient transportation to seniors, persons with special needs, veterans and as otherwise defined by agreements into which SPAN may enter from time to time; and

WHEREAS, The CITY and SPAN desire to enter into this Agreement whereby SPAN will provide demand response transit service for CITY residents that are seniors (age 60 or older), and people with documented disabilities (hereafter referred to collectively as "Riders"); and

WHEREAS, Riders in CITY may be taken anywhere in SPAN's demand response transit service area in Denton County at a cost to the Riders of \$2.50 for seniors (age 60 and older) and people with documented disabilities for the limited purposes of medical treatments, doctor's and dentist's appointments (and trips to get prescriptions filled?); and

WHEREAS, Riders may call in at least one (1) day in advance, but no more than two (2) weeks in advance, to set up appointments for pick-up and drop off by calling SPAN'S Transportation Office at 940-382-1900 weekdays between the hours of 8:00 a.m. and 2:00 p.m.; and

WHEREAS, Demand response transit service is available between the hours of 7:00 a.m. and 6:00 p.m. Monday through Friday excluding major holidays and subject to capacity constraints.

NOW, THEREFORE, THE CITY AND SPAN DO HEREBY COVENANT AND AGREE AS FOLLOWS:

1. Recitals

The foregoing recitals are found to be true and correct, are fully incorporated into the body of this Agreement and made a part hereof by reference just as though they are set out in their entirety.

2. Scope of Transportation Services

SPAN shall provide door-to-door demand response transit services to CITY citizens residing in Denton County who are Riders in accordance with this Agreement and SPAN's "Transportation Policy and Procedures" which is attached hereto as Exhibit "A" and incorporated herein by reference as though it were set out in its entirety ("Policy"). In the event of conflict between this Agreement and the Policy, this Agreement shall control. In performing services under this Agreement, the relationship between the CITY and SPAN is that of an independent contractor. No term or provision of this Agreement or act of SPAN in the performance of this Agreement shall be construed as making SPAN the agent, servant, or employee of the CITY.

3. SPAN Transportation Operations

- a. SPAN shall provide all equipment, facilities, qualified employees, training, and insurance necessary to establish a demand response transit service for the CITY's Riders. SPAN shall further establish, operate, and maintain an accounting system for this program that will allow for a tracking of services provided to Riders and a review of the financial status of the program. SPAN shall also track and break down the information regarding the number of one-way trips it provides to Riders.
- b. The CITY shall have the right to review the activities and financial records kept incident to the services provided to the CITY's Riders by SPAN. In addition, SPAN shall provide monthly ridership information to the City Manager or his/her designee specifically identifying the number of Rider trips including rider origination, destination, and purpose.
- c. SPAN will be responsible for verifying and documenting the eligibility of Riders. SPAN reserves the right to determine on an individual basis whether SPAN has the capability to safely transport a passenger. In the event that safety is compromised, SPAN may decline transportation for this person and must document the reason why service was declined.
- d. Span will inform riders that their trips to the doctor or dentist's office, hospital, drug store or other location may qualify as a Medicaid eligible trip. SPAN will direct potential Medicaid eligible riders to call Texas Health and Human Services toll free at 1-877-633-8747 (TTY: 1-800-735-2989) or 1-877-MED-TRIP on Monday through Friday between 8:00 a.m. and 5:00 p.m. at least two days before their appointment or trip to schedule free transportation through Medicaid.

4. Payment

CITY agrees to pay a reasonable fee to initiate demand response transit service provided to Riders and this service will thereafter be supplemented with Federal grant funds under the §5310 Enhanced Mobility for Seniors and People with Disabilities Program. Such fee to the City for fiscal year October 1, 2017, through September 30, 2018, will be a cumulative amount not to exceed Two Thousand One Hundred Dollars (\$2,100) for up to seventy-six (76) one-way trips for Riders, invoiced to CITY on a monthly basis at a price per one-way trip of Twenty-Seven Dollars and Fifty Cents (\$27.50).

- a. The number of one-way trips funded by the City shall be limited to a maximum of twenty-five (25) one-way trips per month.
- b. EXCEPTION : If the full allotment of twenty-five (25) one-way trips has been exhausted for a particular month and additional one-way trips remain available under this Agreement SPAN may provide transportation service to a Rider needing transportation for dialysis, chemotherapy or other medically necessary treatment or therapy upon provision by the Rider to SPAN of a doctor's order documenting the need for treatment or therapy on the date such service is requested by said Rider (an "Excess One-Way Trip"). CITY will pay SPAN for such Excess One-Way Trips upon submission of documentation supporting the Excess One-Way Trips provided that funds remain available under the maximum amount of this Agreement for such purpose.
- c. Excess One-Way Trips shall be deducted from the immediately following month's allotment of twenty-five one-way trips.
- d. If fewer than twenty-five one-way trips are used in any given month the unused one-way trips from that month will accrue and be available for use during the immediately following month, up until such time as the §5310 funds become available.
- e. Upon notification of the availability of §5310 grant funds, SPAN shall provide up to thirty-three (33) one-way trips per month to CITY riders using such funds. If fewer than thirty-three trips are used in any given month the unused one-way trips from that month will accrue and be available for use during subsequent months of this Agreement.

5. Indemnification

SPAN assumes all liability and responsibility for and agrees to fully indemnify, hold harmless and defend the CITY, and its officials, officers, agents, servants and employees from and against any and all claims, damages, losses and expenses, including but not limited to attorney's fees, for injury to or death of a person or damage to property, arising out of or in connection with, directly or indirectly, the performance, attempted performance or nonperformance of the services described hereunder or in any way resulting from or arising out of the management, supervision, and operation of the program and activities of SPAN. In the event of joint and concurring responsibility of SPAN and the CITY, responsibility and indemnity, if any, shall be apportioned comparatively in accordance with

Texas Law, without waiving any defense of either party under Texas Law. The provisions of this paragraph are solely for the benefit of the parties hereto and are not intended to create or grant any rights, contractual or otherwise, to any other person or entity.

6. Insurance

SPAN shall obtain public liability insurance of the types and in the amounts set forth below from an insurance carrier or underwriter licensed to do business in the State of Texas and acceptable to the CITY. SPAN shall furnish CITY with certificates of insurance or copies of the policies, evidencing the required insurance on or before the beginning date of this Agreement. SPAN agrees to submit new certificates or policies to CITY on or before the expiration date of the previous certificates or policies. The insurance shall be the following types in amounts not less than indicated:

- a. Comprehensive General (Public) Liability Insurance or its equivalent including minimum coverage limits of \$1,000,000 per occurrence combined single limit for bodily injury and property damage.
- b. Automobile Liability Insurance including minimum coverage limits of \$1,000,000 per combined single limit for bodily injury and property damage.
- c. On all insurance required, SPAN shall require insurance providers to:

Name the CITY, and its officials, officers and employees, as additional insureds and provide thirty (30) days written notice to CITY of any material change to or cancellation of the insurance.

7. Assignment and Delegation

Neither party shall assign or delegate the rights or obligations under this Agreement without the prior written consent of the other party.

8. Severability

In the event any provision of this Agreement shall be determined by any court of competent jurisdiction to be invalid or unenforceable, the Agreement shall, to the extent reasonably possible, remain in full force and effect as to the balance of its provisions and shall be construed as if such invalid provision were not a part hereof.

9. Mediation

In the event of any dispute regarding this Agreement or the terms contained herein, the parties hereto agree that they shall submit such dispute to non-binding mediation.

10. Term of Agreement

The term of this Agreement shall be from January 1, 2018 through September 30, 2018, subject to renewal by the parties. Either party may modify this Agreement by submitting, in writing, the

proposed amendment to be considered and executed by both parties. This Agreement may be terminated with or without cause by either party by giving thirty (30) days written notice to the other party of their intent to terminate the Agreement. In the event the CITY terminates without cause, SPAN shall be entitled to receive just and equitable compensation for any satisfactory work completed in accordance with this Agreement and prior to the termination.

11. Applicable Law Venue

This Agreement shall be governed by, construed, and enforced in accordance with the laws of the State of Texas, and venue for any claim or cause of action shall lie exclusively in Denton County, Texas or the Federal courts having jurisdiction over claims arising in Denton County, Texas.

12. Attorney's Fees and Costs

In the event it becomes necessary to take legal action to enforce the terms of this Agreement, the prevailing party in such action shall be entitled to recover attorney's fees and costs of court from the non-prevailing party.

IN WITNESS WHEREOF the CITY of Corinth and Span, Inc. have executed this Agreement on this the _____ day of _____, 2017.

SPAN, INC:

Deborah Robertson, Executive Director

City of Lake Dallas

_____, City Manager

ATTEST:

City Secretary



212 Main Street · Lake Dallas, Texas 75065 · (940) 497-2226 · (940) 497-4485 Fax
www.lakedallas.com · lakedallas@lakedallas.com

March 29, 2017

SPAN, Inc./ Meals on Wheels Denton County
1800 Malone Street
Denton, Texas 76201
Attn: Deb Robertson, Executive Director

RE: Lake Dallas Letter of Support

Dear Ms. Deb Robertson,

The City of Lake Dallas understands the importance of providing our seniors and people with disabilities affordable transportations so they may get to their health care appointments. The City supports affordable transportation for our senior and people with disabilities. The Lake Dallas Council approved to fund its share of the 20% match for the project on March 23, 2017. The City of Lake Dallas is in full support of the grant application.

Sincerely,

A handwritten signature in black ink, appearing to read "M Shaffstall", is written over a horizontal line.

Matt Shaffstall, City Manager
Lake Dallas

SPAN Denton County

Lake Cities §5310 Grant Proposal

Proposed 150 one-way trips per month = 1,800 trips annually

Allocation of trips to City by population		Corinth 88 trips/mo	Lake Dallas 33 trips/mo
Cost per trip (estimate for 2018)	\$ 30.00		
Less passenger fare	\$ 2.50		
Cost per trip after passenger fare	\$ 27.50		
Total grant annual trip cost	\$47,700	\$27,984	\$10,494
Total annual City obligation at 20% match	\$9,540	\$5,580	\$2,100

Hickory Creek 17 trips/mo	Shady Shores 12 trips/
\$5,406	\$3,816

\$1,100	\$760
---------	-------



CITY COUNCIL
AGENDA MEMO

Prepared By: John Cabrales Jr, Interim City Manager

Dec. 14, 2017

Waste Management Solid Waste Rates Adjustment

DESCRIPTION:

Consider and act on the solid waste rates adjustment requested by Solid Waste Management; and declaring an effective date.

BACKGROUND INFORMATION:

Waste Management has submitted a letter (attached) requesting that solid waste rates be modified to reflect changes in the Consumer Price Index (CPI), and diesel fuel prices. According to Waste Management, the CPI increased by 2.13%, while the average price of Diesel Fuel was \$2.62 on the first Monday prior to October 1.

The City has a municipal solid waste collection agreement with Waste Management that gives them exclusive right and privilege to conduct business for the purpose of collection and disposal of waste, and collection of recyclables from residential units within the city limits. According to the agreement, Waste Management is allowed to adjust their base rates as set forth in Section 9 of the agreement. The modifications to the base rates shall not be effective unless and until the rate increase is approved by the City Council, which approval shall not be unreasonably withheld.

9. MODIFICATION TO RATES:

- 9.01 **CPI Adjustment:** Base Rates charged by Contractor for services will remain fixed as set forth on Schedule "A" and will not be adjusted for changes in the CPI (as hereinafter defined), until November 1, 2015. Commencing on November 1, 2015 and continuing annually on each anniversary date of the Commencement Date of this Agreement, Base Rates for services shall be adjusted by the same percentage as the Consumer Price Index, US City Average for All Urban Consumers, Garbage and Trash Collection, Not Seasonally Adjusted, Base Period December 1983 = 100 (published by the United States Bureau of Labor Statistics, Consumer Price Index) (the "C.P.I.") shall have increased during the preceding twelve months. In the event the U.S. Department of Labor, Bureau of Labor Statistics ceases to publish the C.P.I., the parties hereto agree to substitute another equally authoritative measure of change in the purchasing power of the U.S. dollar as may be then available so as to carry out the intent of this provision.
- 9.02 **Fuel Adjustment:** Annually, on each November 1 of this Agreement, the Base Rates shall be subject to a fuel surcharge as follows: (i) an additional one percent (1%) increase in the Base Rates for every twenty-five cent (\$0.25) increase in the price of diesel fuel at, above and including \$3.00 per gallon (with a 1% surcharge beginning at \$3.00 per gallon and an additional 1% surcharge at \$3.25 per gallon, etc.) and (ii) a one percent (1%) decrease in the Base Rates for every twenty-five cent (\$0.25) decrease in the price of diesel fuel below two dollars and fifty cents (\$2.50) per gallon (with a one percent (1%) decrease beginning at two dollars and fifty cents (\$2.50) per gallon and an additional one percent (1%) decrease at two dollars and no cents (\$2.25) per gallon, etc). The diesel fuel price shall be as determined by reference to the Energy Information Administration of the US Department of Energy ("EIA/DOE")'s Weekly Retail On Highway Diesel Prices for the Gulf Coast. The EIA/DOE currently publishes these prices on their website at the following location: <http://tonto.eia.doe.gov/oog/info/wohdp/diesel.asp>. The determination of the average price of diesel fuel from the aforesaid website shall be made on the first Monday prior to October 1 of the subject year (or the first business day thereafter if such Monday is a Federal Holiday).
- 9.03 **Additional Adjustments:** Contractor shall also be entitled to an increase in Base Rates from time to time during the term of this Agreement, and upon thirty (30) days'

The agreement allows Waste Management to adjust fuel prices by 1% for each 25 cents below \$2.50 or +1% for each 25 cents above \$3.00. Because the average price of Diesel Fuel was \$2.62 on the first Monday prior to October 1, Waste Management will not have a fuel adjustment. However, as a result of the CPI increase, there will be an adjustment to the residential price from \$14.86 per month to \$15.18 per month. Commercial and roll off prices will also reflect a 2.13% increase.

FINANCIAL CONSIDERATION:

Solid waste residential rates will increase from \$14.86 per month to \$15.18 per month. Also, the commercial and roll off prices will also increase by 2.13%.

RECOMMENDED MOTIONS:

I move to **approve** the Waste Management request to modified the solid waste residential rates from \$14.86 per month to \$15.18 per month, and to increase the commercial and roll off prices by 2.13%, in accordance with the municipal solid waste collection agreement.

ATTACHMENT(S):

1. Waste Management Nov. 9, 2017 letter and supporting data.

**CITY OF LAKE DALLAS, TEXAS
RESOLUTION NO. 12142017-_____**

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LAKE DALLAS, TEXAS, APPROVING INCREASE IN CHARGES PURSUANT TO THE MUNICIPAL SOLID WASTE AND TRANSPORTATION AGREEMENT DATED DECEMBER 1, 2014, BETWEEN THE CITY AND WASTE MANAGEMENT; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the City of Lake Dallas, Texas entered into that certain *Municipal Solid Waste Collection and Transportation Agreement* (“the Agreement”) with Waste Management of Texas, Inc. on December 1, 2014, to provide solid waste collection and disposal services in the City for a period of five (5) years, which agreement was amended on April 23, 2015 pursuant to that certain *First Amendment to Municipal Solid Waste Collection and Transportation Agreement*; and

WHEREAS, Section 9 of the Agreement provides for annual rate adjustments in November of each year during the term of the Agreement based on the annual change of the Consumer Price Index, US City Average for All Urban Consumers, Garbage and Trash Collection, Not Seasonally Adjusted, as well as the annual change of the U.S. Department of Energy Weekly Retail On Highway Diesel Prices for the Gulf Coast; and

WHEREAS, the stated index from the applicable Consumer Price Index for the 12-month period ending October 1, 2017 was 2.13%, and the stated index from the Weekly Retail on Highway Diesel Prices for the Gulf Coast for the first Monday prior to October 1, 2017 was \$2.62 per gallon; and

WHEREAS, on November 9, 2017, Waste Management delivered a final request for the annual rate adjustment pursuant to the Agreement providing for a increase in collection rates based on the CPI adjustment but no increase based on fuel costs; and

WHEREAS, the Agreement provides that the City must approve the requested adjustment, which approval cannot be unreasonably withheld; and

WHEREAS, the City Council finds no reasonable basis on which to deny the requested increase pursuant to the rate adjustment provisions of the Agreement;

NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LAKE DALLAS, TEXAS, THAT:

SECTION 1. The rates for services as set out in the Agreement are hereby adjusted and approved in accordance with Exhibit “A,” attached hereto and incorporated herein by reference effective _____, 2017.

SECTION 2. This Resolution shall take effect immediately upon its passage.

PASSED AND APPROVED this the 14th day of December, 2018.

APPROVED:

Michael Barnhart, Mayor

ATTEST:

Codi Delcambre, TRMC
City Secretary

APPROVED AS TO FORM

Kevin B. Laughlin, City Attorney
(kbl:12/8/17:93904)

Resolution No. 12142017-_____
EXHIBIT “A” (cont.)

COMMERCIAL FRONT LOAD RECYCLING CONTAINERS (Includes Franchise Fee)								
Size	1x	2x	3x	4x	5x	6x	7x	XPU
2 Yard FEL Container	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3 Yard FEL Container	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4 Yard FEL Container	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6 Yard FEL (Cardboard)	\$93.47	\$112.57	N/A	N/A	N/A	N/A	N/A	N/A
8 Yard FEL Cardboard	\$105.66	\$125.98	N/A	N/A	N/A	N/A	N/A	N/A
See Other Charges Or Notes Below								
Delivery	N/A	MARKET						
Lock Bar, MONTHLY	\$8.60							
Casters MONTHLY	\$8.60							
Redelivery Fee for non payment	\$95.91							
Gate or Enclosure Fee	N/A							
Snapshot Charge	Non-Exempt							
Additional Charge	N/A							
ROLL-OFF RATES (Includes Franchise Fee)								
Container Size / Type	Delivery Rate	Rental Rate	BY Month or Day Rate	Hauling Charge (Per Pull + Disp)	Haul Rate per Pull	Disposal Rate per ton		
20 Yard (Open-Top)	\$104.73	\$7.15	Day	N/A	\$303.08	N/A		
25 Yard (Open-Top)	N/A	N/A	Day	N/A	N/A	N/A		
30 Yard (Open-Top)	\$104.73	\$7.15	Day	N/A	\$360.23	N/A		
40 Yard (Open-Top)	\$104.73	\$7.15	Day	N/A	\$374.99	N/A		
30 Yard (Compactor)	NEGOTIATED	NEGOTIATED	Month	N/A	\$214.54	N/A		
33 Yard (Compactor)	NEGOTIATED	NEGOTIATED	Month	N/A	\$273.03	N/A		
34 Yard (Compactor)	N/A	N/A	Month	N/A	N/A	N/A		
35 Yard (Compactor)	NEGOTIATED	NEGOTIATED	Month	N/A	\$328.47	N/A		
40 Yard (Compactor)	NEGOTIATED	NEGOTIATED	Month	N/A	\$448.48	N/A		
42 Yard (Compactor)	N/A	N/A	Month	N/A	N/A	N/A		
TRIP CHARGE RATE:			N/A					
NOTES / FREE SERVICES								
ALL RATES ON THIS SHEET INCLUDE THE 10% CITY FRANCHISE FEE The residential rate includes no charge access to the landfill for excess residential trash...no commercial trash. Non-compactable materials such as swadust, concrete, singles, etc., cannot be loaded into dumpsters. They must be handled with roll offs. The City receives a total of thirty 30-yard roll off pulls per year (Oct - Sept.) at no charge. Brush and bulk collection is only on the regular Monday collection day..residents must call in by Friday. WM does not go to the City on any other day for residential service. Upon request from the City, we will collect carts "up the driveway" for elderly or disabled. Residential Re-Enstatement of unpaid account: 40.69								



November 9, 2017

John Cabrales
City Manager
City of Lake Dallas
212 Main Street
Lake Dallas, Texas 75065

Dear John,

Pursuant to the terms of our contract, Waste Management is respectfully requesting that solid waste rates be modified to reflect changes in the Consumer Price Index (CPI), and diesel fuel prices. As the attached information demonstrates the CPI increased by 2.13%, while the average price of Diesel Fuel was \$2.62 on the first Monday prior to October 1.

Fuel prices are adjusted 1% for each 25 cents below \$2.50 or +1% for each 25 cents above \$3.00. There will be a fuel adjustment of 0%. Based on the strike price in the supplemental data submitted.

The CPI increase will result in adjusting the residential price from \$14.86 per month to \$15.18 per month. Commercial and roll off prices will also reflect a 2.13% increase.

Please let me know on what council agenda you will place this on and I will be happy to attend to answer any questions.

Sincerely,

A handwritten signature in blue ink, appearing to read 'TJ Gilmore', with a long horizontal flourish extending to the right.

TJ Gilmore
Public Sector Services

CPI-All Urban Consumers (Current Series)
Original Data Value

Series Id: CUSR0000SEHG02

Seasonally Adjusted

Series Title Garbage and trash collection in U.S. city average, all urban consumers, seasonally adjusted

Area: U.S. city average

Item: Garbage and trash collection

Base Period: DECEMBER 1983=100

Years: 2007 to 2017

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
2007	340.087	340.898	342.033	343.286	343.198	343.836	345.081	347.168
2008	356.901	358.059	358.55	359.586	361.533	363.159	366.043	368.96
2009	371.828	372.503	373.241	375.392	375.599	376.582	377.494	377.879
2010	380.036	382.49	383.362	383.615	383.405	383.749	383.832	385.01
2011	389.727	391.854	391.855	392.754	395.477	395.329	395.723	396.605
2012	398.88	400.381	401.692	400.913	401.067	402.793	406.243	406.823
2013	411.126	411.805	412.305	413.675	414.511	414.802	416.505	417.76
2014	422.44	422.483	423.413	425.393	425.242	425.93	426.562	426.771
2015	427.734	429.248	429.235	429.807	431.234	430.813	431.229	432.967
2016	437.205	438.296	437.699	437.676	438.317	437.858	438.607	439.358
2017	446.266	447.699	446.987	447.129	447.272	448.046	448.328	448.717

YoY CPI

Change in YoY

% Change

Net Change for 17-18 (

Sep	Oct	Nov	Dec	HALF1	HALF2
347.949	348.684	351.136	353.439		
369.651	371.155	371.648	371.093		
378.285	379.56	379.208	379.248		
385.92	385.909	387.216	387.884		
397.028	397.106	398.91	398.72		
407.594	409.495	410.155	410.416		
418.357	419.687	421.427	422.237		
427.327	427.995	427.808	428.187		
433.843	434.829	436.428	436.996		
439.707	440.311	443.343	444.745		
449.008					

9.359

0.021301535

2.13%

fuel and CPI): 2.13% increase

City of Lake Dallas
12/1/2017

RESIDENTIAL RATES (Includes Franchise Fee)

Residential Rates	\$15.18	<i>Includes AYD</i>
Extra Trash Cart	\$4.04	
Senior Discount Rate	\$10.32	
Senior Rate Addl. Trash Cart	\$3.04	
Addl. Recycle Cart	\$2.39	<i>Both Resi and Senior Rate</i>

COMMERCIAL HAND COLLECT (Includes Franchise Fee)

	1XWK	2XWK
Hand-PU (1-5 Bags)	N/A	N/A
Hand-PU (6-10 Bags)	N/A	N/A
Poly Cart-PU (1 Toter)	\$23.97	N/A
Poly Cart-PU (2 Toter)	\$34.95	N/A
Poly Cart-PU (3 toters)	\$47.96	N/A
Recycling PU (1 toter)	\$21.15	N/A

COMMERCIAL RATES (Includes Franchise Fee)

Container Size / Type	FREQUENCY PER WEEK							
	1XWK	2XWK	3XWK	4XWK	5XWK	6XWK	7XWK	EXTRA PU
2 Yard FEL Container	\$60.27	\$119.17	\$159.99	\$197.72	\$297.36	\$356.84	N/A	\$20.64
3 Yard FEL Container	\$91.44	\$137.22	\$182.88	\$232.50	\$336.56	\$403.93	N/A	\$33.17
4 Yard FEL Container	\$120.61	\$197.95	\$270.89	\$350.24	\$509.28	\$611.14	N/A	\$37.23
6 Yard FEL Container	\$153.79	\$245.65	\$343.37	\$445.80	\$561.92	\$674.31	N/A	\$47.77
8-Yard FEL Container	\$192.29	\$319.77	\$451.94	\$594.04	\$736.14	\$868.11	N/A	\$64.49
10 Yard FEL Container	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

See Other Charges Or Notes Below

Delivery	N/A	
Lock Bar, MONTHLY	\$8.60	
Casters MONTHLY	\$8.60	
Redelivery Charge for non payment **	\$95.91	
Snapshot Charge	Non-Exempt	
TEMPORARY SERVICE		
6 Yard Temp ***	N/A	
8 Yard Temp ***	N/A	*** Temporary Service includes delivery, rental and removal, and disposal

COMMERCIAL FRONT LOAD COMPACTORS* (Includes Franchise Fee)

Size	1x	2x	3x	4x	5x	6x	7x	XPU
2 Yard FEL Compactor	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3 Yard FEL Compactor	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4 Yard FEL Compactor	\$180.81	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6 Yard FEL Compactor	\$259.59	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8 Yard FEL Compactor	\$342.62	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10 Yard FEL Compactor	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

See Other Charges Or NotesBelow

Delivery	N/A	*Compactor Rate Does Not Include Rental (Choose one and delete the other)	
Lock Bar, MONTHLY	\$8.60	*Compactor Rate Includes Rental	
Casters	\$8.60	MARKET	
Redelivery Fee for non payment	\$95.91		
Gate or Enclosure Fee	N/A		
Snapshot Charge	Non-Exempt		
Additional Charge	N/A		

COMMERCIAL FRONT LOAD RECYCLING CONTAINERS (Includes Franchise Fee)

Size	1x	2x	3x	4x	5x	6x	7x	XPU
2 Yard FEL Container	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3 Yard FEL Container	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4 Yard FEL Container	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6 Yard FEL (Cardboard)	\$93.47	\$112.57	N/A	N/A	N/A	N/A	N/A	N/A
8 Yard FEL Cardboard	\$105.66	\$125.98	N/A	N/A	N/A	N/A	N/A	N/A

See Other Charges Or Notes Below

Delivery	N/A	MARKET
Lock Bar, MONTHLY	\$8.60	
Casters MONTHLY	\$8.60	
Redelivery Fee for non payment	\$95.91	
Gate or Enclosure Fee	N/A	
Snapshot Charge	Non-Exempt	
Additional Charge	N/A	

ROLL-OFF RATES (Includes Franchise Fee)

Container Size / Type	Delivery Rate	Rental Rate	BY Month or Day Rate	Hauling Charge (Per Pull + Disp)	Haul Rate per Pull	Disposal Rate per ton
20 Yard (Open-Top)	\$104.73	\$7.15	Day	N/A	\$303.08	N/A
25 Yard (Open-Top)	N/A	N/A	Day	N/A	N/A	N/A
30 Yard (Open-Top)	\$104.73	\$7.15	Day	N/A	\$360.23	N/A
40 Yard (Open-Top)	\$104.73	\$7.15	Day	N/A	\$374.99	N/A
30 Yard (Compactor)	NEGOTIATED	NEGOTIATED	Month	N/A	\$214.54	N/A
33 Yard (Compactor)	NEGOTIATED	NEGOTIATED	Month	N/A	\$273.03	N/A
34 Yard (Compactor)	N/A	N/A	Month	N/A	N/A	N/A
35 Yard (Compactor)	NEGOTIATED	NEGOTIATED	Month	N/A	\$328.47	N/A
40 Yard (Compactor)	NEGOTIATED	NEGOTIATED	Month	N/A	\$448.48	N/A
42 Yard (Compactor)	N/A	N/A	Month	N/A	N/A	N/A
TRIP CHARGE RATE:			N/A			

NOTES / FREE SERVICES

ALL RATES ON THIS SHEET INCLUDE THE 10% CITY FRANCHISE FEE

The residential rate includes no charge access to the landfill for excess residential trash...no commercial trash.

Non-compactable materials such as swadust, concrete, singles, etc., cannot be loaded into dumpsters. They must be handled with roll offs.

The City receives a total of thirty 30-yard roll off pulls per year (Oct - Sept.) at no charge.

Brush and bulk collection is only on the regular Monday collection day...residents must call in by Friday. WM does not go to the City on any other day for residential service.

Upon request from the City, we will collect carts "up the driveway" for elderly or disabled.

Residential Re-Enstatement of unpaid account: 40.69

CITY COUNCIL
AGENDA MEMO

Prepared By: Kevin Lasher, AICP, Director of Development Services

December 14, 2017

Discussion on a request to change the zoning designation for 5.03 acres of land from C-1 Retail District to a Planned Development (PD) District for all uses permitted in the C-1 District with the inclusion of a mini-warehouse storage facility. (Case ZN171001)

DESCRIPTION:

Conduct a discussion on a request to change the zoning designation for 5.03 acres of land out of the N. French Survey, Abstract No. 424, from C-1 Retail District to a Planned Development (PD) District for all uses permitted in the C-3 Commercial District with the inclusion of a mini-warehouse storage facility. The property is addressed as 502 E. Swisher Road, being situated along the southeast side of E. Swisher Road, north of W. Lakeview Drive. (Case ZN171001)

BACKGROUND INFORMATION:

Platinum Construction out of Highland Village, Texas is contemplating the purchase of the subject property for the purpose of developing a mini-warehouse storage facility on the site. A mini-warehouse storage facility typically requires a zoning designation of M-1 Light Industrial District with a Special Use Permit. However, due to the residential adjacency to the south, staff has recommended the applicant pursue a Planned Development District with an underlying base zoning for retail uses so to avoid the establishment of industrial type uses next to existing residential areas.

Additionally, staff would further recommend that the base zoning for the proposed PD be C-1 Retail District in lieu of the requested C-3 Commercial District. The C-3 district permits automotive related uses which may not be compatible with the adjacent residential area. The applicant's preliminary site plan does not appear to include any retail storefront buildings.

The applicant would like to seek out the Council's initial concerns and questions regarding this proposal.

ADJACENT ZONING AND LAND USE:

DIRECTION	ZONING	EXISTING USE
<i>Subject Property</i>	<i>C-1 Retail District</i>	<i>Vacant.</i>
North	<i>C-1 Retail & R-1-7200 Residential District across Swisher Road.</i>	Swisher Courts Building
South	<i>PD for Single Family Detached Residential</i>	Developed SF Neighborhood Platted in 2006 as Oaks at North Lakeview, Phase 1.

West	<i>C-1 Retail across Swisher Road.</i>	Parking lot for Swisher Courts Building
East	<i>R-1-10000 across N. Lakeview Drive.</i>	Scattered Residential surrounded by flood plain areas classified as AE per FEMA Map Panel 0395.

FINANCIAL CONSIDERATION: N/A

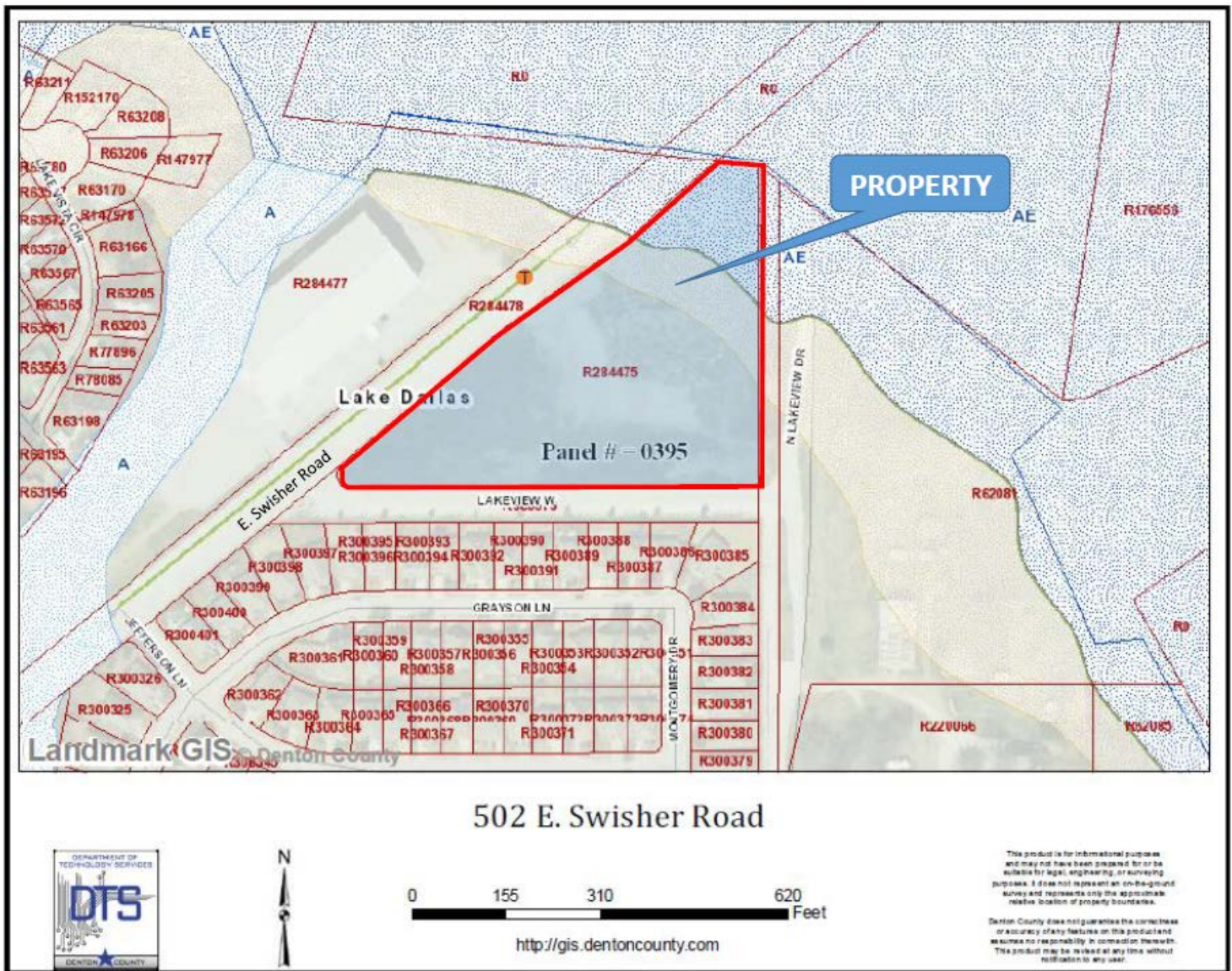
RECOMMENDED MOTION:

None. This agenda item is for discussion only. No formal action is required.

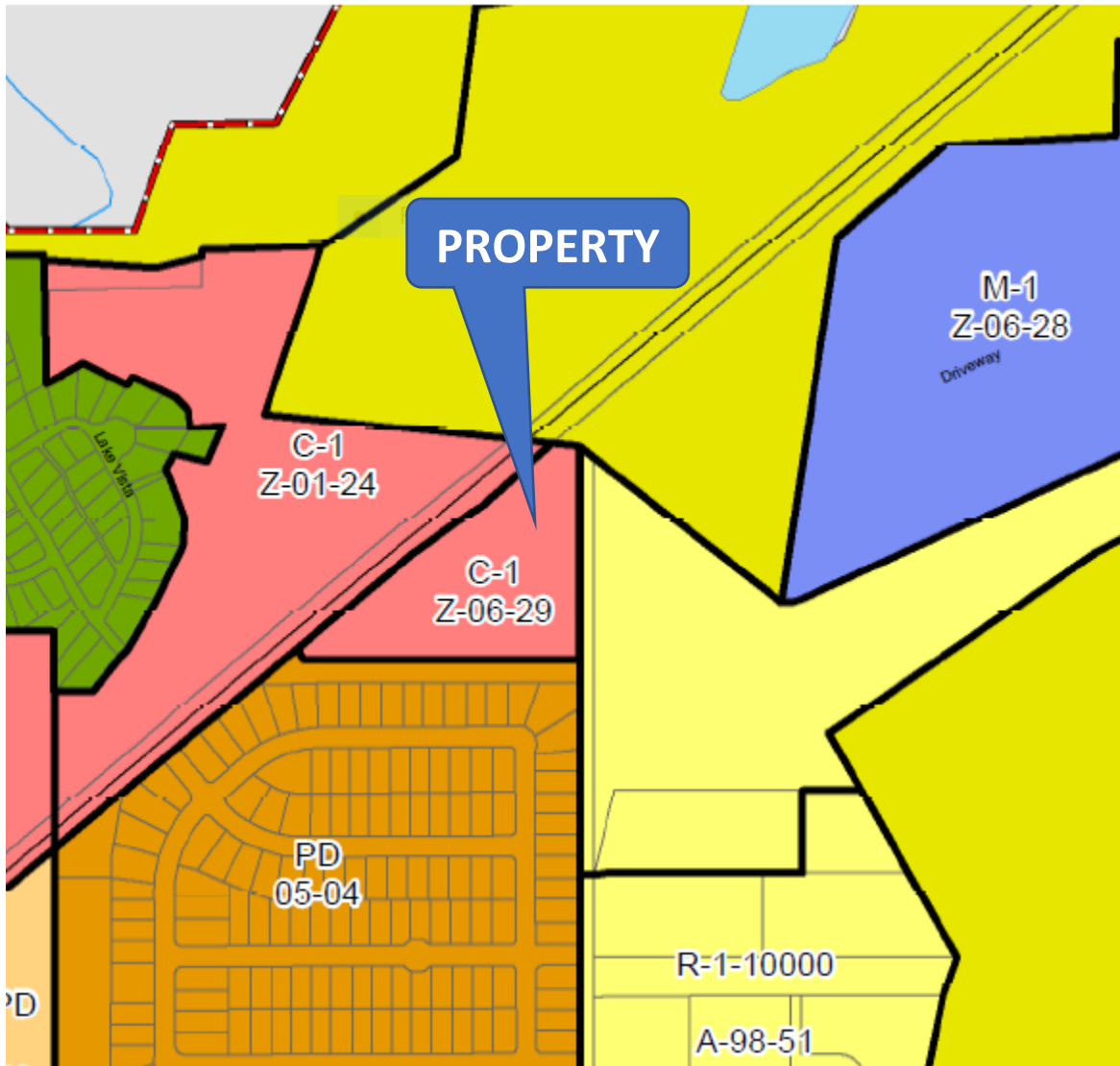
ATTACHMENTS:

1. Vicinity Map.
2. Zoning Map.
3. Applicant's Rezoning Application and Supporting Materials. (6 pages)

Attachment 1. - Vicinity Map.



Attachment 2. - Zoning Map.



Legend

 R-1-10000 Single Family	 C-1 Retail	 Lake Dallas City Limits
 R-1-7200 Single Family	 C-2 Commercial	 35 Development District
 R-1-6000 Single Family	 C-3 Commercial	 Downtown Overlay
 R-1-4000 Manufactured Home	 M-1 Light Industrial	
 R-1-4000C Commercial Manufactured Home	 MA Marina	
 R-2 Two Family	 PD Planned Development	
 R-3 Multi Family		

Attachment 3. - Application and Supporting Materials (page 1 of 6)



212 Main Street, Lake Dallas, TX 75065
940-497-2226 Ext. 110 Fax 940-497-4485 www.lakedallas.com

City of Lake Dallas Development Application

☐ Special Exception ☐ Special Use Permit ☐ Special Waiver ☐ Variance ☒ Zoning Change

A non-refundable filing fee of \$500.00 must accompany each application.

The Property Address: 502 E Swisher Road Current Zoning: C1 Proposed Zoning: PD
Legal Description of Property: A0424A N. FRENCH, TR 21B(PT), 5.03 ACRES
Explanation of Request: We are proposing changing the zoning from a C1 to a PD with a C3 base.
We are essentially wanting to build a high quality self storage facility while restricting industrial uses.

Applicant Name: Annalyse Valk Company: Platinum Construction
Address: 1834 S FM 551 Fate, TX 75189
Phone: 972-722-2590 Email Address: annalyse@platinumtx.com

Property Owner Name: Dancore LP, LLC Company: SAME
Address: 2570 Justin Rd, Suite 206 Highland Village, Texas 75077
Phone: 972.317.8222 Email Address: mike@landcoredevelopment.net

☒ Developer ☐ Engineer ☐ Surveyor

Name: Annalyse Valk Company: Platinum Construction
Address: 1834 S FM 551 Fate, TX 75189
Phone: 972-722-2590 Email Address: annalyse@platinumtx.com

Annalyse Valk
Applicant's Signature

Annalyse Valk
Please Print Name

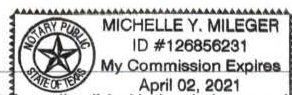
10/16/17
Date

If you are submitting this application on behalf of the property owner the following must be completed:

I am authorized to make application for a _____ on behalf of the owner of this property.

Signed: _____ (Agent)

The above person is my representative, authorized to make application for a Zoning Change on my behalf, and I Mike Silvaggio, hereby certify that I am owner of the property for which this application is made.



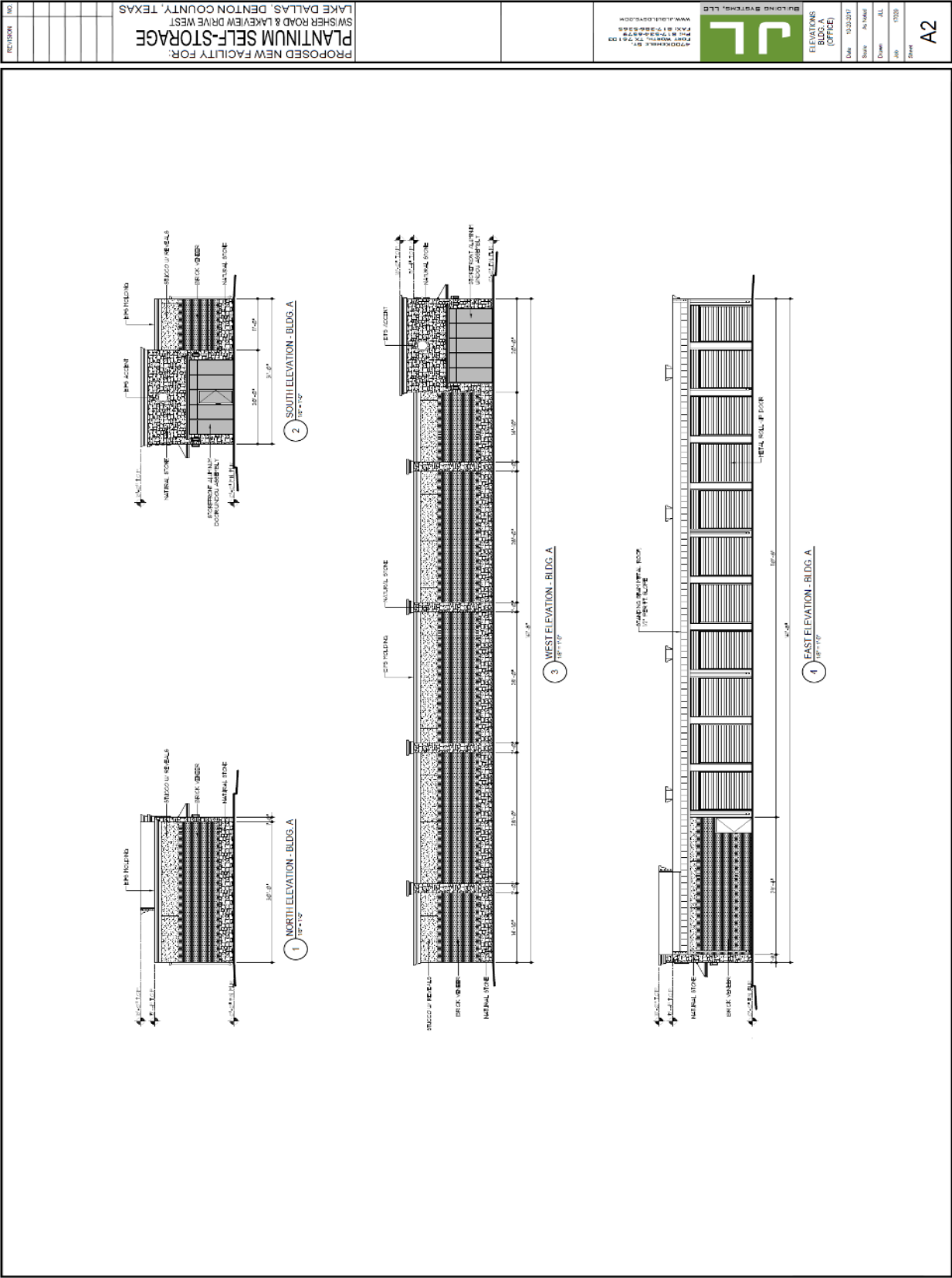
Michelle Y. Mileger
Notary Public Signature

Information listed below to be completed by City Staff:

Date Submitted: 10-16-17 Received by: DBontle Amount: \$ 500.00

Probable Planning and Zoning Commission Date: 11-16-17 Probable City Council Date: 12-14-17
12-21-17 1-11-18

[illegible]



PROPOSED NEW FACILITY FOR:
PLANTINUM SELF-STORAGE
SWISHER ROAD & LAKEVIEW DRIVE WEST
LAKE DALLAS & LAKEVIEW DRIVE WEST
TARRANT COUNTY, TEXAS

REVISIONS

NO.	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

PROPOSED NEW FACILITY FOR:
PLANTINUM SELF-STORAGE
SWISHER ROAD & LAKEVIEW DRIVE WEST
LAKE DALLAS & LAKEVIEW DRIVE WEST
TARRANT COUNTY, TEXAS

REVISIONS

NO.	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

PROPOSED NEW FACILITY FOR:
PLANTINUM SELF-STORAGE
SWISHER ROAD & LAKEVIEW DRIVE WEST
LAKE DALLAS & LAKEVIEW DRIVE WEST
TARRANT COUNTY, TEXAS

REVISIONS

NO.	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

PROPOSED NEW FACILITY FOR:
PLANTINUM SELF-STORAGE
SWISHER ROAD & LAKEVIEW DRIVE WEST
LAKE DALLAS & LAKEVIEW DRIVE WEST
TARRANT COUNTY, TEXAS

REVISIONS

NO.	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

PROPOSED NEW FACILITY FOR:
PLANTINUM SELF-STORAGE
SWISHER ROAD & LAKEVIEW DRIVE WEST
LAKE DALLAS & LAKEVIEW DRIVE WEST
TARRANT COUNTY, TEXAS

REVISIONS

NO.	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

PROPOSED NEW FACILITY FOR:
PLANTINUM SELF-STORAGE
SWISHER ROAD & LAKEVIEW DRIVE WEST
LAKE DALLAS & LAKEVIEW DRIVE WEST
TARRANT COUNTY, TEXAS

REVISIONS

NO.	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

PROPOSED NEW FACILITY FOR:
PLANTINUM SELF-STORAGE
SWISHER ROAD & LAKEVIEW DRIVE WEST
LAKE DALLAS & LAKEVIEW DRIVE WEST
TARRANT COUNTY, TEXAS

REVISIONS

NO.	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

PROPOSED NEW FACILITY FOR:
PLANTINUM SELF-STORAGE
SWISHER ROAD & LAKEVIEW DRIVE WEST
LAKE DALLAS & LAKEVIEW DRIVE WEST
TARRANT COUNTY, TEXAS

REVISIONS

NO.	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

PROPOSED NEW FACILITY FOR:
PLANTINUM SELF-STORAGE
SWISHER ROAD & LAKEVIEW DRIVE WEST
LAKE DALLAS & LAKEVIEW DRIVE WEST
TARRANT COUNTY, TEXAS

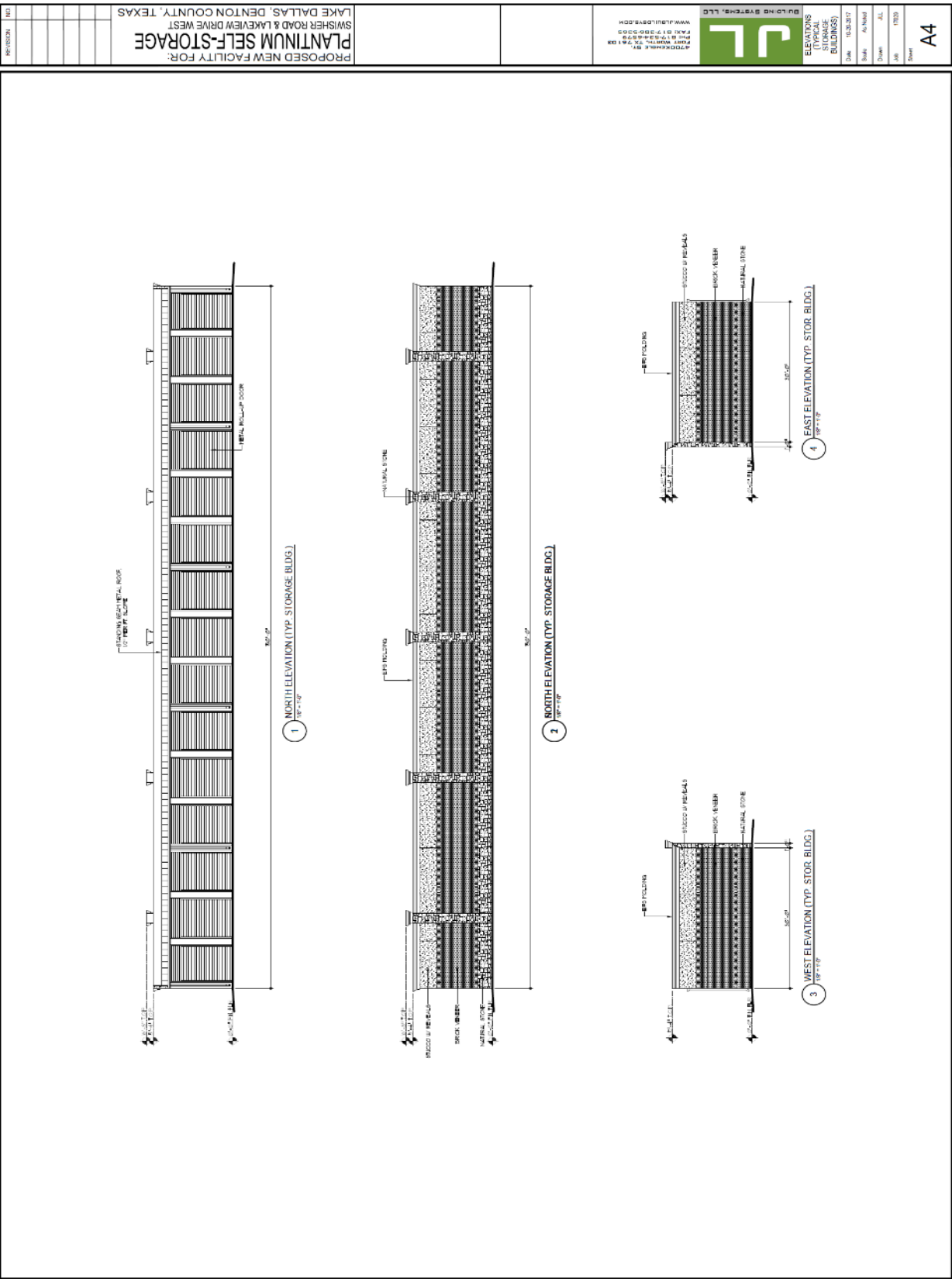
REVISIONS

NO.	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

PROPOSED NEW FACILITY FOR:
PLANTINUM SELF-STORAGE
SWISHER ROAD & LAKEVIEW DRIVE WEST
LAKE DALLAS & LAKEVIEW DRIVE WEST
TARRANT COUNTY, TEXAS

REVISIONS

NO.	DATE	DESCRIPTION
1		
2		
3		
4		
5		





CITY COUNCIL
AGENDA MEMO

Prepared By: Kevin Lasher, AICP, Director of Development Services

December 14, 2017

Conduct a discussion on a request for a non-residential masonry exception for the use of concrete plank siding on an existing wood paneled building previously used as a residence, located on a 0.24 acre tract of land in the S. McCarroll Survey, Abstract No. 958, Denton County, Lake Dallas, Texas. (Case ME171001)

DESCRIPTION:

Conduct a discussion on a request for a non-residential masonry exception for the use of concrete plank siding on an existing wood paneled building previously used as a residence, located on a 0.24 acre tract of land in the S. McCarroll Survey, Abstract No. 958, Denton County, Lake Dallas, Texas, and being a part of Lot 3 of Block C of Barmarchar Sites according to plat thereof recorded in Volume 418, Page 124, Deed Records, Denton County, Texas. The Property is commonly known as being located at 205 S. Lake Dallas Drive, situated at the northwest corner of Janet Street and S. Lake Dallas Drive. The property is zoned C-3 Commercial District and is locating within the IH-35E Business Corridor District. The applicant is Michael and Vonnet Ward. (Case ME171001)

BACKGROUND INFORMATION:

Property owners Michael and Vonnet Ward are seeking to open a beauty salon out of an existing structure on the subject property. Current Denton County Appraisal District records reflect the 0.24 acre tract has been historically appraised as a "Type 8 - Residential Lot." The owners are seeking to repurpose an existing 1,560 square foot wood frame building into a salon that would contain several suites for stylist and barbers. Renovations are being proposed for both the interior and exterior of the building which includes re-paneling the exterior structure with concrete plank siding. A beauty salon, barbershop is a permitted use within the C-3 and IH-35E Business Corridor Districts.

Sec. 122-414. "Exterior surfaces" of the Lake Dallas Zoning Code requires all exterior surfaces of structures in district C-3 to consist of masonry materials covering no less than 80 percent of total exterior surfaces exclusive of windows, doors and gables. Section 122-4 of the Code defines masonry as *"fired clay brick, stone, finished stucco, aggregate concrete, or other brick and materials as determined by the commission."* Upon recommendation from the planning and zoning commission following a public hearing, the city council may consider and grant or deny an exemption from the masonry requirement. The applicant is required to submit a site plan, elevations and proof of an architectural theme or an individual theme that would require a different type of exterior.

The applicant would like to seek out the Council's initial concerns and questions regarding this proposal to renovate the exterior structure with concrete plank siding in lieu of masonry.

ADJACENT ZONING AND LAND USE:

DIRECTION	ZONING	EXISTING USE
<i>Subject Property</i>	C-3 Commercial District & IH-35E Business Corridor District.	<i>Wood frame residential structure.</i>
North	C-3 Commercial District & IH-35E Business Corridor District.	Masonry and wood frame residence.
South	C-3 Commercial District & IH-35E Business Corridor District & Janet Drive.	First Baptist Church of Lake Dallas.
West	C-3 Commercial District & IH-35E Business Corridor District.	Existing 2-story masonry bank and office building across Stephens Street. (Northstar Bank)
East	S. Lake Dallas Drive & the DCTA Rail Line and Right-of-way. C-1 Retail District & Downtown District is across rail line further west.	Scattered commercial and retail development across rail line.

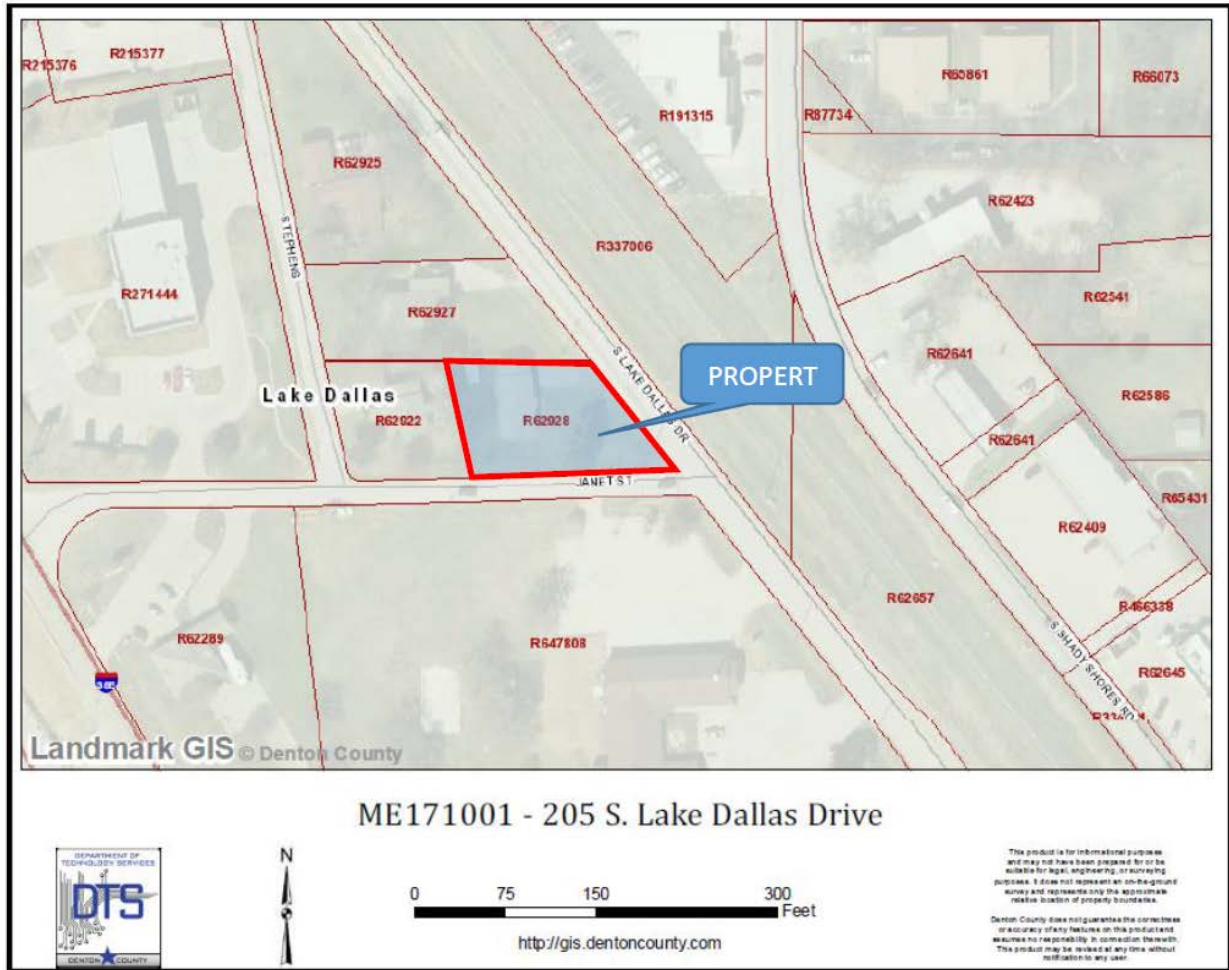
FINANCIAL CONSIDERATION: N/A**RECOMMENDED MOTION:**

None. This agenda item is for discussion only. No formal action is required.

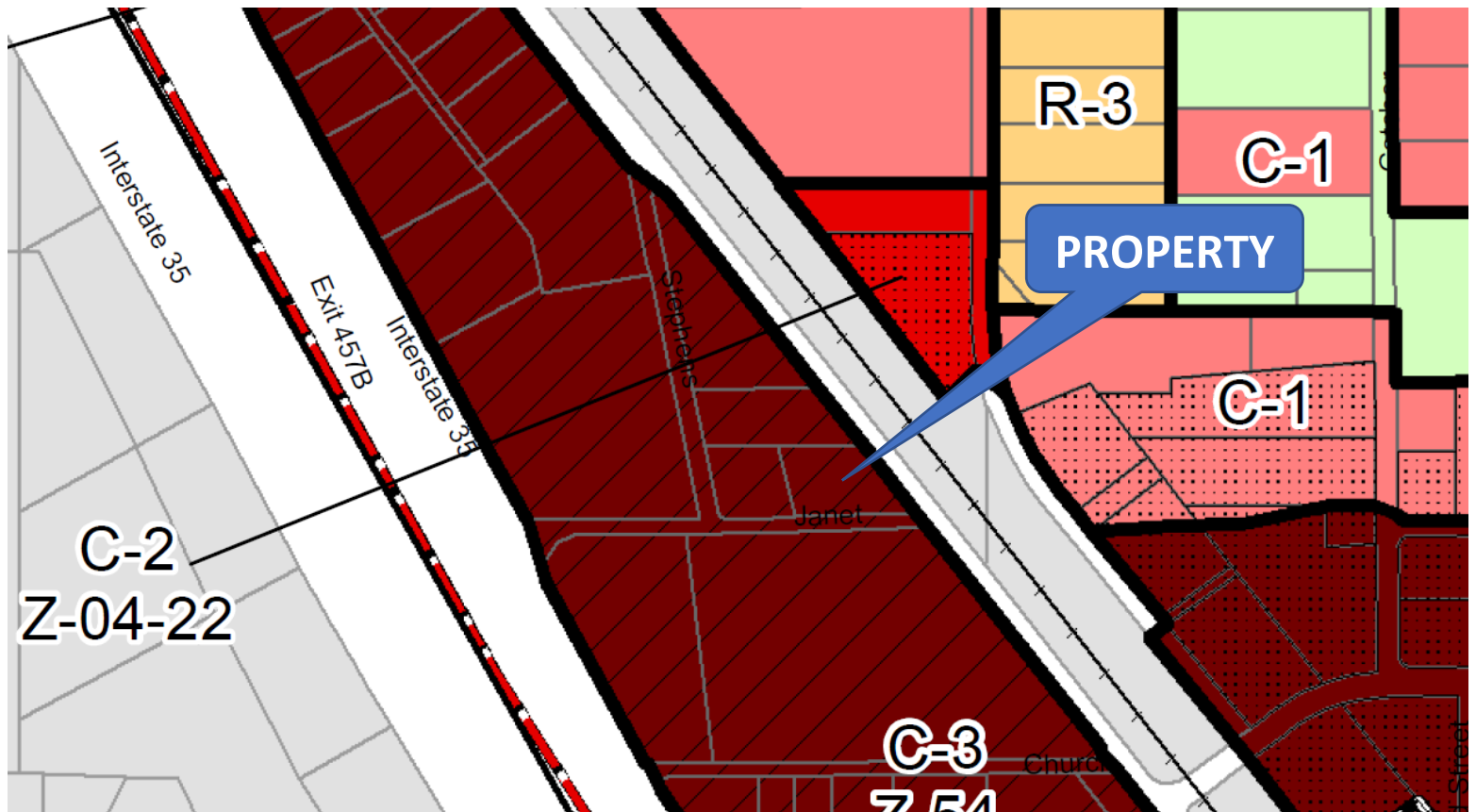
ATTACHMENTS:

1. Vicinity Map.
2. Zoning Map.
3. Applicant's Application and Supporting Materials. (6 pages)

Attachment 1. - Vicinity Map.



Attachment 2. - Zoning Map.



Legend

 R-1-10000 Single Family	 C-1 Retail	 Lake Dallas City Limits
 R-1-7200 Single Family	 C-2 Commercial	 35 Development District
 R-1-6000 Single Family	 C-3 Commercial	 Downtown Overlay
 R-1-4000 Manufactured Home	 M-1 Light Industrial	
 R-1-4000C Commercial Manufactured Home	 MA Marina	
 R-2 Two Family	 PD Planned Development	
 R-3 Multi Family		

Attachment 3. - Application and Supporting Materials (page 1 of 6)



212 Main Street, Lake Dallas, TX 75065
940-497-2226 Ext. 110 Fax 940-497-4485 www.lakedallas.com

Petition for Masonry Exemption

The Property Address: 205 S. Lake Dallas Drive

Legal Description of Property: Part of lot 3 block C of the Barmarchar Sites Lake Dallas Tx.

The variance is requested based on the following information: As of purchase date of March 2017 we believe the property was occupied. Water and electricity were on, restroom and a/c were operational, furniture and appliances in place

Owner: Michael D. and Vonnet A Ward

Address: 2617 fm 1816 Bowie Tx. 76230

Phone: 940 782 3134

Email: viesmail@yahoo.com

An accurate survey of the property and a site plan showing all setbacks of the property must be attached to this application. You may attach comments concerning the existence of any hardship.

One 11 X 17 copy must be submitted.

A non-refundable filing fee of \$500.00 must accompany this application. The owner or a representative of the property must be present at the Public Hearing before the Planning & Zoning Commission and City Council.

Circle One: Property Owner / Agent

Michael D. Ward
Vonnet A Ward
Signature

Michael D. Ward
Vonnet A Ward
Please Print Name

10-9-17
10-9-17
Date

If you are submitting this application on behalf of the property owner the following must be completed:

I am authorized to make an application for a Masonry Exemption on behalf of the owner of this property.

Signed: _____ (Agent)

The above person is my representative, authorized to make application for a subdivision on my behalf, and I

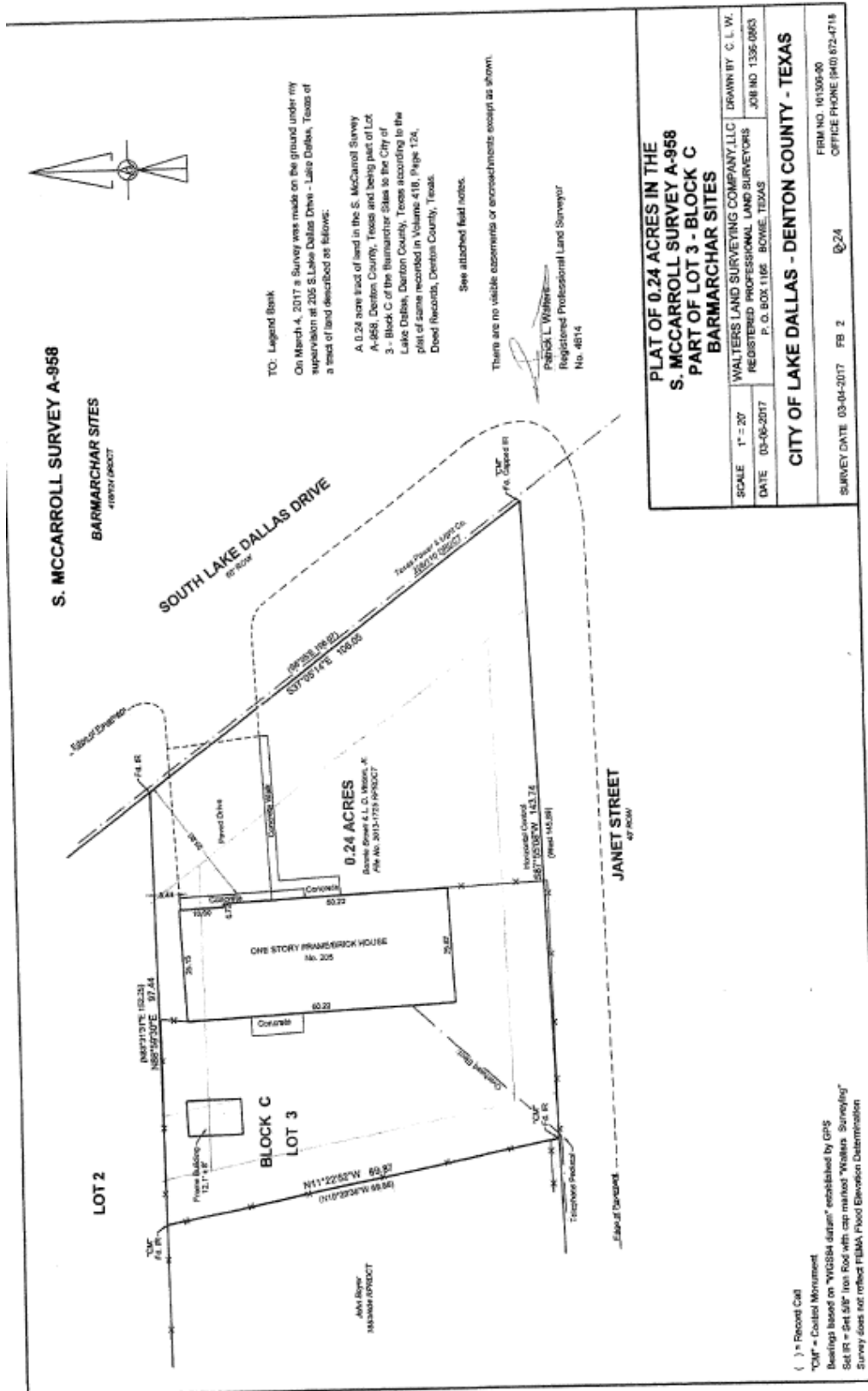
_____, hereby certify that I am owner of the property for which this application is made:

Notary Public Signature

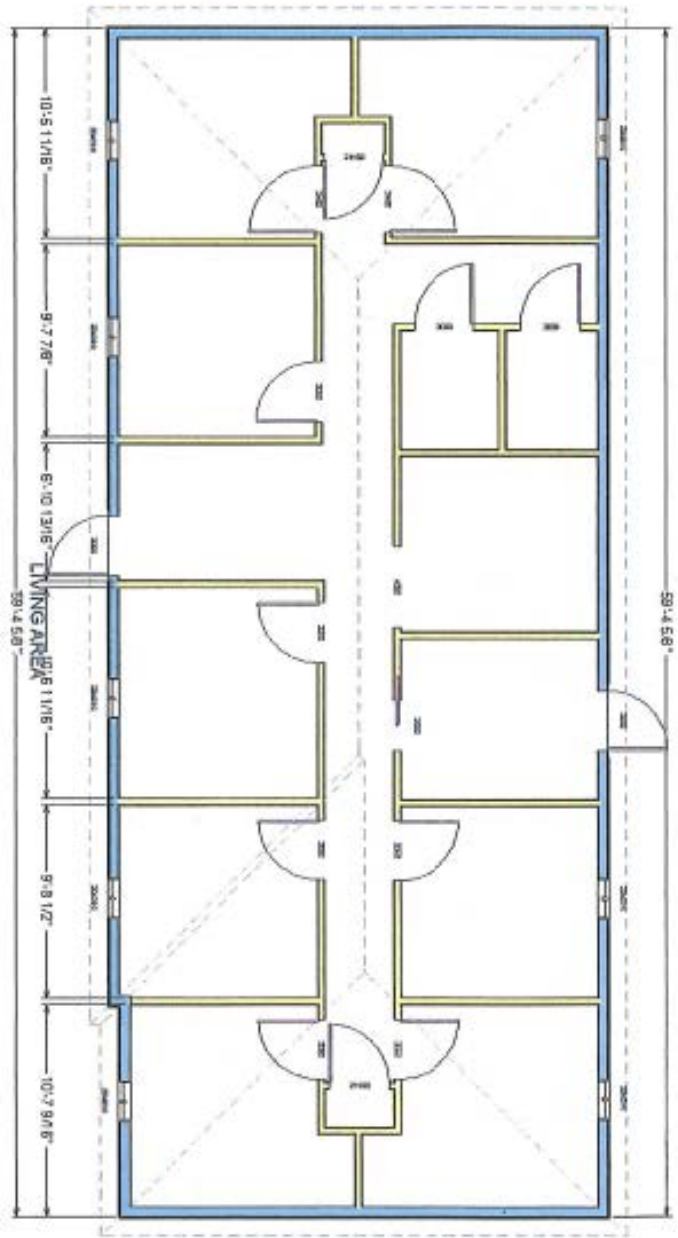
Information listed below to be completed by City Staff:

Date Submitted: 10-10-17 Received by: [Signature] Amount: \$ 500.00

Probable Planning and Zoning Commission Date: 11-16-17 Probable City Council Date: 12-14-17
12-21-17 1-11-18



205 South
Lake Dallas Dr.
Salon Suites
Trista Sanders
214-995-0781



Attachment 3. - Application and Supporting Materials (page 5 of 6)

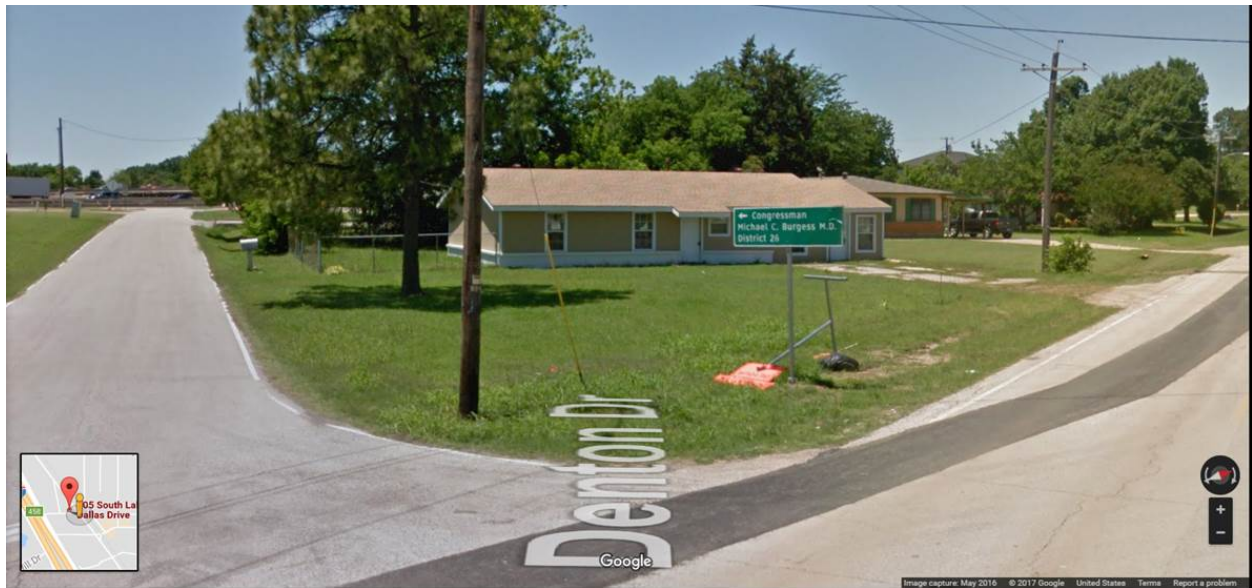


Exterior

- Commercial door
no steps
on a smaller scale
(not as wide)



Attachment 3. - Application and Supporting Materials (page 6 of 6)





CITY COUNCIL
AGENDA MEMO

Prepared By: Kevin J. Lasher, AICP, Director of Development Services

December 14, 2017

Conduct a discussion on a proposed ordinance of the City of Lake Dallas, Texas, amending Chapter 22, "Buildings and Building Regulations," Sec. 22-1, "Codes Adopted," of the City of Lake Dallas Code of Ordinances; providing for the adoption of the 2015 International Building Code, the 2015 International Residential Code, the 2015 International Energy Conservation Code, the 2015 International Plumbing Code, the 2015 International Mechanical Code, the 2015 International Fuel Gas Code, and the 2017 National Electrical Code, with the 2015 NCTCOG local amendments thereto; and amending Chapter 46, "Fire Prevention and Protection," Sec. 46-41, "Adoption," of the City of Lake Dallas Code of Ordinances. (Case TA171201)

DESCRIPTION:

Conduct a discussion and provide staff direction regarding amendments to the Lake Dallas Code of Ordinances amending Chapter 22, "Buildings and Regulations," to update the following building codes with local NCTCOG amendments:

1. Update the 2009 International Building Code to the 2015 edition with amendments,
2. Update the 2009 International Residential Code to the 2015 edition with amendments,
3. Update the 2009 International Energy Conservation Code to the 2015 edition with amendments,
4. Update the 2009 International Plumbing Code to the 2015 edition with amendments,
5. Update the 2009 International Mechanical Code to the 2015 edition with amendments,
6. Update the 2009 International Fuel Gas Code to the 2015 edition with amendments,
7. Update the 2014 National Electrical Code to the 2017 edition with amendments, and
8. Update the 2009 International Fire Code to the 2015 edition with amendments recommended by the Lake Cities Fire Department.

BACKGROUND INFORMATION:

The last update to the building codes for the City of Lake Dallas occurred in October of 2014. At that time, the City Council approved the 2009 edition of the International Codes with the North Central Texas Council of Governments (NCTCOG) amendments. Staff is now presenting the 2015 International Codes along with the 2017 National Electric Code (NEC) with NCTCOG amendments for City Council consideration. The International Code Council (ICC) updates the model codes every three years, and State law requires adoption of these codes but allows for local amendments. The new codes are necessary to ensure that the City keeps pace with state law, changing technology, new practices within the construction industry, and to ensure the codes

being enforced are consistent with those of surrounding cities within the north Texas region. The following table is a list of surrounding cities and the current adopted codes for those cities:

City	International Codes	National Electric Code
Denton	2012	2011
Lewisville	2015	2014
Flower Mound	2015	2014
Highland Village	2015	2014
Plano	2015	2014
The Colony	2012	2011
Frisco	2015	2014
Coppell	2015	2014
Carrollton	2015	2014
Hickory Creek	2015	2014
Corinth	2015	2014
Shady Shores	2009	2011

The State of Texas adopted the 2015 International Energy Conservation Code (IECC) and the energy efficiency Chapter 11 of the International Residential Code (IRC). Both were signed into law on January 5, 2016. The residential provisions were made effective September 1, 2016 and the Commercial provisions were made effective November 1, 2016. The original NCTCOG recommended amendments to the 2015 IECC and Chapter 11 of the IRC were analyzed and deemed less stringent than the provisions of the 2015 IECC adopted by the State and therefore are no longer considered recommended amendments.

Significant changes to the various codes include the following provisions:

2015 International Building Code (IBC)

- A change of use within the same occupancy classification that requires additional life safety provisions requires a new certificate of occupancy.
- Education Occupancies and Critical Emergency Operations Buildings (i.e. Fire Stations, Call Centers and Police Stations) are required to have storm shelters.
- Fire Sprinkler Provision – Small bathrooms are no longer exempt.
- Rooftop vegetation now has referenced standards for structural load criteria.
- Rooftop Photovoltaic Panels (solar panels) have structural design requirements.
- Smoke Alarms near Bathrooms – Increased distance from doorway.
- Smoke Alarms near Cooking Appliances – Increased distance from appliances.

- Carbon Monoxide Detection – Detectors are required near and within sleeping areas in apartments with attached garages or fuel burning appliances.
- Shower Compartments – Raised from 70 to 72 inches.
- Apartment Conversions to Assisted Living – Extensive alarm retrofitting requirements.
- Attic Venting – Updated to accommodate energy codes.

2015 International Residential Code (IRC)

- No Significant Changes other than IECC code requirements.

2015 International Mechanical Code (IMC)

- Ventilation - Specific requirements for R-2 Occupancies (Apartment, Hotel & Motel).

2015 International Energy Conservation Code (IECC)

- Envelope leakage and duct leakage testing are required.
- Duct and envelope testing requirements are more stringent.
- Improved window performance.
- Wall/ceiling insulation increased.
- Efficient lighting requirement has gone from 50% to 75%.
- Whole house mechanical ventilation is required.
- Increased hot water pipe insulation and length limits.

2015 International Fire Code (IFC)

- Requiring two points of connection to the public water main whenever a new development exceeds 35,000 square feet, whenever three or more on-site fire hydrants are required, and when a dead-end water main exceeds 300-feet.
- For developments that require a multiple inlet fire department connection to the fire sprinkler system, an additional large diameter inlet will be required.
- The 2015 International Fire Code has lessened the requirements for the amount of water available from fire hydrants when the building is equipped with fire sprinklers.
- Increased fire sprinkler protection for furniture and mattress storage and display areas.

2015 International Plumbing Code (IPC)

- Irrigation regulations for cities over 20,000 population - TCEQ

2017 National Electrical Code (NFPA)

- Required exterior service disconnects for firefighter operations safety.

- Limits the number of service disconnect (meters) per service connection.
- Requires copper wiring only other than service connects and main feed lines.
- Licensing requires work to be performed by a State licensed Electrician exempting homeowners; however, not owners of rental properties.

FINANCIAL CONSIDERATION: N/A

RECOMMENDED MOTION:

For discussion only - no motion necessary. If the Council so directs, staff will bring forth an ordinance for City Council adoption in January.

ATTACHMENTS:

1. Update the 2009 International Building Code to the 2015 edition with amendments,
2. Update the 2009 International Residential Code to the 2015 edition with amendments,
3. Update the 2009 International Energy Conservation Code to the 2015 edition with amendments,
4. Update the 2009 International Plumbing Code to the 2015 edition with amendments,
5. Update the 2009 International Mechanical Code to the 2015 edition with amendments,
6. Update the 2009 International Fuel Gas Code to the 2015 edition with amendments,
7. Update the 2014 National Electrical Code to the 2017 edition with amendments, and
8. Update the 2009 International Fire Code to the 2015 edition with amendments recommended by the Lake Cities Fire Department.

INTERNATIONAL BUILDING CODE – City of Lake Dallas, Texas 2017-2018

International Building Code Adopted

The 2015 International Building Code which is on file in the office of the Building Official is hereby adopted and designated as the Building Code of the City of Lake Dallas, to the same extent as if such code was copied verbatim, subject to the deletions, amendments and additions prescribed by this ordinance.

Adoption of the NCTCOG Recommended Amendments to the 2015 International Building Code (Option B)

The 2015 International Building Code is hereby amended as recommended by the North Central Texas Council of Governments (“NCTCOG”), which amendments are incorporated herein by reference and on file in the office of the Building Official of the City of Lake Dallas.

Recommended Amendments to the 2015 International Building Code

North Central Texas Council of Governments Region

The following sections, paragraphs, and sentences of the *2015 International Building Code* are hereby amended as follows: Standard type is text from the IBC. Underlined type is text inserted. ~~Lined through type is deleted text from IBC.~~ A double asterisk (**) at the beginning of a section identifies an amendment carried over from the 2012 edition of the code and a triple asterisk (***) identifies a new or revised amendment with the 2015 code. A quadruple asterisk (****) identifies a local amendment.

Explanation of Options A and B:

Please note that as there is a wide range in fire fighting philosophies / capabilities of cities across the region, OPTION “A” and OPTION “B” are provided in the Fire and Building Code amendments. Jurisdictions should choose one or the other based on their fire fighting philosophies / capabilities when adopting code amendments.

****Section 101.4; change to read as follows:**

101.4 Referenced codes. The other codes listed in Sections 101.4.1 through 101.4.8 and referenced elsewhere in this code, when specifically adopted, shall be considered part of the requirements of this code to the prescribed extent of each such reference. Whenever amendments have been adopted to the referenced codes and standards, each reference to said code and standard shall be considered to reference the amendments as well. Any reference to NFPA 70 or the Electrical Code shall mean the Electrical Code as adopted.

(Reason: Legal wording to recognize locally adopted codes and amendments adopted with referenced codes. The former ICC Electrical Code is now Appendix K of this code but no longer called by that name.)

****Section 101.4.8; add the following:**

101.4.8 Electrical. The provisions of the Electrical Code shall apply to the installation of electrical systems, including alterations, repairs, replacement, equipment, appliances, fixtures, fittings and appurtenances thereto.

(Reason: This was dropped when ICC quit publishing the ICC Electrical Code, but the Electrical Code still should be referenced regardless of how it is adopted.)

**** Section 103 and 103.1 amend to insert the Department Name**

DEPARTMENT OF BUILDING SAFETY [Community Development Department – City of Lake Dallas]

103.1 Creation of enforcement agency. The Department of Building Safety [Community Development Department – City of Lake Dallas] is hereby created and the official in charge thereof shall be known as the *building official*.

(Reason: Reminder to be sure ordinance reads the same as designated by the city.)

*****Section [A] 104.2.1 Determination of substantially improved or substantially damaged existing buildings and structures in flood hazard areas; (jurisdictions may consider the option to amend or delete depending on local enforcement and flood hazard ordinances.)**

****Section 104.10.1; Flood hazard areas.** (jurisdictions may consider the option to amend or delete depending on local enforcement and flood hazard ordinances.)

(Reason: Flood hazard ordinances may be administered by other departments within the city.)

****Section 105.2 Work exempt from permit; under sub-title entitled “Building” delete items 1, 2, 10 and 11 and re-number as follows:**

Building:

- ~~1. One-story detached accessory structures used as tool and storage sheds, playhouses and similar uses, provided the floor area does not exceed 120 square feet (11 m²).~~
- ~~2. Fences not over 7 feet (1829 mm) high.~~
- ~~3. 1. (Unchanged)~~
- ~~4. 2. (Unchanged)~~
- ~~5. 3. (Unchanged)~~
- ~~6. 4. (Unchanged)~~
- ~~7. 5. (Unchanged)~~
- ~~8. 6. (Unchanged)~~
- ~~9. 7. (Unchanged)~~
- ~~10. Shade cloth structures constructed for nursery or agricultural purposes, not including service systems.~~
- ~~11. 8. (Unchanged)~~
- ~~12. 9. (Unchanged)~~
- ~~13. 10. (Unchanged)~~

(Reason: Items deleted are for one- and two-family dwellings regulated by the International Residential Code. Accessory structures, fences and shade cloth structures would require a permit for commercial properties to ensure compliance with local ordinance, egress, accessibility, flame spread of fabric, wind/snow design load, etc.).

****Section 109; add Section 109.7 to read as follows:**

109.7 Re-inspection Fee. A fee as established by city council resolution may be charged when:

1. The inspection called for is not ready when the inspector arrives;
2. No building address or permit card is clearly posted;
3. City approved plans are not on the job site available to the inspector;
4. The building is locked or work otherwise not available for inspection when called;

5. The job site is red-tagged twice for the same item;
6. The original red tag has been removed from the job site.
7. Failure to maintain erosion control, trash control or tree protection.

Any re-inspection fees assessed shall be paid before any more inspections are made on that job site.

(Reason: This fee is not a fine or penalty but is designed to compensate for time and trips when inspections are called for when not ready.)

****Section 109; add Section 109.8, 109.8.1, 109.8.2 and 109.9 to read as follows:**

109.8 Work without a permit.

109.8.1 Investigation. Whenever work for which a permit is required by this code has been commenced without first obtaining a permit, a special investigation shall be made before a permit may be issued for such work.

109.8.2 Fee. An investigation fee, in addition to the permit fee, shall be collected whether or not a permit is subsequently issued. The investigation fee shall be equal to the amount of the permit fee required by this code or the city fee schedule as applicable. The payment of such investigation fee shall not exempt the applicant from compliance with all other provisions of either this code or the technical codes nor from penalty prescribed by law.

109.9 Unauthorized cover up fee. Any work concealed without first obtaining the required inspection in violation of Section 110 shall be assessed a fee as established by the city fee schedule.

(Reason: This fee is not a fine or penalty but is designed to compensate for time and to remove incentive to attempt to evade permits and code compliance. Text taken from former Uniform Administrative Code.)

****Section 110.3.5; Lath, gypsum board and gypsum panel product inspection. Delete exception**

~~**Exception :** Gypsum board and gypsum panel products that are not part of a fire resistance rated assembly or a shear assembly.~~

(Reason: Lath or gypsum board inspections are performed in this area.)

****Section 202; amend definition of Ambulatory Care Facility as follows:**

AMBULATORY CARE FACILITY. Buildings or portions thereof used to provide medical, surgical, psychiatric, nursing or similar care on a less than 24-hour basis to individuals who are rendered incapable of self-preservation by the services provided. This group may include but not be limited to the following:

- Dialysis centers
- Sedation dentistry
- Surgery centers
- Colonic centers
- Psychiatric centers

*(Reason: To clarify the range of uses included in the definition. [Explanatory note related to **Ambulatory Care Facilities**: This group of uses includes medical or dental offices where persons are put under for dental surgery or other services. Section 903.2.2 will now require such uses to be sprinklered if on other than the floor of exit discharge or if four or more persons are put under on the level of exit discharge. Recommend (1.) jurisdictions document any pre-existing non-conforming conditions prior to issuing a new C of O for a change of tenant and, (2.) On any medical or dental office specify on C of O the maximum number of persons permitted to be put under general anesthesia. It is recommended that before a Certificate of Occupancy is issued, a letter of intended use from the business owner shall be included and a C of O documenting the maximum number of care recipients incapable of self-preservation allowed.]*

****Section 202; add definition of Assisting Living Facilities to read as follows.**

ASSISTED LIVING FACILITIES. A building or part thereof housing persons, on a 24-hour basis, who because of age, mental disability or other reasons, live in a supervised residential environment which provides personal care services. The occupants are capable of responding to an emergency situation without

physical assistance from staff.

(Reason: The code references Assisted Living facilities and definition was deleted)

****Section 202; change definition of “Atrium” as follows:**

ATRIUM. An opening connecting ~~two~~ three or more stories... {Balance remains unchanged}

(Reason: Accepted practice in the region based on legacy codes. Section 1019 permits unenclosed two story stairways under certain circumstances.)

****Section 202; add definition of “Repair Garage” as follows:**

REPAIR GARAGE. A building, structure or portion thereof used for servicing or repairing motor vehicles. This occupancy shall also include garages involved in minor repair, modification and servicing of motor vehicles for items such as lube changes, inspections, windshield repair or replacement, shocks, minor part replacement and other such minor repairs.

(Reason: The code references aligns with fire code)

*****Section 202; amend definition of SPECIAL INSPECTOR to read as follows:**

SPECIAL INSPECTOR. A qualified person employed or retained by an approved agency who shall prove to the satisfaction of the registered design professional in responsible charge and ~~approved by~~ the Building Official as having the competence necessary to inspect a particular type of construction requiring special inspection.

(Reason: The registered design professional in responsible charge should be included.)

****Section 202; {No amendment necessary}**

Option A

****Section 202; amend definition to read as follows:**

Option B

HIGH-RISE BUILDING. A building with an occupied floor located more than ~~75~~ 55 feet (~~22 860 mm~~) (16 764 mm) above the lowest level of fire department vehicle access.

(Reason: To define high-rise, as it influences sprinkler requirement thresholds based on the fire fighting capabilities of a jurisdiction.)

****Section 303.1.3; add a sentence to read as follows:**

303.1.3 Associated with Group E occupancies. A room or space used for assembly purposes that is associated with a Group E occupancy is not considered a separate occupancy. Except when applying the assembly requirements of Chapter 10 and 11.

(Reason: To clarify that egress and accessibility requirements are applicable for assembly areas, i.e. cafeteria, auditoriums, etc.)

****Section 304.1; add the following to the list of occupancies:**

Fire stations
Police stations with detention facilities for 5 or less

(Reason: Consistent with regional practice dating back to the legacy codes.)

****Section 307.1.1; add the following sentence to Exception 4:**

4. Cleaning establishments... {Text unchanged} ...with Section 707 or 1-hour horizontal assemblies constructed in accordance with Section 711 or both. See also IFC Chapter 21, Dry Cleaning Plant provisions.

(Reason: To call attention to detailed requirements in the Fire Code.)

****Section 403.1, Exception 3; change to read as follows:**

3. The open air portion of a building [remainder unchanged]

(Reason: To clarify enclosed portions are not exempt.)

****Section 403.3, Exception; delete item 2.**

(Reason: To provide adequate fire protection to enclosed areas.)

*****Section 403.3.2; change to read as follows:**

[F] 403.3.2 Water supply to required fire pumps. In buildings that are more than 420 120 feet (36.5 m) in building height, required fire pumps shall be supplied by connections to no fewer than two water mains located in different streets. Separate supply piping shall be provided between each connection to the water main and the pumps. Each connection and the supply piping between the connection and the pumps shall be sized to supply the flow and pressure required for the pumps to operate.

Exception: {No change to exception.}

(Reason: The 2009 edition of the IFC added this requirement based on a need for redundancy of the water supply similar to the redundancy of the power supply to the fire pumps required for such tall buildings, partially due to the fact that these buildings are rarely fully evacuated in a fire event. More commonly, the alarm activates on the floor of the event, the floor above and the floor below. Back-up power to the fire pump becomes critical for this reason. Certainly, the power is pointless if the water supply is impaired for any reason, so a similar requirement is provided here for redundant water supplies. The 2015 edition changes the requirement to only apply to very tall buildings over 420 ft. This amendment modifies/lowers the requirement to 120 ft., based on this same height requirement for fire service access elevators. Again, the language from the 2009 and 2012 editions of the code applied to any high-rise building. This compromise at 120 ft. is based on the above technical justification of defend- in-place scenarios in fire incidents in such tall structures.)

****Section 404.5; delete Exception.**

(Reason: Consistent with amended atrium definition.)

****Section 406.3.5.1 Carport separation; add sentence to read as follows:**

A fire separation is not required between a Group R-2 and U carport provided that the carport is entirely open on all sides and that the distance between the two is at least 10 feet (3048 mm).

(Reason: Simplifies the fire separation distance and eliminates the need to obtain opening information on existing buildings when adding carports in existing apartment complexes. Consistent with legacy codes in effect in region for years and no record of problems with car fires spreading to apartments as a result.)

****Section 506.2.2; add sentence to read as follows:**

506.3.2.1 Open Space Limits. Such open space shall be either on the same lot or dedicated for public use and shall be accessed from a street or approved fire lane. In order to be considered as accessible, if not in direct contact with a street or fire lane, a minimum 10-foot wide pathway meeting fire department access from the street or approved fire lane shall be provided.

(Reason: To define what is considered accessible. Consistent with regional amendment to IFC 504.1.)

****Section 712.1.9, change item 4 to read as follows:**

4. Is not open to a corridor in Group I and R H occupancies.

(Reason: To be consistent with amended definition of an atrium.)

****Section 901.6.1; add Section 901.6.1.1 to read as follows:**

901.6.1.1 **Standpipe Testing.** Building owners/managers must maintain and test standpipe systems as per NFPA 25 requirements. The following additional requirements shall be applied to the testing that is required every 5 years:

1. The piping between the Fire Department Connection (FDC) and the standpipe shall be backflushed when foreign material is present, and also hydrostatically tested for all FDC's on any type of standpipe system. Hydrostatic testing shall also be conducted in accordance with NFPA 25 requirements for the different types of standpipe systems.
2. For any manual (dry or wet) standpipe system not having an automatic water supply capable of flowing water through the standpipe, the tester shall connect hose from a fire hydrant or portable pumping system (as approved by the *fire code official*) to each FDC, and flow water through the standpipe system to the roof outlet to verify that each inlet connection functions properly. Confirm that there are no open hose valves prior to introducing water into a dry standpipe. There is no required pressure criteria at the outlet. Verify that check valves function properly and that there are no closed control valves on the system.
3. Any pressure relief, reducing, or control valves shall be tested in accordance with the requirements of NFPA 25. All hose valves shall be exercised.
4. If the FDC is not already provided with approved caps, the contractor shall install such caps for all FDC's as required by the *fire code official*.
5. Upon successful completion of standpipe test, place a blue tag (as per Texas Administrative Code, Fire Sprinkler Rules for Inspection, Test and Maintenance Service (ITM) Tag) at the bottom of each standpipe riser in the building. The tag shall be check-marked as "Fifth Year" for Type of ITM, and the note on the back of the tag shall read "5 Year Standpipe Test" at a minimum.
6. The procedures required by Texas Administrative Code Fire Sprinkler Rules with regard to Yellow Tags and Red Tags or any deficiencies noted during the testing, including the required notification of the local Authority Having Jurisdiction (*fire code official*) shall be followed.
7. Additionally, records of the testing shall be maintained by the owner and contractor, if applicable, as required by the State Rules mentioned above and NFPA 25.
8. Standpipe system tests where water will be flowed external to the building shall not be conducted during freezing conditions or during the day prior to expected night time freezing conditions.
9. Contact the *fire code official* for requests to remove existing fire hose from Class II and III standpipe systems where employees are not trained in the utilization of this firefighting equipment. All standpipe hose valves must remain in place and be provided with an approved cap and chain when approval is given to remove hose by the *fire code official*.

(Reason: Increases the reliability of the fire protection system and re-emphasizes the requirements of NFPA 25 relative to standpipe systems, as well as ensuring that FDC connections are similarly tested/maintained to ensure operation in an emergency incident.)

****Section 903.1.1; change to read as follows:**

[F] 903.1.1 Alternative protection. Alternative automatic fire-extinguishing systems complying with Section 904 shall be permitted ~~instead of in addition to~~ automatic sprinkler protection where recognized by the applicable standard ~~and, or as~~ approved by the *fire code official*.

(Reason: Such alternative systems do not provide the reliability of automatic sprinkler protection in general. An applicant could pursue an Alternate Method request to help mitigate the reliability issues with these

alternative systems with the fire code official if so desired, or there may be circumstances in which the fire code official is acceptable to allowing an alternate system in lieu of sprinklers, such as kitchen hoods or paint booths. This also meets with local practices in the region.)

****Section 903.2; add the following:**

[F] 903.2 Where required. Approved automatic sprinkler systems in new buildings and structures shall be provided in the locations described in Sections 903.2.1 through 903.2.12. Automatic Sprinklers shall not be installed in elevator machine rooms, elevator machine spaces, and elevator hoistways, other than pits where such sprinklers would not necessitate shunt trip requirements under any circumstances. Storage shall not be allowed within the elevator machine room. Signage shall be provided at the entry doors to the elevator machine room indicating "ELEVATOR MACHINERY – NO STORAGE ALLOWED."

(Reason: Firefighter and public safety. This amendment eliminates the shunt trip requirement of the International Building Code Section 3006.5 for the purpose of elevator passenger and firefighter safety. This amendment is contingent on the Building Code amendment eliminating the Exceptions to Section 3006.4, such that passive fire barriers for these areas are maintained. This also meets with local practices in the region.)

[F] **Section 903.2; delete the exception.

(Reason: The exception deletion is due to the fact that such telecom areas pose an undue fire risk to the structural integrity of the building. This also meets with local practices in the region.)

****Section 903.2.9; add Section 903.2.9.3 to read as follows:**

[F] 903.2.9.3 Self-service storage facility. An automatic sprinkler system shall be installed throughout all self-service storage facilities.

(Reason: Fire departments are unable to inspect these commercial occupancies and are unaware of the contents being stored. Previous allowance to separate units by fire barriers is difficult to enforce maintenance after opening.)

Option A

Section 903.2.11; change 903.2.11.3 and add 903.2.11.7 and 903.2.11.8, as follows:

903.2.11.3 Buildings 55 feet or more in height. An automatic sprinkler system shall be installed throughout buildings that have one or more stories with an occupant load of 30 or more, other than penthouses in compliance with Section 1510 of the *International Building Code*, located 55 feet (16 764 mm) or more above the lowest level of fire department vehicle access, measured to the finished floor.

Exceptions:

1. Open parking structures in compliance with Section 406.5 of the *International Building Code*, having no other occupancies above the subject garage.

2. Occupancies in Group F-2.

903.2.11.7 High-Piled Combustible Storage. For any building with a clear height exceeding 12 feet (4572 mm), see Chapter 32 to determine if those provisions apply.

903.2.11.8 Spray Booths and Rooms. New and existing spray booths and spraying rooms shall be protected by an approved automatic fire-extinguishing system.

Option B

Section 903.2.11; change 903.2.11.3 and add 903.2.11.7, 903.2.11.8, and 903.2.11.9 as follows:

903.2.11.3 Buildings 55 35 feet or more in height. An automatic sprinkler system shall be installed throughout buildings that have one or more stories ~~with an occupant load of 30 or more, other than penthouses in compliance with Section 1510 of the International Building Code, located 55 35 feet~~ (16 764 10 668 mm) or more above the lowest level of fire department vehicle access, measured to the finished floor.

Exceptions:

1.—Open parking structures in compliance with Section 406.5 of the International Building Code, having no other occupancies above the subject garage.

2.—~~Occupancies in Group F-2.~~

903.2.11.7 High-Piled Combustible Storage. For any building with a clear height exceeding 12 feet (4572 mm), see Chapter 32 of the IFC to determine if those provisions apply.

Spray Booths and Rooms. New and existing spray booths and spraying rooms shall be protected by an approved automatic fire-extinguishing system.

Buildings Over 6,000 sq.ft. An automatic sprinkler system shall be installed throughout all buildings with a building area 6,000 sq.ft. or greater and in all existing buildings that are enlarged to be 6,000 sq. ft. or greater. For the purpose of this provision, fire walls shall not define separate buildings.

Exception: Open parking garages in compliance with Section 406.5 of the *International Building Code*.

(Reason: Provides jurisdictions options as to their desired level of sprinkler protection based on multiple factors including firefighting philosophies/capabilities.)

****Section 903.3.1.1.1; change to read as follows:**

[F] 903.3.1.1.1 Exempt locations. When approved by the fire code official, automatic sprinklers shall not be required in the following rooms or areas where such ...{text unchanged}... because it is damp, of fire-resistance-rated construction or contains electrical equipment.

1. Any room where the application of water, or flame and water, constitutes a serious life or fire hazard.
2. Any room or space where sprinklers are considered undesirable because of the nature of the contents, when approved by the code official.
3. Generator and transformer rooms, under the direct control of a public utility, separated from the remainder of the building by walls and floor/ceiling or roof/ceiling assemblies having a fire-resistance rating of not less than 2 hours.
4. ~~Rooms or areas that are of noncombustible construction with wholly noncombustible contents.~~
5. ~~Fire service access~~ Elevator machine rooms, and machinery spaces, and hoistways, other than pits where such sprinklers would not necessitate shunt trip requirements under any circumstances.
6. {Delete.}

(Reason: Gives more direction to code official. Exception 4 deleted to provide protection where fire risks are poorly addressed. Amendment 903.2 addresses Exception 5. above relative to the elimination of sprinkler protection in these areas to avoid the shunt trip requirement.)

****Section 903.3.1.2.3; add section to read as follows:**

[F] Section 903.3.1.2.3 Attics and Attached Garages. Sprinkler protection is required in attic spaces of such buildings two or more stories in height, in accordance with NFPA 13 and or NFPA 13R requirements, and attached garages.

(Reason: Attic protection is required due to issues with fire exposure via soffit vents, as well as firefighter safety. Several jurisdictions indicated experience with un-protected attic fires resulting in displacement of all building occupants. NFPA 13 provides for applicable attic sprinkler protection requirements, as well as exemptions to such, based on noncombustible construction, etc. Attached garages already require sprinklers via NFPA 13R – this amendment just re-emphasizes the requirement.)

****Section 903.3.1.3; change to read as follows:**

[F] 903.3.1.3 NFPA 13D sprinkler systems. Automatic sprinkler systems installed in one- and two-family dwellings; Group R-3; Group R-4 Condition 1 and townhouses shall be permitted to be installed throughout in accordance with NFPA 13D or in accordance with state law.

(Reason: To allow the use of the Plumbing section of the IRC and recognize current state stipulations in this regard.)

*****Section 903.3.1.4; add to read as follows:**

[F] 903.3.1.4 Freeze protection. Freeze protection systems for automatic fire sprinkler systems shall be in accordance with the requirements of the applicable referenced NFPA standard and this section.

903.3.1.4.1 Attics. Only dry-pipe, preaction, or listed antifreeze automatic fire sprinkler systems shall be allowed to protect attic spaces.

Exception: Wet-pipe fire sprinkler systems shall be allowed to protect non-ventilated attic spaces where:

1. The attic sprinklers are supplied by a separate floor control valve assembly to allow ease of draining the attic system without impairing sprinklers throughout the rest of the building, and
2. Adequate heat shall be provided for freeze protection as per the applicable referenced NFPA standard, and
3. The attic space is a part of the building's thermal, or heat, envelope, such that insulation is provided at the roof deck, rather than at the ceiling level.

903.3.1.4.2 Heat trace/insulation. Heat trace/insulation shall only be allowed where approved by the fire code official for small sections of large diameter water-filled pipe.

(Reason: In the last few years, severe winters brought to light several issues with current practices for sprinklering attics, not the least of which was wet-pipe sprinklers in ventilated attics provided with space heaters, etc. for freeze protection of such piping. This practice is not acceptable for the protection of water-filled piping in a ventilated attic space as it does not provide a reliable means of maintaining the minimum 40 degrees required by NFPA, wastes energy, and presents a potential ignition source to the attic space. Listed antifreeze is specifically included because NFPA currently allows such even though there is no currently listed antifreeze at the time of development of these amendments. The intent of this amendment is to help reduce the large number of freeze breaks that have occurred in the past with water-filled wet-pipe sprinkler systems in the future, most specifically in attic spaces.)

****Section 903.3.5; add a second paragraph to read as follows:**

[F] Water supply as required for such systems shall be provided in conformance with the supply requirements of the respective standards; however, every water-based fire protection system shall be designed with a 10 psi safety factor. Reference Section 507.4 for additional design requirements.

(Reason: To define uniform safety factor.)

****Section 903.4; add a second paragraph after the exceptions to read as follows:**

[F] Sprinkler and standpipe system water-flow detectors shall be provided for each floor tap to the sprinkler system and shall cause an alarm upon detection of water flow for more than 45 seconds. All control valves in the sprinkler and standpipe systems except for fire department hose connection valves shall be electrically supervised to initiate a supervisory signal at the central station upon tampering.

(Reason: To avoid significant water losses. Consistent with amendment to IFC 905.9.)

****Section 903.4.2; add second paragraph to read as follows:**

[F] The alarm device required on the exterior of the building shall be a weatherproof horn/strobe notification appliance with a minimum 75 candela strobe rating, installed as close as practicable to the fire department connection.

(Reason: Fire department connections are not always located at the riser; this allows the fire department faster access.)

****Section 905.2; change to read as follows:**

[F] **905.2 Installation standard.** Standpipe systems shall be installed in accordance with this section and NFPA 14. Manual dry standpipe systems shall be supervised with a minimum of 10 psig and a maximum of 40 psig air pressure with a high/low alarm.

(Reason: To define manual dry standpipe supervision requirements. Helps ensure the integrity of the standpipe system via supervision, such that open hose valves will result in a supervisory low air alarm.)

****Section 905.3; add Section 905.3.9 and exception to read as follows:**

[F] **905.3.9 Buildings exceeding 10,000 sq. ft.** In buildings exceeding 10,000 square feet in area per story and where any portion of the building's interior area is more than 200 feet (60960 mm) of travel, vertically and horizontally, from the nearest point of fire department vehicle access, Class I automatic wet or manual wet standpipes shall be provided.

Exceptions:

1. Automatic dry and semi-automatic dry standpipes are allowed as provided for in NFPA 14.
2. R-2 occupancies of four stories or less in height having no interior corridors.

(Reason: Allows for the rapid deployment of hose lines to the body of the fire.)

*****Section 905.4, change Item 1., 3., and 5. and add Item 7. to read as follows:**

- [F]**
1. In every required ~~interior~~ exit stairway, a hose connection shall be provided for each story above and below grade plane. Hose connections shall be located at an intermediate landing between stories, unless otherwise approved by the fire code official.
 2. {No change.}
 3. In every exit passageway, at the entrance from the exit passageway to other areas of a building.
Exception: Where floor areas adjacent to an exit passageway are reachable from an ~~interior~~ exit stairway hose connection by a{No change to rest.}
 4. {No change.}
 5. Where the roof has a slope less than four units vertical in 12 units horizontal (33.3-percent slope), each standpipe shall be provided with a two-way a hose connection ~~shall be~~ located to serve the roof or at the highest landing of an ~~interior~~ exit stairway with stair access to the roof provided in accordance with Section 1011.12.
 6. {No change.}
 7. When required by this Chapter, standpipe connections shall be placed adjacent to all required exits to the structure and at two hundred feet (200') intervals along major corridors thereafter, or as otherwise approved by the fire code official.

(Reason: Item 1., 3., and 5. amendments to remove 'interior' will help to clarify that such connections are required for all 'exit' stairways, to ensure firefighter capabilities are not diminished in these tall buildings, simply because the stair is on the exterior of the building. Item 5. reduces the amount of pressure required to facilitate testing, and provides backup protection for fire fighter safety. Item 7. allows for the rapid deployment of hose lines to the body of the fire.)

****Section 905.9; add a second paragraph after the exceptions to read as follows:**

[F] Sprinkler and standpipe system water-flow detectors shall be provided for each floor tap to the sprinkler system and shall cause an alarm upon detection of water flow for more than 45 seconds. All control valves in the sprinkler and standpipe systems except for fire department hose connection valves shall be electrically supervised to initiate a supervisory signal at the central station upon tampering.

(Reason: To avoid significant water losses. Consistent with amendment to IFC 903.4.)

****Section 907.1; add Section 907.1.4 and 907.1.4.1 to read as follows:**

[F] 907.1.4 Design standards. Where a new fire alarm system is installed, the devices shall be addressable. Fire alarm systems utilizing more than 20 smoke detectors shall have analog initiating devices.

(Reason: Provides for the ability of descriptive identification of alarms, and reduces need for panel replacement in the future. Updated wording to match the language of the new requirement at 907.5.2.3. Change of terminology allows for reference back to definitions of NFPA 72)

****Section 907.2.1; change to read as follows:**

[F] 907.2.1 Group A. A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group A occupancies ~~where the having an occupant load due to the assembly occupancy is of 300 or more persons or more than 100 persons above or below the lowest level of exit discharge.~~ Group A occupancies not separated from one another in accordance with Section 707.3.10 of the *International Building Code* shall be considered as a single occupancy for the purposes of applying this section. Portions of Group E occupancies occupied for assembly purposes shall be provided with a fire alarm system as required for the Group E occupancy.

Exception: {No change.}

Activation of fire alarm notification appliances shall:

1. Cause illumination of the means of egress with light of not less than 1 foot-candle (11 lux) at the walking surface level, and
2. Stop any conflicting or confusing sounds and visual distractions.

(Reason: Increases the requirement to be consistent with Group B requirement. Also addresses issue found in Group A occupancies of reduced lighting levels and other A/V equipment that distracts from fire alarm notification devices or reduces ability of fire alarm system to notify occupants of the emergency condition.)

****Section 907.2.3; change to read as follows:**

[F] 907.2.3 Group E. A manual fire alarm system that initiates the occupant notification signal utilizing an emergency voice/alarm communication system meeting the requirements of Section 907.5.2.2 and installed in accordance with Section 907.6 shall be installed in Group E educational occupancies. When *automatic sprinkler systems* or smoke detectors are installed, such systems or detectors shall be connected to the building fire alarm system. An approved smoke detection system shall be installed in Group E day care occupancies. Unless separated by a minimum of 100' open space, all buildings, whether portable buildings or the main building, will be considered one building for alarm occupant load consideration and interconnection of alarm systems.

Exceptions:

1. {No change.}
- 1.1. Residential In-Home day care with not more than 12 children may use interconnected single station detectors in all habitable rooms. (For care of more than five children 2 1/2 or less years of age, see Section 907.2.6.)

{No change to remainder of exceptions.}

(Reason: To distinguish educational from day care occupancy minimum protection requirements. Further, to define threshold at which portable buildings are considered a separate building for the purposes of alarm systems. Exceptions provide consistency with State law concerning such occupancies.)

****Section 907.2.13, Exception 3; change to read as follows:**

[F] 3. Open air portions of buildings with an occupancy in Group A-5 in accordance with Section 303.1 of the International Building Code; however, this exception does not apply to accessory uses including but not limited to sky boxes, restaurants and similarly enclosed areas.

(Reason: To indicate that enclosed areas within open air seating type occupancies are not exempted from automatic fire alarm system requirements.)

****Section 907.4.2; add Section 907.4.2.7 to read as follows:**

[F] 907.4.2.7 Type. Manual alarm initiating devices shall be an approved double action type.

(Reason: Helps to reduce false alarms.)

****Section 907.6.1; add Section 907.6.1.1 to read as follows:**

[F] 907.6.1.1 Wiring Installation. All fire alarm systems shall be installed in such a manner that a failure of any single initiating device or single open in an initiating circuit conductor will not interfere with the normal operation of other such devices. All signaling line circuits (SLC) shall be installed in such a way that a single open will not interfere with the operation of any addressable devices (Class A). Outgoing and return SLC conductors shall be installed in accordance with NFPA 72 requirements for Class A circuits and shall have a minimum of four feet separation horizontal and one foot vertical between supply and return circuit conductors. The initiating device circuit (IDC) from a signaling line circuit interface device may be wired Class B, provided the distance from the interface device to the initiating device is ten feet or less.

(Reason: To provide uniformity in system specifications and guidance to design engineers. Improves reliability of fire alarm devices and systems.)

*****Section 907.6.3; delete all four Exceptions.**

(Reason: To assist responding personnel in locating the emergency event for all fire alarm systems.)

*****Section 907.6.6; – add sentence at end of paragraph to read as follows:**

[F] See 907.6.3 for the required information transmitted to the supervising station.

(Reason: To assist responding personnel in locating the emergency event for all fire alarm systems. This was moved from 907.6.5.3 in the 2012 IFC and reworded to match new code language and sections.)

*****Section 909.22; add to read as follows:**

[F] 909.22 Stairway or ramp pressurization alternative. Where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 and the stair pressurization alternative is chosen for compliance with Building Code requirements for a smokeproof enclosure, interior exit stairways or ramps shall be pressurized to a minimum of 0.10 inches of water (25 Pa) and a maximum of 0.35 inches of water (87 Pa) in the shaft relative to the building measured with all interior exit stairway and ramp doors closed under maximum anticipated conditions of stack effect and wind effect. Such systems shall comply with Section 909, including the installation of a separate fire-fighter's smoke control panel as per Section 909.16, and a Smoke Control Permit shall be required from the Fire Department as per Section 105.7.

[F] 909.22.1 Ventilating equipment. The activation of ventilating equipment for the stair or ramp pressurization system shall be by smoke detectors installed at each floor level at an approved location at the entrance to the smokeproof enclosure. When the closing device for the stairway or ramp shaft and vestibule doors is activated by smoke detection or power failure, mechanical equipment shall activate and operate at the required performance levels. Smoke detectors shall be installed in accordance with Section 907.3.

[F] 909.22.1.1 Ventilation systems. Smokeproof enclosure ventilation systems shall be independent of other building ventilation systems. The equipment, control wiring, power wiring and ductwork shall comply with one of the following:

1. Equipment, control wiring, power wiring and ductwork shall be located exterior to the building

and directly connected to the smokeproof enclosure or connected to the smokeproof enclosure by ductwork enclosed by not less than 2-hour fire barriers constructed in accordance with Section 707 of the Building Code or horizontal assemblies constructed in accordance with Section 711 of the Building Code, or both.

2. Equipment, control wiring, power wiring and ductwork shall be located within the smokeproof enclosure with intake or exhaust directly from and to the outside or through ductwork enclosed by not less than 2-hour barriers constructed in accordance with Section 707 of the Building Code or horizontal assemblies constructed in accordance with Section 711 of the Building Code, or both.
3. Equipment, control wiring, power wiring and ductwork shall be located within the building if separated from the remainder of the building, including other mechanical equipment, by not less than 2-hour fire barriers constructed in accordance with Section 707 of the Building Code or horizontal assemblies constructed in accordance with Section 711 of the Building Code, or both.

Exceptions:

1. Control wiring and power wiring utilizing a 2-hour rated cable or cable system. 2. Where encased with not less than 2 inches (51 mm) of concrete.
3. Control wiring and power wiring protected by a listed electrical circuit protective systems with a fire-resistance rating of not less than 2 hours.

[F] 909.22.1.2 Standby power. Mechanical vestibule and stairway and ramp shaft ventilation systems and automatic fire detection systems shall be provided with standby power in accordance with Section 2702 of the Building Code.

[F] 909.22.1.3 Acceptance and testing. Before the mechanical equipment is approved, the system shall be tested in the presence of the fire code official to confirm that the system is operating in compliance with these requirements.

(Reason: To assist with enforcement of such as a smoke control system, as per Section 909.6.3, especially since a permit is now specifically required for such systems in the Fire Code. Also ensures that a firefighter's override panel is provided as per 909.16 for such systems. The above amendment copies the applicable requirements for such systems from Section 909.20 of the Building Code into the Fire Code. Although the published code did copy the elevator pressurization requirements into the Fire Code, it did not copy over the stair pressurization requirements.)

*****Section 910.2; change Exception 2. and 3.to read as follows:**

- [F] 2.** Only manual smoke and heat removal shall not be required in areas of buildings equipped with early suppression fast-response (ESFR) sprinklers. Automatic smoke and heat removal is prohibited.
3. Only manual smoke and heat removal shall not be required in areas of buildings equipped with control mode special application sprinklers with a response time index of $50(m^*S)^{1/2}$ or less that are listed to control a fire in stored commodities with 12 or fewer sprinklers. Automatic smoke and heat removal is prohibited.

(Reason: Allows the fire department to control the smoke and heat during and after a fire event, while still prohibiting such systems from being automatically activated, which is a potential detriment to the particular sprinkler systems indicated.)

*****Section 910.2; add subsections 910.2.3 with exceptions to read as follows:**

[F] 910.2.3 Group H. Buildings and portions thereof used as a Group H occupancy as follows:

1. In occupancies classified as Group H-2 or H-3, any of which are more than 15,000 square feet (1394 m²) in single floor area.

Exception: Buildings of noncombustible construction containing only noncombustible materials. 2. In areas of buildings in Group H used for storing Class 2, 3, and 4 liquid and solid oxidizers, Class 1 and unclassified detonable organic peroxides, Class 3 and 4 unstable (reactive) materials, or Class 2 or 3 water-reactive materials as required for a high-hazard commodity classification.

Exception: Buildings of noncombustible construction containing only noncombustible materials.

(Reason: Maintains a fire protection device utilized in such occupancies where it is sometimes necessary to allow chemicals to burn out, rather than extinguish.)

****Section 910.3; add section 910.3.4 to read as follows:**

[F] 910.3.4 Vent operation. Smoke and heat vents shall be capable of being operated by approved automatic and manual means. Automatic operation of smoke and heat vents shall conform to the provisions of Sections 910.3.2.1 through 910.3.2.3.

[F] 910.3.4.1 Sprinklered buildings. Where installed in buildings equipped with an approved automatic sprinkler system, smoke and heat vents shall be designed to operate automatically. The automatic operating mechanism of the smoke and heat vents shall operate at a temperature rating at least 100 degrees F (approximately 38 degrees Celsius) greater than the temperature rating of the sprinklers installed.

Exception: Manual only system per 910.2

[F] 910.3.4.2 Nonsprinklered buildings. Where installed in buildings not equipped with an approved automatic sprinkler system, smoke and heat vents shall operate automatically by actuation of a heat-responsive device rated at between 100°F (56°C) and 220°F (122°C) above ambient.

Exception: Listed gravity-operated drop out vents.

(Reason: Amendment continues to keep applicable wording from prior to the 2012 edition of the IFC. Specifically, automatic activation criteria is no longer specifically required in the published code. Specifying a temperature range at which smoke and heat vents should activate in sprinklered buildings helps to ensure that the sprinkler system has an opportunity to activate and control the fire prior to vent operation.)

****Section 910.4.3.1; change to read as follows:**

[F] 910.4.3.1 Makeup air. Makeup air openings shall be provided within 6 feet (1829 mm) of the floor level. Operation of makeup air openings shall be ~~manual or~~ automatic. The minimum gross area of makeup air inlets shall be 8 square feet per 1,000 cubic feet per minute (0.74 m² per 0.4719 m³/s) of smoke exhaust.

(Reason: Makeup air has been required to be automatic for several years now in this region when mechanical smoke exhaust systems are proposed. This allows such systems to be activated from the smoke control panel by first responders without having to physically go around the exterior of the building opening doors manually. Such requires a significant number of first responders on scene to conduct this operation and significantly delays activation and/or capability of the smoke exhaust system.)

****Section 910.4.4; change to read as follows:**

[F] 910.4.4 Activation. The mechanical smoke removal system shall be activated by manual controls only automatically by the automatic sprinkler system or by an approved fire detection system. Individual manual controls shall also be provided.

Exception: Manual only systems per Section 910.2.

(Reason: The provision of a manual only mechanical smoke removal system does not provide equivalency with automatic smoke and heat vents. This amendment clarifies that the primary intent is for automatic systems, unless exceptions are provided as in 910.2 – consistent with the charging statements of the section.)

****Section 912.2; add Section 912.2.3 to read as follows:**

[F] 912.2.3 Hydrant distance. An approved fire hydrant shall be located within 100 feet of the fire department connection as the fire hose lays along an unobstructed path.

(Reason: To accommodate limited hose lengths, improve response times where the FDC is needed to achieve fire control, and improve ease of locating a fire hydrant in those situations also. Also, consistent with NFPA 14 criteria.)

****Section 913.2.1; add second paragraph and exception to read as follows:**

[F] When located on the ground level at an exterior wall, the fire pump room shall be provided with an exterior fire department access door that is not less than 3 ft. in width and 6 ft. – 8 in. in height, regardless of any interior doors that are provided. A key box shall be provided at this door, as required by Section 506.1.

Exception: When it is necessary to locate the fire pump room on other levels or not at an exterior wall, the corridor leading to the fire pump room access from the exterior of the building shall be provided with equivalent fire resistance as that required for the pump room, or as approved by the fire code official. Access keys shall be provided in the key box as required by Section 506.1.

(Reason: This requirement allows fire fighters safer access to the fire pump room. The requirement allows access without being required to enter the building and locate the fire pump room interior access door during a fire event. The exception recognizes that this will not always be a feasible design scenario for some buildings, and as such, provides an acceptable alternative to protect the pathway to the fire pump room.)

****Section 1006.2.2.6 Add a new Section 1006.2.2.6 as follows:**

1006.2.2.6 Electrical Rooms. For electrical rooms, special exiting requirements may apply. Reference the electrical code as adopted.

(Reason: Cross reference necessary for coordination with the NEC which has exiting requirements as well.)

****Section 1009.1; add the following Exception 4:**

Exceptions:

{previous exceptions unchanged}

4. Buildings regulated under State Law and built in accordance with State registered plans, including any variances or waivers granted by the State, shall be deemed to be in compliance with the requirements of Section 1009.

(Reason: To accommodate buildings regulated under Texas State Law and to be consistent with amendments to Chapter 11.)

****Section 1010.1.9.4 Bolt Locks; amend exceptions 3 and 4 as follows:**

Exceptions:

3. Where a pair of doors serves an occupant load of less than 50 persons in a Group B, F, M or S occupancy. {Remainder unchanged}
4. Where a pair of doors serves a Group A, B, F, M or S occupancy {Remainder unchanged}

(Reason: Application to M occupancies reflects regional practice; No. 4 expanded to Group A due to it being a similar scenario to other uses; No. 4 was regional practice.)

*****Section 1015.8 Window Openings. No amendment necessary:**

Option A

*****Section 1015.8 Window Openings. REVISE text as follows:**

Option B

1. Operable windows where the top of the sill of the opening is located more than 75 feet (22 860 mm) 55 feet (16 764 mm) above the finished grade or other surface below and that are provided with window fall prevention devices that comply with ASTM F 2006.

(Reason: In Option B jurisdictions, change "75 feet" to "55 feet".)

****Section 1020.1 Construction; add exception 6 to read as follows:**

6. In group B occupancies, corridor walls and ceilings need not be of fire-resistive construction within a single tenant space when the space is equipped with approved automatic smoke-detection within the corridor. The actuation of any detector shall activate self-annunciating alarms audible in all areas within the corridor. Smoke detectors shall be connected to an approved automatic fire alarm system where such system is provided.

(Reason: Revise the 2012 published NCTCOG amendment to this section to now read closer to that of the City of Dallas 2012 amendment.)

****Section 1029.1.1.1 Delete this section. Spaces under grandstands and bleachers;**

(Reason: Unenforceable.)

*****Section 1101.1 Scope. add exception to Section 1101.1 as follows:**

Exception: Components of projects regulated by and registered with Architectural Barriers Division of Texas Department of Licensing and Regulation shall be deemed to be in compliance with the requirements of this chapter.

(Reason: To accommodate buildings regulated under state law. Further clarified in 2015 to mean components that are specifically addressed by TDLR shall be exempt.)

*****Section 1203.1; amend to read as follows:**

*****1203.1 General.** Buildings shall be provided with natural ventilation in accordance with Section 1203.4, or mechanical ventilation in accordance with the *International Mechanical Code*.

Where air infiltration rate in a *dwelling unit* is ~~less than~~ 5 air changes or less per hour when tested with a blower door at a pressure 0.2 inch w.c. (50 Pa) in accordance with Section 402.4.1.2 of the *International Energy Conservation Code*, the *dwelling unit* shall be ventilated by mechanical means in accordance with Section 403 of the *International Mechanical Code*.

(Reason: See IECC change to performance testing. Whole-house ventilation is recognized as necessary).

****Table 1505.1; delete footnote c and replace footnote b with the following:**

- b. Non-classified roof coverings shall be permitted on buildings of U occupancies having not more than 120 sq. ft. of protected roof area. When exceeding 120 sq. ft. of protected roof area, buildings of U occupancies may use non-rated non-combustible roof coverings.

c. [delete]

(Reason: Conforms to regional practice affording increased fire protection.)

****Section 1505.7; delete the section**

(Reason: Conforms to regional practice.)

****Section 1510.1; add a sentence to read as follows:**

1510.1 General. Materials and methods of applications used for recovering or replacing an existing roof covering shall comply with the requirements of Chapter 15. All individual replacement shingles or shakes shall be in compliance with the rating required by Table 1505.1.

{text of exception unchanged}

(Reason: Relocated the text to more appropriate place. Previously was footnote "b" to Table 1505.1)

*****Section 1704.2, Special inspections and tests is amended to read as follows:**

1704.2 Special inspections and tests. Where application is made to the Building Official for construction as specified in Section 105, the owner or the owner's authorized agent, or the registered design professional in responsible charge, other than the contractor, shall employ one or more approved agencies to provide special inspections and tests during construction on the types of work listed under Section 1705 and identify the approved agencies to the Building Official. The special inspector shall not be employed by the contractor. These special inspections and tests are in addition to the inspections identified by the Building Official that are identified in Section 110.

(Reason: The RDPRC should be included in the documentation.)

NOTE: Referenced document is available for download for addition of your city logo.

*****Section 1704.2.1, Special inspector qualifications, is amended to read as follows:**

1704.2.1 Special inspector qualifications. Prior to the start of construction and or upon request, the approved agencies shall provide written documentation to the registered design professional in responsible charge and the building official demonstrating the competence and relevant experience or training of the special inspectors who will perform the special inspections and tests during construction. [Remainder unchanged]

(Reason: The RDPRC should be included in the documentation.)

NOTE: Referenced document is available for download for addition of your city logo.

*****Section 1704.2.4, Report requirement, is amended to read as follows:**

1704.2.4 Report requirement. Approved agencies shall keep records of special inspections and tests. The approved agency shall submit reports of special inspections and tests to the Building Official upon request, and to the registered design professional in responsible charge. Individual inspection reports ~~[Reports]~~ shall indicate that work inspected or tested was or was not completed in conformance to approved construction documents. [Remainder unchanged]

(Reason: The RDPRC should be included in the documentation and building official can choose to request reports as required.)

NOTE: Referenced document is available for download for addition of your city logo.

*****Section 1704.2.5.2, Fabricator approval, is amended to read as follows:**

1704.2.5.1 Fabricator approval. Special inspections during fabrications required by Section 1704 are not required where the work is done on the premises of a fabricator registered and approved to perform such work without special inspection. Approval shall be based upon review of the fabricator's written procedural and quality control manuals and periodic auditing of fabrication practices by an approved agency, or a fabricator that is enrolled in a nationally accepted inspections program. At completion of fabrication, the acceptable or approved fabricator shall submit a certificate of compliance to the owner or the owner's authorized agent or the registered design professional in responsible charge, for submittal to the building official as specified in Section 1704.5 stating that the work was performed in accordance with the approved construction documents. The certificate of compliance shall also be made available to the Building Official upon request.

(Reason: The RDPRC should be included in the documentation and fabricators can be accepted or approved.)

NOTE: Referenced document is available for download for addition of your city logo.

****Section 2901.1; add a sentence to read as follows:**

[P] 2901.1 Scope. *{existing text to remain}* The provisions of this Chapter are meant to work in coordination with the provisions of Chapter 4 of the International Plumbing Code. Should any conflicts arise between the two chapters, the Building Official shall determine which provision applies.

(Reason: Gives building official discretion.)

****Section 2902.1; add a second paragraph to read as follows:**

In other than E Occupancies, the minimum number of fixtures in Table 2902.1 may be lowered, if requested in writing, by the applicant stating reasons for a reduced number and approved by the Building Official.

(Reason: To allow flexibility for designer to consider specific occupancy needs.)

****Table 2902.1; add footnote f to read as follows:**

f. Drinking fountains are not required in M Occupancies with an occupant load of 100 or less, B Occupancies with an occupant load of 25 or less, and for dining and/or drinking establishments.

(Reason: Adjustment meets the needs of specific occupancy types.)

****Section 2902.1.3; add new Section 2902.1.3 to read as follows:**

2902.1.3 Additional fixtures for food preparation facilities. In addition to the fixtures required in this Chapter, all food service facilities shall be provided with additional fixtures set out in this section.

2902.1.3.1 Hand washing lavatory. At least one hand washing lavatory shall be provided for use by employees that is accessible from food preparation, food dispensing and ware washing areas. Additional hand washing lavatories may be required based on convenience of use by employees.

2902.1.3.2 Service sink. In new or remodeled food service establishments, at least one service sink or one floor sink shall be provided so that it is conveniently located for the cleaning of mops or similar wet floor cleaning tool and for the disposal of mop water and similar liquid waste. The location of the service sink(s) and/or mop sink(s) shall be approved by the **<Jurisdiction's>** health department.

(Reason: Coordinates Health law requirements with code language for consistent regional practice.)

*****Section 3002.1 Hoistway Enclosure Protection.** Add exceptions to read as follows:

Exceptions:

1. Elevators wholly located within atriums complying with Section 404 shall not require hoistway enclosure protection.
2. Elevators in open or enclosed parking garages that serve only the parking garage, and complying with Sections 406.5 and 406.6, respectively, shall not require hoistway enclosure protection.

(Reason: Provides specific Code recognition that elevators within atriums and within parking garages do not require hoistway enclosure protection.)

*****Section 3005.4 Machine rooms, control rooms, machinery spaces and control spaces.**

~~Delete text as follows: Elevator machine rooms, control rooms, control spaces and machinery spaces outside of but attached to a hoistway that have openings into the hoistway shall be enclosed with fire barriers constructed in accordance with Section 707 or horizontal assemblies constructed in accordance with Section 711, or both.~~

Revise text to read:

Elevator machine rooms, control rooms, control spaces and machinery spaces shall be enclosed with fire barriers constructed in accordance with Section 707 or horizontal assemblies constructed in accordance with Section 711, or both.

[Remainder unchanged]

(Reason: This amendment eliminates code language so as to be consistent with the regional goal to require passive enclosures of these areas unless a hoistway enclosure is not required by other Code provisions. See companion change to eliminate fire sprinklers thereby eliminating shunttrip.)

***Section 3005.7 add a Section 3005.7 as follows:

3005.7 Fire Protection in Machine rooms, control rooms, machinery spaces and control spaces.

3005.7.1 Automatic sprinkler system. The building shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, except as otherwise permitted by Section 903.3.1.1.1 and as prohibited by Section 3005.7.2.1.

3005.7.2.1 Prohibited locations. Automatic sprinklers shall not be installed in machine rooms, elevator machinery spaces, control rooms, control spaces and elevator hoist-ways.

3005.7.2.2 Sprinkler system monitoring. The sprinkler system shall have a sprinkler control valve supervisory switch and water-flow initiating device provided for each floor that is monitored by the building's fire alarm system.

3005.7.3 Water protection. An approved method to prevent water from infiltrating into the hoistway enclosure from the operation of the automatic sprinkler system outside the elevator lobby shall be provided.

3005.7.4 Shunt trip. Means for elevator shutdown in accordance with Section 3005.5 shall not be installed.

(Reason: Firefighter and public safety. This amendment eliminates the shunt trip requirement of the International Building Code Section 3005.5 for the purpose of elevator passenger and firefighter safety. The new section above is intended to be identical to Sections 3007.2, 3007.3, and 3007.4 for Fire Service Access Elevators and Sections 3008.2, 3008.3 and 3008.4 for Occupant Evacuation Elevators.)

***Section 3005.8 add Section 3005.8 as follows:

3005.8 Storage. Storage shall not be allowed within the elevator machine room, control room, machinery spaces and or control spaces. Provide approved signage at each entry to the above listed locations stating: "No Storage Allowed."

(Reason: Reinforces the need to maintain space clean and free of combustibles. See companion change to eliminate fire sprinklers therein, to always require an enclosure - with IBC 3005.4 exceptions deleted - resulting in the limited need for a shunt trip system.)

Option A

***Section 3006.2, Hoistway opening protection required. Revise text as follows:

5. The building is a high rise and the elevator hoistway is more than 75 feet (22 860 mm) in height. The height of the hoistway shall be measured from the lowest floor at or above grade to the highest floors served by the hoistway.

Option B

5. The building is a high rise and the elevator hoistway is more than ~~75 feet (22 860 mm)~~ 55 feet (16 764 mm) in height. The height of the hoistway shall be measured from the lowest floor at or above grade to the highest floors served by the hoistway.

***Section 3006.2, Hoistway opening protection required. Revise text as follows:

(Reason: 2015 IBC text does not address hoistways that are > 75' in height that are both below grade and above grade but not located above the high rise classification nor does the IBC address hoistways wholly located above grade such as those that serve above skylobbies.)

****Section 3109.1; change to read as follows:**

3109.1 General. Swimming pools shall comply with the requirements of sections 3109.2 through 3109.5 and other applicable sections of this code and complying with applicable state laws.

(Reason: To recognize "state requirements".)

End



CODE COUNCIL
TRAINING

~~2009~~
~~2012~~
2015

2015 IBC® Transition from the 2009 IBC®

Based on the International Building Code® (IBC®)



2015 IBC Transition from the 2009 IBC

First Printing: March 2015

COPYRIGHT © 2015
by
International Code Council, Inc.

ALL RIGHTS RESERVED. The 2015 IBC Transition from the 2009 IBC is a copyrighted work owned by the International Code Council, Inc. Without advance written permission from the copyright owner, no part of this book may be reproduced, distributed, or transmitted in any form or by any means, including, without limitation, electronic, optical or mechanical means (by way of example and not limitation, photocopying, or recording by or in an information storage retrieval system). For information on permission to copy material exceeding fair use, please contact: ICC Publications, 4051 West Flossmoor Road, Country Club Hills, IL 60478. Phone 1-888-ICC-SAFE (422-7233).

Trademarks: “International Code Council,” the “International Code Council” logo, the “IBC” and the “International Building Code” are trademarks of the International Code Council, Inc.

PRINTED IN THE U.S.A.

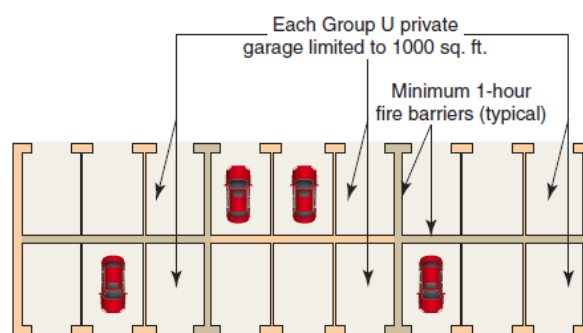
2015 International Building Code –Transition from the 2009 IBC

Topic	2012	2015
Part 1 Administration (Chapters 1 and 2)		
Change of use or occupancy		111.1 A change in a building's use, or portion of a building's use, with no change in its occupancy classification now requires that a new certification of occupancy be issued by the building code official.
Definitions	202 For consistency and usability purposes, all definitions of terms specifically defined in the IBC have now been moved to a single location in Chapter 2	
Part 2 Building Planning (Chapters 3 through 6)		
Assembly rooms associated with Group E occupancies	303.1.3 The allowance for a Group E classification of accessory assembly spaces in school buildings has been clarified so as to not confuse the provision with the mixed-occupancies requirements dealing with accessory occupancies as regulated by Section 508.2.	
Occupancy classification of food processing facilities and commercial kitchens	303.3, 306.2 The appropriate occupancy classification of a commercial kitchen has been clarified based upon the kitchen's relationship, or lack of a relationship, to dining facilities.	
		304.1 Small (2,500 sq. ft. or less in area) food processing establishments and commercial kitchens not associated with dining facilities are now considered as Group B occupancy. 306.2 A classification of Group F-1 is now applied only to larger-sized (over 2,500 sq. ft. in area) food processing facilities and commercial kitchens not associated with dining facilities.
Training and skill development facilities		304.1 The Group B classification for training and skill development uses has been clarified to address the ages of the occupants using the facility, the occupant load limitation where the facility is used for assembly purposes, and the types of permitted uses.
Facilities generating combustible dusts	Table 307.1(1), Section 307.4 In the determination of occupancy classification for a facility where combustible dusts are anticipated, a technical report and opinion must now be provided to the building official that provides all necessary information for a qualified decision as to the potential combustible dusts hazards.	

2015 International Building Code –Transition from the 2009 IBC

Topic	2012	2015
Part 2 Building Planning (Chapters 3 through 6), continued		
Definition of care facilities	308.2, 202 A number of new definitions related to care facilities have been added and some existing definitions have been revised to provide clarity and consistency in application.	
Group I-1 occupancy classification		308.3 The uses permitted in Group I-1 custodial care facility have been expanded to include care recipients who may need a limited degree of verbal or physical assistance if responding to a fire or other emergency situation.
Occupancy classification for medical care facilities. Group I-2 occupancy classification		308.4 Two basic conditions of Group I-2 medical care uses that have previously been regulated together as a single category have been created, dividing the classification into short-term care facilities, such as, hospitals, and long-term care facilities, such as nursing homes.
Group R-3 lodging house		310.5 Lodging houses are now specifically defined in Chapter 2 and are typically permitted to be constructed in accordance with the <i>International Residential Code</i> (IRC) if they contain no more than five guest rooms.
Group R-4 occupancy classification	310.6 The allowance for constructing Group R-4 supervised residential facilities under the IRC has been eliminated.	
		310.6 The uses permitted in a Group R-4 custodial care facility have been expanded to include care recipients who may need a limited degree of verbal or physical assistance while responding to a fire or other emergency situation.
Classification of accessory storage spaces		311.1.1 Storage rooms less than 100 square feet in floor area are not to be classified as Group S, but rather as the same occupancy as the portion of the building to which they are accessory.
Open mall buildings	402 A variety of changes have now been made to clarify the open mall building provisions that were originally developed for covered mall conditions.	

Topic	2012	2015
Part 2 Building Planning (Chapters 3 through 6), continued		
Private garages – Definition, floor-area limitation		202 Motor vehicles stored in a “private garage” are now limited through a new definition to only those vehicles used by tenants of the building or buildings on the same premises as the garage.
		406.3.1 A group U private garage is now limited to a maximum floor area of 1000sf, however, multiple Group U private garages are permitted in the same building where they are compartmentalized by minimum 1-hour fire separations.



Example: If non-sprinklered building of Type VB construction, total allowable area limited to 5500 sq. ft. plus any applicable frontage increase

Topic	2012	2015
Public parking garage	406.4 Those parking structures that fall outside of the scope of Section 406.3 regulating private parking garages are now identified as public parking garages.	
Group I-2 shared living spaces		407.2.5 Shared living spaces, group meeting area, and multipurpose therapeutic spaces are now permitted to be open to corridors in Group I-2, Condition 1 nursing homes provided fire specific conditions are met.
Group I-2 cooking facilities		407.2.6 A room or space containing a cooking facility with domestic cooking appliances is now permitted to be open to the corridor in a Group I-2, Condition 1 nursing home provided 13 specific conditions are met.
Maximum size of Group I-2 smoke compartments		407.5 The maximum allowable smoke compartment size for Group I-2, Condition 2 hospitals and similar occupancies has been increased to 40,000 square feet.
Technical production areas	410.6.3, 202 Outdated terminology, such as fly galleries, gridirons, and pin rails, has been replaced by the general and comprehensive term “technical production area” and the special means of egress provisions for such areas have all been relocated to Section 410.	

Topic	2012	2015
Part 2 Building Planning (Chapters 3 through 6), continued		
Travel distance in aircraft manufacturing facilities		412.7 The travel distance allowances for aircraft manufacturing facilities have been significantly increased based upon a combination of the manufacturing area’s height and floor area.

TABLE 412.7 Aircraft Manufacturing Exit Access Travel Distance

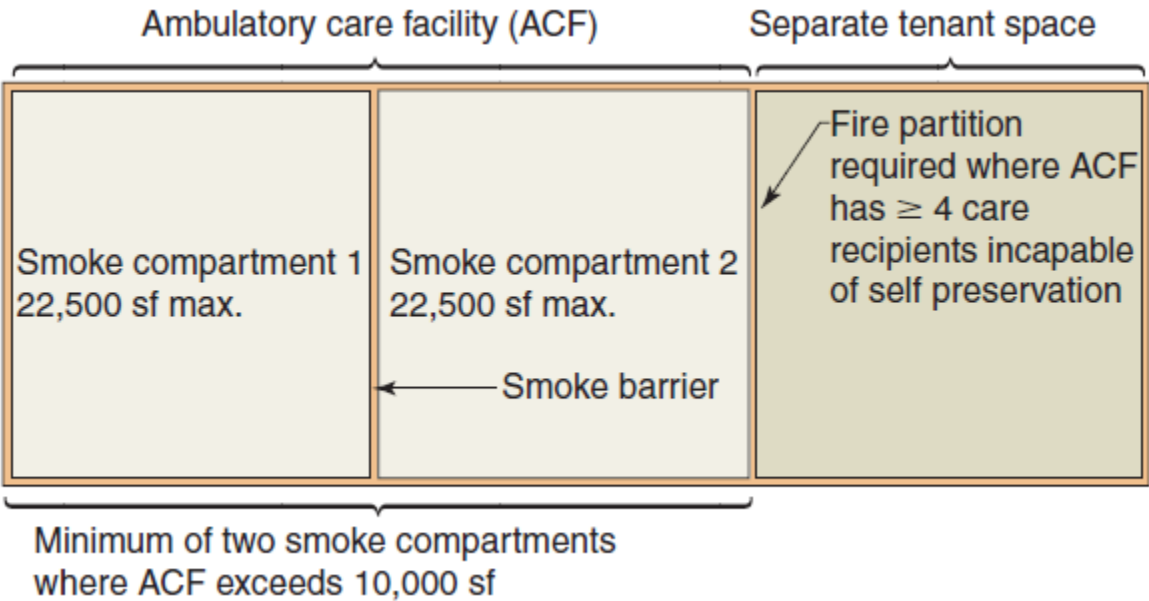
Height (feet) ^b	Manufacturing Area (sq. ft.) ^a					
	≥150,000	≥200,000	≥250,000	≥500,000	≥750,000	≥1,000,000
≥25	400	450	500	500	500	500
≥50	400	500	600	700	700	700
≥75	400	500	700	850	1,000	1,000
≥100	400	500	750	1,000	1,250	1,500

For SI: 1 foot = 304.3 mm

a. Contiguous floor area of the aircraft manufacturing facility having the indicated height.

b. Minimum height from finished floor to bottom of ceiling or roof slab or deck.

Topic	2012	2015
Ambulatory care facilities	422 In a multi-tenant or mixed-occupancy building where there are uses present other than an ambulatory care facility, a fire-partition is now required between the care facility and those nonrelated spaces where the ambulatory care facility is intended to have at least four care recipients incapable of self-preservation at any one time.	



Topic	2012	2015
Part 2 Building Planning (Chapters 3 through 6), continued		
Storm shelters serving critical emergency operations facilities and Group E occupancies		423.3 The construction of complying storm shelters is now required in critical emergency operations facilities where such facilities are located in geographical areas where the shelter design wind speed for tornadoes is at its highest.
		423.4 Storm shelters are now required in Group E occupancies located in those areas of the U.S. where the shelter design wind speed for tornadoes is at its highest.
General building height and area limitations; Building height and number of stories, Building area		503 The provisions regulating building height and area limitations have been extensively revised with no change in technical application in order to provide an increased degree of user-friendliness and technical consistency.
		Tables 504.3 & 504.4 In order to increase the degree of user-friendliness of the process by which the allowable building height provisions are determined, Table 503 has now been reformatted as Tables 504.3 (Allowable height in feet) and 504.4 (Allowable number of stories above grade plane), and any applicable sprinkler increase has been incorporated directly into the new tables.

TABLE 503 504.3^a Allowable Building Heights and Areas in Feet Above Grade Plane

Occupancy Classification	See Footnotes	Type of Construction								
		Type I		Type II		Type III		Type IV	Type V	
		A	B	A	E	A	B	HT	A	B
A,B,E,F,M,S,U	NS ^b	UL	160	65	55	65	55	65	50	40
	S	UL	<u>180</u>	<u>85</u>	<u>75</u>	<u>85</u>	<u>75</u>	<u>85</u>	<u>70</u>	<u>60</u>
H-1, H-2, H-3, H-5	NS ^{c,d}									
	<u>S</u>	UL	160	65	55	65	55	65	50	40

Note: UL = Unlimited; NS = Buildings not equipped throughout with an automatic sprinkler system; S = Buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.1.1.1

(Only a portion of Table 504.3 is shown above.)

TABLE 503 504.4^{a,b} Allowable Building Heights and Areas Number of Stories Above Grade Plane

Occupancy Classification		Type of Construction								
		Type I		Type II		Type III		Type IV	Type V	
		A	B	A	E	A	B	HT	A	B
A-1	NS	UL	5	3	2	3	2	3	2	1
	S	UL	6	4	3	4	3	4	3	2
A-2	NS	UL	11	3	2	3	2	3	2	1
	S	UL	12	4	3	4	3	4	3	2
A-3	NS	UL	11	3	2	3	2	3	2	1
	S	UL	12	4	3	4	3	4	3	2

Note: UL = Unlimited; NS = Buildings not equipped throughout with an automatic sprinkler system; S = Buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.1.1.1

(Only a portion of Table 504.4 is shown above.)

Topic	2012	2015
Part 2 Building Planning (Chapters 3 through 6), continued		
General building height and area limitations; Building height and number of stories, Building area, <i>Continued</i>		Table 506.2 In order to increase the degree of user-friendliness of the process by which the allowable building area provisions are determined, Table 503 has been reformatted as new Table 506.2 (allowable area factor in square feet), and any applicable sprinkler increase has been incorporated directly into the new table.

TABLE 503 506.2^{a,b} Allowable Building Heights and Areas Factor (A_1 = NS, S1, S13R or SM, as applicable) in Square Feet

Occupancy Classification	See Footnotes	Type of Construction									
		Type I		Type II		Type III		Type IV	Type V		
		A	B	A	B	A	B	HT	A	B	
A-1	NS	UL	UL	15,500	8,500	14,000	8,500	15,000	11,500	5,500	
	S1	UL	UL	62,000	34,000	56,000	34,000	60,000	46,000	22,000	
	SM	UL	UL	46,500	25,500	42,000	25,500	45,000	34,500	16,500	
A-2	NS	UL	UL	15,500	9,500	14,000	9,500	15,000	11,500	6,000	
	S1	UL	UL	62,000	38,000	56,000	38,000	60,000	46,000	24,000	
	SM	UL	UL	46,500	28,500	42,000	28,500	45,000	34,500	18,000	
A-3	NS	UL	UL	15,500	9,500	14,000	9,500	15,000	11,500	6,000	
	S1	UL	UL	62,000	38,000	56,000	38,000	60,000	46,000	24,000	
	SM	UL	UL	46,500	28,500	42,000	28,500	45,000	34,500	18,000	

(Only a portion of Table 506.2 is shown above.)

Topic	2012	2015
Mezzanine – Means of egress and Openness	505.2.2 The specific provisions for mezzanine means of egress have been deleted and replaced with a general reference to Chapter 10.	
		505.2.3 Direct access to at least one exit at the mezzanine level is no longer required for those enclosed mezzanines regulated by Exception 2 of Section 505.2.3.
Unlimited area buildings – Accessory occupancies; Basements in unlimited area buildings	507.1.1 (507.1) The allowance for occupancy groups not specifically scoped under the unlimited area building provisions of Section 507 to be located in such buildings under accessory occupancies provisions of Section 508.2 is now contained within the code text.	
		507.1 The allowance of a single-story basement in unlimited area buildings have now been clarified.
Unlimited area buildings – Group H occupancies; Group H-5 in unlimited area buildings	507.8 The limitations placed on Group H occupancies permitted in unlimited area building have been clarified and reformatted to aid in their consistent application.	
		507.9 Group H-5 buildings are now permitted to be unlimited in area under the special provisions of Section 507.

Topic	2012	2015
Part 2 Building Planning (Chapters 3 through 6), continued		
Incidental uses – General provisions; Separation and Protection; Rooms or areas; Fire protection from incidental uses	509.1 The concept of incidental uses has been clarified by eliminating the previous relationship with the mixed-occupancy provisions.	
	509.4 An automatic sprinkler system is now the only fire-extinguishing system specifically permitted as a means of providing any fire protection required for incidental use rooms and area.	
	Table 509 The list of incidental uses now includes waste and linen collection rooms in Group B ambulatory care facilities and such rooms must be separated from the remainder of the building by minimum 1-hour fire-resistance-rated fire barriers and/or horizontal assemblies.	
		Table 509 A more detailed analysis of various support spaces within a healthcare or ambulatory care facility is now possible due to modifications to Table 509 regulating incidental uses

INCIDENTAL USES SPECIFIC TO AMBULATORY CARE FACILITIES		
Room or Area	2015 IBC	2012 IBC
Laboratories not classified as Group H occupancies	1-hour separation <i>and</i> provide automatic sprinkler system	Not considered as an incidental use
Waste and linen collection rooms	1-hour separation for rooms where containers have an aggregate volume of 10 cubic feet or more	1-hour regardless of amount of collection
Storage rooms more than 100 square feet in floor area	1-hour separation	Not considered as an incidental use

INCIDENTAL USES SPECIFIC TO GROUP I-2 OCCUPANCIES		
Room or Area	2015 IBC	2012 IBC
Laboratories not classified as Group H occupancies	1-hour separation <i>and</i> provide automatic sprinkler system	1-hour separation <i>or</i> provide automatic sprinkler system
Laundry rooms	1-hour separation where more than 100 square feet in floor area	1-hour separation <i>or</i> provide automatic sprinkler system where more than 100 square feet in floor area
Patient rooms equipped with padded surfaces	1-hour separation	Not considered as an incidental use
Physical plant maintenance shops	1-hour separation	Not considered as an incidental use
Waste and linen collection rooms	1-hour for rooms where containers have an aggregate volume of 10 cubic feet or more	1-hour regardless of amount of collection
Storage rooms more than 100 square feet in floor area	1-hour separation	Not considered as an incidental use

Topic	2012	2015
Horizontal building separation		510.2 In the special provisions of Section 510.2 addressing pedestal buildings, there is no longer a limit of one story above grade plane for that portion of the structure that occurs below the 3-hour horizontal separation.

Topic	2012	2015
Part 3 Fire Protection (Chapters 7 - 9)		
Topic	2012	2015
Identification of fire and smoke separation walls	703.7 The size & location of identifying markings required on vertical fire assembly's above-ceiling spaces have been modified to increase the potential for such markings to be seen.	
Projections at exterior walls		705.2 The minimum required separation between the leading edge of a projection and the line used to determine the fire separation distance has been modified in a manner that provides for a significant increase in the separation required. Table 705.2 is modified.

TABLE 705.2 Minimum Distance of Projection

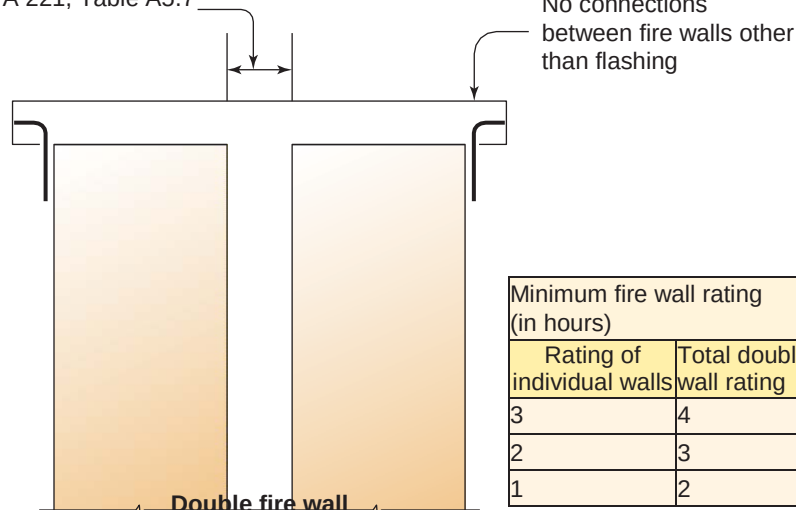
Fire Separation Distance (FSD)	Minimum Distance from Line Used to Determine FSD
0 feet to less than 2 feet	Projections not permitted
Greater than 2 feet to less than 5 feet 3 feet	24 inches
5 feet or Greater than 3 feet to less than 30 feet	40 inches 24 inches plus 8 inches for every foot of FSD beyond 3 feet or fraction thereof
30 feet or greater	20 feet

For SI: 1 foot = 304.8 mm; 1 inch = 25.4 mm.

Topic	2012	2015
Combustible projections		705.2.3 The provisions regulating combustible projections adjacent to an interior lot line or other line used to determine the fire separation distance have been modified to provide a simple and consistent approach that is less restrictive than previously determined.
Buildings on the same lot		705.3 Opening are permitted through adjacent exterior walls of a Group S-2 parking garage and a Group R-2 building on the same lot where such buildings are regulated as two buildings on the same lot and the fire separation distance is zero.

Topic	2012	2015
Part 3 Fire Protection (Chapters 7 - 9), Continued		
Structural element bracing of exterior walls		705.6 Interior structural elements, such as floor or roof elements, that brace exterior walls are no longer required to be regulated for fire resistance due to the exterior wall's ratings regardless of the building's proximity to a lot line.
Structural stability of fire walls	706.2 To satisfy the intended objective of structural stability the use of a double fire wall complying with NFPA 221 is permitted as an alternative to a single fire wall.	706.2 The reference to NFPA 221 for fire wall design and construction has been expanded to permit the use of the "tied" and "cantilevered" options addressed in the standard.

Minimum clear space per NFPA 221, Table A5.7



Topic	2012	2015
Intersections of fire barriers at roof assemblies	707.8, 707.9 The void at the intersection between a fire barrier and a non-fire-resistance rated roof assembly now need only to be protected with an approved material rather than a fire-resistant joint system.	
Horizontal assemblies and vertical openings	712 Significant reformatting in Chapter 7 now places emphasis on the presence of vertical openings rather than on shaft enclosures, recognizing the use of shaft enclosures is just one of many acceptable protective measures that can be utilized to address the hazards related to vertical openings.	711, 712 The reorganization of Section 711 and 712 has been continued such that Section 711 now contains only the construction requirements for floor and roof assemblies, and Section 712 only contains the requirements related to the protection of vertical openings.
Floor penetration of horizontal assembly	714.4.1.2 (714.4.1.1.2) Exception 2 An approved through-penetration fire-stop system used to protect floor penetrations of horizontal assemblies due to the presence of floor, tub, & shower drains is no longer required to have a T rating.	

Topic	2012	2015
Part 3 Fire Protection (Chapters 7 - 9), Continued		
Membrane penetration		714.4.2 The ceiling of a 1-hour or 2-hour floor/ceiling or roof/ceiling assembly is permitted to be interrupted by double wood top plate of a wall. The wall interrupting the ceiling membrane of the horizontal assembly must be sheathed only with Type X gypsum wallboard. The wall will not require a fire-resistance rating unless needed due to some other code requirement. Items penetrating the top plates must be protected.
L ratings	714.4.4 (714.5), 715.6, 202 An "L" rating identifying the air leakage rate - as defined in Chapter 2 – is now mandated for penetration firestop systems and fire-resistant joint systems that are utilized in smoke barrier construction.	
Marking of fire-rated glazing assemblies, Opening protection ratings and markings, Fire-protection-rated glazing	716.3, 202 Table 716.3 has been added to define and relate the various test standards for fire-rated glazing, now defined in Chapter 2 to the designations used to mark such glazing. Table 716.5 The information previously available in Table 716.5 (715.4 in 2009) addressing the minimum required fire-protection ratings of fire door and fire shutter assemblies has been extensively expanded to also include the maximum size and marking requirements for door vision panels and the minimum assembly rating and glazing marking requirements for sidelights and transoms.	

TABLE 715.4 716.5 Fire Door and Fire Shutter Fire Protection Ratings
Opening Fire-Protection Assemblies, Ratings, and Markings

Type of Assembly	Required Wall Assembly Rating (Hours)	Minimum Fire Door and Fire Shutter Assembly Rating (Hours)	Door Vision Panel Size	Fire-Rated Glazing Marking Door Vision Panel ^a	Minimum Sidelight/Transom Assembly Rating (Hours)		Fire-Rated Glazing Marking Sidelight/Transom Panel	
					Fire protection	Fire resistance	Fire protection	Fire resistance
Fire walls and fire barriers having a required fire-resistance rating greater than 1 hour	4	3	Not Permitted	Not Permitted	Not Permitted	4	Not Permitted	W-240
	3	3 ^a	Not Permitted	Not Permitted	Not Permitted	3	Not Permitted	W-180
	2	1½	100 sq. in. ^c	≤100 in. ² = D-H-90 >100 in. ² = D-H-W-90	Not Permitted	2	Not Permitted	W-120
	1½	1½	100 sq. in. ^c	>100 in. ² = D-H-W-90 <100 in. ² = D-H-90	Not Permitted	1½	Not Permitted	W-90
Shaft, exit enclosures, and exit passageway walls	2	1½	100 in. ^{2 e,d}	≤100 in. ² = D-H-T-or D-H-T-W-90	Not Permitted	2	Not Permitted	W-120

continued

2015 International Building Code –Transition from the 2009 IBC

Table 716.5 continued

Type of Assembly	Required Wall Assembly Rating (Hours)	Minimum Fire Door and Fire Shutter Assembly Rating (Hours)	Door Vision Panel Size	Fire-Rated Glazing Marking Door Vision Panel ^a	Minimum Sidelight/Transom Assembly Rating (Hours)	Fire-Rated Glazing Marking Sidelight/Transom Panel
					Fire protection Fire resistance	Fire protection Fire resistance
Fire barriers having a required fire-resistance rating of 1 hour: Enclosures for shafts, exit access stairways, exit access ramps, interior exit stairways, interior exit ramps, and exit passageway walls	1	1	100 in. ^{2 c, d}	≤100 in. ² = D-H-60 >100 in. ² = D-H-T-60 or D-H-T-W-60	Not Permitted 1	Not Permitted W-60
					Fire protection	
Other fire barriers	1	¾	Maximum size tested	D-H-NT-45	¾	D-H-NT-45
	1	½ ^b	Maximum size tested	D-20	¾ ²	D-H-OH-45
Fire partitions	0.5	½ ^b	Maximum size tested	D-20	½	D-H-OH-20
Corridor walls						
Other fire partitions	1	¾	Maximum size tested	D-H-45	¾	D-H-45
	0.5	½	Maximum size tested	D-H-20	½	D-H-20
					Fire protection Fire resistance	Fire protection Fire resistance
Exterior walls	3	1½	100 in. ^{2 c}	≤100 in. ² = D-H-90 >100 in. ² = D-H-W-90	Not Permitted 3	Not Permitted W-180
	2	1½	100 in. ^{2 c}	≤100 in. ² = D-H-90 >100 in. ² = D-H-W-90	Not Permitted 2	Not Permitted W-120
					Fire protection	
	1	¾	Maximum size tested	D-H-45	¾	D-H-45
					Fire protection	
Smoke barriers	1	½ ^b	Maximum size tested	D-20	¾	D-H-OH-45

- a. Two doors, each with a fire protection rating of 1-½ hours, installed on opposite sides of the same opening in a fire wall, shall be deemed equivalent in fire protection rating to one 3-hour fire door.
b. For testing requirements, see Section 716.6.3.
c. Fire-resistance-rated glazing tested to ASTM E 119 per Section 716.2 shall be permitted, in the maximum size tested.
d. Except where the building is equipped throughout with an automatic sprinkler and the fire-rated glazing meets the criteria established in Section 716.5.5.
e. Under the column heading "Fire-Rated Glazing Marking Door Vision Panel," W refers to the fire-resistance rating of the glazing, not the frame.

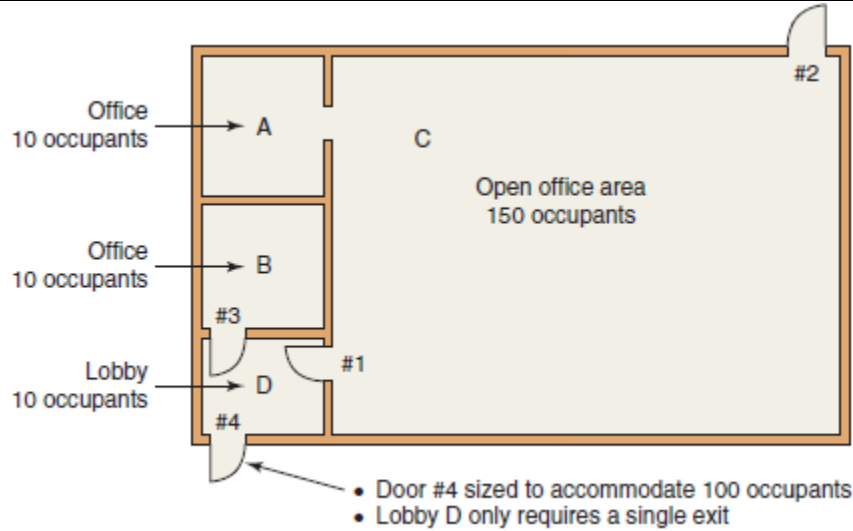
Topic	2012	2015
Part 3 Fire Protection (Chapters 7 - 9), Continued		
	Table 716.6 In addition to fire window assembly fire protection ratings, Table 716.6 now identifies the markings required on the fire-rated glazing for acceptance in specified applications.	
Wired glass in fire window assemblies	716.6.4 (715.5.4 and 715.5.5 in 2009) The allowance for the use of wired glass without compliance with the appropriate test standards has been deleted.	

Topic	2012	2015
Part 3 Fire Protection (Chapters 7 - 9), Continued		
Corridor dampers		717.3, 717.5 Where a duct penetration occurs in the ceiling of a fire-resistance-rated corridor where the lid of the corridor is constructed using a corridor wall placed horizontally, a corridor damper is now specifically mandated.
Sprinkler systems – Assembly occupancies on roofs		903.2.1.6 An automatic sprinkler system is now required to be installed in a building when the roof is used for a Group A-2 assembly occupancy with an occupant load exceeding 100, as well as other Group A occupancies where the occupant load exceeds 300.
Multiple fire areas		903.2.1.7 Where small Group A fire areas share a common means of egress, the occupant load of the spaces must now be added together to determine if a sprinkler system is required.
Sprinklers systems – Group R occupancies		903.2.8 Sprinkler requirements for Group R-4 occupancies are now dependent on the capabilities of the occupants. In buildings where occupants required limited assistance when responding to an emergency condition, additional sprinkler protection is required for attic space.
Furniture storage and display in Group F-1, M and S-1 occupancies	903.2.4, 903.2.7, 903.2.9 Automatic sprinkler systems are now required in occupancies where upholstered furniture or mattresses are manufactured, stored, or displayed.	
Sprinkler protection for basements	903.2.11.1.3 Basements provided with walls, partitions, or fixtures that can obstruct water from hose streams now require automatic sprinkler protection.	
Open-ended corridors		903.3.1.2.2 Where an NFPA 13R sprinkler system is installed, the sprinkler protection must now be extended to any open-ended corridors and associated exterior stairways, clarifying that an open breezeway is considered as an interior portion of the building and not an exterior location for the application of sprinkler requirements.
Actuation of multiple fire-extinguishing systems	904.3.2 When two or more alternative automatic fire-extinguishing systems are required to protect a hazard, all of the systems must now be designed to simultaneously operate.	
Portable fire extinguishers in Group R-2 occupancies	906.1 Portable fire extinguishers are no longer required in many public and common areas of Group R-2 occupancies provided a complying extinguisher is provided within each individual dwelling unit.	
Fire alarm systems in Group A occupancies	907.2.1 Requirements for a fire alarm system in a building housing two or more Group A occupancies are now based on whether or not the occupancies are in separate fire areas.	

Topic	2012	2015
Part 3 Fire Protection (Chapters 7 - 9), Continued		
Emergency voice/alarm communication captions	907.2.1.2 Mass notification fire alarm signals in large stadiums, arenas, and grandstands now require captioned messages.	
Group E fire alarms		907.2.3 The threshold for alarm systems in Group E occupancies has been increased such that a manual fire alarm is required where the occupant load exceeds 50, and an emergency voice/alarm communication (EVAC) system must only be provided for the occupant load exceeds 100. (2012 had dropped thresholds to 30)
Smoke detection and alarm systems in Group R-2 college buildings	907.2.9.3 A smoke detection system, tied into the occupant notification system, is now required in certain public and common spaces of Group R-2 college and university buildings, and the required smoke alarms within individual dwelling and sleeping units must be interconnected with the building's fire alarm and detection system.	907.2.3 The scope of the fire alarm provisions for Group R-2 college and university buildings has been revised to apply to facilities "operated by" the college or university whether owned by the school or not.
Smoke alarms near cooking appliances and bathrooms		907.2.11.3, 903.2.11.4 Requirements from the NFPA 72 standard addressing the installation of smoke alarms near cooking appliances and bathrooms have been introduced to the IBC in order to provide direct guidance on the placement of smoke alarms.
Wireless interconnection of smoke alarms	907.2.11.5 (907.2.11.3) The smoke alarm interconnection requirements are now applicable to Group I-1 occupancies and include allowances for use of wireless alarms.	
Smoke and heat removal		910 The format and technical requirements for smoke and heat removal systems have been revised, including a new allowance permitting a mechanical smoke removal system as an alternative to smoke and heat vents.
Carbon monoxide alarms	915 (908.7) In new and existing buildings, carbon monoxide (CO) alarms are now required in Group R and I occupancies with fuel-burning appliances or attached garages.	915 The carbon monoxide (CO) alarm provisions have been relocated, reformatted and revised; the scope has been modified to exclude Group I-3 occupancies while adding Group E occupancies.

2015 International Building Code –Transition from the 2009 IBC

Topic	2012	2015
Part 4 Means of Egress (Chapter 10)		
Cumulative occupant load		1004.1.1 The determination of the cumulative design occupant load for intervening spaces, adjacent levels and adjacent stories has been clarified.



Topic	2012	2015
Design occupant load – Areas without fixed seating	1004.1.2, Table 1004.1.2 An occupant load factor for museums and exhibit galleries has been established at 30 square feet per occupant.	

TABLE 1004.1.1 1004.1.2 Maximum Floor Area Allowances per Occupant

Function of Space	Occupant Load Factor ^a Floor Area In Sq. Ft. Per Occupant
Assembly	
Gaming floors (keno, slots, etc.)	11 gross
Exhibit gallery and museum	30 net
Mall buildings—covered and open	See Section 402.4.1

For SI: 1 square foot = 0.0929 m².
a. Floor area in square feet per occupant.

Note: (no changes to remainder of table)

Topic	2012	2015
Occupant load factors		Table 1004.1.2 The mercantile occupant load factor has been revised such that a single factor is now applicable regardless of the story on which the mercantile use is located.

TABLE 1004.1.2 Maximum Floor Area Allowances per Occupant

Function of Space	Occupant Load Factor ^a
Mercantile	60 gross
Areas on other floors	60 gross
Basement and grade floor areas	30 gross
Storage, stock, shipping areas	300 gross

For 1 square foot = 0.0929 m².

a. Floor area in square feet per occupant.

(Remaining portions of table not shown are unchanged)

Topic	2012	2015
Part 4 Means of Egress (Chapter 10). Continued		
Means of egress capacity determination	1005 Reduced exit width factors have been established for sprinklered building provided with an emergency voice/alarm communication (EVAC) system, and the exit width/capacity requirements are now presented in a more logical and organized layout.	
Means of egress , Numbers of exits and exit access doorways		1006, 1007 Provisions addressing the minimum required number of means of egress and their arrangement for rooms and space as well as stories have been reformatted and relocated. The means of egress requirements for rooms and spaces, along with those for stories, have been consolidated in Chapter 10. Section 1006 will address the number of means of egress required and Section 1007 will address the egress configuration (arrangement/separation).
Exits from dwelling units	Table 1006.3.2 (1021.2(1)) A new section clarifies when a single exit is permitted within or from an individual dwelling unit. Changes to Sec. 1021.2 and the tables will also provide a second option for compliance.	Note: Tables 1021.2(1) and 1021.2(2) in the 2012 code are now Tables 1006.3.2(1) and 1006.3.2(2) in 2015 code due to reformatting of Chapter 10
Spaces with one exit or exit access doorway		Table 1006.2.1 A new table combines the occupant load requirements from 2012 IBC Table 1015.1 along with the provisions for common path of egress travel from Section 1014.3 into a single location. <i>See next page for Table 1006.2.1.</i>

TABLE 1006.2.1 Spaces with One Exit or Exit Access Doorway

Maximum Common Path of Egress Travel Distance (feet)				
Occupancy	Maximum Occupant Load of Space	Without Sprinkler System (feet)		With Sprinkler System (feet)
		Occupant Load		
		OL ≤ 30	OL > 30	
A ^c , E, M	49	75	75	75 ^a
B	49	100	75	100 ^a
F	49	75	75	100 ^a
H-1, H-2, H-3	3	NP	NP	25 ^b
H-4, H-5	10	NP	NP	75 ^b
I-1, I-2 ^d , I-4	10	NP	NP	75 ^a
I-3	10	NP400	NP400	100 ^a
R-1	10	NP75	NP75	75 ^a
R-2	10	NP75	NP75	125 ^a
R-3 ^e	10	NP75	NP75	125 ^a
R-4 ^e	10	75	75	125 ^a
S ^f	29	100	75	100 ^a
U	49	100	75	75 ^a

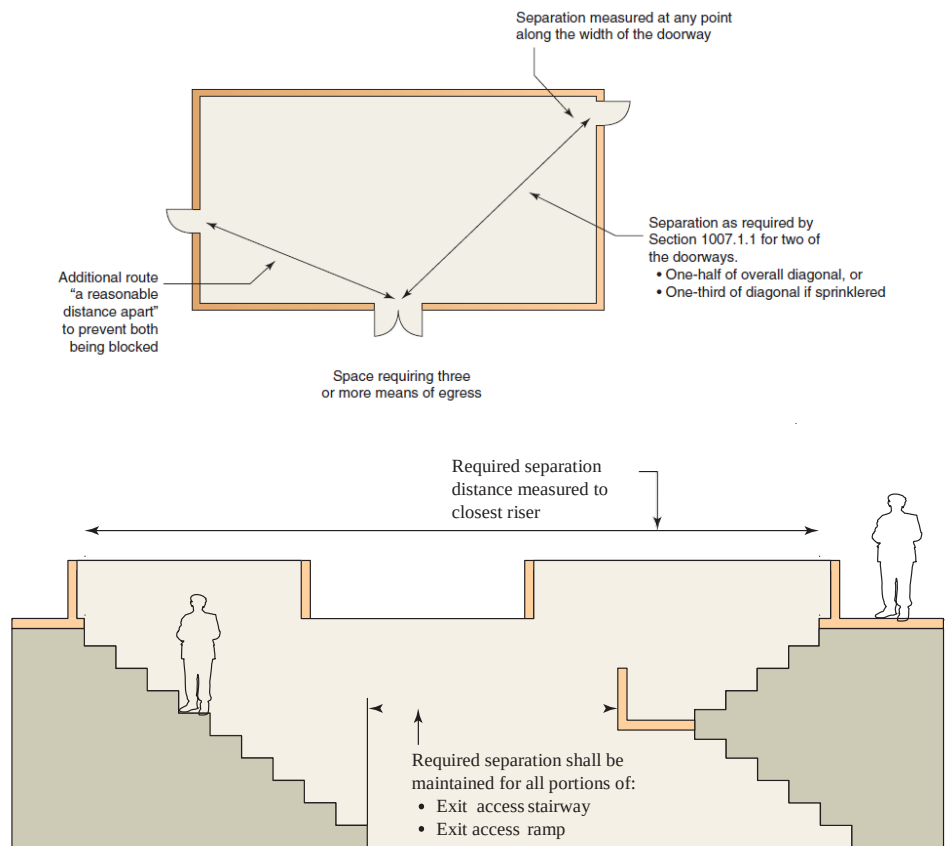
For SI: 1 foot = 304.8 mm.

NP = Not Permitted

- a. Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2. See Section 903 for occupancies where automatic sprinkler systems are permitted in accordance with Section 903.3.1.2.
- b. Group H occupancies equipped throughout with an automatic sprinkler system in accordance with Section 903.2.5.
- c. For a room or space used for assembly purposes having fixed seating, see Section 402.8.5 1029.8.
- d. For the travel distance limitations in Group I-2, see Section 407.4.
- e. The length of common path of egress travel distance in a Group R-3 occupancy located in a mixed occupancy building or within a Group R-3 or R-4 congregate living facility.
- f. The length of common path of egress travel distance in a Group S-2 open parking garage shall be not more than 100 feet.

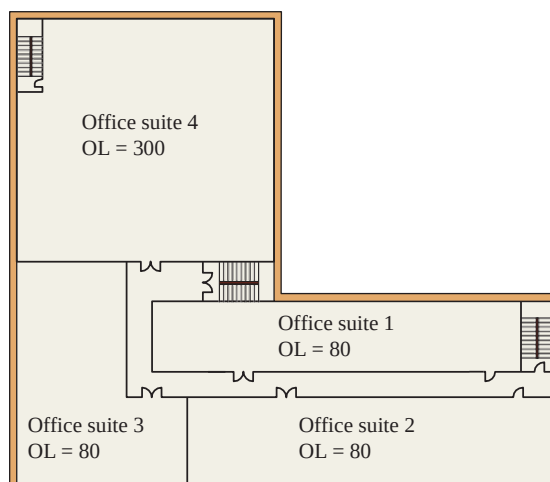
Topic	2012	2015
Part 4 Means of Egress (Chapter 10). Continued		
Exit and exit access doorway configuration		1007.1 Specific information is now provided regarding the point where exit separation is to be measured. In addition, where three or more means of egress are required, performance language has been included to ensure the egress paths are adequately separated.

2015 International Building Code –Transition from the 2009 IBC

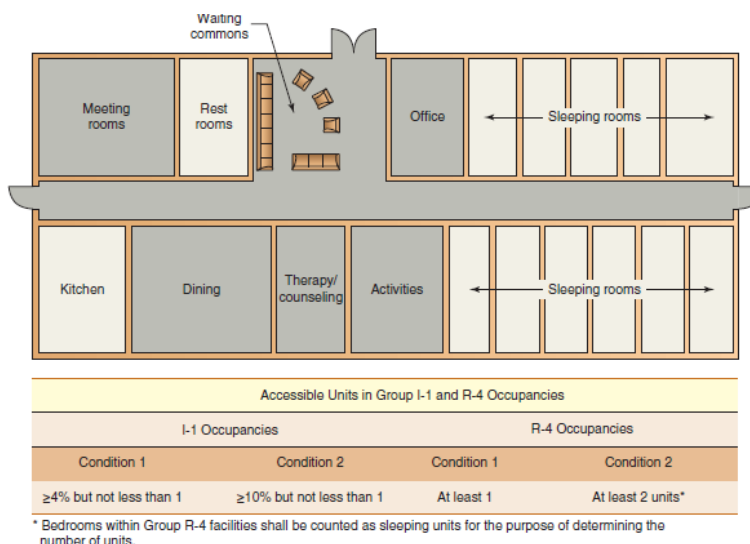


Topic	2012	2015
Door operations – Locking systems		1010.1.9 Numerous revisions throughout the locking provisions now help clarify requirements and their application through the use of consistent terminology.
Application of stairway provisions	1011.1 (1009.1) Stairway provisions have been clarified to apply to any stairway serving occupied portions of a building, including "convenience" stairways that are not a portion of a required means of egress or required means of egress stairways.	

Topic	2012	2015
Part 4 Means of Egress (Chapter 10). Continued		
Floor level exit signs in Group R-1	1013.2 (1011.2) Where general-use exit signs are required in R-1 occupancies, low-level exit signs must also be provided in the means of egress serving the guest rooms.	
Guards at operable windows	1015.1 (1013.1, 1013.8) The guard requirements for operable windows having a sill height more than 72 inches above the finished grade have been relocated from Chapter 14 to the general guard provisions of Chapter 10 and the minimum window sill height at which a guard is not required has been increased from 24 inches to 36 inches.	
Egress through intervening spaces		1016.2 A means of egress is now permitted through an elevator lobby provided access to at least one exit is available without passing through the lobby.
Travel distance increase for Groups F-1 and S-1		1017.2.2 An increased exit access travel distance is now permitted for Groups F-1 and S-1 occupancies where specific requirements are met
Aisles in Groups B and M		1018.3 The required width of aisles in Groups B and M occupancies is now consistent with the widths required for corridors and is no longer limited only to the capacity based on the occupant load served.
Exit access stairways and ramps	1019 (1009, 1010) Revisions have been made throughout the code to coordinate the provisions for unenclosed interior stairways and ramps (exit access stairways and ramps) that can be used as a portion of the means of egress. Relies on the distinction of “exit access” stair versus “exit” stair.	



Topic	2012	2015
Part 4 Means of Egress (Chapter 10). Continued		
Enclosure penetrations of interior exit stairways	1023.5 (1022.5) Penetrations of the outside membrane of a fire barrier utilized to enclose an interior exit stair or ramp are now permitted provided the penetration is properly protected.	
Separation of spaces under grandstands and bleachers	1029.1.1.1 (1028.1.1.1) Spaces beneath grandstands and bleachers are now required to be adequately separated to protect the assembly seating area from any potential hazards.	
Stepped aisle construction tolerances		1029.13.2.2.1 The variation allowed between adjacent risers within a stepped aisle is now limited.
Part 5 Accessibility (Chapter 11)		
Areas in places of religious worship		1103.2.8 Small areas used for religious ceremonies are now exempt from the access requirements.
Employee work areas	1104.3.1 Where an employee work area is less than 1,000 square feet in floor area, the common use circulation path need not meet the accessible route requirements.	
Multistory buildings and facilities, Accessible spaces and routes		1104.4 A distinction has been made between the requirements for access within a story and those with greater level changes, such as between stories or mezzanines.
		1107.3, 1107.4 The provisions for connecting all spaces within a building have been modified to clearly identify the distinction for those with a change of elevation between stories or mezzanines.
Group R – Accessible units		1107.6.1.1 The method by which multiple buildings on a site are reviewed when determining the required number of Accessible units has been revised to consider building size in addition to the total number of units on the site.



Topic	2012	2015
Part 5 Accessibility (Chapter 11)		
Captioning of public address announcements	1108.2.7.3 The captioning of audible public announcements is now only required for assembly spaces having a public address system and 15,000 or more seats.	
Accessible children's facilities	1109.2, 1109.5 Toilet facilities and drinking fountains "primarily for children's use" may now be installed at a lower height than generally permitted for accessible elements and considered as the required accessible elements.	
Recreational facilities		1110 More detailed scoping requirements for recreational facilities have been included within the new Section 1110 to coordinate with the ADA and provide the scoping for technical requirements found within Chapter 11 of the A 117.1 standard.
Part 6 Building Envelope, Structural Systems, and Construction Materials (Chapters 12 through 26)		
Toilet and bathroom requirements	1210 The water closet compartment and urinal partition requirements have been from Chapter 29 to Section 1210.	
Vapor retarders		1405.3 The required types and locations appropriate for each class of vapor retarder have been revised to also indicate where certain vapor retarders are not allowed to be installed.
Roof gardens and landscaped roofs, Roof loads	1507.16 The IBC now provides a reference to a new IFC provisions on roof gardens and landscaped roofs as a means of controlling the potential hazards these combustible materials on the roof could create.	
Photovoltaic systems	1507.17, 3111, 202 Photovoltaic elements (modules/shingles or systems) must now meet the general code requirements for roofing materials and roof top structures.	
Rooftop structures	1510 (1509), 202 In addition to several technical changes, the provisions addressing rooftop structures have been reformatted to better organize and clarify the requirements.	
Construction documents, Special loads		1603 Two additional items related to snow load drifting are now required to be identified on the construction documents.
		1603.1.8 The dead load of any rooftop-mounted photovoltaic (PV) solar panels must now be identified on the construction documents.

Topic	2012	2015
Part 6 Building Envelope, Structural Systems, and Construction Materials (Chapters 12 through 26), Continued		
Risk category	1604.5 The term “Occupancy category” has been changed to “risk category” to better reflect the intended meaning and to coordinate with the terminology used in ASCE 7-10.	
		1604.5 In the application of assigning the appropriate risk category for a structure, Section 1604.5 has been revised to clarify that where standards referred to ASCE 7 Table 1.5-1, IBC Table 1604.5 should be used instead. In addition, descriptions for Risk Category III structures have been revised to include occupancy classifications to help clarify the intent.
Minimum Live loads	1607.1 The live loads established in IBC Section 1607 and Table 1607.1 have been modified and updated in order to coordinate with the live loads of Chapter 4 and Table 4-1 in ASCE 7-10.	

2012 CODE:

TABLE 1607.1 Minimum Uniformly Distributed Live Loads, L_o , and Minimum Concentrated Live Loads⁸

Occupancy or Use	Uniform (psf)	Concentrated (lb)
3. Armories and drill rooms	150 ^m	—
4. Assembly areas and theaters		
Fixed seats (fastened to floor)	60 ^m	
Follow spot, projections, and control rooms	50	
Lobbies	100 ^m	
Movable seats	100 ^m	—
Stages and floors	125 150 ^m	
Platforms (assembly)	125 100	
Other assembly areas	100 ^m	
5. Balconies (exterior) and decks ^b	Same as occupancy served	
6. Bowling alleys	75	—
7. 6. Catwalks	40	300
9. 8. Corridors, except as otherwise indicated		
First floor	100	
Other floors	Same as occupancy served except as indicated	—
10. Dance halls and ballrooms	100	—
11. 9. Dining rooms and restaurants	100 ^m	—
13. 11. Elevator machine room grating (on area of 4-in ² 2 inches by 2 inches)	—	300
14. 12. Finish light floor plate construction (on area of 1-in ² 1 inch by 1 inch)	—	200
16. 14. Garages (passenger vehicles only) Trucks and buses	40 ^m	Note a
		See Section 1607.7

Table 1607.1 continues

Table 1607.1 continued

Occupancy or Use	Uniform (psf)	Concentrated (lb)
17. Grandstands (see stadium and arena bleachers)	—	—
18. Gymnasiums, main floors and balconies	100	—
19. 15. Handrails, guards and grab bars	See Section 1607.8	
16. Helipads	See Section 1607.6	
22 19. Libraries		
Corridors above first floor	80	1000
Reading rooms	60	1000
Stack rooms	150 ^{b, m}	1000
23 20. Manufacturing		
Heavy	250 ^m	3000
Light	125 ^m	2000
24. Recreational uses:		
Bowling alleys, poolrooms, and similar uses	75 ^m	
Dance halls and ballrooms	100 ^m	
Gymnasiums	100 ^m	
Reviewing stands, grandstands, and bleachers	100 ^{c, m}	
Stadiums and arenas with fixed seats (fastened to floor)	60 ^{c, m}	
27. 25. Residential:		
One- and two-family dwellings		
Uninhabitable attics without storage ⁱ	10	
Uninhabitable attics with limited storage ^{i, j, k}	20	
Habitable attics and sleeping areas ^k	30	—
All other areas	40	
Hotels and multiple-family dwellings		
Private rooms and corridors serving them	40	
Public rooms ^m and corridors serving them	100	
28. Reviewing stands, grandstands and bleachers		Note c
29. 26. Roofs:		
All roof surfaces subject to maintenance workers		300
Awnings and canopies:		
Fabric construction supported by a lightweight rigid skeleton structure	5 Nonreducible	
All other construction	20	
Ordinary flat, pitched, and curved roofs (that are not occupiable)	20	
Where primary roof members, are exposed to a work floor, at single panel points of lower chord of roof trusses, or any point along primary structural members supporting roofs:		
Over manufacturing, storage warehouses, and repair garages		2000
All other occupancies primary roof members		300
Roofs used for other special purposes	Note 1	Note 1
Roofs used for promenade purposes	60	
Roofs used for roof gardens or assembly purposes	100	

2015 International Building Code –Transition from the 2009 IBC

Occupancy or Use	Uniform (psf)	Concentrated (lb)
<u>Occupiable roofs:</u>		
Roof gardens	100	
Assembly areas	100 ^m	
All other similar areas	Note l	Note l
32: 29. Sidewalks, vehicular driveways, and yards, subject to trucking	250 ^{d,m}	8000 ^e
33: Skating rinks	100	—
34: Stadiums and arenas		
Bleachers	100 ^o	—
Fixed seats (fastened to floor)	60 ^c	
35: 30. Stairs and exits		Note f
One- and two-family dwellings	40	300 ⁱ
All other	100	300 ⁱ
36: 31. Storage warehouses (shall be designed for heavier loads if required for anticipated storage)		
Heavy	250 ^m	—
Light	125 ^m	
37: 32. Stores		
Retail		
First floor	100	1000
Upper floors	75	1000
Wholesale, all floors	125 ^m	1000
38: 33. Vehicle barriers systems	See Section 1607.8.3	
40: 35. Yards and terraces, pedestrian	100 ^m	—

(Portions of table not shown are unchanged)

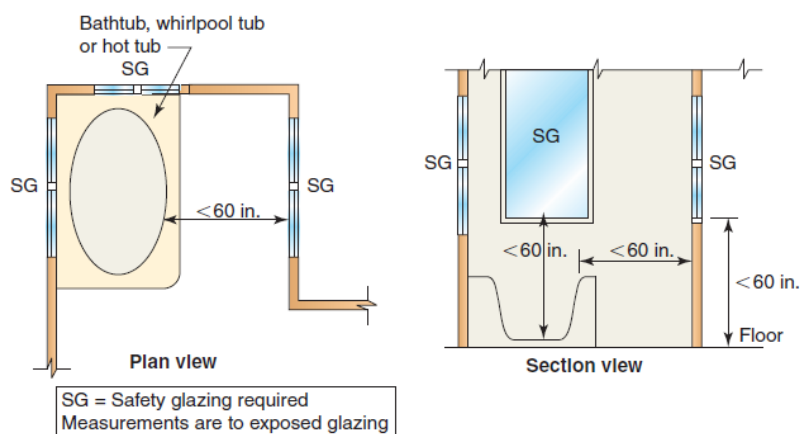
- f. The minimum concentrated load on stair treads (shall be applied on an area of 4 square 2 inches by 2 inches) is 300 pounds. This load need not be assumed to act concurrently with the uniform load.
- g. Where snow loads occur that are in excess of the design conditions, the structure shall be designed to support the loads due to the increased loads caused by drift buildup or a greater snow design determined by the building official (see Section 1608). For special-purpose roofs, see Section 1607.11.2.2.
- i. Uninhabitable attics without storage are those where the maximum clear height between the joists and rafters is less than 42 inches, or where there are not two or more adjacent trusses with web configurations capable of accommodating an assumed rectangle 42 inches in height by 24 inches in width, or greater, within the plane of the trusses. For attics without storage, this live load need not be assumed to act concurrently with any other live load requirements.
- j. For attics with limited storage and constructed with trusses, this live load need only be applied to those portions of the bottom chord. Uninhabitable attics with storage are those where the maximum clear height between the joists and rafters is 42 inches or greater, or where there are two or more adjacent trusses with the same web configurations capable of containing accommodating an assumed rectangle 42 inches high in height by 24 inches wide in width, or greater, located within the plane of the trusses.
- The rectangle shall fit between the top of the bottom chord and the bottom of any other truss member, provided that each of the following criteria is met: The live load need only be applied to those portions of the joists or truss bottom chords where both of the following conditions are met:
- The attic area is accessible by a pull-down stairway or framed opening in accordance with Section 1209.2, from an opening not less than 20 inches in width by 30 inches in length that is located where the clear height in the attic is a minimum of 30 inches; and
 - The slopes of the joists or truss shall have a bottom chord; pitch less than 2:12 are no greater than 2 units vertical to 12 units horizontal.
- iii. Bottom chords of trusses shall be designed for the greater of actual imposed dead load or 10 psf, uniformly distributed over the entire span. The remaining portions of the joists or bottom chords shall be designed for a uniformly distributed concurrent live load of not less than 10 lb/ft².
- k. Attic spaces served by a fixed stair stairways other than pull-down type shall be designed to support the minimum live load specified for habitable attics and sleeping rooms.
- l. Roofs used for other special purposes. Areas of occupiable roofs, other than roof gardens and assembly areas, shall be designed for appropriate loads as approved by the building official. Unoccupied landscaped areas of roofs shall be designed in accordance with Section 1607.12.3.
- m. Live load reduction is not permitted unless specific exceptions of Section 1607.10 apply.

(Footnotes not shown are unchanged)

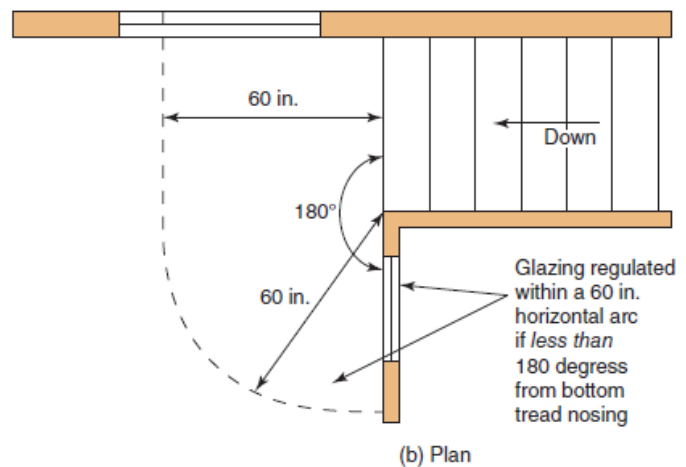
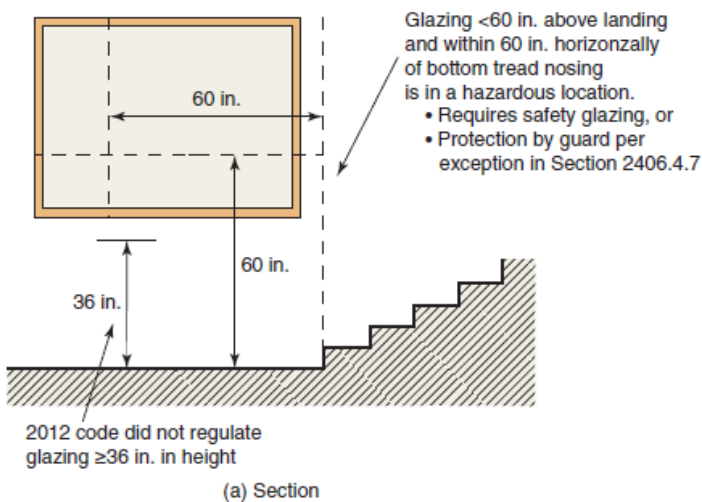
Topic	2012	2015
Part 6 Building Envelope, Structural Systems, and Construction Materials (Chapters 12 through 26), Continued		
Photovoltaic panel systems, Ballasted photovoltaic panel systems		1607.12.5 Design requirements for roof structures supporting photovoltaic (PV) solar panels and modules have been added to Section 1607.
		1613.6 Seismic requirements for ballasted roof-mounted photovoltaic (PV) solar panels have been added to section 1613.6.
Determination of wind loads	1609, 202 The wind design requirements of Section 1609 have been updated and coordinated with the latest wind load provisions in ASCE/SEI 7 (ASCE 7-10) and the wind load maps in the IBC are now based on ultimate design wind speeds, V_{ult} , which produce a strength level wind load similar to seismic load effects.	
Mapped acceleration parameters	1613.3.1, 202 The IBC seismic ground motion maps have been updated to reflect the 2008 maps developed by the United States Geological Survey (USGS) National Seismic Hazard Mapping Project and the technical changes adopted for the 2009 <i>NEHRP Recommended Seismic Provisions for New Buildings and Other Structures</i> (FEMA P750).	1613.3.1 The U.S. Geological Survey (USGS) recently developed seismic hazard and Risk-Targeted Maximum Considered Earthquake (MCER) ground motion maps for Guam and American Samoa, which have now been included in the IBC.
Statement of special inspections	1704.3 The provisions requiring specific items to have special inspection and what information is required to be included in the statement of special inspections have been clarified and coordinated, with previous conflicts between the two being resolved.	
Submittals to the building official		1704.5 Requirements for submittal of reports and certificates related to construction that is subject to special inspections and tests are now clearly specified.

Topic	2012	2015
Part 6 Building Envelope, Structural Systems, and Construction Materials (Chapters 12 through 26), Continued		
Special inspections	1705 Special inspection requirements for structural steel have been deleted from Chapter 17 because the new standard for structural steel buildings (ANSI/AISC 360-10) includes quality assurance provisions. Requirements pertaining to special inspection of masonry construction were deleted from Chapter 17 because the 2011 edition of TMS 402/ACI 530/ASCE 5 and TMS 602/ACI 530.1/ASCE 6 includes requirements for quality assurance of masonry construction.	1705 Steel construction provisions modified to use new terminology that coordinates with Chapter 22 and AISC 360 standard. A new SDI standard addresses inspection of cold-formed steel floor and roof decks (SDI QA/QC) (Section 1705.2) Special inspections required during installation of open web steel joists and joist girders. (Section 1705.2.3) Special inspection of cast-in-place anchors in concrete where allowable loads have been increased or strength design is used have been deleted from Table 1705.3 since specific requirements for design and installation of adhesive anchors is now included in ACI 318. Continuous special inspection is added for these anchors installed horizontally or in upwardly inclined orientations with sustained loads. (Table 1705.3) Periodic special inspection of cold-formed steel special bolted moment frames (CFS-SBMFs) is now mandated. Modifications to the special inspection requirements for seismic resistance have been made to clarify the intent. (Section 1705.12)
	1705.17 (1705.16) Where penetration firestop systems and fire-resistant joint systems are used in high-rise buildings and those building assigned to Risk Category III and IV, it is now mandatory that they be inspected by an approved inspection agency as a part of the special inspection process.	
Structural items moved from code to standards	Chapter 19 Numerous provisions related to concrete construction were deleted from Chapter 19 because they are contained in the 2011 edition of ACI 318. <i>Building Code Requirements for Structural Concrete and Commentary</i>. (e.g. IBC Sections 1905, 1906, and 1907 were deleted because they only provided referencing to the corresponding sections in the ACI 318 standard.)	1901.3 Anchoring to concrete Sections 1908 and 1909 of the 2012 IBC, which contain the requirements for anchorage to concrete, have been deleted because they are obsolete and not consistent with current referenced standards. In their place, no provisions on anchoring to concrete have been added to the general provisions found in Section 1901. 1904 Durability requirements The durability requirements for structural concrete have been deleted from the IBC and replaced by a reference to the durability provisions in ACI 318. 2101.2 Masonry Design Methods The references in Chapter 21 to specific sections in the Masonry Standards Joint Committee (MSJC) code have been deleted because the 2013 edition of TMS 402/ACI 530/ASCE 5 has been substantially reorganized to be more user-friendly. The charging language of Section 2101.2 has been modified to simply reference TMS 402/ACI 530/ASCE 5 or TMS 403 for the design and construction of masonry structures.

Topic	2012	2015
Part 6 Building Envelope, Structural Systems, and Construction Materials (Chapters 12 through 26), Continued		
Structural items moved from code to standards, <i>Continued</i>		2103 Masonry Construction Materials Masonry material provisions that have historically been found in Section 2103 have been deleted because they are contained in the MSJC Specification TMS 602/ACI 530.1/ASCE 6. 2104 Masonry Construction Many masonry construction provisions previously found in Section 2104 that are contained in the MSJC Specification TMS 602/ACI 530.1/ASCE 6 have been deleted and replaced with references to the specification. 2105 Quality Assurance Provisions for the quality assurance of masonry structures and related definitions have been deleted from Section 2106 and replaced with a reference to the MSJC Specification TMS 602/ACI 530.1/ASCE 6 and the special inspection and testing requirements contained in Chapter 17.
Conventional light-frame construction		2308 Section 2308, which contains prescriptive requirements for conventional wood frame construction, has been reformatted and reorganized in its entirety. Significant changes include the introduction of new designations for wall bracing method similar to those in the IRC as shown in Table 2308.6.3(1), and reformatted wall bracing requirements set forth in Table 2308.6.1.
Roof and ceiling framing		2308.7 Ceiling joist and rafter span tables from the IRC have been incorporated into the conventional construction provisions of the IBC.
Safety glazing – hazardous locations	2406.1, 2406.4 The hazardous locations identified in the safety glazing provisions have been reorganized and clarified in order to provide better consistency between the IBC and IRC.	



Topic	2012	2015
Part 6 Building Envelope, Structural Systems, and Construction Materials (Chapters 12 through 26), Continued		
Safety glazing – impact test	2406.2 The default impact test criteria have been revised to impose the more restrictive test methodology. The higher impact requirements will apply unless the tables in Section 2406.2 allow for a lower impact test to be used.	
Safety glazing adjacent to bottom stair landing		2406.4.7 The height criteria for regulating glazing at the landing at the bottom of a stair has been revised and the method for measuring the horizontal distance has been clarified, now generally requiring safety glazing if located less than 60 inches above the bottom landing of the stair.



Topic	2012	2015
Water-resistive barriers for stucco applications	2510.6 In order to reduce the likelihood of moisture getting into the building, detailed requirements have been provided for the installation of the two layers of weather-resistive barriers that are required behind stucco-covered exterior walls.	
Foam plastic insulation installed in floor assemblies	2603.4.1.14 The use of 1/2-inch wood structural panels installed on the walking surface side of a floor assembly is now permitted as an alternative to the thermal barrier typically required where foam plastic insulation is installed within a floor assembly.	
Special approval of foam plastics	2603.9 (2603.10, 2603.10.1) The specific approval requirements now ensure that the smoke development of all assemblies that contain foam plastic is evaluated regardless of the test standard used.	
Plastic composites		2612 New definitions and applicable test standards now address the use of plastic composites for use as exterior deck boards, stair treads, handrails and guards.

Topic	2012	2015
Part 7 Building Services, Special Devices, and Special Conditions (Chapters 27 through 34)		
Single-user toilet facilities	2902.2 Where separate sex toilet facilities are required and only one water closet is required in each facility, two family or assisted-use toilet rooms may now be provided as an acceptable alternative.	
Toilet facilities in parking garages	2902.3 Public toilet facilities are no longer required in open and enclosed parking garages and employee toilet facilities are not required in those garages that do not have parking attendants.	
Public toilet facilities		2902.3 Limited-size quick-service tenant spaces are no longer required to provide toilet facilities for the public customers.
Elevator hoistway venting		3004 The elevator hoistway venting provisions of Section 3004 have been deleted; such hoistways are no longer required to be vented to the exterior.
Elevator lobbies and hoistway opening protection		3006 The elevator lobby requirements have been relocated from Section 713.14.1, where they were previously included with the general shaft enclosure requirements, to Chapter 30, which addresses elevators. Provisions now focus on hoistway opening protection, with lobbies being one of three options (enclosed lobbies, additional door, or hoistway pressurization).
Fire service access elevators, Occupant evacuation elevators	3007 Many of the provisions addressing fire service access elevators have now been coordinated with those applicable to occupant evacuation elevators to ensure that the fire service access elevators are able to continue to function and serve their intended purpose during an emergency. 3008 The provisions addressing occupant evacuation elevators are now more closely coordinated with those regulating fire service access elevators	
Existing structures		Chapter 34 Chapter 34 has been deleted from the IBC in its entirety, and existing buildings will now be solely regulated by the <i>International Existing Building Code</i> (IEBC).
Type B units in existing buildings	IEBC 410 (3411) Type B units are now required in existing buildings when there is a change of occupancy or an alteration and more than 50 percent of the building is affected. Note: Because the 2015 IBC deleted Chapter 34, this provision is no longer found within the IBC. However, this requirement is located in the IEBC which is adopted by reference in IBC Section 101.4.7. In addition, because this requirement is more restrictive than the requirements of the federal Fair Housing Act, it is important code users are aware of this change.	

2015 International Building Code –Transition from the 2009 IBC

Notes:

INTERNATIONAL RESIDENTIAL CODE - City of Lake Dallas, Texas 2017-2018

International Residential Code Adopted

The 2015 International Residential Code which is on file in the office of the Building Official is hereby adopted and designated as the Residential Code of the City of Lake Dallas, to the same extent as if such code was copied verbatim, subject to the deletions, amendments and additions prescribed by this ordinance.

Adoption of the NCTCOG Recommended Amendments to the 2015 International Residential Code

The 2015 International Residential Code is hereby amended as recommended by the North Central Texas Council of Governments ("NCTCOG"), which amendments are incorporated herein by reference and on file in the office of the Building Official of the City of Lake Dallas.

Recommended Amendments to the 2015 International Residential Code

North Central Texas Council of Governments Region

The following sections, paragraphs, and sentences of the *2012 International Residential Code* are hereby amended as follows: Standard type is text from the IRC. Underlined type is text inserted. ~~Lined through type is deleted text from IRC.~~ A double asterisk (**) at the beginning of a section identifies an amendment carried over from the 2012 edition of the code and a triple asterisk (***) identifies a new or revised amendment with the 2015 code.

In 2009, the State Legislature enacted SB 1410 prohibiting cities from enacting fire sprinkler mandates in residential dwellings. However, jurisdictions with ordinances that required sprinklers for residential dwellings prior to and enforced before January 1, 2009, may remain in place. Reference; Section R313 Automatic Fire Sprinkler Systems.

The energy provisions in Chapter 11 of the International Residential Code (IRC) mirror the requirements of the International Energy Conservation Code (IECC). IRC Chapter 11 is deleted in its entirety.
Reference the 2015 IECC for energy code provisions and recommended amendments.

****Section R102.4; change to read as follows:**

R102.4 Referenced codes and standards. The codes, when specifically adopted, and standards referenced in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference and as further regulated in Sections R102.4.1 and R102.4.2. Whenever amendments have been adopted to the referenced codes and standards, each reference to said code and standard shall be considered to reference the amendments as well. Any reference made to NFPA 70 or the Electrical Code shall mean the *Electrical Code* as adopted.

(Reason: Legal wording to recognize locally adopted codes and amendments adopted with referenced codes. Note: the former ICC Electrical Code is now Appendix K of the IBC, but no longer called by that name. If adopting in that location, be sure to include language that includes structures under IRC and IBC.)

****Section R104.10.1 Flood Hazard areas; delete this section.**

(Reason: Flood hazard ordinances may be administered by other departments within the city.)

****Section R105.3.1.1& R106.1.4; Delete these sections.**

(Reason: Floodplain provisions are addressed locally.)

****Section R110 (R110.1 through R110.5); delete the section.**

(Reason: Issuing CO's for residences is not a common practice in the area.)

****Section R202; change definition of "Townhouse" to read as follows:**

TOWNHOUSE. A single-family dwelling unit constructed in a group of three or more attached units separated by property lines in which each unit extends from foundation to roof and with a *yard* or *public* way on at least two sides.

(Reason: To distinguish Townhouses on separate lots.)

****Table R301.2 (1); fill in as follows:**

GROUND SNOW LOAD	WIND DESIGN				SEISMIC DESIGN CATEGORY ^f	SUBJECT TO DAMAGE FROM			WINTER DESIGN TEMP ^e	ICE BARRIER UNDER- LAYMENT ^h	FLOOD HAZARDS ^g	AIR FREEZING INDEX ⁱ	MEAN ANNUAL TEMP ^j
	SPEED ^d (MPH)	Topographic Effects ^k	Special Wind Region ^L	Windborne Debris Zone ^m		Weathering ^a	Frost Line Depth ^b	Termite ^c					
5 lb/ft	115 (3 sec- gust)/ 76 fastest mile	No	No	No	A	Moderate	6"	Very Heavy	22° F	No	Local Code	150	64.9° F

(Reason: To promote regional uniformity.)

****Section R302.1; add exception #6 to read as follows:**

Exceptions: {previous exceptions unchanged}

6. Open non-combustible carport structures may be constructed when also approved within adopted ordinances.

(Reason: Refers to other ordinances, such as zoning ordinances.)

****Section R302.3; add Exception #3 to read as follows:**

Exceptions:

1. {existing text unchanged}
2. {existing text unchanged}
3. Two-family dwelling units that are also divided by a property line through the structure shall be separated as required for townhouses.

(Reason: Provide guidance for a common construction method in this area. Correlates with amendment to IRC Section R202 Townhouse definition.)

*****Section R302.5.1; change to read as follows:**

R302.5.1 Opening protection. Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage and residence shall be equipped with solid wood doors not less than 13/8 inches (35 mm) in thickness, solid or honeycomb core steel doors not less than 13/8 inches (35 mm) thick, or 20-minute fire-rated doors ~~equipped with a self-closing device~~.

(Reason: Absence of data linking self-closing devices to increased safety. Self-closing devices often fail to close the door entirely.)

****Section R303.3, Exception; amend to read as follows:**

Exception: {existing text unchanged} Exhaust air from the space shall be exhaust out to the outdoors unless the space contains only a water closet, a lavatory, or water closet and a lavatory may be ventilated with an approved mechanical recirculating fan or similar device designed to remove odors from the air.

(Reason: Consistent with common local practice as recirculating fans are recognized as acceptable air movement.)

Section R313 Automatic Fire Sprinkler Systems. Delete subsections in their entirety.

(Reason: In 2009, the State Legislature enacted SB 1410 prohibiting cities from enacting fire sprinkler mandates in residential dwellings. However, jurisdictions with ordinances that required sprinklers for residential dwellings prior to and enforced before January 1, 2009, may remain in place.)

*****Section R315.2.2 Alterations, repairs and additions. Amend to read as follows:**

Exception:

2. Installation, alteration or repairs of electrical powered {remaining text unchanged}

(Reason: Code intent is to protect against the products of combustion.)

****Section R322 Flood Resistant Construction. Deleted Section.**

(Reason: Floodplain hazard ordinances may be administered by other departments within the city.)

*****Section R326 Swimming Pools, Spas and Hot Tubs. Amended to read as follows:**

R326.1 General. The design and construction of pools and spas shall comply with the ~~International Swimming Pool and Spa Code~~ **2015 IRC Appendix O. Swimming Pools, Spas and Hot Tubs.**

(Reason: New Pool and Spa code not under review. In lieu of adoption of new pool code, previous edition of 2012 Appendix G is proposed for continued use but renamed 2015 Appendix Q.)

****Section R401.2, amended by adding a new paragraph following the existing paragraph to read as follows.**

Section R401.2. Requirements. {existing text unchanged} ...

Every foundation and/or footing, or any size addition to an existing post-tension foundation, regulated by this code shall be designed and sealed by a Texas-registered engineer.

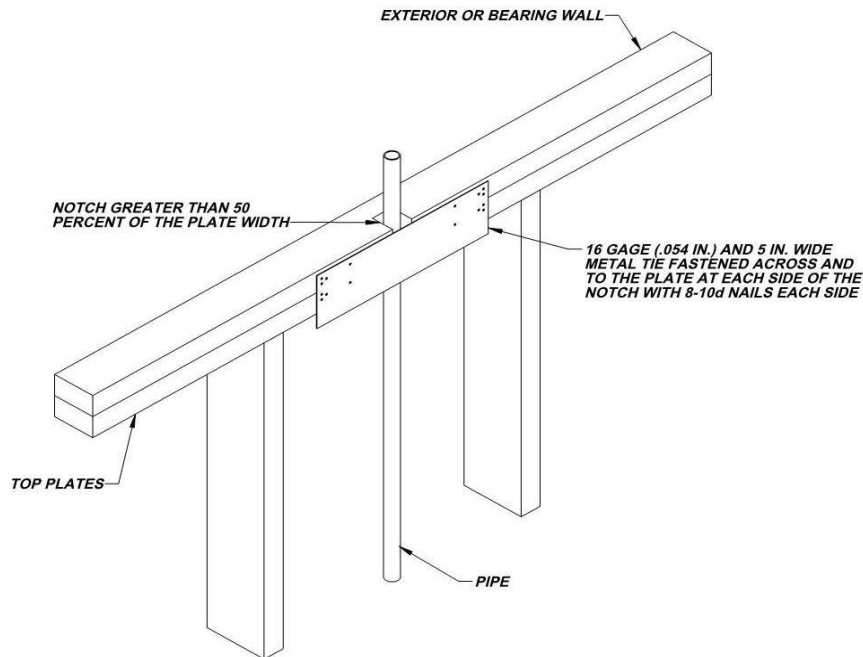
(Amendment to 2012 IRC carried forward to 2015 IRC.)

****Section R602.6.1; amend the following:**

R602.6.1 Drilling and notching of top plate. When piping or ductwork is placed in or partly in an exterior wall or interior load-bearing wall, necessitating cutting, drilling or notching of the top plate by more than 50 percent of its width, a galvanized metal tie not less than 0.054 inch thick (1.37 mm) (16 Ga) and ~~± ½ inches (38 mm)~~ **5 inches (127 mm)** wide shall be fastened across and to the plate at each side of the opening with not less than eight 10d (0.148 inch diameter) having a minimum length of 1 ½ inches (38 mm) at each side or equivalent. Fasteners will be offset to prevent splitting of the top plate material. The metal tie must extend a minimum of 6 inches past the opening. See figure R602.6.1. {remainder unchanged}

(Amendment to 2012 IRC carried forward to 2015 IRC.)

****Figure R602.6.1; delete the figure and insert the following figure:**



(Amendment to 2012 IRC carried forward to 2015 IRC also provides additional assurance of maintaining the integrity of the framing by spreading the nailing pattern.)

****Section R703.8.4.1; add a second paragraph to read as follows:**

In stud framed exterior walls, all ties shall be anchored to studs as follows:

1. When studs are 16 in (407 mm) o.c., stud ties shall be spaced no further apart than 24 in (737 mm) vertically starting approximately 12 in (381 mm) from the foundation; or
2. When studs are 24 in (610 mm) o.c., stud ties shall be spaced no further apart than 16 in (483 mm) vertically starting approximately 8 in (254 mm) from the foundation.

(Reason: (Amendment to 2012 IRC carried forward to 2015 IRC. Provide easy to install and inspect dimensions to clarify how to anchor and to distinguish "studs" from other types of construction.)

****Section R902.1; Amend and add exception #3 to read as follows:**

R902.1 Roofing covering materials. Roofs shall be covered with materials as set forth in Sections R904 and R905. Class A, B, or C roofing shall be installed ~~in areas designated by law as requiring their use or when the edge of the roof is less than 3 feet from a lot line.~~ {remainder unchanged}

Exceptions:

1. {text unchanged}
2. {text unchanged}
3. {text unchanged}
4. {text unchanged}
5. Non-classified roof coverings shall be permitted on one-story detached accessory structures used as tool and storage sheds, playhouses and similar uses, provided the floor area does not exceed (area defined by jurisdiction).

(Reason: to address accessory structures Group U exempt from permits per Section R105.2)

***** Chapter 11 [RE] – Energy Efficiency is deleted in its entirety and replaced with the following:**

N1101.1 Scope. This chapter regulates the energy efficiency for the design and construction of buildings regulated by this code.

N1101.2 Compliance. Compliance shall be demonstrated by meeting the requirements of the residential provisions of 2015 International Energy Conservation Code.

(Reason: The text of the residential provisions of the 2015 IRC is extracted from the 2015 edition of the International Energy Conservation Code—Residential Provisions and has been editorially revised to conform to the scope and application of this code. The section numbers appearing in parenthesis after each section number are the section numbers of the corresponding text in the International Energy Conservation Code—Residential Provisions. This approach simply minimizes the number of amendments to the IRC)

****Section M1305.1.3; change to read as follows:**

M1305.1.3 Appliances in attics. Attics containing appliances shall be provided . . . {bulk of paragraph unchanged} . . . sides of the appliance where access is required. The clear access opening dimensions shall be a minimum of 20 inches by 30 inches (508 mm by 762 mm), or larger and large enough to allow removal of the largest appliance. A walkway to an appliance shall be rated as a floor as approved by the building official. As a minimum, for access to the attic space, provide one of the following:

1. A permanent stair.
2. A pull down stair with a minimum 300 lb (136 kg) capacity.
3. An access door from an upper floor level.

Exceptions:

1. The passageway and level service space are not required where the appliance can be serviced and removed through the required opening.
2. Where the passageway is unobstructed...{remaining text unchanged}

(Reason: To provide a safe means of accessibility to appliances in attics and to allow for different types of construction limitations. Consistent with regional amendment to IFGC and IMC 306.3.)

****Section M1411.3; change to read as follows:**

M1411.3 Condensate disposal. Condensate from all cooling coils or evaporators shall be conveyed from the drain pan outlet to ~~an approved place of disposal~~ a sanitary sewer through a trap, by means of a direct or indirect drain. {remaining text unchanged}

(Reason: Reflects regional practice and to reduce excessive runoff into storm drains.)

****Section M1411.3.1, Items 3 and 4; add text to read as follows:**

M1411.3.1 Auxiliary and secondary drain systems. {bulk of paragraph unchanged}

1. {text unchanged}
2. {text unchanged}
3. An auxiliary drain pan... {bulk of text unchanged}... with Item 1 of this section. A water level detection device may be installed only with prior approval of the building official.
4. A water level detection device... {bulk of text unchanged}... overflow rim of such pan. A water level detection device may be installed only with prior approval of the building official.

(Reason: Reflects standard practice in this area.)

****Section M1411.3.1.1; add text to read as follows:**

M1411.3.1.1 Water-level monitoring devices. On down-flow units ...*{bulk of text unchanged}*... installed in the drain line. A water level detection device may be installed only with prior approval of the *building official*.

(Reason: Reflects standard practice in this area.)

****M1503.4 Makeup Air Required Amend and add exception as follows:**

M1503.4 Makeup air required. Exhaust hood systems capable of exhausting in excess of 400 cubic feet per minute (0.19 m3/s) shall be provided with makeup air at a rate approximately equal to the difference between the exhaust air rate and 400 cubic feet per minute. Such makeup air systems shall be equipped with a means of closure and shall be automatically controlled to start and operate simultaneously with the exhaust system.

Exception: Where all appliances in the house are of sealed combustion, power-vent, unvented, or electric, the exhaust hood system shall be permitted to exhaust up to 600 cubic feet per minute (0.28 m3/s) without providing makeup air. Exhaust hood systems capable of exhausting in excess of 600 cubic feet per minute (0.28 m3/s) shall be provided with a makeup air at a rate approximately equal to the difference between the exhaust air rate and 600 cubic feet per minute.

(Reason: Exception requires makeup air equaling the amount above and beyond 400 cfm for larger fan which will address concerns related to "fresh" air from the outdoors in hot humid climates creating a burden on HVAC equipment and negative efficiency impacts from back-drafting and wasted energy.)

****Section M2005.2; change to read as follows:**

M2005.2 Prohibited locations. Fuel-fired water heaters shall not be installed in a room used as a storage closet. Water heaters located in a bedroom or bathroom shall be installed in a sealed enclosure so that *combustion air* will not be taken from the living space. Access to such enclosure may be from the bedroom or bathroom when through a solid door, weather-stripped in accordance with the exterior door air leakage requirements of the *International Energy Conservation Code* and equipped with an *approved* self-closing device. Installation of direct-vent water heaters within an enclosure is not required

(Reason: Corresponds with the provisions of IFGC Section 303, exception #5.)

****Section G2408.3 (305.5); delete.**

(Reason: This provision does not reflect standard practice in this area.)

****Section G2415.2.1 (404.2.1); add a second paragraph to read as follows:**

Both ends of each section of medium pressure gas piping shall identify its operating gas pressure with an *approved* tag. The tags are to be composed of aluminum or stainless steel and the following wording shall be stamped into the tag:

"WARNING: 1/2 to 5 psi gas pressure - Do Not Remove"

(Reason: To protect homeowners and plumbers.)

****Section G2415.2.2 (404.2.2); add an exception to read as follows:**

Exception: Corrugated stainless steel tubing (CSST) shall be a minimum of 1/2" (18 EDH).

(Reason: Pipe less than 1/2" has a history in this region of causing whistling.)

****Section G2415.12 (404.12); change to read as follows:**

G2415.12 (404.12) Minimum burial depth. Underground *piping* systems shall be installed a minimum depth of ~~12 inches (305 mm)~~ 18 inches (457 mm) below grade, ~~except as provided for in Section G2415.12.1.~~

(Reason: To provide increased protection to piping systems.)

****Section G2417.1 (406.1); change to read as follows:**

G2417.1 (406.1) General. Prior to acceptance and initial operation, all *piping* installations shall be inspected and pressure tested to determine that the materials, design, fabrication, and installation practices comply with the requirements of this code. The permit holder shall make the applicable tests prescribed in Sections 2417.1.1 through 2417.1.5 to determine compliance with the provisions of this code. The permit holder shall give reasonable advance notice to the building official when the piping system is ready for testing. The equipment, material, power and labor necessary for the inspections and test shall be furnished by the permit holder and the permit holder shall be responsible for determining that the work will withstand the test pressure prescribed in the following tests.

(Reason: To utilize language used in the IPC regarding who is responsible for testing procedures.)

****Section G2417.4; change to read as follows:**

G2417.4 (406.4) Test pressure measurement. Test pressure shall be measured with a monometer or with a pressure-measuring device designed and calibrated to read, record, or indicate a pressure loss caused by leakage during the pressure test period. The source of pressure shall be isolated before the pressure tests are made. ~~Mechanical gauges used to measure test pressures shall have a range such that the highest end of the scale is not greater than five times the test pressure.~~

(Reason: To require the use of more accurate diaphragm gauges. Spring gauges do not provide accurate measurement below approximately 17 psig.)

****Section G2417.4.1; change to read as follows:**

G2417.4.1 (406.4.1) Test pressure. The test pressure to be used shall be no less than 3 psig (20 kPa gauge), or at the discretion of the Code Official, the piping and valves may be tested at a pressure of at least six (6) inches (152 mm) of mercury, measured with a manometer or slope gauge, irrespective of design pressure. Where the test pressure exceeds 125 psig (862 kPa gauge), the test pressure shall not exceed a value that produces a hoop stress in the piping greater than 50 percent of the specified minimum yield strength of the pipe. For tests requiring a pressure of 3 psig, diaphragm gauges shall utilize a dial with a minimum diameter of three and one half inches (3 ½"), a set hand, 1/10 pound incrementation and pressure range not to exceed 6 psi for tests requiring a pressure of 3 psig. For tests requiring a pressure of 10 psig, diaphragm gauges shall utilize a dial with a minimum diameter of three and one-half inches (3 ½"), a set hand, a minimum of 2/10 pound incrementation and a pressure range not to exceed 20 psi. For welded piping, and for piping carrying gas at pressures in excess of fourteen (14) inches water column pressure (3.48 kPa) (1/2 psi) and less than 200 inches of water column pressure (52.2 kPa) (7.5 psi), the test pressure shall not be less than ten (10) pounds per square inch (69.6 kPa). For piping carrying gas at a pressure that exceeds 200 inches of water column (52.2 kPa) (7.5 psi), the test pressure shall be not less than one and one-half times the proposed maximum working pressure.

Diaphragm gauges used for testing must display a current calibration and be in good working condition. The appropriate test must be applied to the diaphragm gauge used for testing

(Reason: To provide for lesser pressures to coordinate with the use of more accurate diaphragm gauges.)

****Section G2417.4.2; change to read as follows:**

G2417.4.2 (406.4.2) Test duration. The test duration shall be held for a length of time satisfactory to the Building Official, but in no case for be not less than 10-fifteen (15) minutes. For welded piping, and for piping carrying gas at pressures in excess of fourteen (14) inches water column pressure (3.48 kPa), the test duration shall be held for a length of time satisfactory to the Building Official, but in no case for less than thirty (30) minutes.

(Reason: To comply with accepted regional practices.)

****Section G2420.1 (406.1); add Section G2420.1.4 to read as follows:**

G2420.1.4 Valves in CSST installations. Shutoff valves installed with corrugated stainless steel (CSST) *piping* systems shall be supported with an approved termination fitting, or equivalent support, suitable for the size of the

valves, of adequate strength and quality, and located at intervals so as to prevent or damp out excessive vibration but in no case greater than 12-inches from the center of the valve. Supports shall be installed so as not to interfere with the free expansion and contraction of the system's piping, fittings, and valves between anchors. All valves and supports shall be designed and installed so they will not be disengaged by movement of the supporting piping.

(Reason: To provide proper security to CSST valves. These standards were established in this region in 1999 when CSST was an emerging technology.)

****Section G2420.5.1 (409.5.1); add text to read as follows:**

G2420.5.1 (409.5.1) Located within the same room. The shutoff valve ...*{bulk of paragraph unchanged}*... in accordance with the appliance manufacturer's instructions. A secondary shutoff valve must be installed within 3 feet (914 mm) of the firebox if appliance shutoff is located in the firebox.

(Reason: Reflects regional practice and provides an additional measure of safety.)

****Section G2421.1 (410.1); add text and Exception to read as follows:**

G2421.1 (410.1) Pressure regulators. A line pressure regulator shall be ... *{bulk of paragraph unchanged}*... approved for outdoor installation. Access to regulators shall comply with the requirements for access to appliances as specified in Section M1305.

Exception: A passageway or level service space is not required when the regulator is capable of being serviced and removed through the required attic opening.

(Reason: To require adequate access to regulators.)

****Section G2422.1.2.3 (411.1.3.3); delete Exception 1 and Exception 4.**

(Reason: To comply with accepted regional practices.)

****Section G2445.2 (621.2); add Exception to read as follows:**

G2445.2 (621.2) Prohibited use. One or more unvented room heaters shall not be used as the sole source of comfort heating in a dwelling unit.

Exception: Existing approved unvented room heaters may continue to be used in dwelling units, in accordance with the code provisions in effect when installed, when approved by the Building Official unless an unsafe condition is determined to exist as described in International Fuel Gas Code Section 108.7 of the Fuel Gas Code.

(Reason: Gives code official discretion.)

****Section G2448.1.1 (624.1.1); change to read as follows:**

G2448.1.1 (624.1.1) Installation requirements. The requirements for water heaters relative to access, sizing, relief valves, drain pans and scald protection shall be in accordance with this code.

(Reason: To clarify installation requirements. Also corresponds with amendments regarding water heater access.)

***** Section P2801.6.1; change to read as follows:**

Section P2801.6.1 Pan size and drain. The pan shall be not less than 11/2 inches (38 mm) in depth and shall be of sufficient size and shape to receive all dripping or condensate from the tank or water heater.

The pan shall be drained by an indirect waste pipe having a diameter of not less than 3/4 inch (19 mm). Piping for safety pan drains shall be of those materials listed in Table 605.4. Multiple pan drains may terminate to a single discharge piping system when approved by the administrative authority and permitted by the manufactures installation instructions and installed with those instructions.

***** Section P2804.6.1; change to read as follows:**

Section P2804.6.1 Requirements for discharge piping. The discharge piping serving a pressure relief valve,

temperature relief valve or combination thereof shall:

1. Not be directly connected to the drainage system.
2. Discharge through an air gap ~~located in the same room as the water heater.~~
3. Not be smaller than the diameter of the outlet of the valve served and shall discharge full size to the air gap.
4. Serve a single relief device and shall not connect to piping serving any other relief device or equipment.

Exception: Multiple relief devices may be installed to a single T & P discharge piping system when approved by the administrative authority and permitted by the manufactures installation instructions and installed with those instructions.

5. Discharge ~~to the floor,~~ to an indirect waste receptor or to the outdoors.

[remainder unchanged]

(Reason: To ensure the T&P is ran to the exterior.)

****Section P2801.7; add Exception to read as follows:**

Exceptions:

1. Electric Water Heater.

(Reason: To coordinate with Section 2408.2 of the IRC, which recognizes this exception.)

****Section P2902.5.3; change to read as follows:**

P2902.5.3 Lawn irrigation systems. The potable water supply to lawn irrigation systems shall be protected against backflow by an atmospheric-type vacuum breaker, a pressure-type vacuum breaker, a double-check assembly or a reduced pressure principle backflow preventer. A valve shall not be installed downstream from an atmospheric vacuum breaker. Where chemicals are introduced into the system, the potable water supply shall be protected against backflow by a reduced pressure principle backflow preventer.

(Reason: To provide clarity.)

*****Section P3009.9; change to read as follows:**

P3003.9. Solvent cementing. Joint surfaces shall be clean and free from moisture. A purple primer that conforms to ASTM F 656 shall be applied. Solvent cement not purple in color and conforming to ASTM D 2564, CSA B137.3, CSA B181.2 or CSA B182.1 shall be applied to all joint surfaces. The joint shall be made while the cement is wet and shall be in accordance with ASTM D 2855. Solvent cement joints shall be permitted above or below ground.

Exception: A primer is not required where both of the following conditions apply:

- ~~1. The solvent cement used is third-party certified as conforming to ASTM D 2564~~ 2. ~~The solvent cement is used only for joining PVC drain, waste, and vent pipe and fittings in not pressure applications in sizes up to and including 4 inches (102mm) in diameter.~~

(Reasoning: to keep the "process of joining PVC pipe)

****Section P3111; delete.**

(Reason: A combination waste and vent system is not approved for use in residential construction.)

****Section P3112.2; delete and replace with the following:**

P3112.2 Installation. Traps for island sinks and similar equipment shall be roughed in above the floor and may be

vented by extending the vent as high as possible, but not less than the drainboard height and then returning it downward and connecting it to the horizontal sink drain immediately downstream from the vertical fixture drain. The return vent shall be connected to the horizontal drain through a wye-branch fitting and shall, in addition, be provided with a foot vent taken off the vertical fixture vent by means of a wye-branch immediately below the floor and extending to the nearest partition and then through the roof to the open air or may be connected to other vents at a point not less than six (6) inches (152 mm) above the flood level rim of the fixtures served. Drainage fittings shall be used on all parts of the vent below the floor level and a minimum slope of one-quarter (1/4) inch per foot (20.9 mm/m) back to the drain shall be maintained. The return bend used under the drain-board shall be a one (1) piece fitting or an assembly of a forty-five (45) degree (0.79 radius), a ninety (90) degree (1.6 radius) and a forty-five (45) degree (0.79 radius) elbow in the order named. Pipe sizing shall be as elsewhere required in this Code. The island sink drain, upstream of the return vent, shall serve no other fixtures. An accessible cleanout shall be installed in the vertical portion of the foot vent.

(Reason: To clarify the installation of island venting and to provide a regional guideline on a standard installation method for this region.)

*****Appendix Q Reserved. Amended to read as follows:**

Appendix O. Swimming Pools, Spas and Hot Tubs.

SECTION AQ101 GENERAL

AQ101.1 General.

The provisions of this appendix shall control the design and construction of swimming pools, spas and hot tubs installed in or on the lot of a one- or two-family dwelling.

AQ101.2 Pools in flood hazard areas.

Pools that are located in flood hazard areas established by Table R301.2(1), including above-ground pools, on- ground pools and in-ground pools that involve placement of fill, shall comply with Section

AQ101.2.1 or AQ101.2.2.

Exception: Pools located in riverine flood hazard areas which are outside of designated floodways.

AQ101.2.1 Pools located in designated floodways.

Where pools are located in designated floodways, documentation shall be submitted to the building official which demonstrates that the construction of the pool will not increase the design flood elevation at any point within the jurisdiction.

AQ101.2.2 Pools located where floodways have not been designated.

Where pools are located where design flood elevations are specified but floodways have not been designated, the applicant shall provide a floodway analysis that demonstrates that the proposed pool will not increase the design flood elevation more than 1 foot (305 mm) at any point within the jurisdiction.

SECTION AQ102 DEFINITIONS

AQ102.1 General.

For the purposes of these requirements, the terms used shall be defined as follows and as set forth in Chapter 2.

ABOVE-GROUND/ON-GROUND POOL. See "Swimming pool."

BARRIER. A fence, wall, building wall or combination thereof which completely surrounds the swimming pool and obstructs access to the swimming pool.

HOT TUB. See "Swimming pool."

IN-GROUND POOL. See "Swimming pool."

RESIDENTIAL. That which is situated on the premises of a detached one- or two-family dwelling, or a one-family townhouse not more than three stories in height.

SPA, NONPORTABLE. See "Swimming pool."

SPA, PORTABLE. A nonpermanent structure intended for recreational bathing, in which all controls, water-heating and water-circulating equipment are an integral part of the product.

SWIMMING POOL. Any structure intended for swimming or recreational bathing that contains water more than 24 inches (610 mm) deep. This includes in-ground, above-ground and on-ground swimming pools, hot tubs and spas.

SWIMMING POOL, INDOOR. A swimming pool which is totally contained within a structure and surrounded on all four sides by the walls of the enclosing structure.

SWIMMING POOL, OUTDOOR. Any swimming pool which is not an indoor pool.

SECTION AG103 SWIMMING POOLS

AO103.1 In-ground pools.

In-ground pools shall be designed and constructed in compliance with ANSI/NSPI-5.

AO103.2 Above-ground and on-ground pools.

Above-ground and on-ground pools shall be designed and constructed in compliance with ANSI/NSPI-4.

AO103.3 Pools in flood hazard areas.

In flood hazard areas established by Table R301.2(1), pools in coastal high-hazard areas shall be designed and constructed in compliance with ASCE 24.

SECTION AQ104 SPAS AND HOT TUBS

AO104.1 Permanently installed spas and hot tubs.

Permanently installed spas and hot tubs shall be designed and constructed in compliance with ANSI/NSPI-3.

AO104.2 Portable spas and hot tubs.

Portable spas and hot tubs shall be designed and constructed in compliance with ANSI/NSPI-6.

SECTION AQ105 BARRIER REQUIREMENTS

AO105.1 Application.

The provisions of this appendix shall control the design of barriers for residential swimming pools, spas and hot tubs. These design controls are intended to provide protection against potential drownings and near-drownings by restricting access to swimming pools, spas and hottubs.

AQ105.2 Outdoor swimming pool. An outdoor swimming pool, including an in-ground, above-ground or on-ground pool, hot tub or spa shall be surrounded by a barrier which shall comply with the following:

1. The top of the barrier shall be at least 48 inches (1219mm) above grade measured on the side of the barrier, which faces away from the swimming pool. The maximum vertical clearance between grade and the bottom of the barrier shall be 2 inches (51mm) measured on the side of the barrier, which faces away from the swimming pool. Where the top of the pool structure is above grade, such as an above-ground pool, the barrier may be at ground level, such as the pool structure, or mounted on top of the pool structure. Where the barrier is mounted on top of the pool structure, the maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall be 4 inches (102mm).
2. Openings in the barrier shall not allow passage of a 4-inch-diameter (102mm) sphere.
3. Solid barriers which do not have openings, such as a masonry or stone wall, shall not contain indentations or protrusions except for normal construction tolerances and tooled masonry joints.
4. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is less than 45 inches (1143mm), the horizontal members shall be located on the swimming pool side of the fence. Spacing between vertical members shall not exceed 1.75 inches (44mm) in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1.75 inches (44 mm) in width.

5. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches (1143 mm) or more, spacing between vertical members shall not exceed 4 inches (102 mm). Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1.75 inches (44 mm) in width.
6. Maximum mesh size for chain link fences shall be a 2.25-inch (57 mm) square unless the fence is provided with slats fastened at the top or the bottom which reduce the openings to not more than 1.75 inches (44 mm).
7. Where the barrier is composed of diagonal members, such as a lattice fence, the maximum opening formed by the diagonal members shall not be more than 1.75 inches (44 mm).
8. Access gates shall comply with the requirements of Section AQ105.2, Items 1 through 7, and shall be equipped to accommodate a locking device. Pedestrian access gates shall open outward away from the pool and shall be self-closing and have a self-latching device. Gates other than pedestrian access gates shall have a self-latching device. Where the release mechanism of the self-latching device is located less than 54 inches (1372 mm) from the bottom of the gate, the release mechanism and openings shall comply with the following:
- 8.1. The release mechanism shall be located on the pool side of the gate at least 3 inches (76 mm) below the top of the gate, and
 - 8.2. The gate and barrier shall have not opening greater than 0.5 inch (13 mm) within 18 inches (457 mm) of the release mechanism.
9. Where a wall of a dwelling serves a part of the barrier one of the following conditions shall be met: 9.1. The pool shall be equipped with a powered safety cover in compliance with ASTM F1346; or 9.2. Doors with direct access to the pool through that wall shall be equipped with an alarm which produces an audible warning when the door and/or its screen, if present, are opened. The alarm shall be listed and labeled in accordance with UL 2017. The deactivation switch (es) shall be located at least 54 inches (1372 mm) above the threshold of the door; or
- 9.3. Other means of protection, such as self-closing doors with self-latching devices, which are approved by the governing body, shall be acceptable as long as the degree of protection afforded is not less than the protection afforded by Item 9.1 or 9.2 described above.
10. Where an above-ground pool structure is used as a barrier or where the barrier is mounted on top of the pool structure, and the means of access is a ladder or steps, then:
- 10.1. The ladder or steps shall be capable of being secured, locked or removed to prevent access, or
 - 10.2. The ladder or steps shall be surrounded by a barrier which meets the requirements of Section AQ105.2, Items 1 through 9. When the ladder or steps are secured, locked or removed, any opening created shall not allow the passage of a 4-inch diameter (102 mm) sphere.

AQ105.3 Indoor swimming pool. Walls surrounding an indoor swimming pool shall comply with Section AQ105.2, Item 9.

AQ105.4 Prohibited locations. Barriers shall be located so as to prohibit permanent structures, equipment or similar objects from being used to climb them.

AQ105.5 Barrier exceptions. Spas or hot tubs with a safety cover which complies with ASTM F 1346, as listed in Section AQ107, shall be exempt from the provisions of this appendix

SECTION AQ106 ENTRAPMENT PROTECTION FOR SWIMMING POOL AND SPA SUCTION OUTLETS

AQ106.1 General.

Suction outlets shall be designed and installed in accordance with ANSI/APSP-7.

SECTION AQ107 ABBREVIATIONS

AQ107.1 General.

ANSI—American National Standards Institute 11 West
42nd Street
New York, NY 10036

APSP—Association of Pool and Spa Professionals NSPI—

National Spa and Pool Institute
2111 Eisenhower Avenue
Alexandria, VA 22314

ASCE—American Society of Civil Engineers 1801
Alexander Bell Drive
Reston, VA 98411-0700

ASTM—ASTM International 100 Barr
Harbor Drive West Conshohocken, PA
19428

UL—Underwriters Laboratories, Inc. 333
Pfingsten Road Northbrook, IL 60062-2096

SECTION AQ108 REFERENCED STANDARDS

AQ108.1 General.

ANSI/NSP

<u>ANSI/NSPI- 3—</u>	<u>Standard for Permanently Installed</u>	
<u>99</u>	<u>Residential Spas</u>	<u>AQ104.1</u>
<u>ANSI/NSPI- 4—</u>	<u>Standard for Above-ground/</u>	
<u>99</u>	<u>On-ground Residential</u>	
	<u>Swimming Pools</u>	<u>AQ103.2</u>
<u>ANSI/NSPI- 5—</u>	<u>Standard for Residential</u>	
<u>03</u>	<u>In-ground Swimming Pools</u>	<u>AQ103.1</u>
<u>ANSI/NSPI- 6—</u>	<u>Standard for Residential</u>	
<u>99</u>	<u>Portable Spas</u>	<u>AQ104.2</u>

ANSI/APSP

<u>ANSI/APSP-</u>	<u>Standard for Suction Entrapment</u>	
<u>7—06</u>	<u>Avoidance in Swimming Pools,</u>	
	<u>Wading Pools, Spas, Hot Tubs</u>	
	<u>and Catch Basins</u>	<u>AQ106.1</u>

ASCE

<u>ASCE/SEI-24—</u>	<u>Flood-resistant Design and</u>	
<u>05</u>	<u>Construction</u>	<u>AQ103.3</u>

ASTM

<u>ASTM F</u>	<u>Performance Specification for</u>	
<u>1346—91</u>	<u>Safety Covers and Labeling</u>	
<u>(2003)</u>	<u>Requirements for All Covers</u>	
	<u>for Swimming Pools Spas and Hot</u>	
	<u>Tubs</u>	<u>AQ105.2, AQ105.5</u>

UL

<u>UL 2017—</u>	<u>Standard for General-purpose</u>	<u>AQ105.2</u>
-----------------	-------------------------------------	----------------

2000 Signaling Devices and
Systems—with revisions
through June 2004

(Reason: New Pool and Spa code not under review. In lieu of adoption of new pool code, previous edition of 2012 Appendix G is proposed for continued use but renamed 2015 Appendix Q.)



CODE COUNCIL TRAINING

2009
2012



2015 IRC® Transition from the 2009 IRC®

Based on the International Residential Code® (IRC®)

2015 IRC Transition from the 2009 IRC

Second Printing: May 2015

COPYRIGHT © 2015
by
International Code Council, Inc.

ALL RIGHTS RESERVED. The 2015 IRC Transition from the 2009 IRC is a copyrighted work owned by the International Code Council, Inc. Without advance written permission from the copyright owner, no part of this book may be reproduced, distributed, or transmitted in any form or by any means, including, without limitation, electronic, optical or mechanical means (by way of example and not limitation, photocopying, or recording by or in an information storage retrieval system). For information on permission to copy material exceeding fair use, please contact: ICC Publications, 4051 Flossmoor Road, Country Club Hills, IL 60478. Phone 1-888-ICC-SAFE (422- 7233).

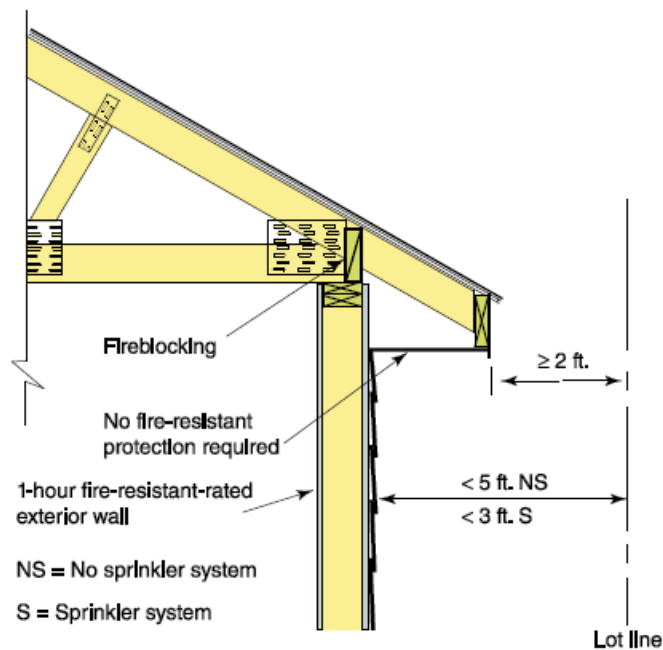
Trademarks: “International Code Council,” the “International Code Council” logo, the “IRC” and the “International Residential Code” are trademarks of the International Code Council, Inc.

PRINTED IN THE U.S.A.

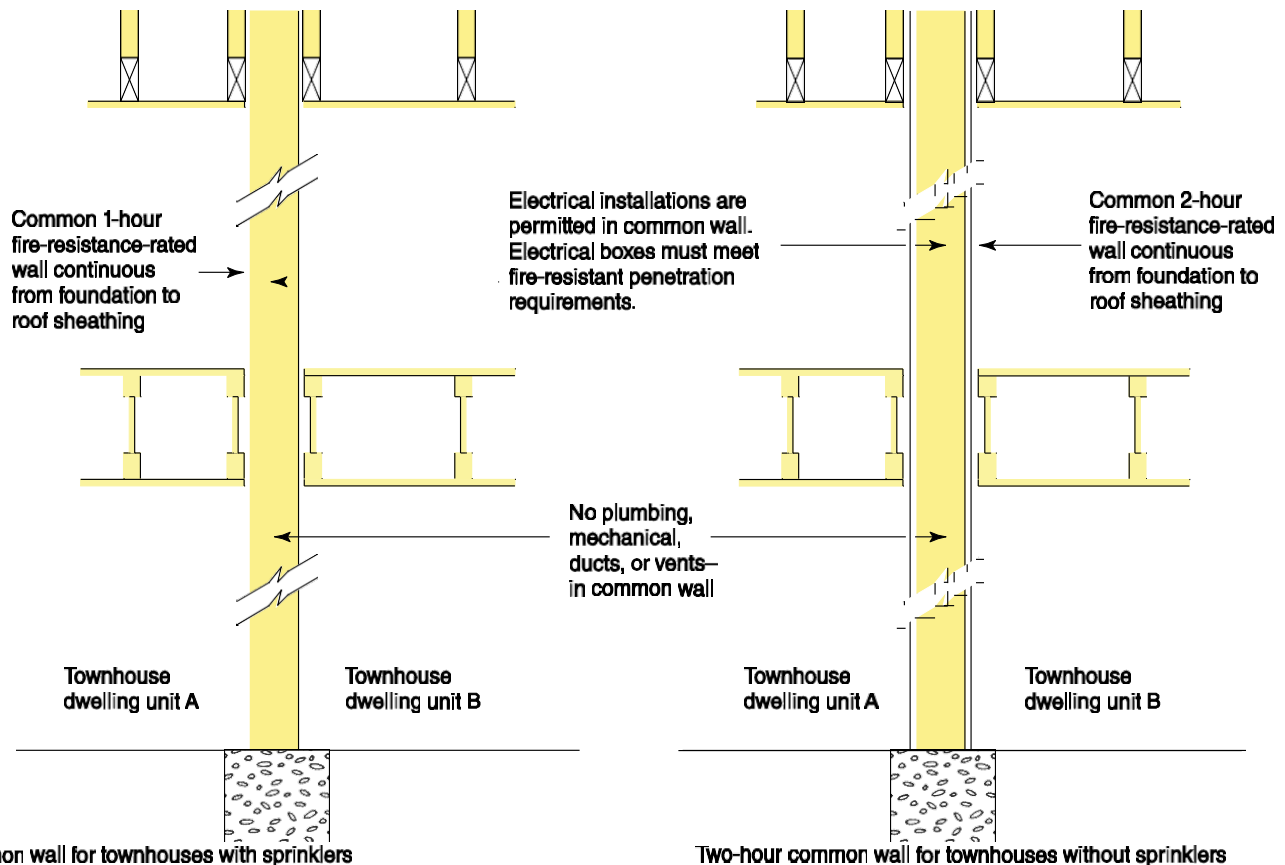
2015 International Residential Code –Transition from the 2009 IRC

Topic	2012	2015
Part 1 Scope and Administration (Chapter 1)		
Scope – Accessory Structures		R101.2 The maximum height for accessory structures has been increased from two to three stories above grade plane. Technical requirements have been removed from the definition, and accessory structures are now permitted to be unlimited in area.
Alternative Materials, Design, and Methods of Construction and Equipment		R104.11 When proposed alternatives are not approved, the reason for the disapproval must be stated in writing by the building official.
Fences Exempt from Permit	R105.2 Fences up to 7 feet high are exempt from permit requirements.	
Existing Buildings in Flood Hazard Areas		R105.3.1.1 Determination of substantial improvement for existing buildings in flood hazard areas is the responsibility of the building official. The related provisions are now consolidated in Section R105.3.1.1.
Information for Construction in Flood Hazard Areas		R106.1.4 Construction documents for dwellings in Coastal A Zones shall include the elevation of the bottom of the lowest horizontal structural member.
Part 2 Building Planning (Chapter 3)		
Climatic and Geographic Design Criteria		Table R301.2(1) The jurisdiction must indicate if it contains special wind regions or wind borne debris zones.
Wind Design Criteria	R301.2.1 A new map indicates the geographic locations that require wind design, which means an engineered design in accordance with the IBC or ASCE 7, or a design in accordance with the applicable provisions of ICC-600, the WFCM, or AISI S230.	R301.2 Ultimate design wind speed values replace basic wind speed values for 3-sec gust wind speeds in Section R301.2.2. A wind speed conversion table has been added for conversion from ultimate design to nominal design wind speeds.
Sunrooms		R301.2.1.1.1 The 2015 IRC requires sunrooms to comply with AAMA/NPEA/NSA 2100-12. The standard contains requirements for habitable and non-habitable sunrooms.
Protection of Openings in Wind Borne Debris Regions		R301.2.1.2 The mean roof height limit has been increased from 33 feet to 45 feet for the prescriptive attachment provisions for wood structural panels protecting glazing. The ASTM E 1996 standard has been modified to classify wind zones according to ultimate design wind speed.
Wind Exposure Category		R301.2.1.4 Wind Exposure Category A has been deleted because it no longer exists in the IBC and ASEC 7, which is the basis for determination of wind exposure categories. Wind Exposure Category D now applies to open water, mud and salt flats, and unbroken ice fields, which includes hurricane-prone regions.

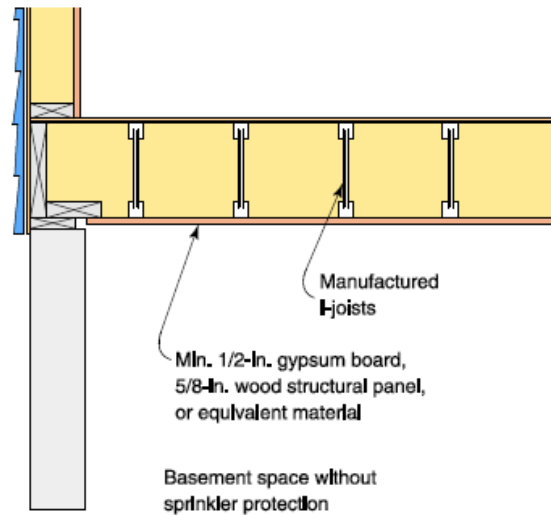
Topic	2012	2015
Part 2 Building Planning (Chapter 3), Continued		
Floodplain Construction		R301.2.4 Buildings located in a flood hazard area must comply with the provisions for the most restrictive flood hazard area and may use ASCE 24 for design.
Story Height		R301.3 Story height of wood and steel wall framing, insulated concrete, and SIP walls may not exceed 11ft, 7in. Masonry wall height is limited to 13ft 7in.
Exterior Walls	R302.1 The minimum clearances to lot lines have been reduced from 5 feet to 3 feet for unrated exterior walls when the dwelling is protected with a fire sprinkler system. The code now permits construction of unrated exterior walls on the lot line when all dwellings in the subdivision are protected with automatic fire sprinkler systems and the opposing lot maintains a minimum 6-foot clearance from the common lot line.	R302.1 Unprotected roof overhangs are now permitted to project to within 2ft of the property line when fireblocking is installed between the top of the wall and the roof sheathing. In most cases, projections are not permitted less than 2ft from the property line. For dwellings with or without fire sprinkler protection, penetrations of exterior walls do not require fire-resistant protection unless they are located less than 3ft from the property line.



Topic	2012	2015
Part 2 Building Planning (Chapter 3), Continued		
Townhouse Separation R302.2.2 Parapet Exception	R302.2 When a parapet is not installed, openings and penetrations of the roof are no longer permitted within 4 feet of the separating wall between townhouse dwelling units.	R302.2 The provisions for separating townhouses with structurally independent fire-resistant-rated walls in accordance with Section R302.1 have been removed in favor of the common wall provisions of Section R302.2. Common walls separating townhouses must now be rated for 2hrs when an automatic fire sprinkler system is not installed in the townhouse dwelling units.



Topic	2012	2015
Part 2 Building Planning (Chapter 3), Continued		
Garage Opening Protection	R302.5.1 Doors between the garage and dwelling unit now require self-closing devices.	
Fire Protection of Floors	R302.13 (R501.3) With some exceptions, the code now requires 1/2-inch gypsum board or equivalent material to be applied to the underside of floor assemblies in buildings regulated by the IRC.	R302.13 The provisions for fire protection of floors have been relocated from Chapter 5 to the fire-resistant construction provisions of Section R302. New language clarifies that the code does not regulate penetrations or openings in the fire protection membrane.



Fire protection of floors

Topic	2012	2015
Mechanical Ventilation	R303 When used for satisfying the ventilation requirements for dwellings, mechanical ventilation must now comply with new provisions in Section M1507 for whole-house ventilation of habitable rooms and local exhaust of bathrooms. A whole-house mechanical ventilation system is now required for any dwelling that is tested with a blower door test and determined to have an air infiltration rate of less than 5 air changes per hour. Definitions for whole-house mechanical ventilation system and local exhaust have been added to Section R202.	
Ventilation Intake Openings	R303.5 The minimum vertical clearance between a contaminant source and an outdoor air intake below has increased from 2 feet to 3 feet.	
Stairway Illumination		R303.7, R303.8 Interior and exterior stairway illumination provisions have been placed in separate sections. Conflicting language has been removed to clarify the requirements.
Minimum Habitable Room Area		R304.1 The requirement for one habitable room with a minimum floor area of 120sf has been removed from the code.

2015 International Residential Code –Transition from the 2009 IRC

Topic	2012	2015
Part 2 Building Planning (Chapter 3), Continued		
Ceiling Height		R305 The minimum ceiling height for bathrooms, toilet rooms, and laundry rooms has been reduced to 6ft 8in. The exception for allowing beams, girders, ducts or other obstructions to project to within 6ft 4in of the finished floor has been expanded to include basement with habitable space.
Hazardous Locations for Glazing	R308.4 The provisions for hazardous locations related to the installation of glazing have been reorganized for ease of use and consistent application. Each item in the numbered list of hazardous locations has been placed in a separate subsection and given a descriptive title.	
Glazing Adjacent to Doors		R308.4.2 Glazing installed perpendicular to a door in a closed position and within 24in of the door only requires safety glazing if it is on the hinge side of an in-swinging door.
Glazing and Wet Surfaces	R308.4.5 The separate provisions regulating glazing near tubs and swimming pools have been consolidated into one subsection titled Glazing and Wet Surfaces.	R308.4.5 The exception from the safety glazing requirement for glazing that is 60 in. or greater from the water's edge of a bathtub, hot tub, spa, whirlpool, or swimming pool has been expanded to include glazing that is an equivalent distance from the edge of a shower, sauna, or steam room.
Glazing Adjacent Stairs and Ramps	R308.4.6 The glazing that is not considered to be in a hazardous location, the rule for the minimum height above a tread at the side of a stairway is now 36 inches to correspond to the height of a guard as previously found in the exception. Other revisions to the test clarify the meaning and application of the glazing requirements at stairways.	
Glazing Adjacent to the Bottom Stair Landing	R308.4.7 The provisions for glazing installed near the landing at the bottom of a stairway have been revised to clarify the application. The threshold for the minimum height above the walking surface is now 36 inches for determining that the glazing is not in a hazardous location.	R308.4.7 Glazing adjacent to the bottom stair landing is now defined as the area in front of the plane of the bottom tread.
Garage Fire Sprinklers	R309.5 In a subdivision where all homes are protected with dwelling fire sprinkler systems, nonrated exterior walls of garages are permitted to be constructed on a lot line when the garage is protected with a fire sprinkler system and meets the other conditions of Section R302.1.	
Emergency Escape and Rescue Openings		R310 The emergency escape and rescue openings provisions have been reorganized. Separate provisions spell out the requirements for windows and doors used for emergency escape and rescue.

2015 International Residential Code –Transition from the 2009 IRC

Topic	2012	2015
Part 2 Building Planning (Chapter 3), Continued		
Window Well Drainage	R310.2.2 Except for locations with well-drained soils, window wells serving emergency escape and rescue openings now require a means to drain surface water to the foundation drainage system.	
Emergency Escape and Rescue Openings for Additions, Alterations and Repairs		R310.5, R310.6 The basement of a dwelling addition does not require an emergency escape and rescue opening if there is access to a basement that does have an emergency escape and rescue opening. Remodeling of an existing basement does not trigger the emergency escape and rescue opening requirements unless a new bedroom is created.
Stair Risers		R311.7.3, R311.7.5.1 The total vertical rise in a stairway without an intermediate landing has increased from 144in to 147 in. The provision for allowing open risers has been clarified. It is based on the distance above grade or the floor below, not on the total rise of the stair. A new exception clarifies that open risers are permitted on spiral stairways.
Landing for Stairways	R311.7.6 For a turn in a stairway, the IRC now specifically permits angular and curved stair landing with certain dimensions less than 36 inches if the prescribed depth is provided at the walk line and minimum area criteria are satisfied. The maximum vertical rise requirement of 12 feet has been moved from the exception to a new Section R311.7.3.	
Spiral Stairways		R311.7.10.1 The code adds a definition of spiral stairway that omits any requirement for a center post to allow for design flexibility. The code now limits the size of spiral stairways by restricting the radius at the walk line to a dimension not greater than 24 ½ ins. The method of measurement for tread depth now matches the winder provisions and measures at the intersection of the walk line and the tread nosing rather than perpendicular to the leading edge of the tread.
Alternating Tread Devices and Ship Ladders		R311.7.11, R311.7.12 Alternating tread devices and ship ladders have been added to the stair provisions. Neither device is approved for use as a means of egress.
Ramps		R311.8 Ramps that do not serve the required egress door are now permitted to have a slope not greater than 1 unit vertical in 8 units horizontal.
Guard Height		R312.1.2 The provision requiring that the guard height be measured from the surface of adjacent fixed seating has been removed from the code.

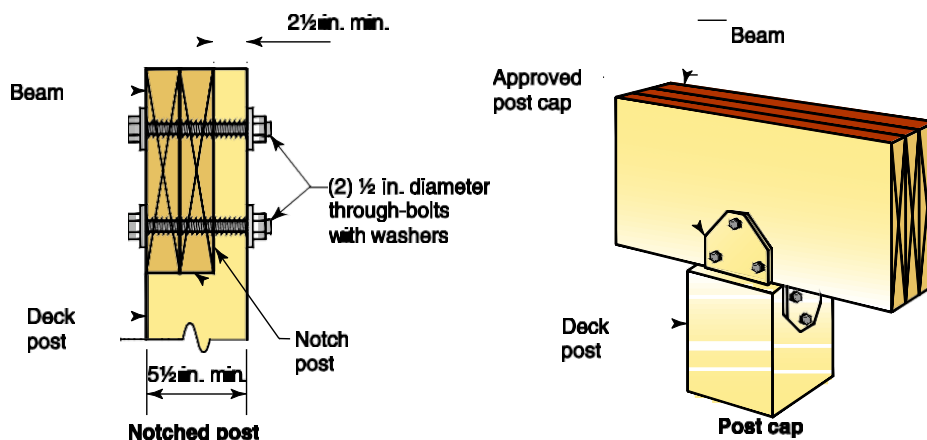
2015 International Residential Code –Transition from the 2009 IRC

Topic	2012	2015
Part 2 Building Planning (Chapter 3), Continued		
Window Fall Protection	R312.2 The provisions for window fall protection have been relocated from Chapter 6 to Chapter 3. The terminology for window opening control devices has been updated for consistency with the referenced standard ASTM F 2090. Operation criteria found in the 2008 edition of the standard have been deleted from the prescriptive provisions of the IRC.	R312.2 The window fall protection provisions have been revised to clarify the meaning, remove redundant language, and achieve consistency with the IBC provisions.
Smoke Alarms	R314 The code now specifically recognizes wireless technology in lieu of interconnection for smoke alarm installation in both new and existing dwelling units. The interconnection provisions have been moved out of the sections related to location and power source and placed in a new section.	R314 Battery-operated smoke alarms are permitted for satisfying the smoke alarm power requirements when alternations, repairs, and additions occur. Household fire alarm systems no longer require monitoring by an approved supervising station. New provisions address nuisance alarms related to devices installed near bathrooms and cooking appliances.
Carbon Monoxide Alarms	R315 The code now specifically recognizes carbon monoxide detection systems with separate detectors and notification appliances installed in accordance with NFPA 720.	R315 Carbon monoxide alarms now require connection to the house wiring system with battery backup. Exterior work such as roofing, sliding, windows, doors, and decks and porch additions no longer trigger the carbon monoxide alarm provisions for existing buildings. An attached garage is one criterion for requiring carbon monoxide alarms, but only if the garage has an opening into the dwelling. A carbon monoxide alarm is required in bedrooms when there is a fuel-fired appliance in the bedroom and adjoining bathroom. Carbon Monoxide detection systems only require detectors installed in the locations prescribed by the code and not those locations described in NFPA 720.
Thermal Barrier	R316.4 Reference to a new standard, NFPA 275, replaces references to previous standards for determining an acceptable thermal barrier material other than 1/2-inch gypsum wallboard.	R316.4 23/32-inch wood structural panels satisfy the thermal barrier requirements for foam plastic insulation.
Thermal Barrier for Floors	R316.5.13 New provisions allow the installation of structural insulated panels and other materials containing foam plastic insulation as part of a floor system without requiring a thermal barrier on the upper surface. The code requires a minimum ½-inch wood structural panel or equivalent material to protect the foam plastic insulation.	
Flood Hazards		R322.1, R322.2 Section R322.1 is modified to emphasize that the provision applies to existing buildings in flood hazard areas where 50% or more of the structure has damage and requires restoration. Section R322.2 limits the minimum elevation allowed for dwellings in flood hazard areas and defines a Coastal A Zone.
Coastal High-Hazard Areas		R322.3 Coastal A Zones are defined and an exception for foundation types in Coastal A Zones is added.

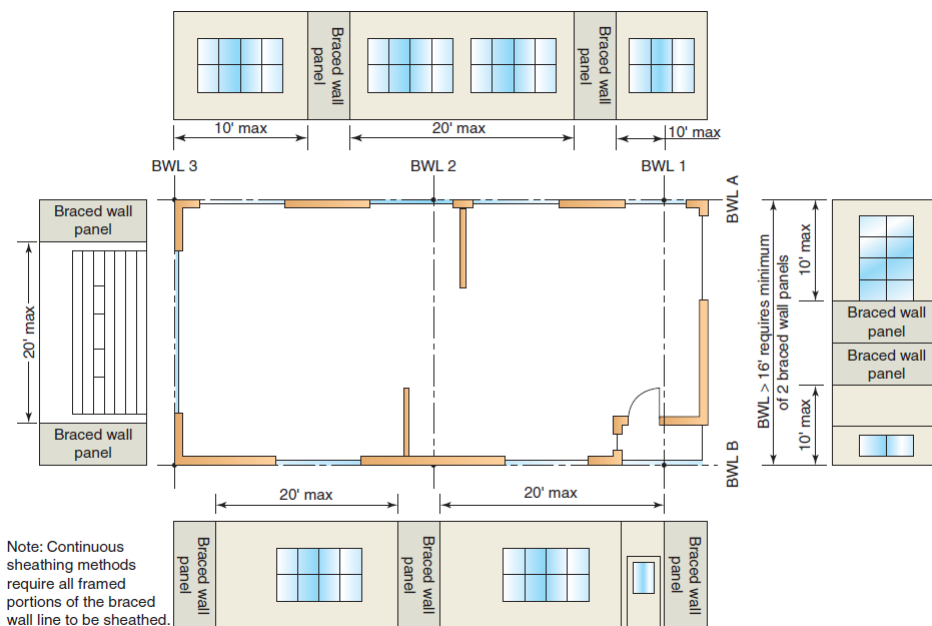
2015 International Residential Code –Transition from the 2009 IRC

Topic	2012	2015
Part 3 Building Construction (Chapters 4 - 10)		
Mezzanines		R325 New provisions place limitations on the construction of mezzanines related to ceiling height and openings consistent with the IBC.
Swimming Pools, Spas and Hot Tubs		R326 The design and construction of pools and spas shall comply with the International Swimming Pool and Spa Code (ISPSC). Appendix G, Swimming Pools, Spas and Hot Tubs, has been deleted.
Minimum Footing Size		R403.1.1 The table for minimum footing size and thickness is divided into three expanded tables based on the type of construction being supported: light frame, light frame with veneer, and concrete or masonry. The values are also based on the type of foundations: slab on grade, crawl space, or basement.
Footing and Stem Wall Reinforcing in Seismic Design Categories D ₀ , D ₁ , and D ₂		R403.1.3 Updated figures and code provisions in Section R403.1.3 now clearly define minimum required reinforcement in footings and stem walls located in Seismic Design Categories (SDC) D ₀ , D ₁ , and D ₂
Foundation Anchorage		R403.1.6 Anchor bolts are now required to be placed in the middle third of the sill plate.
Masonry Foundation Walls in SDC D ₀ , D ₁ , and D ₂		R404.1.4.1 Minimum vertical reinforcement in masonry stem walls has been increased from No. 3 bars to No. 4 bars spaced in maximum of 4ft on center in grouted cells.
Isolated Masonry Piers	R404.1.9 The IRC now includes prescriptive provisions for the construction of isolated masonry pier foundations supporting raised floor systems.	
Retaining Walls		R404.4 Retaining walls, freestanding walls not supported at the top, with more than 48ins of unbalanced backfill must be designed by an engineer. Retaining walls resisting additional lateral loads and with more than 24ins of unbalanced backfill must also be designed in accordance with accepted engineering practice.
Foundation Drainage	R405.1 A filter membrane is now required for perforated foundation drains.	
Floor Joist Spans for Common Lumber Species		Tables R502.3.1(1), R502.3.1(2) Changes to Southern Pine (SP), Douglas Fir-Larch (DFL), and Hemlock Fir (HF) lumber capacities have changed the floor joist span length in the prescriptive tables of the IRC. Span lengths for Southern Pine have decreased: lengths for DFL and HF joists have increased.

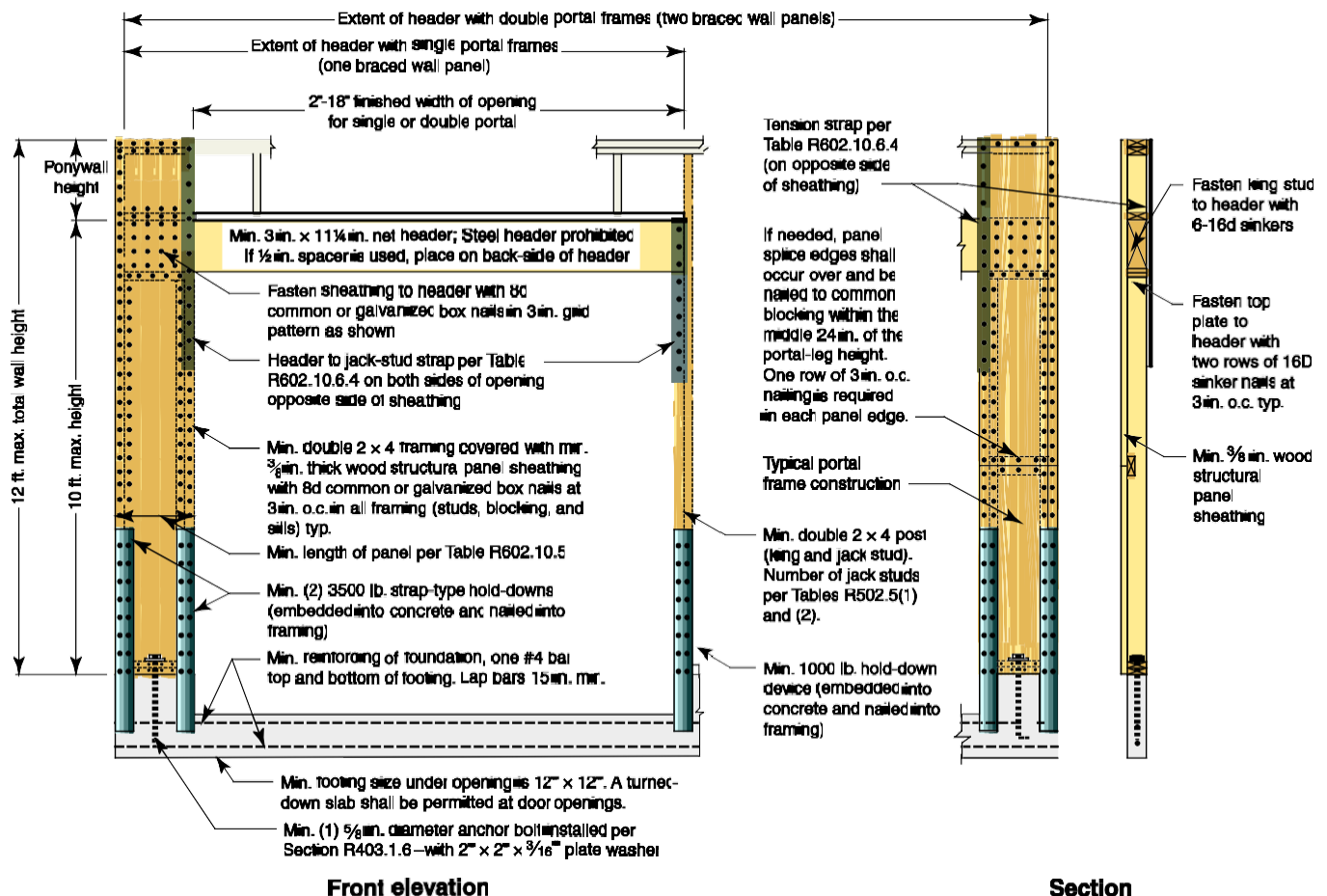
Topic	2012	2015
Part 3 Building Construction (Chapters 4 - 10), Continued		
Framing of Floor Openings		R502.10 Requirements for header joist and trimmer connections in the framing of floor openings have been deleted. This section conflicted with Section R502.6, which contains minimum bearing lengths for all joists and headers.
Decks	R507 All deck provisions have been relocated to a new section. The prescriptive provisions related to the placement of bolts and lags for deck ledger attachment to the band joist have been revised to correlate with the National Design Specifications (NDS) for Wood Construction.	
Deck Ledger Connection to Band Joist		R507.2 The deck ledger section is reorganized to better describe the minimum requirements for connection of deck ledgers to band joists.
Alternative Deck Lateral Load Connection		R507.2.4 When the prescriptive deck lateral load connection that has appeared in the previous editions of the code is chosen as a design option, the code now requires the two hold-down devices to be within 2 feet of the ends of the deck. A new lateral load connection option prescribes four hold-downs installed below the deck structure.
Decking		R507.4 The code sets the maximum allowable spacing for deck joists supporting the various types of common decking materials.
Deck Joists and Beams		R507.5, R507.6, R507.7 New sections and tables provide prescriptive methods for joists and beams in deck construction. Section R507.5 describes requirements for deck joists, Section R507.6 lists requirements for deck beams, and Section R507.7 describes minimum bearing requirements for joists and beams.



Topic	2012	2015
Part 3 Building Construction (Chapters 4 - 10), Continued		
Deck Posts		R507.8 New Section R507.8 establishes minimum sizes of wood posts supporting wood decks and describes the requirements for connection of deck posts to the footing.
Fastener Schedule for Structural Members	Table R602.3 (1) Table R602.3 (1) now includes requirements for nailing roof trusses to plates, abutting studs at intersecting wall corners, and connection of rim board to sill plates.	Table R602.3 (1) The Fastening Schedule now contains multiple nail size options. Roof rafter connections at ridge, valley, and hip are revised. Double top plate splicing is clarified. Clarification of the joist-to-band-joist (rim board) connection is added.
Stud Size, Height, and Spacing		R602.3.1 Table R602.3.1 is deleted and the exception for walls greater than 10ft tall is added to the text of Section R602.3.1. If studs in a tall wall meet Exception 2, they meet the requirements of the IRC and do not need engineering or use of an alternate standard.
Headers	R602.7, Table R602.7.1 The code now includes prescriptive provisions for single member headers under limited conditions.	R602.7, Tables R602.7(1), R602.7(2), R602.7(3), R602.7.5 The girder and header span tables of Chapter 5 have been moved to the header section in Chapter 6, Multi-ply and single header tables are combined. A new section describing rim board headers is added.
Braced Wall Lines	R602.10.1 The section has been reorganized to address braced wall lines only, including provisions for spacing and offsets.	
Braced Wall Panels	R602.10.2 Information on braced wall panels has been placed in one section. Braced wall panels now may be located up to 10 feet from both ends of the braced wall line. Maximum braced wall panel spacing is 20 ft measured edge to edge.	



Topic	2012	2015
Part 3 Building Construction (Chapters 4 - 10), Continued		
Required Length of Bracing	R602.10.3 Information on the required length of wall bracing is consolidated into one section. Wind wall bracing adjustments have been placed in a separate table from the bracing requirements based on wind speed.	Table R602.10.3(1) Table values for bracing requirements based on wind speed have changed slightly due to use of ultimate design wind speed values to calculate required bracing length.
Construction Methods for Braced Wall Panels	R602.10.4 Bracing construction methods and the allowable mixing of bracing methods have been grouped into a single section. Braced wall lines that change from exterior to interior wall lines may now mix bracing methods along the braced wall line.	
Minimum Length of a Braced Wall Panel	R602.10.5 Braced wall panel minimum lengths are combined in Table R602.10.5. Other braced wall panel length information also is placed in this section.	Table R602.10.5 The contributing length of continuously sheathed portal frames (Method CS-PF) in low-seismic regions has increased by 50%
Construction of Methods ABW, PFH, PFG, CS-PF, and BV-WSP	R602.10.6 This change places all of the alternate braced wall panel methods into one section and adds a new Method BV-WSP, Wall Bracing for Dwellings with Stone and Masonry Veneer in Seismic Design Categories D ₀ , D ₁ , and D ₂ .	R602.10.6.2 Due to recent testing of Method PFH (Portal Frame with Hold-downs), the minimum required capacity of the hold-downs is lowered to 3500lbs in the 2015 IRC. Additionally, the new testing confirms that two sill plates are sufficient under each braced wall panel of the portal rather than the three plates used in Method PFH for the 2012 IRC.



2015 International Residential Code –Transition from the 2009 IRC

Topic	2012	2015
Part 3 Building Construction (Chapters 4 - 10, Continued)		
Ends of Braced Wall Lines with Continuous Sheathing	R602.10.7 Braced wall line end conditions for continuous sheathing have been placed in one section. A fifth end condition is defined for braced wall panel connections. When a 48-inch braced wall panel is at the end of a wall line, the code does not require a return panel or hold-down at the corner.	
Braced Wall Panel Support	R602.10.9 Concrete stem walls 48 inches long or less and that are less than 6 inches thick require reinforcement similar to narrow masonry stem walls for supporting braced wall panels.	
Cripple Wall Bracing		R602.10.11 A reduction is no longer required in determining the maximum distance between braced wall panels in a cripple wall. References to the bracing length adjustment tables clarify that increased bracing is required if gypsum wall finish is not applied to the cripple wall.
Simplified Wall Bracing	R602.12 This new section offers an alternative method to braced wall lines for detached dwellings located in SDC A, B, C and townhouses in SDC A or B. The code also places limitations on wind speed, exposure category, building size and other criteria.	R602.12 Simplified wall bracing is now allowed for one-to three-story dwellings and townhouse in Wind Exposure Category B or C with ultimate design wind speeds (<i>V_{ult}</i>) of 130 mph or less.
Structural Sheathing over Steel Framing for Stone and Masonry Veneer		R603.9.5 Section R603.9.5 addressing the bracing requirements for cold-formed steel framing with stone or masonry veneer has been expanded to include the higher seismic design categories. This section directs the user to increase bracing length when a structure is located in SCD C, D ₀ , D ₁ , and D ₂ and has stone or masonry veneer.
Grouting Requirements for Masonry Construction		R606.3.5 With reorganization of the masonry wall provisions in the 2015 IRC, the section covering provisions for grouting above-ground masonry walls now combines all the requirements for single, multiwythe, and reinforced masonry construction in one section. Clarified provisions address grout placement, cleanouts, and construction for all three types of masonry construction.
Drilling and Notching in Structural Insulated Panels		R610.7 Drilling and notching provisions for structural insulated panels (SIP) are clarified.
Siding Material Thickness and Attachment		R703.3 New code language clarifies limitations of use of Table R703.4 and describes fastener type, length, and penetration criteria. Table R703.4, Weather Resistant Siding Attachment and Minimum Thickness, is simplified.

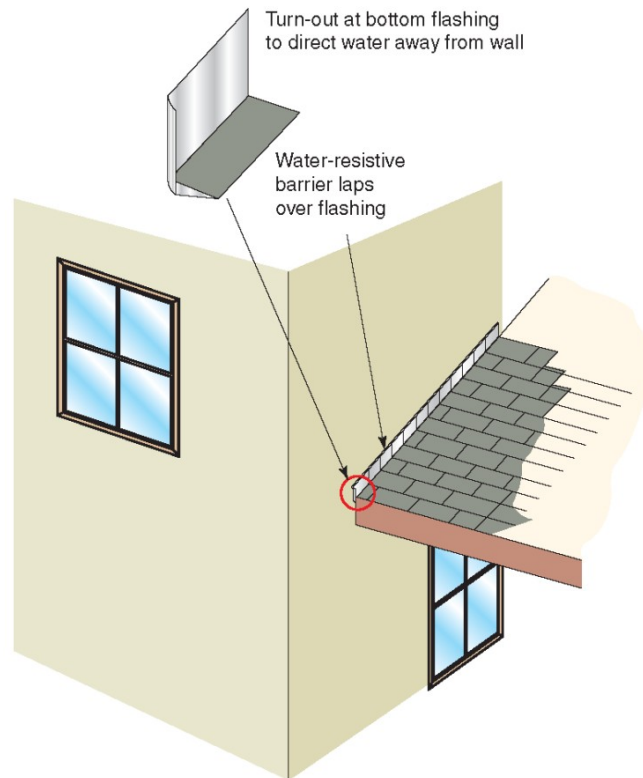
2015 International Residential Code –Transition from the 2009 IRC

Topic	2012	2015
Part 3 Building Construction (Chapters 4 - 10, Continued)		
Wood, Hardboard, and Wood Structural Panel Siding		R703.5 Minimum spacing based on siding thickness has been moved from 2012 IRC Table R703.4 footnote i, siding attachment and minimum thickness, to 2015 IRC Section R703.5.2, panel siding. Requirements for vertical wood siding have moved from 2012 IRC footnote j to 2015 IRC Section R703.5.1 vertical wood siding.
Wood Shakes and Shingles on Exterior Walls		R703.6 The provisions for the application of wood shakes and shingles on exterior walls have been reorganized to give more information and for ease of use.
Masonry Veneer Lintel	R703.7.3.2 Minimum and Maximum heights of masonry veneer are established for masonry lintels spanning not greater than 18 feet 3 inches.	
Masonry Veneer Anchorage	R703.7.4 The fastener and air space requirements for anchored veneer have been placed in a new table for ease of use. The veneer tie spacing requirements have been modified for consistency with Building Code Requirements and Specification for Masonry Structures (TMS 402/ACI 530/ASCE 5).	
Grout Fill Behind Masonry Veneer	R703.7.4.2 Mortar is no longer permitted to fill the air space behind anchored masonry veneer.	
Exterior Insulation and Finish Systems		R703.9 Limitations for exterior insulation and finish systems (EIFS) with and without drainage have been added to the 2015 IRC. EIFS with drainage is required over all wall assemblies except concrete and masonry.
Vinyl Siding Attachment		R703.11.1 This clarifies nailing penetration and spacing requirements for horizontal and vertical vinyl siding.
Adhered Masonry Veneer	R703.12 Minimum clearance and flashing requirements have been added to apply to the base of adhered masonry veneer on exterior walls.	
Insulated Vinyl Siding and Polypropylene Siding		R703.13, R703.14 New sections set minimum requirements for insulated vinyl siding and polypropylene siding. Polypropylene siding requires a minimum 5-ft fire separation distance and must maintain 10-ft separation from buildings on other lots.
Cladding Attachment over Foam Sheathing		R703.15, R703.16, R703.17 Three new sections set minimum requirements for cladding attachment over foam sheathing to wood framing (R703.15), cold-formed steel framing (R703.16), and masonry or concrete walls (R703.17). For light-frame construction, prescriptive requirements are given. Connection to concrete and masonry construction continues to require engineered design in most cases when placing foam over the concrete or masonry wall.

2015 International Residential Code –Transition from the 2009 IRC

Topic	2012	2015
Part 3 Building Construction (Chapters 4 – 10), Continued		
Ceiling Joist and Rafter Span Tables		Tables R802.4, R802.5 Changes to Southern Pine, Douglas Fir-Larch, and Hemlock Fir capacities have changed the maximum spans for lumber in the ceiling joist and rafter span tables of the IRC.
Cutting, Drilling, and Notching of Roof Members	R802.7 Text in Section R802.7 has been deleted in favor of referencing Section R502.8.1 for provisions related to cutting, drilling, and notching of solid lumber. Provisions for notching of cantilevered rafters are placed in a new section, and the nominal dimension is replaced by the actual minimum dimension of 3 ½ inches for the remaining portion of the rafter. A new section clarifies the limits for taper cuts on the ends of ceiling joists. Two new figures aid in determine the correct application of cantilevered rafters and ceiling joist taper cut requirements.	
Roof Uplift Resistance	802.11 The provisions for roof connections to resist wind uplift forces have been updated to current standards and simplified for ease of use. Table R802.11 has been replaced to provide accurate values for both low- and high-slope roofs in Wind Exposure Categories B and C.	
Roof Ventilation	R806 The provisions for minimum vent area have been revised by placing two exceptions after the general rule to clarify the meaning. The exception for reducing the ventilation area when a vapor retarder is installed on the ceiling now only applies to cold-weather climates. The reduction in vent area based on cross ventilation now requires no less than 40% and no more than 50% (previously 50% and 80%) of the required ventilating area to be placed in the upper portion of the roof and no more than 3 feet below the ridge. The requirement for the upper vents to be at least 3 feet below the ridge. The requirement for the upper vents to be a least 3 feet above the eave vents has been removed.	
Unvented Attic Assemblies	R806.5 The unvented attic provisions apply to rafter assemblies typically used for vaulted or cathedral ceilings in addition to conventional attics. References to vapor retarders now specify the applicable class as defined in Section R202. Insulation board installed as an air-impermeable barrier must have the edges sealed to provide a continuous barrier.	Table R806.5 For unvented attics and unvented rafter spaces, Table R806.5 has a new footnote allowing calculation of insulation thickness when the insulation is placed above the structural roof sheathing.

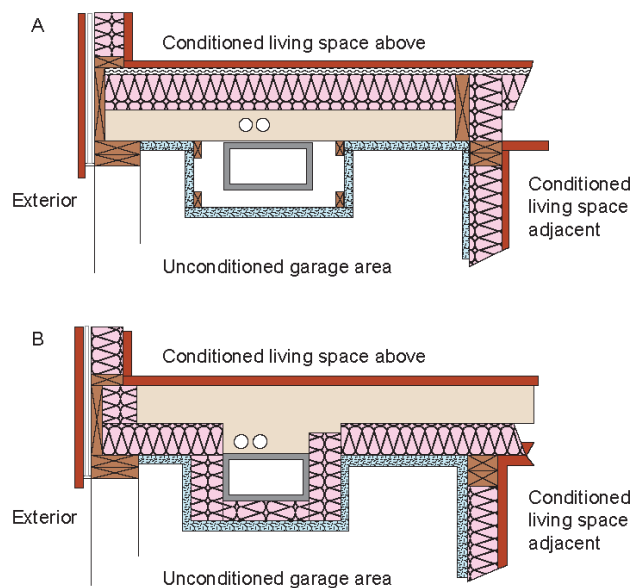
Topic	2012	2015
Part 3 Building Construction (Chapters 4 – 10), Continued		
Roof Flashing Locations	R903.2.1 The general roof flashing provisions for Chapter 9 now require a kick-out flashing where the eave of the roof intersects a wall to prevent water intrusion into the wall assembly.	



Topic	2012	2015
Crickets and Saddles	R903.2.2 Unit skylights or roof windows must be installed in accordance with the manufacturer's installation instructions, which may not require a cricket even when they exceed 30 inches in width.	
Underlayment	R905.2.7.2 The requirements for installation of roof covering underlayment have been added for high-wind areas. Adhered underlayment that conforms to ASTM D1970 is exempt from the fastening requirements.	R905.1.1, R905.1.2 Roof underlayment provisions have been combined into Section R905.1.1 with three tables listing underlayment type, application, and attachment. Sections on ice barriers from the 2012 IRC are reorganized and combined into Section R905.1.2

Topic	2012	2015
Part 3 Building Construction (Chapters 4 - 10), Continued		
Sidewall Flashing	R905.2.8.3 For asphalt shingles, the IRC now recognizes both step and continuous base flashings where sloped roofs meet walls. Where the wall has anchored or adhered masonry veneer, or stucco, the provisions are clarified by referencing the applicable section of the code for counterflashing.	
Roof Drip Edge	R905.2.8.5 A roof drip edge is now required for asphalt shingles.	
Wood Shingle Application		R905.7.5 The minimum requirements for application of wood shingles are expanded. Fastener type is clarified and a new table lists minimum sizes for box nails. Labeling requirements for fastener packaging have also been added.
Wood Shake Installation		R905.8.6 The minimum requirements for application of wood shakes are expanded. Fastener type is clarified, and a new table lists minimum sizes for box nails. Labeling requirements for fastener packaging have also been added.
Photovoltaic Shingles		R905.16 Additional requirements and limits for photovoltaic shingles have been added to Section R905.16
Rooftop-Mounted Photovoltaic Systems		907 This code provision describes the requirements and limits of rooftop-mounted photovoltaic.
Recovering versus Replacement of Roofing	R907.3 The hail exposure map, related definitions, and the limitations on reroofing in hail zones have been deleted from the code. A new exception clarifies that the reroofing provisions do not require the removal of self-adhered ice barrier underlayment.	
Masonry Chimney Caps and Rain Caps	R1003.9.1, R1003.3.3 New language includes provisions for commonly used masonry chimney caps and rain caps consistent with ASTM C 1283.	
Factory-Built Chimney Offsets	R1005.7 Factory-built chimney assemblies must be installed vertically with no offsets greater than 30 degrees. No more than four elbows are permitted within the entire length of chimney assembly.	
Part 4 Energy Conservation (Chapter 11)		
Energy Efficiency	Chapter 11 The IRC energy efficiency provisions have been replaced with the applicable residential requirements of the IECC.	
Compliance Paths		N1101.13 The compliance paths in the energy provisions have been clarified. The mandatory provisions combined with either the prescriptive provisions or the performance provisions are deemed to comply with the code.

Topic	2012	2015
Part 4 Energy Conservation (Chapter 11), Continued		
Permanent Energy Certificate	N1101.14 (N1101.16) The permanent certificate must list the results of the blower door test for air leakage of the building envelope and the results of required duct system testing.	N1101.14 The code now requires the permanent energy certificate to be placed on a wall in proximity to the furnace, in a utility room, or in another approved location inside the building.
R-Value Computation-Insulated Siding		N1102.1.3 The code now allows insulated siding to be used in the calculation for satisfying the wall insulation R-value. The labeled R-value for the siding must be reduced by R-0.6 for calculation purposes.
Access Hatches and Doors		N1102.2.4 Vertical doors that access unconditioned attics and crawl spaces do not require an R-value to match the required wall insulation. Such doors must comply with the fenestration U-factor requirements of Table N1102.1.2.
R-Value Reduction for Walls with Partial Structural Sheathing		N1102.2.7, Table N1102.1.2 The allowed R-value reduction for portions of walls with structural sheathing and requiring continuous insulation has been moved from footnote h of Table N1102.1.2 and placed in a new section to clarify the application.
Floor Framing Cavity Insulation		N1102.2.8, Table N1102.4.1.1 The code now permits an air space above required insulation installed in a floor framing cavity above unconditioned space. Table N1102.4.1.1 has been reformatted into three columns to separate the air barrier requirements from the insulation requirements.
Insulation at Wall Corners and Headers		Table N1102.4.1.1 Insulation requirements at framed wall corners and headers only apply when there is space to install insulation. The minimum insulation thermal resistance is R-3 per inch of insulation.

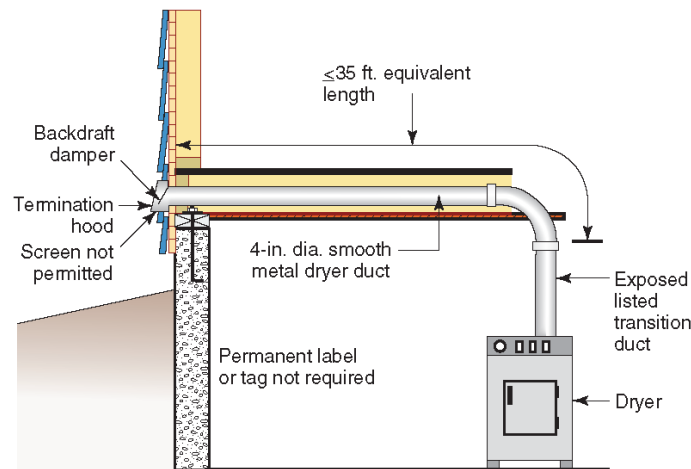
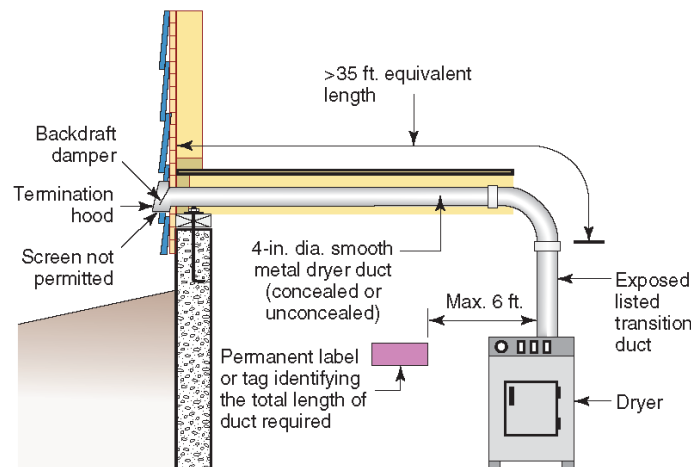


Two options for floor insulation above unconditioned space

2015 International Residential Code –Transition from the 2009 IRC

Topic	2012	2015
Part 4 Energy Conservation (Chapter 11), Continued		
Building Thermal Envelope Testing	N1102.4.1.2 The code requires a blower door test to be performed on all dwelling units to determine compliance with the maximum air leakage rate for the applicable climate zone.	
Wood-burning Fireplace Doors		N1102.4.2, Table N1102.4.1.1 Doors on wood-burning fireplaces must be listed for the application. The requirement for gasketed doors on fireplaces has been removed.
Duct Sealing and Testing		N1103.3 The duct sealing and testing provisions have been reorganized to clarify the application. The maximum duct leakage rates are now prescriptive rather than mandatory provisions to accommodate design flexibility.
Building Cavities	N1103.3.5 (N1103.2.3) Building framing cavities are no longer permitted to be used for ducts or plenums.	
Heated Water Circulation and Temperature Maintenance Systems		N1103.5 The code now requires automatic controls to maintain hot water temperature for heated water circulation systems and for heat trace temperature maintenance systems when such systems are installed. To save energy, continuously operating circulation pumps are no longer permitted. Heat trace systems must comply with one of the referenced standards.
Hot Water Pipe Insulation	N1103.5.3 (N1103.4.2) The code sets minimum insulation requirements for hot water piping.	
Lighting Equipment	N1104.1 High-efficacy lamps are required in at least 75 percent of permanent lighting fixtures.	
Part 5 Mechanical (Chapters 12 through 23)		
Identification and Certification of Pipe, Tubing, and Fittings	M1301 All pipe, tubing, and fittings used in mechanical systems now require a manufacturer's mark and third-party testing or certification. New definitions supplement the provisions.	
Locking Access Port Caps	M1411.6 The code now recognizes any approved means to prevent unauthorized access to outdoor refrigerant ports.	

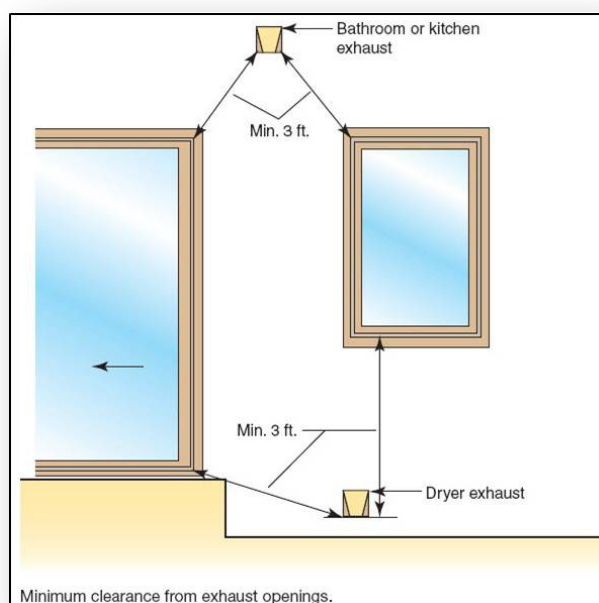
Topic	2012	2015
Part 5 Mechanical (Chapters 12 through 23), Continued		
Dryer Exhaust Duct	M1502.4 The maximum support spacing for dryer exhaust ducts has increased from 4 feet to 12 feet. Dryer exhaust ducts now specifically require mechanical fastening. Screw fasteners are permitted to penetrate the exhaust duct no more than 1/8 inch. The maximum specified length of dryer exhaust duct has been increased from 25 to 35 feet and now matches the corresponding dryer exhaust provisions of the IMC, IFGC, and the IRC fuel-gas provisions.	
Dryer Exhaust Duct Power Ventilators		M1502.4.4, M1502.4.5 The code now recognizes the use of dryer exhaust duct power ventilators (DEDPVs) to increase the allowable exhaust duct length for clothes dryers.
Dryer Duct Length Identification		M1502.4.6 A permanent label identifying the concealed length of the dryer exhaust duct is no longer required where the equivalent duct length does not exceed 35ft. For the dryer exhaust duct exceeding 35ft, a label or tag is required whether the duct is concealed or not.



© International Code Council

A permanent label or tag is only required when the equivalent length of the dryer exhaust duct exceeds 35 feet.

Topic	2012	2015
Part 5 Mechanical (Chapters 12 through 23), Continued		
Makeup Air for Range Hoods		M1503.4 Automatic operation of a mechanical damper is no longer required for supplying makeup air for kitchen exhaust systems exceeding a rating of 400 cubic feet per minute (cfm). Transfer openings are permitted to obtain makeup air from rooms other than the kitchen.
Exhaust Openings	M1506 A minimum clearance of 3 ft is required between air exhaust terminations and openings into the building.	



Topic	2012	2015
Exhaust Duct Length		M1506.2 The code establishes maximum exhaust duct lengths based on duct diameter, type of duct and the exhaust fan airflow rating.
Mechanical Ventilation	M1507 Prescriptive design criteria for whole-house ventilation systems have been added to the mechanical ventilation provisions. Mechanical ventilation of kitchens and bathrooms is now described as local exhaust. New definitions for whole-house ventilation and local exhaust have been added to Section R202.	
Above-Ground Duct Systems	M1601.1 Stud cavities of exterior walls are no longer permitted to be used for return air plenums.	
Above-Ground Duct Systems		M1601.1.1, Table M1601.1.1, M1601.2 The list of duct system requirements has been revised to reference the applicable standards and delete redundant language. The table for material thickness of metal ducts was replaced with what is

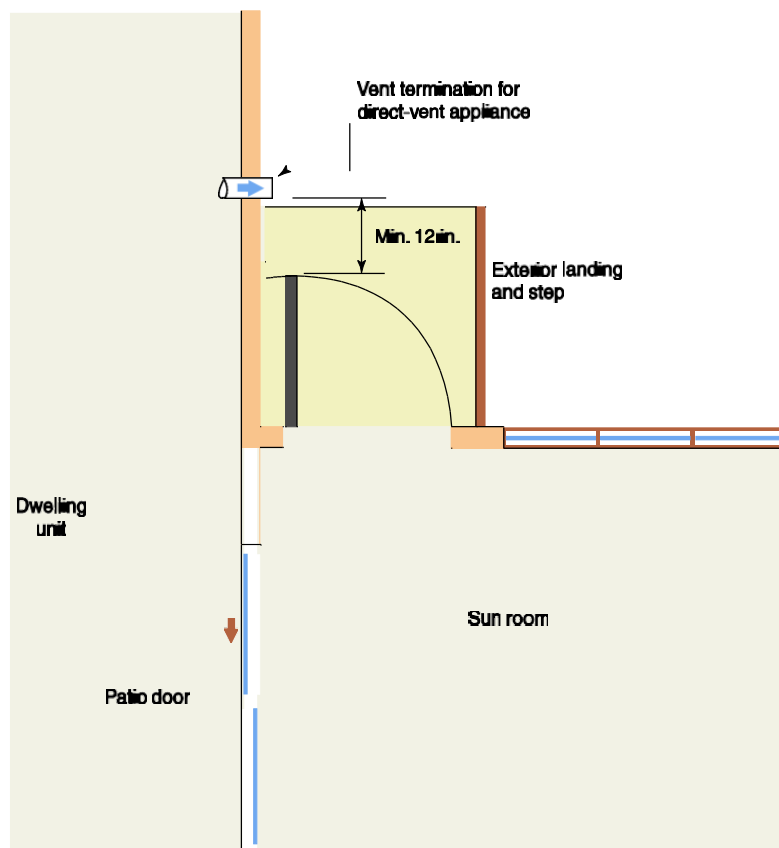
2015 International Residential Code –Transition from the 2009 IRC

Topic	2012	2015
		currently consistent with the SMACNA sheet metal construction standard.
Part 5 Mechanical (Chapters 12 through 23), Continued		
Duct Installation		M1601.4 Tapes and mastics used to seal sheet metal ducts must be listed to UL 181 B as has been required for sealing flexible ducts. Snap-lock and button-lock seams are no longer exempt from the sealing requirements.
Duct Joints, Seams and Connections	M1601.4.1 The IRC provisions for duct connections have been replaced with language from the IMC and now reference the SMACNA HVAC Duct Construction Standards. Unlisted duct tape is not permitted for sealing joints or seams of ductwork.	
Return Air		M1602 The provisions for return air have been simplified and clarified to improve understanding while preserving the intent of keeping contaminants out of the airstream of the heating, ventilation and air-conditioning (HVAC) system. The provisions for outdoor air openings have been removed and the code now references the applicable provisions for outdoor air in Chapter 3.
Prohibited Sources of Outdoor and Return Air	M1602.2 The prohibition on taking return air from a garage does not apply to an HVAC system that serves the garage only. Mechanical rooms are no longer listed as prohibited sources of return air. Modifications of the 10-foot rule for separation of return air inlets and fuel-burning appliances clarifies that the requirement applies to the draft hood and open combustion chamber of atmospheric burner appliances, not direct vent appliances with sealed combustion chambers.	
Ranges and Ovens	M1901 The provisions for kitchen ranges have been updated to match those for gas-fired ranges in Section G2447. References in Sections M1504.1 and M1505.1 alert the code user to specific provisions related to installation of cooking appliances above ranges and clearances for open-top broiler units. Mandatory code language now clarifies that cooking appliances used in swellings must be listed and labeled for household use. Commercial cooking appliances are not permitted in dwelling units.	

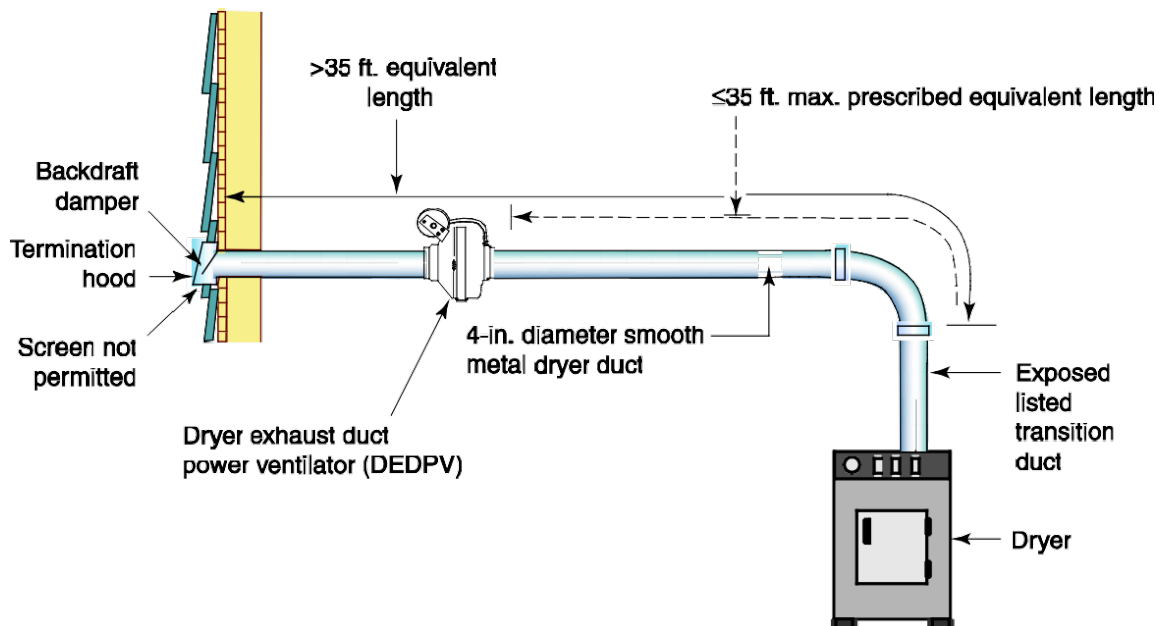
2015 International Residential Code –Transition from the 2009 IRC

Topic	2012	2015
Part 6 Fuel Gas (Chapter 24)		
Condensate Pumps		G2404.11 Condensate pumps located in uninhabitable spaces must be connected to the appliance to shut down the equipment in the event of pump failure.
Reduced Clearance to Combustible Materials	G2409.1 Gypsum board is now specifically identified as a combustible material for purposes of determining required clearances around gas-fired appliances.	
Electrical Bonding of Corrugated Stainless Steel Tubing		G2411.1.1 The maximum allowable length of the bonding jumper for corrugated stainless steel tubing (CSST) is 75ft. Bonding methods must comply with NFPA 70 and devices, such as clamps, must be listed in accordance with UL 467.
Pipe Identification and Certification	G2412, G2415 All pipe, tubing, and fittings used in a fuel-gas system now require a manufacture’s mark and third-party testing or certification. New definitions supplement the provisions.	
Maximum Gas Demand		G2413.2 Table G2413.2 and the reference to it were deleted to clarify that the code requires the actual maximum input rating of the appliances to be known and used for gas pipe sizing purposes.
Plastic Pipe, Tubing and Fitting		G2414.6 PVC and CPVC pipe are expressly prohibited materials for supplying fuel gas.
Fittings in Concealed Locations		G2415.5 This section retains the basic intent while being completely reorganized to clarify the correct application. Threaded elbows, tees and coupling are now specifically approved for concealed locations as the code always intended. The code now provides the applicable referenced standards for fittings that are listed for concealed locations.
Protection of Concealed Piping Against Physical Damage		G2415.7 The section on protection of piping has been completely rewritten to address more than just bored holes and notches in structural members. It now addresses piping parallel to framing members and piping within framing members. The new text requires that the protection extend well beyond the edge of members that are bored or notched.
Sediment Trap	G2419.4 A new figure illustrates the correct configuration of a sediment trap. Gas-fired decorative vented appliances installed in vented fireplaces and gas fireplaces are not required to be equipped with a sediment trap.	
Medium-Pressure Regulators		G2421.2 Medium-Pressure (MP) line regulators installed in rigid piping must have a union installed to allow removal of the regulator.

Topic	2012	2015
Part 6 Fuel Gas (Chapter 24), Continued		
Connecting Portable and Movable Appliances		G2422.1 Where portable gas appliances are used outdoors, such as gas grills, fire pits, and patio heaters, the options for connecting to the gas distribution system are practically limited to gas hoses designed for the purpose. Such hoses must comply with ANSI Z21.54.
Door Clearance to Vent Terminals		G2426.7.1 An appliance vent terminal is not permitted in a location with 12 inches of the arc of a swinging door.

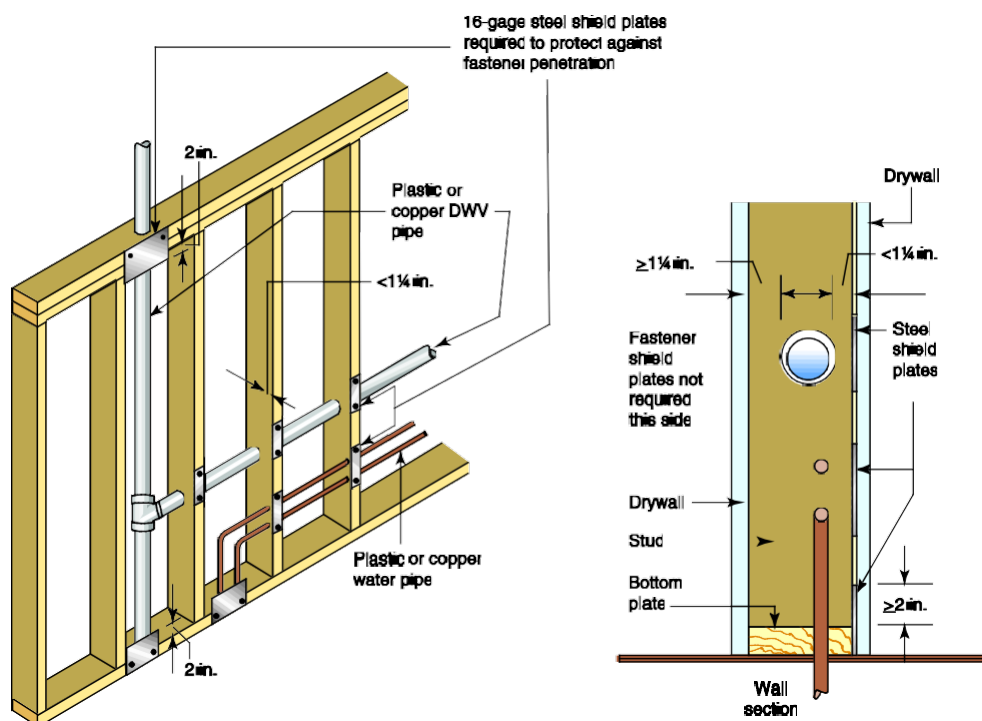


Topic	2012	2015
Part 6 Fuel Gas (Chapter 24), Continued		
Plastic Piping for Appliance Vents		G2427.4.1, G2427.6.8.3 The approval of plastic pipe for venting appliances is no longer a responsibility of the building official and, instead that responsibility rests with the appliance manufacturer and the appliance listing agency. The code previously addressed only vents, which are defined as listed and labeled factory-made products. The code is no longer silent on the sizing of plastic pipe vents that do not fall under the definition of “vent”.
Venting System Termination Location		G2427.8 New text addresses the location of sidewall vent terminals with respect to adjoining buildings. A 10-foot separation is required when a vent discharges in the direction of an opening in an adjacent building.
Clothes Dryer Exhaust Ducts		G2439.4, G2439.7 New text recognizes the use of dryer exhaust duct power ventilators (DEDPVs) to increase the allowable exhaust duct length for clothes dryers. A permanent label identifying the concealed length of dryer exhaust duct is no longer required where the equivalent duct length does not exceed 35ft. For dryer exhaust duct exceeding 35ft, a label or tag is required whether the duct is concealed or not. Instead of prohibiting all duct fasteners such as screws and rivets, the code now limits the penetration of fasteners, where installed.



Topic	2012	2015
Part 6 Fuel Gas (Chapter 24), Continued		
Prohibited Sources of Outdoor and Return Air	G2442.4 For an HVAC system that services the garage only, return air is permitted to be taken from the garage. The requirement for a 10-foot separation between return air inlets and fuel-burning appliances applies only to the draft hood and open combustion chamber of atmospheric burner appliances, not direct vent appliances with sealed combustion chambers.	
Prohibited Location of Commercial Cooking Appliances		2447.2 The code does not prohibit the installation of cooking appliances that are listed as both commercial and domestic appliances.
Part 7 Plumbing (Chapter 25 through 33)		
Inspection and Tests for Building Sewer		P2502.1, P2503.4 New text clarifies the method for examining existing building sewers and building drains when the entire sanitary drainage system is replaced. Internal examination is required to verify the size, slope, and condition of the existing piping. A new provision prescribes a pressure test for a forced sewer at a test pressure of 5psi (34.5 kPa) greater than the pump rating.
Drain, Waste, and Vent Systems Testing		P2503.5 The head pressure for a water test on drain, waste, and vent (DWV) systems has been reduced from 10ft to 5ft.
Rough Plumbing Test	P2503.5.1 The IRC no longer permits air testing of plastic piping in DWV systems.	
Connections to Drainage Systems	P2601.2 Waste water from lavatories, bathtubs, showers, clothes washers, and laundry trays I now defined as gray water and is permitted to be discharged to an approved gray-water system.	

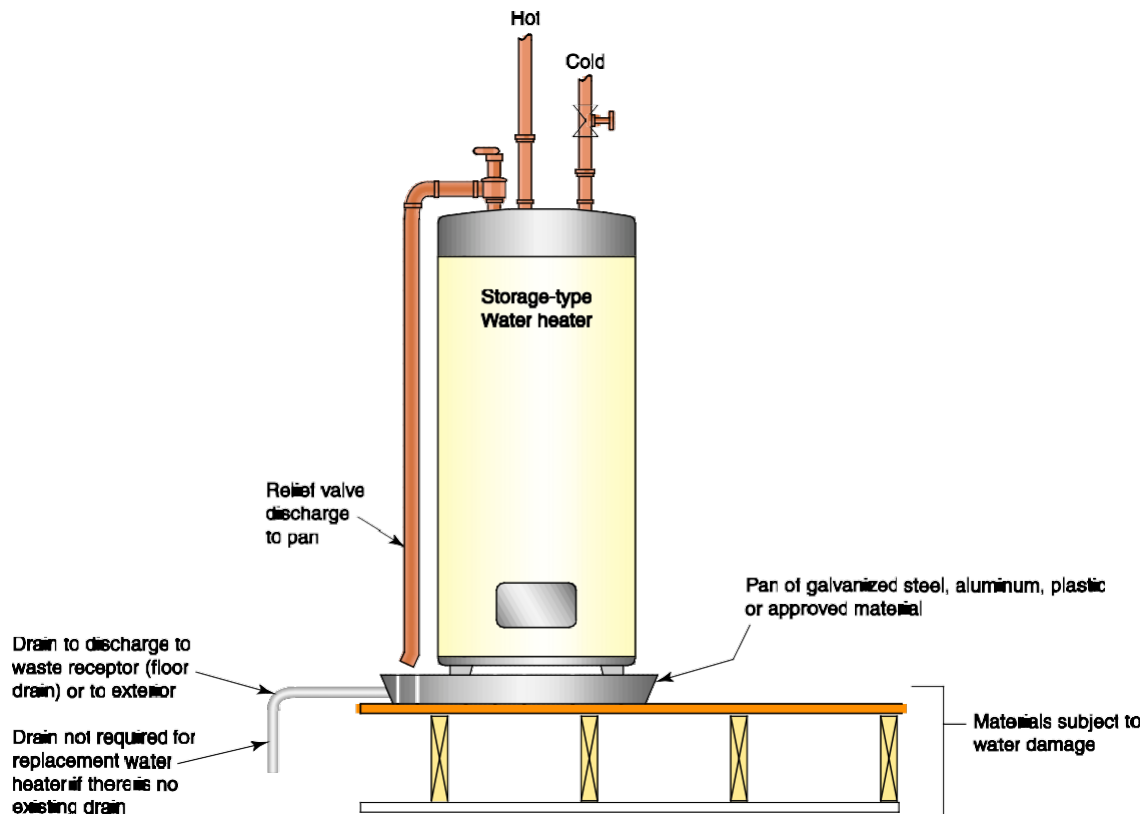
Topic	2012	2015
Part 7 Plumbing (Chapter 25 through 33), Continued		
Protection Against Physical Damage		P2603.2.1 For piping installed through bored holes or in notches, the minimum clearance distance from the concealed piping to the edge of the framing member has been reduced from 1 ½ in to 1 ¼ in. Protection is required for piping installed less than 1 ¼ in from the edge of the framing member.



Topic	2012	2015
Protection Against Corrosion		P2603.3 The minimum thickness of sheathing material for protection of piping against corrosion has been reduced from 0.025 in to 0.008 in (8mil). The corrosion protection requirement applies to metallic piping other than cast iron, ductile iron, and galvanized steel that is in direct contact with concrete, masonry or steel framing. Previously, protection was only required for materials passing through walls and floors of these materials. All metallic piping requires corrosion protection when located in corrosive soils.
Pipes through Foundation Walls	P2603.4 A sleeve or relieving arch is not required for pipes passing under a footing.	
Piping Support		Table P2605.1 Support spacing requirements for PEX and PE-RT tubing 1 ¼ in and greater in diameter have been added to the table. Footnote b of Table P2605.1 clarifies the mid-story guide requirements for some types of vertical pipe 2 ins and smaller in diameter.

Topic	2012	2015
Part 7 Plumbing (Chapter 25 through 33), Continued		
Sealing of Annular Spaces	P2606 Provisions for sealing pipe penetrations of the building envelope have been placed in a new section and revised to more precisely prescribe the approved types of materials and their correct application. The new language also correlates with the provisions for sealing against air leakage in the IECC.	
Identification and Certification	P2609.1, 2609.4 Pipe, fittings, and plumbing components are required to meet the marking requirements of the applicable referenced standard in addition to bearing the identification of the manufacturer. The code now requires all plumbing products and materials to be listed by a third-party certification agency. Table P2608.4 and third-party testing requirements have been deleted.	
Plumbing Fixtures, Waste Receptors	P2702.1, P2706.1 The definition of plumbing fixture has been revised to include receptacles and devices that discharge to the drainage system but are not connected to a water supply, such as a floor drains and standpipes. The requirement for strainers on plumbing fixture outlets has been clarified by specifically excluding hub drains and standpipes. Attics and crawlspaces are now listed as prohibited locations for waste receptors and standpipes. Clothes-washer standpipes are permitted to be installed in bathrooms.	P2702.1, P2706.1 A definition of waste receptor has been added to the code. Waste receptors are now permitted in bathrooms and closets.
Shower Receptors and Lining	P2709.1, P2709.2 The distance shower liners must extend above finished thresholds has been reduced from 3 inches to 2 inches. Minimum thickness requirements for PVC and CPE shower liners have been deleted in favor of requirements in referenced standards.	
Dishwashing Machines		P2717 The code now references the applicable standards for integral air gaps protecting the potable water supply to dishwashers. The term “food waste disposer” replaces “food waste grinder.” Section P2717.2 and P2717.3 regarding dishwasher discharge to the sink tailpiece or the food waste disposer have been combined into a single Section P2717.2, eliminating redundant language and improving understanding of the provisions.

Topic	2012	2015
Part 7 Plumbing (Chapter 25 through 33), Continued		
Water Heater Drain Valves and Pans	P2801.5 The provisions for safety pans under water heaters have been clarified by prescribing such protection for water heaters with storage tanks only. Tankless water heaters do not require pans.	P2801 The code now specifically requires drain valves with a threaded outlet for water heaters. The water heater pan requirements have been expanded to accept aluminum and plastic pans of the prescribed thickness. The code clarifies that a pan drain is not required when a water heater is replaced and there is no existing drain.



Topic	2012	2015
Water Heater Relief Valve Discharge Piping		P2804.6.1 The temperature and pressure (T&P) relief valve discharge pipe termination must have an air gap suitable to protect the potable water supply distribution system of the building. PEX and PE-RT tubing used for relief valve discharge piping must be one size larger than the T&P valve discharge outlet, and the outlet end of the tubing must be fastened in place.

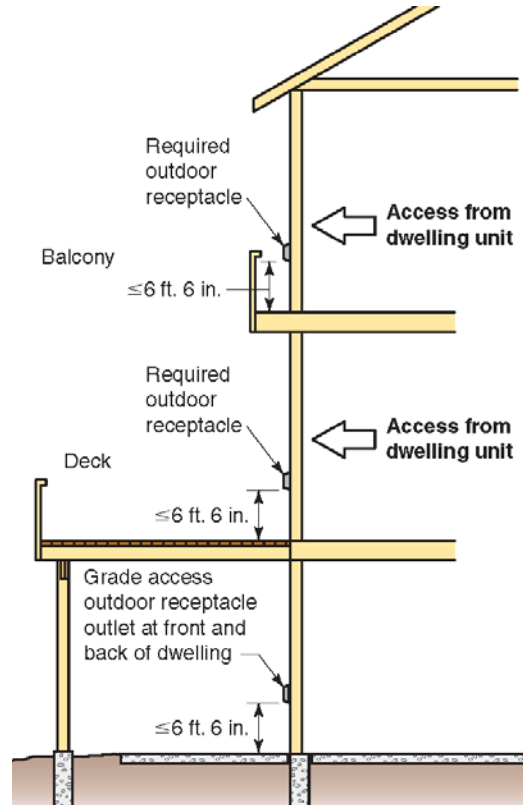
2015 International Residential Code –Transition from the 2009 IRC

Topic	2012	2015
Part 7 Plumbing (Chapter 25 through 33), Continued		
Nonpotable Water Systems		P2901, P2910 through P2913 Nonpotable water outlets, such as hose connections, that utilize nonpotable water must be identified with a warning and a symbol that nonpotable water is being used. The color purple is established for identifying distribution piping conveying nonpotable water. New Sections P2910 through P2913 are extracted from the IgCC and intend to provide guidance on the collection, storage, and distribution of various types of nonpotable water for residential buildings.
Minimum Fire Sprinkler Separation from Obstructions	P2904.2.4.2 A new figure provides prescriptive values for minimum separation distances between fire sprinklers and obstructions. Lesser distances are permitted in accordance with the manufacturer's installation instructions.	
Heated Water Distribution Systems		P2905 Pointers have been added to the IRC plumbing provisions to direct the user to the applicable energy conservation provisions of IRC Chapter 11 related to heated water distribution systems. Section N1103.5 requires automatic controls to maintain hot water temperature for heated water circulation systems and for heat trace temperature maintenance systems when such systems are installed.
Lead Content of Drinking Water Pipe and Fittings		P2906.2 The code has a more stringent limitation for lead content in pipe, pipe fittings, joints, valves, faucets, and fixture fittings that convey water used for drinking and cooking.
Solvent Cementing of PVC Joints		P3003.9 The application of a primer to drain, waste, and vent PVC pipe and fittings prior to solvent cementing is not required for 4-inch pipe size and smaller, provided that the piping is for a non-pressure application.
Joints between Drainage Piping and Water Closets	P3003.19 Use of waste connector and sealing gasket is now permitted as an alternative to a flanged connection for floor-mounted water closets.	
Cleanouts		P3005.2 The section on cleanouts has been completely reorganized and reworded for clarity. Brass cleanout plugs are only permitted for metallic piping. Where located at a finished wall, the cleanout must be within 1 ½ in of the finished surface. A cleanout is no longer required at the base of each waste or soil stack.

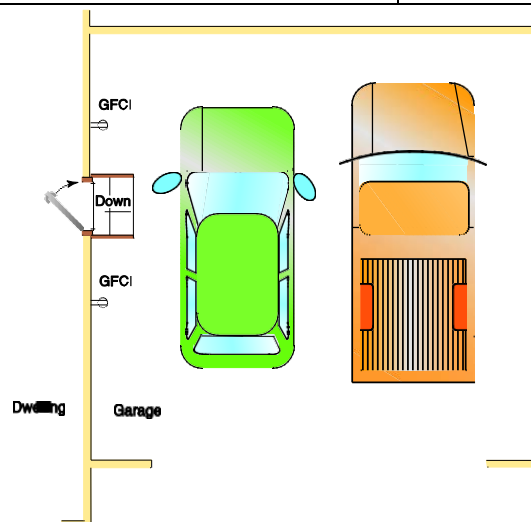
2015 International Residential Code –Transition from the 2009 IRC

Topic	2012	2015
Part 7 Plumbing (Chapter 25 through 33), Continued		
Ejector Connection to the Drainage System	P3007.3.5 The discharge from ejector pumps is now permitted to connect to soil stacks, waste stacks, and horizontal branch drains in addition to building sewers and building drains.	
Backwater Valves		P3008.1 For existing buildings, fixtures that are located above the next upstream manhole cover are allowed to discharge through a backwater valve.
Vent Terminals		P3103.1, P3103.2 Where a minimum 3-inch diameter vent terminal is required to prevent frost blockage in cold climates, the 3-inch diameter pipe must extend at least 12 in inside the building's thermal envelope. The minimum 7-foot height requirement for vent terminations applies only to roofs used for purposes similar to residential decks, patios and balconies.
Location of Vent Terminal	P3103.5 The minimum clearance to vent terminations above openings within 10 feet has been increased from 2 feet to 3 feet.	
Trap Seal Protection Against Evaporation		P3201.2 Trap seal protection against evaporation can now be accomplished in a variety of ways, including trap seal primer valves supplied with nonpotable water and barrier-type trap seal protection devices
Part 8 Electrical (Chapters 34 through 43)		
Concrete-Encased Electrodes	E3608.1.2 The provisions for concrete-encased electrodes have been broken into separate parts to clarify the meaning and application.	
Supplemental Electrode Required	E3608.4 A rod, pipe, or plate electrode requires a supplemental electrode unless testing confirms that the single electrode has a resistance to earth of 25 ohms or less.	

	2012	2015
Part 8 Electrical (Chapters 34 through 43), Continued		
Outdoor Outlets	E3901.7 An outdoor outlet is now required for any size of deck, porch, or balcony that is accessible from inside the dwelling unit.	



Topic	2012	2015
Receptacle Outlets for Garages		E3901.9 Garage receptacle outlets must be served by a separate branch circuit that does not supply other outlets. At least one receptacle outlet is required for each car space in a garage.



2015 International Residential Code –Transition from the 2009 IRC

Topic	2012	2015
Part 8 Electrical (Chapters 34 through 43), Continued		
Receptacle Outlets in Foyers	E3901.11 When exceeding 60 square feet in area, foyers in dwelling units now require receptacle outlets.	
Ground-Fault Circuit Interrupter Protection		E3902.8, E3902.9, E3902.10 Laundry areas have been added to the list of locations requiring ground-fault circuit interrupter (GFCI) protection. Receptacles within 6 feet of bathtubs and showers, and receptacles for dishwashers also require CFGI protection.
Location of Ground-Fault Circuit Interrupters	E3902.11 When provided, ground-fault circuit interrupter devices must be placed in a readily accessible location.	
Boxes at Fan Outlets	E3905.8 When a ceiling outlet box is wired for a future ceiling fan, the box must be listed for the support of a ceiling fan.	
Switching Controlling Lighting Loads	E4001.15 Unless a means of access for rewiring is provided, a grounded circuit conductor must be provided at the switch outlet.	
Tamper-Resistant Receptacles	E4002.14 Receptacles that are located more than 5-1/2 feet above the floor, are part of a luminaire or appliance, or in a dedicated space for an appliance are no longer required to be tamper-resistant.	
Location of Low-Voltage Luminaires Adjacent to Swimming Pools		E4203.4.3 Listed low-voltage luminaires meeting the prescribed conditions are permitted to be located less than 5 feet from the water's edge of swimming pools, spas, and hot tubs.
Bonded Parts of Pools, Spas, and Hot Tubs	E4204.2 Where walls are at least 5 feet high and less than 3 feet from the edge of the pool, equipotential bonding is required on the pool side of the wall only. Metal parts, including awnings, fences, and door and window frames constructed of metal, require bonding if located within 5 feet of the edge of the pool.	
Accessibility to Electrical Equipment of Hydromassage Bathtubs	E4209.3 When located behind access panels and serving hydromassage bathtubs, receptacle outlets must have their face in direct view and within 1 foot of the access opening.	

2015 International Residential Code –Transition from the 2009 IRC

Topic	2012	2015
Part 9 Appendices		
Light Straw-Clay Construction		Appendix R Prescriptive requirements for light straw-clay construction have been added as an appendix to the 2015 IRC. Light straw-clay walls are non-bearing infill around a structural frame.
Strawbale Construction		Appendix S Prescriptive requirements for strawbale construction have been added as an appendix to the 2015 IRC. Strawbale walls may be non-bearing infill around a structural frame or bearing walls depending upon the method of construction and detailing. Appendix S contains requirements for both construction methods.

Note

INTERNATIONAL ENERGY CONSERVATION CODE

International Energy Conservation Code Adopted

The 2015 International Energy Conservation Code which is on file in the office of the Building Official is hereby adopted and designated as the Energy Conservation Code of the City of Lake Dallas, to the same extent as if such code was copied verbatim, subject to the deletions, amendments and additions prescribed by this ordinance.

Adoption of the NCTCOG Recommended Amendments to the 2015 International Energy Conservation Code

The 2015 International Energy Conservation Code is hereby amended as recommended by the North Central Texas Council of Governments ("NCTCOG"), which amendments are incorporated herein by reference and on file in the office of the Building Official of the City of Lake Dallas.

Recommended Amendments to the 2015 International Energy Conservation Code

North Central Texas Council of Governments Region
(Climate Zone 3 of the IECC)

The following sections, paragraphs, and sentences of the *2015 International Energy Conservation Code* (IECC) are hereby amended as follows: Standard type is text from the IECC. Underlined type is text inserted. ~~Lined through type is deleted text from IECC.~~ A double (**) asterisk at the beginning of a section identifies an amendment carried over from the 2012 edition of the code and a triple (***) asterisk identifies a new or revised amendment with the 2015 code.

Note: Historically NCTCOG has limited Chapter 1 amendments in order to allow each city to insert their local policies and procedures. We now have suggested certain items to be brought to the attention of cities considering adoption of the code that may be of concern to several jurisdictions. **It is still intended to be discretionary to each city to determine which Chapter 1 amendments to include.**

The 2015 IECC contains separate provisions for commercial buildings and for residential buildings 3 stories or less. The provisions of the commercial buildings are preceded by "C" for Commercial. The provisions for residential buildings 3 stories or less are preceded by "R" for residential buildings. Each set of provisions are separately applied to buildings within their respective scope. Each set of provisions also contains a Scope and Administration chapter, a Definitions chapter, a General Requirements chapter and a chapter containing energy efficiency requirements applicable to building within their respective scope.

Recommended amendments that match sections in each of the respective provisions ("C" and "R") are written to represent both sections rather than duplicating the recommended amendment in this document.

Sections N1101.2 through N1105 of the 2015 *International Residential Code* (IRC) are noted to be extracted from the 2015 IECC. The Building and Residential Advisory Board (BRAB) recommends amending Chapter 11 [RE] ENERGY EFFICIENCY of the 2015 IRC to refer to the residential provisions of the 2015 IECC.

The Governor signed HB1736 into law on June 16, 2015. HB1736 adopts energy efficiency chapter of the International Residential Code as it existing on May 1, 2015, as the energy code for single-family

construction (as defined in Section 388.002 of the Health and Safety Code) effective September 1, 2016. The recommended amendments to the 2015 IECC have been analyzed by the Energy Systems Laboratory of the Texas A&M University for stringency with the current Texas Building Energy Performance Standards (TBEPS) which is the 2009 Edition of the IECC and the energy provisions of the 2009 IRC. Some amendments below are noted that effective September 1, 2016, the proposed amendment would be deemed less stringent than the provisions of the 2015 IECC and therefore would no longer be considered a recommended amendment.

****Section C102/R102; add Section C102.1.2 and R102.1.2 to read as follows:**

C102.1.2 Alternative compliance. A building certified by a national, state, or local accredited energy efficiency program and determined by the Energy Systems Laboratory to be in compliance with the energy efficiency requirements of this section may, at the option of the Code Official, be considered in compliance. The United States Environmental Protection Agency's Energy Star Program certification of energy code equivalency shall be considered in compliance.

R102.1.2 Alternative compliance. A building certified by a national, state, or local accredited energy efficiency program and determined by the Energy Systems Laboratory to be in compliance with the energy efficiency requirements of this section may, at the option of the Code Official, be considered in compliance. The United States Environmental Protection Agency's Energy Star Program certification of energy code equivalency shall be considered in compliance. Regardless of the program or the path to compliance, each 1- and 2-family dwelling shall be tested for air and duct leakage as prescribed in Section R402.4 and R403.3.3 respectively.

(Reason: This amendment is added to allow alternative compliance in accordance with Texas HB 1365, 78th Legislature. Codified in Chapter 388 Texas Building Energy Performance Standards: §388.003(i).

The last sentence to Section R102.1.2 was added to insure that every house is tested in accordance with the mandatory provisions of the code.)

Section C202 and R202; add the following definition:

*****PROJECTION FACTOR.** The ratio of the horizontal depth of the overhang, eave or permanently attached shading device, divided by the distance measured vertically from the bottom of the fenestration glazing to the underside of the overhang, eave or permanently attached shading device.

(Reason: The amendment to Section 402.3.2 Glazed fenestration SHGC was proposed by the TAB and ESL determined the proposal to be not less restrictive than the 2009, 2012 and 2015 IECC. This added definition is necessary as part of that amendment. The amendment will provide additional options for SHGC selection.)

Section R202; add the following definition:

*****DYNAMIC GLAZING.** Any fenestration product that has the fully reversible ability to change its performance properties, including U-factor, solar heat gain coefficient (SHGC), or visible transmittance (VT).

(Reason: This term is referenced in Section R402.3.2. This definition of DYNAMIC GLAZING is also found in the Commercial provisions of the code.)

*****Section R402.3.2 Glazed fenestration SHGC; amend by adding a paragraph and table**

**following
the exception to read as follows:**

Where vertical fenestration is shaded by an overhang, eave, or permanently attached shading device, the SHGC required in Table R402.1.2 shall be reduced by using the multipliers in Table R402.3.2 SHGC Multipliers for Permanent Projections.

Table R402.3.2 SHGC Multipliers for Permanent Projections ^a

Projection Factor	SHGC Multiplier (all Other Orientation)	SHGC Multiplier (North Oriented)
0 - 0.10	1.00	1.00
>0.10 – 0.20	0.91	0.95
>0.20 – 0.30	0.82	0.91
>0.30 – 0.40	0.74	0.87
>0.40 – 0.50	0.67	0.84
>0.50 – 0.60	0.61	0.81
>0.60 – 0.70	0.56	0.78
>0.70 – 0.80	0.51	0.76
>0.80 – 0.90	0.47	0.75
>0.90 – 1.00	0.44	0.73

^a North oriented means within 45 degrees of true north.

*(Reason: The amendment to **Section 402.3.2 Glazed fenestration SHGC** was proposed by the TAB and ESL determined the proposal to be not less restrictive than the 2009 and 2015 IECC. This added definition is necessary as part of that amendment. The amendment will provide additional options for SHGC selection.)*

*****R402.4.1.2 Testing; Add a last paragraph to read as follows:**

Mandatory testing shall only be performed by individuals that are certified to perform air infiltration testing certified by national or state organizations as approved by the building official. The certified individuals must be an independent third-party entity, and may not be employed; or have any financial interest in the company that constructs the structure.

(Reason: The 2012/15 International Residential Code (IRC) and International Energy Conservation Code (IECC) includes enhanced emphasis on envelope infiltration and duct leakage. Significant changes in the residential energy requirements include more frequent requirement of performance testing for leakage. Residential Duct systems must be tested unless all ducts and equipment are located within the conditioned space. Envelope testing is required to demonstrate compliance with maximum allowable leakage rate. This language puts the regulatory authority on notice that the testing requires specialized credentials and establishes a conflict of interest baseline).

***** R403.3.3 Duct Testing (Mandatory) Add a last paragraph to read as follows:**

Mandatory testing shall only be performed by individuals that are certified to perform duct testing leakage testing certified by national or state organizations as approved by the building official. The certified individuals must be an independent third-party entity, and may not be employed; or have any financial interest in the company that constructs the structure.

(Reason: The 2015 International Residential Code (IRC) and International Energy Conservation Code (IECC) includes enhanced emphasis on envelope infiltration and duct leakage. Significant changes in the residential energy requirements include more frequent requirement of performance testing for

leakage. Residential Duct systems must be tested unless all ducts and equipment are located within the conditioned space. Envelope testing is required to demonstrate compliance with maximum allowable leakage rate. This language puts the regulatory authority on notice that the testing requires specialized credentials and establishes a conflict of interest baseline).

****Section C402.2.7/R402.2; Add Section C402.2.9 and R402.2.14 to read as follows:**

Section C402.2.7/R402.2.14 Insulation installed in walls. To insure that insulation remains in place, insulation installed in walls shall be totally enclosed on all sides consisting of framing lumber, gypsum, sheathing, wood structural panel sheathing, netting or other equivalent material approved by the building official.

(Reason: This will increase the performance of the insulation by ensuring that the insulation stays in place.)

*****Section R405.6.2; add the following sentence to the end of paragraph:**

Acceptable performance software simulation tools may include, but are not limited to, REM Rate™, Energy Gauge and IC3. Other performance software programs accredited by RESNET BESTEST and having the ability to provide a report as outlined in R405.4.2 may also be deemed acceptable performance simulation programs and may be considered by the building official.

(Reason: These performance software tools are accredited by RESNET at the time of recommendation.)

*****TABLE R406.4 MAXIMUM ENERGY RATING INDEX; amend to read as follows:**

TABLE R406.4¹ MAXIMUM ENERGY RATING INDEX

CLIMATE ZONE	ENERGY RATING INDEX
3	65

¹ This table is effective until August 31, 2019.

TABLE R406.4² MAXIMUM ENERGY RATING INDEX

CLIMATE ZONE	ENERGY RATING INDEX
3	63

² The table is effective from September 1, 2019 to August 31, 2022.

TABLE R406.4³ MAXIMUM ENERGY RATING INDEX

CLIMATE ZONE	ENERGY RATING INDEX
3	59

³ This table is effective on or after September 1, 2022.

(Reason: The tables reflect the values and time table set forth in HB1736.)

END

APPENDIX

In addition to the recommended amendments, the EAGB endorses the attached universal testing form and encourages municipalities to consider incorporating the use of the form locally to minimize the number of forms that the third party testers and energy providers are required to maintain.

Major Changes Included in the 2015 TX State Energy Code

Residential Provisions		
Code Reference IECC	Title	Change
IRC/IECC	All	Beginning with the 2012 I-codes, the technical provisions of the IECC and Ch. 11 of the IRC are identical, minor variations continue to exist in Sections R101/N1101 General and in definitions
Table R402.1.2*	Insulation and Fenestration Requirements by Component	Changes Window and door U and SHGC and attic insulation levels all climate zones, changes wall and floor insulation in CZ 3 & 4. Corresponding changes made to Table R402.1. Equivalent U-Factors
R402.4.1.2	Testing (Air Leakage)	Envelope testing is mandatory, no longer an option, 2015 air leakage thresholds changed to 5 ACH/50 in CZ 2 and 3 ACH/50 in CZ 3 & 4
R403.3.3	(Duct) Sealing (Mandatory)	Duct Testing Required except when ducts and air handler are located entirely within thermal envelope
R403.3.4	Duct Leakage(prescriptive)	Sets maximum duct leakage at rough in and post construction at 4cfm/100 sq ft conditioned area, 3 CFM/100 sq ft if air handler not installed.
R403.6	Mechanical Ventilation (Mandatory	This section combined with IRC and IMC require whole house ventilation to be installed
R405.3	Compliance Report (Performance Path)	Adds the requirement that the compliance report for the proposed building shall be submitted with the application for building permit, and a compliance report based on the as-built condition of the building shall be submitted before C of O. and adds new sections R405.4.2.1 and R405.2.2 which cover requirements for compliance report for permit application and compliance report for C of O.
R406	Energy Rating Index	New Performance based compliance path. See SPEER ERI Guidance Document (link)
Chapter 5 (RE)	Existing Buildings	New chapter containing regulations for compliance in existing buildings, additions, renovations, alterations and historic buildings

* To convert to IRC Ch 11 references Change R4__ to N11__, example R401.2 - N1101.2

Commercial Provisions

IECC Code Reference	Title	Change
Tables C402.1.3, 402.1.4	Thermal Envelope Insulation tables	Increases insulation requirements for most assemblies in CZ 1-4
C402.3	Roof Solar Reflectance	Requires roofs directly above conditioned spaces to meet minimum roof reflectance and emittance requirements in CZ 1-3.
C402.4.1	Maximum (Fenestration) Area	Reduces max vertical fenestration area from 40% in 2009 IECC to 30%
Table 402.4	Fenestration Max U-Factor	Reduces Max U-Factor for windows
C403.1.2.15 - C403.2.17	Walk-in Coolers-Refrigerated Display Cases	New sections setting requirements for walk-in coolers, freezers and refrigerated display cases
C404	Service Water Heating	Significant new requirements for water heating systems throughout section C404
C405	Electrical Power and Lighting Systems	Significant additional requirements for lighting controls, sensors and day lighting controls, new requirements for electrical motors and vertical and horizontal transportation systems.
C406	Additional Efficiency Package Options	New section requiring design teams to choose one of six above code options for additional efficiency
C408	System Commissioning	Significant expansion of Commissioning requirements and documentation
Chapter 5 (CE)	Existing Buildings	New chapter containing regulations for compliance in existing buildings, additions, renovations, alterations and historic buildings

INTERNATIONAL PLUMBING CODE

International Plumbing Code Adopted

The 2015 International Plumbing Code which is on file in the office of the Building Official is hereby adopted and designated as the Plumbing Code of the City of Lake Dallas, to the same extent as if such code was copied verbatim, subject to the deletions, amendments and additions prescribed by this ordinance.

Adoption of the NCTCOG Recommended Amendments to the 2015 International Plumbing Code

The 2015 International Plumbing Code is hereby amended as recommended by the North Central Texas Council of Governments ("NCTCOG"), which amendments are incorporated herein by reference and on file in the office of the Building Official of the City of lake Dallas.

Recommended Amendments to the 2015 International Plumbing Code

North Central Texas Council of Governments Region

The following sections, paragraphs, and sentences of the *2015 International Plumbing Code* are hereby amended as follows: Standard type is text from the IPC. Underlined type is text inserted. ~~Lined through type is deleted text from the IPC.~~ A double asterisk (**) at the beginning of a section identifies an amendment carried over from the 2012 edition of the code and a triple asterisk (***) identifies a new or revised amendment with the 2015 edition of the code. A quadruple asterisk (****) identifies a local amendment.

Note: Historically NCTCOG has limited Chapter 1 amendments in order to allow each city to insert their local policies and procedures. We now have suggested certain items to be brought to the attention of cities considering adoption of the code that may be of concern to several jurisdictions. **It is still intended to be discretionary to each city to determine which Chapter 1 amendments to include.**

****Table of Contents, Chapter 7, Section 714; change to read as follows:**

714 Engineered ~~Computerized~~ Drainage Design 69

(Reason: Editorial change to make compatible with amendment to Section 714.1.)

****** 101.1 Title** These regulations shall be known as the *International Plumbing Code of the City of Lake Dallas, Texas...*

****Section 102.8; change to read as follows:**

102.8 Referenced codes and standards. The codes and standards referenced in this code shall be those that are listed in Chapter 15 and such codes, when specifically adopted, and standards shall be considered as part of the requirements of this code to the prescribed extent of each such reference. Where the differences occur between provisions of this code and the referenced standards, the provisions of this code shall be the minimum requirements. Whenever amendments have been adopted to the referenced codes

and standards, each reference to said code and standard shall be considered to reference the adopted amendments. Any reference to NFPA 70 or the *National Electrical Code (NEC)* shall mean the Electrical Code as adopted.

(Reason: Legal wording to recognize locally adopted codes and amendments adopted with referenced codes.)

****Sections 106.6.2 and 106.6.3; change to read as follows: Fee schedule.** The fees for all plumbing work shall be as indicated in the following schedule: ~~(JURISDICTION TO INSERT APPROPRIATE SCHEDULE)~~ adopted by resolution of the governing body of the jurisdiction.

106.6.2 Fee Refunds. The code official shall establish a policy for ~~authorize~~ authorizing the refunding of fees as follows. *{Delete balance of section}*

(Reason: This calls to attention of local jurisdictions considering adoption that they need a fee schedule and a refund policy.)

****Section 109; delete entire section and insert the following:**

SECTION 109 MEANS OF APPEAL

109.1 Application for appeal. Any person shall have the right to appeal a decision of the code official to the board of appeals established by ordinance. The board shall be governed by the enabling ordinance.

(Reason: Most jurisdictions already have an ordinance establishing and governing an appeals board for this code. This also calls to the attention of jurisdictions not having such a board that it needs to be established.)

****Section 305.4.1; change to read as follows:**

305.4.1 Sewer depth. Building sewers that connect to private sewage disposal systems shall be a minimum of ~~[number] inches (mm) below finished grade at the point of septic tank connection.~~ Building sewers shall be a minimum of 12 inches (304 mm) below grade.

(Reason: Provides sewer depth that is common in this region. Deleted reference to private sewage disposal because a private sewage disposal code is not typically adopted in this region.)

****Section 305.7; change to read as follows:**

305.7 Protection of components of plumbing system. Components of a plumbing system installed within 3 feet along alleyways, driveways, parking garages or other locations in a manner in which they could be exposed to damage shall be recessed into the wall or otherwise protected in an *approved* manner.

(Reason: Provide a common cutoff point to designate a general separation distance at which plumbing systems should be safe for consistency in enforcement.)

****Section 314.2.1; change to read as follows:**

314.2.1 Condensate disposal. Condensate from all cooling coils and evaporators shall be conveyed from the drain pan outlet to an *approved* place of disposal. ... {text unchanged} ... Condensate shall not discharge into a street, alley, sidewalk, rooftop, or other areas so as to cause a nuisance.

(Reason: Greater specificity in prohibited locations for condensate discharge. It is the intent of this amendment to send condensate discharge into a sanitary sewer drain. Consistent with regional amendment to IMC 307.2.1.)

****Section 409.2; change to read as follows:**

409.2 Water connection. The water supply to a commercial dishwashing machine shall be protected against backflow by an air gap or backflow preventer in accordance with Section 608. (Remainder of section unchanged)

(Reason: Domestic dishwashing machines would be difficult to enforce and should already come equipped with backflow preventers. Consistent with regional amendments in IPC Section 608.)

****Section 412.4; change to read as follows:**

412.4 Required location for floor drains ~~Public laundries and central washing facilities.~~ Floor drains shall be installed in the following areas.

1. In public coin-operated laundries and in the central washing facilities of multiple family dwellings, the rooms containing automatic clothes washers shall be provided with floor drains located to readily drain the entire floor area. Such drains shall have a minimum outlet of not less than 3 inches (76 mm) in diameter.
2. Commercial kitchens. In lieu of floor drains in commercial kitchens, the code official may accept floor sinks.
3. Public restrooms.

(Reason: To make more compatible with local health code practices.)

****Section 419.3; change to read as follows:**

419.3 Surrounding material. Wall and floor space to a point 2 feet (610 mm) in front of a urinal lip and 4 feet (1219 mm) above the floor and at least 2 feet (610 mm) to each side of the urinal shall be waterproofed with a smooth, readily cleanable, hard, nonabsorbent material.

(Reason: Match un-amended IBC 1210.2.2.)

***Section 502.3; change to read as follows:

502.3 Appliances in attics. Attics containing a water heater shall be provided . . . {bulk of paragraph unchanged} . . . side of the water heater. The clear access opening dimensions shall be a minimum of 20 inches by 30 inches (508 mm by 762 mm), or larger where such dimensions be not less than 20 inches by 30 inches(508mm by 762mm) where such dimensions are large enough to allow removal of the water heater. A walkway to an appliance shall be rated as a floor as approved by the building official. As a minimum, for access to the attic space, provide one of thefollowing:

1. A permanent stair.
2. A pull down stair with a minimum 300 lb (136 kg) capacity.
3. An access door from an upper floor level.
4. Access Panel may be used in lieu of items 1, 2, and 3 with prior approval of the code official due to building conditions.

Exceptions:

1. The passageway and level service space are not required where the appliance is capable of being serviced and removed... {remainder of section unchanged}

(Reason: To provide a safe means of accessibility to appliances in attics and to allow for different types of construction limitations. Consistent with regional amendment to IMC and IFGC)

**Section 502.6; add Section 502.6 to read as follows:

502.6 Water heaters above ground or floor. When the attic, roof, mezzanine or platform in which a water heater is installed is more than eight (8) feet (2438 mm) above the ground or floor level, it shall be made accessible by a stairway or permanent ladder fastened to the building.

Exception: A max 10 gallon water heater (or larger with approval) is capable of being accessed through a lay-in ceiling and a water heater is installed is not more than ten (10) feet (3048 mm) above the ground or floor level and may be reached with a portable ladder.

(Reason: To provide safe access to water heaters. (Consistent with regional amendments to IFGC 306.7 and IMC 306.3. Note reference to amendment above.)

**Section 504.6; change to read as follows:

504.6 Requirements for discharge piping. The discharge piping serving a pressure relief valve, temperature relief valve or combination thereof shall:

1. Not be directly connected to the drainage system.
2. Discharge through an air gap. ~~located in the same room as the water heater.~~
3. Not be smaller than the diameter of the outlet of the valve served and shall discharge full size to the air gap.

4. Serve a single relief device and shall not connect to piping serving anyother relief device or equipment.

Exception: Multiple relief devices may be installed to a single T & P discharge piping system when *approved* by the administrative authority and permitted by the manufactures installation instructions and installed with those instructions.

5. Discharge ~~to the floor,~~ to an indirect waste receptor or to the outdoors.
6. Discharge in a manner that does not cause personal injury or structural damage.
7. Discharge to a termination point that is readily observable by the building occupants.
8. Not be trapped.
9. Be installed so as to flow by gravity.
10. Terminate not more than 6 inches above and not less than two times the discharge pipe diameter above the floor or flood level rim of the waste receptor.
11. Not have a threaded connection at the end of such piping.
12. Not have valves or tee fittings.

13. Be constructed of those materials listed in Section 605.4 or materials tested, rated and *approved* for such use in accordance with ASME A112.4.1.

(Reason: To provide a higher degree of safety.)

*****Section 504.7.1; change to read as follows:**

Section 504.7.1 Pan size and drain to read as follows: The pan shall be not less than 1 1/2 inches (38 mm) in depth and shall be of sufficient size and shape to receive all dripping or condensate from the tank or water heater. The pan shall be drained by an indirect waste pipe having a diameter of not less than 3/4 inch (19 mm). Piping for safety pan drains shall be of those materials listed in Table 605.4. Multiple pan drains may terminate to a single discharge piping system when *approved* by the administrative authority and permitted by the manufactures installation instructions and installed with those instructions.

****Section 604.4; add Section 604.4.1 to read as follows:**

604.4.1 State maximum flow rate. Where the State mandated maximum flow rate is more restrictive than those of this section, the State flow rate shall take precedence.

(Reason: To recognize State standards.)

****Section 606.1; delete items #4 and #5.**

(Reason: The code is too restrictive as written.)

****Section 606.2; change to read as follows:**

606.2 Location of shutoff valves. Shutoff valves shall be installed in the following locations:

1. On the fixture supply to each plumbing fixture other than bathtubs and showers in one- and two family residential occupancies, and other than in individual sleeping units that are provided with unit shutoff valves in hotels, motels, boarding houses and similar occupancies.
2. ~~On the water supply pipe to each sillcock.~~
3. On the water supply pipe to each appliance or mechanical equipment.

(Reason: To provide shut-off valves to every fixture.)

****Section 608.1; change to read as follows:**

608.1 General. A potable water supply system shall be designed, installed and maintained in such a manner so as to prevent contamination from non-potable liquids, solids or gases being introduced into the potable water supply through cross-connections or any other piping connections to the system. Backflow preventer applications shall conform to applicable local regulations, Table 608.1, ~~except~~ and as specifically stated in Sections 608.2 through 608.16.10.

(Reason: To recognize local requirements.)

****Section 608.16.5; change to read as follows:**

608.16.5 Connections to lawn irrigation systems.

The potable water supply to lawn irrigation systems shall be protected against backflow by an atmospheric-type vacuum breaker, a pressure-type vacuum breaker, a double-check assembly or a reduced pressure principle backflow preventer. A valve shall not be installed downstream from an atmospheric vacuum breaker. Where chemicals are introduced into the system, the potable water supply shall be protected against backflow by a reduced pressure principle backflow preventer.

(Reason: To recognize regional practices.)

****Section 608.17; change to read as follows:**

608.17 Protection of individual water supplies. An individual water supply shall be located and constructed so as to be safeguarded against contamination in accordance with applicable local regulations. Installation shall be in accordance with Sections 608.17.1 through 608.17.8.

(Reason: To allow local requirements to govern.)

****Section 610.1; add exception to read as follows:**

610.1 General. New or repaired potable water systems shall be purged of deleterious matter and disinfected prior to utilization. The method to be followed shall be that prescribed by the health authority or water purveyor having jurisdiction or, in the absence of a prescribed method, the procedure described in either AWWA C651 or AWWA C652, or as described in this section. This requirement shall apply to “on-site” or “in-plant” fabrication of a system or to a modular portion of a system.

1. The pipe system shall be flushed with clean, potable water until dirty water does not appear at the points of outlet.
2. The system or part thereof shall be filled with a water/chlorine solution containing at least 50 parts per million (50 mg/L) of chlorine, and the system or part thereof shall be valved off and allowed to stand for 24 hours; or the system or part thereof shall be filled with a water/chlorine solution containing at least 200 parts per million (200 mg/L) of chlorine and allowed to stand for 3 hours.
3. Following the required standing time, the system shall be flushed with clean potable water until the chlorine is purged from the system.
4. The procedure shall be repeated where shown by a bacteriological examination that contamination remains present in the system.

Exception: With prior approval the Code Official may wave this requirement when deemed un-necessary. by the Code Official.

(Reason: May not always be needed)

Section 703.6; Delete

(Reason: not a standard practice in this region)

*****Section 704.5; added to read as follows:**

704.5 Single stack fittings. Single stack fittings with internal baffle, PVC schedule 40 or cast iron single stack shall be designed by a registered engineer and comply to a national recognized standard.

(Reason: to allow owners, installers, inspectors, and design professionals to readily identify product markers to determine they meet all required standards.)

*****Section 705.11.2; change to read as follows:**

705.11.2 Solvent cementing. Joint surfaces shall be clean and free from moisture. A purple primer that conforms to ASTM F 656 shall be applied. Solvent cement not purple in color and conforming to ASTM D 2564, CSA B137.3, CSA B181.2 or CSA B182.1 shall be applied to all joint surfaces. The joint shall be made while the cement is wet and shall be in accordance with ASTM D 2855. Solvent cement joints shall be permitted above or below ground.

~~Exception: A primer is not required where both of the following conditions apply:~~

- ~~1. The solvent cement used is third-party certified as conforming to ASTM D 2564 2.~~
~~The solvent cement is used only for joining PVC drain, waste, and vent pipe and fittings in not pressure applications in sizes up to and including 4 inches (102mm) in diameter.~~

(Reasoning: to keep the "process of joining PVC pipe)

Section 708 Clean-outs

708.1.12 Cleanout required at property line – A Cleanout shall be installed at the property line. It shall be sized in accordance with 708.1.5 .It shall be arranged in accordance with 708.1.8. It shall be protected inside an approved box.

****Section 712.5; add Section 712.5 to read as follows:**

712.5 Dual Pump System. All sumps shall be automatically discharged and, when in any "public use" occupancy where the sump serves more than 10 fixture units, shall be provided with dual pumps or ejectors arranged to function independently in case of overload or mechanical failure. For storm drainage sumps and pumping systems, see Section 1113.

(Reason: To address dual pump system. To provide reference for storm drainage systems.)

****Section 714, 714.1; change to read as follows:**

**SECTION 714
ENGINEERED COMPUTERIZED DRAINAGE DESIGN**

714.1 Design of drainage system. The sizing, design and layout of the drainage system shall be permitted to be designed by a registered engineer using approved computer design methods.

(Reason: Code was too restrictive.)

*****Section 804.2; added to read as follows:**

804.2 Special waste pipe, fittings, and components. Pipes, fittings, and components receiving or intended to receive the discharge of any fixture into which acid or corrosive chemicals are placed shall be constructed of CPVC, high silicone iron, PP, PVDF, chemical resistant glass, or glazed ceramic materials.

(Reason): To clarify the allowable materials which are specifically listed for chemical drainage applications.

****Section 903.1; change to read as follows:**

903.1 Roof extension. Open vent pipes that extend through a roof shall terminate not less than six (6) inches (152 mm) above the roof. Where a roof is to be used for assembly or as a promenade, observation deck, sunbathing deck or similar purposes, open vent pipes shall terminate not less than 7 feet (2134 mm) above the roof.

(Reason: To provide regional guideline on standard installation method for this area and address reference number correction.)

****Section 917 Single stack vent system. Delete entire section.**

(Reason: Not in conformance with regional practices.)

****Section 1002.10; delete.**

(Reason: Texas State regulations cover plumbing in mental health centers. Consistent with regional amendment to IPC 405.6.)

****Section 1003; see note below :)**

***** 1003.2 Approval.** The size, type and location of each interceptor shall be designed **by a mechanical engineer** and installed... (rest of text remain unchanged)

****Section 1101.8; change to read as follows:**

1101.8 Cleanouts required. Cleanouts or manholes shall be installed in the building storm drainage system and shall comply with the provisions of this code for sanitary drainage pipe cleanouts.

Exception: ~~Subsurface drainage system~~

(Reason: To specify ~~that~~ where cleanouts are ~~only~~ required. ~~in the building.~~)

****Section 1106.1; change to read as follows:**

1106.1 General. The size of the vertical conductors and leaders, building storm drains, building storm sewers, and any horizontal branches of such drains or sewers shall be based on six (6) inches per hour the 100-year hourly rainfall rate indicated in Figure 1106.1 or on other rainfall rates determined from approved local weather data.

(Reason: Specify the roof drain size normally used in the area.)

****Section 1108.3; change to read as follows:**

1108.3 Sizing of secondary drains. Secondary (emergency) roof drain systems shall be sized in accordance with Section 1106 ~~based on the rainfall rate for which the primary system is sized in Figure 1106.1 or on other rainfall rates determined from approved local weather data.~~ Scuppers shall be sized to prevent the depth of ponding water from exceeding that for which the roof was designed as determined by Section 1101.7. Scuppers shall not have an opening dimension of less than 4 inches (102 mm). The flow through the primary system shall not be considered when sizing the secondary roof drain system.

(Reason: Specify that overflow drainage is to be the same size as the normal roof drains.)

****Section 1109; delete this section...**

****Section 1202.1; delete Exception 2.**

(Reason: State law already specifies that vacuum systems must comply with NFPA 99C.)

END



CODE COUNCIL
TRAINING

~~2009~~
~~2012~~
2015

2015 Transition from the 2009: Plumbing, Mechanical, Fuel Gas

Based on the International Plumbing Code® (IPC®), the International Mechanical Code® (IMC®), and the International Fuel Gas Code® (IFGC®)



2015 Transition from the 2009: Plumbing, Mechanical, Fuel Gas

First Printing: March 2015

COPYRIGHT © 2015
by
International Code Council, Inc.

ALL RIGHTS RESERVED. The 2015 Transition from the 2009: Plumbing, Mechanical, Fuel Gas is a copyrighted work owned by the International Code Council, Inc. Without advance written permission from the copyright owner, no part of this book may be reproduced, distributed, or transmitted in any form or by any means, including, without limitation, electronic, optical or mechanical means (by way of example and not limitation, photocopying, or recording by or in an information storage retrieval system). For information on permission to copy material exceeding fair use, please contact: ICC Publications, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
Phone 1-888-ICC-SAFE (422-7233).

Trademarks: “International Code Council,” the “International Code Council” logo, the “IPC”, “IMC”, “IFGC” and the “International Plumbing Code, “International Mechanical Code”, “International Fuel Gas Code” are trademarks of the International Code Council, Inc.

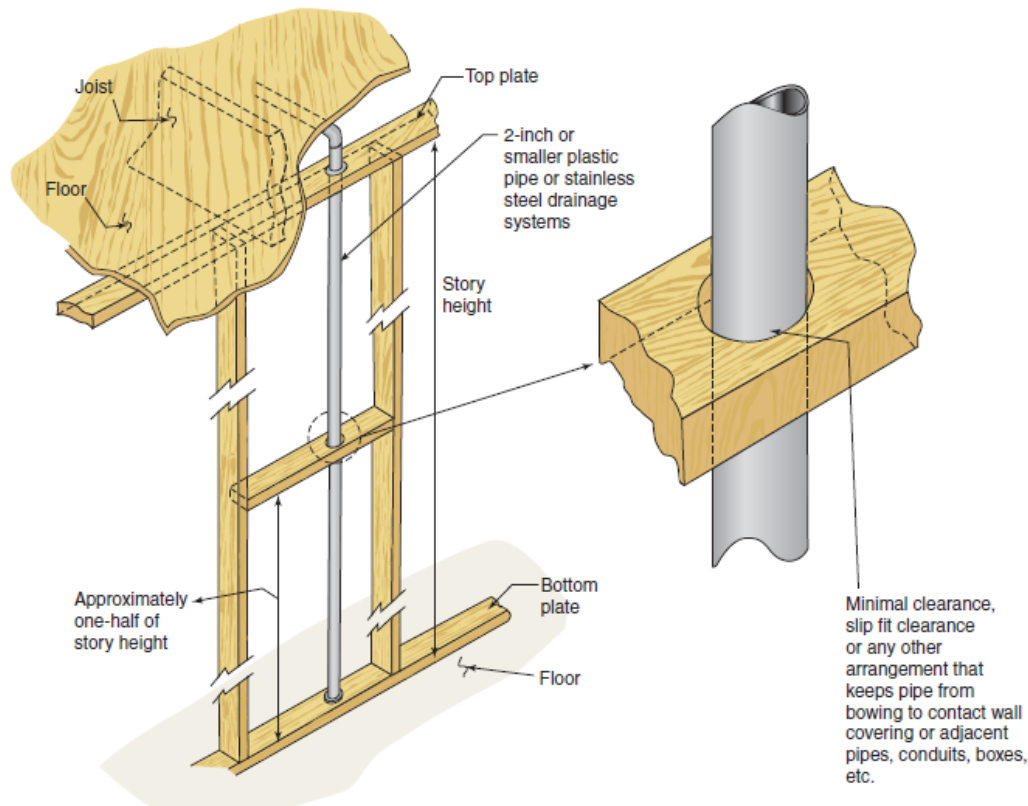
PRINTED IN THE U.S.A.

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

Topic	2012	2015
International Plumbing Code (IPC)		
Alternate Onsite Nonpotable Water Definition		202 This term has been added to support a revised Chapter 13 that covers various nonpotable waters to be collected, stored and distributed. Examples include gray water, on-site reclaimed water, collected rainwater, captured condensate and rejected water from reverse osmosis systems.
Backflow Preventer Definition		202 This definition has been made more specific about what constitutes a backflow preventer: a backflow prevention assembly, a backflow prevention device or other means or methods.
Drinking Fountain, Water Cooler and Water Dispenser Definitions; Substitution for Drinking Fountains		202, 410.4 Definitions for drinking fountain, water dispenser and water cooler clarify Section 410 on drinking fountain requirements. The water dispenser definition expands the group of devices and apparatus that can be used as substitution for 50% of the required number of drinking fountains.
Grease Interceptor Hydro mechanical Gravity Fats, Oils and Grease (FOG) Disposal Systems	202 The definition of a “grease interceptor” has been modified for consistency with current industry terms for the two general types of grease interceptors: “hydro mechanical” and “gravity”.	202 Another type of grease interceptor, the Fats, Oils and Grease (FOG) disposal system, has been added to support the revised text in Section 1003.3.4 covering grease interceptors.
Plumbing Appliance Definition	202 The definition of “plumbing appliance” has been changed to clarify the difference between appliance and fixtures.	
Plumbing Fixture Definition	202 The definition of “plumbing fixture” has been modified to include fixtures that are not connected to a water supply such as waterless urinals.	
Toilet Facility Definition		202 This definition has been added to clarify that a toilet facility is a room or space that contains not less than one water closet and one lavatory.
Waste Receptor Definition		202 This definition has been added to clarify that floor sinks, standpipes, hub drains and floor drains receiving indirect waste are considered waste receptors.
Material Identification and Third-Party Certification	303.1, 303.4 Plumbing products and materials must be listed by a third-party certification agency and bear required identification.	

**2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code –
Transition from the 2009**

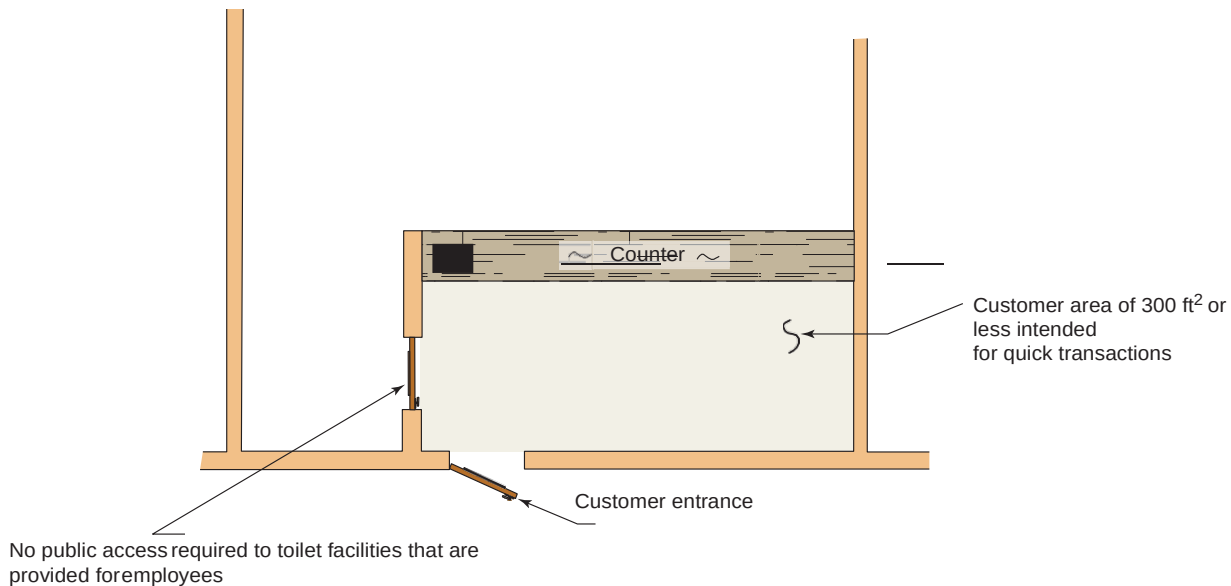
Topic	2012	2015
Mid-Story Pipe Guide		Table 308.5 Footnote 'b' of Table 308.5 clarifies the mid-story guide requirement for plastic pipe 2 inches and smaller. The guide must restrain the pipe perpendicular to its axis at the midpoint between required vertical supports.



Topic	2012	2015
Parallel Water Distribution Systems	308.9 In parallel water distribution systems, the hot and cold water piping may now be grouped in the same pipe bundle.	
Sealing of Annular Spaces at Penetrations	315.1 The provisions for sealing any annular spaces created at piping penetrations have been revised to be consistent with the building envelope sealing requirements of the IECC.	

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

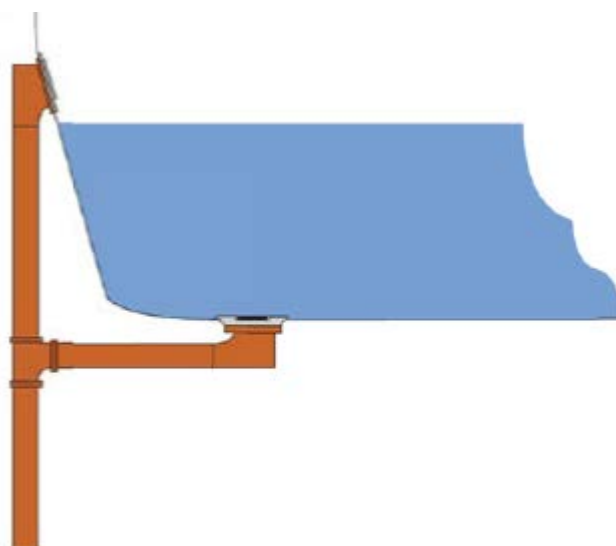
Topic	2012	2015
Minimum Number of Required Plumbing Fixtures	Table 403.1 Service sinks are no longer required in Group B and M occupancies where the occupant load does not exceed 15.	Table 403.1 The IBC occupancy classifications (A, B, M, etc) are no longer used to determine which row in Table 403.1 to use for fixture quantities. The actual use of the building or space determines which row in the table to use.



Topic	2012	2015
Separate Toilet Facilities in Group M Occupancies	403.2 The exemption from separate plumbing facilities for each sex in Group M mercantile occupancies now applies where the occupant load of the occupancy does not exceed 100.	
Family or Assisted-Use Toilet Facilities Serving as Separate Facilities	403.2.1 Where separate toilet facilities for each sex are required and only one water closet is mandated in each facility, two family or assisted-use toilet facilities are now permitted to satisfy the separate facilities. requirement	
Required Public Toilet Facilities Exception		403.3 Occupancies that have limited areas for public access, such as dry cleaners, takeout only restaurants and automated teller machine lobbies, do not require public toilet facilities where the public access area is limited to 300 ft² or less.
Relationship of Toilet Rooms and Food Preparation Areas	403.3.2 The IBC requirement prohibiting the opening of toilet rooms directly into food preparation areas is now also placed in the IPC.	
Locking of Toilet Room Doors	403.3.6 Locking devices are now specifically prohibited on the egress doors of toilet rooms designed for multiple occupants.	

**2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code –
Transition from the 2009**

Topic	2012	2015
Directional Signage for Location of Public Toilet Facilities		403.4.1 The provision for directional signs to public toilet facilities now requires that the signage be located at the main entrance to the building or tenant space.
Drinking Fountain Locations	403.5 The permitted locations of drinking fountains in multi-tenant facilities are now similar to the permitted locations for required public toilet facilities: travel distance of 300 feet for a mall and 500 feet for other buildings.	
Minimum Water Closet Compartment Size	405.3.1 The minimum depth of a water closet compartment containing a wall-hung water closet has been reduced from 60 inches to 56 inches.	
Floor and Wall Drainage Connections	405.4 The use of a waste connector and sealing gasket is now permitted as an acceptable means to connect floor outlet plumbing fixtures, allowing for water closet installations that are provided with a gasketed waste tube outlet connection.	
Backflow Protection for Clothes Washing and Dishwashing Machines		406.1, 409.2 This modification adds the standards designations with which air gaps must comply, so that the enforcement can be accomplished by the inspector identifying those standard numbers either on the machines or in the literature for the machines.
Bathtub Waste Outlets and Overflows	407.2 Bathtubs are now required to be equipped with an overflow and the required stopper must be watertight.	



Bathtub Overflow Cross Section

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

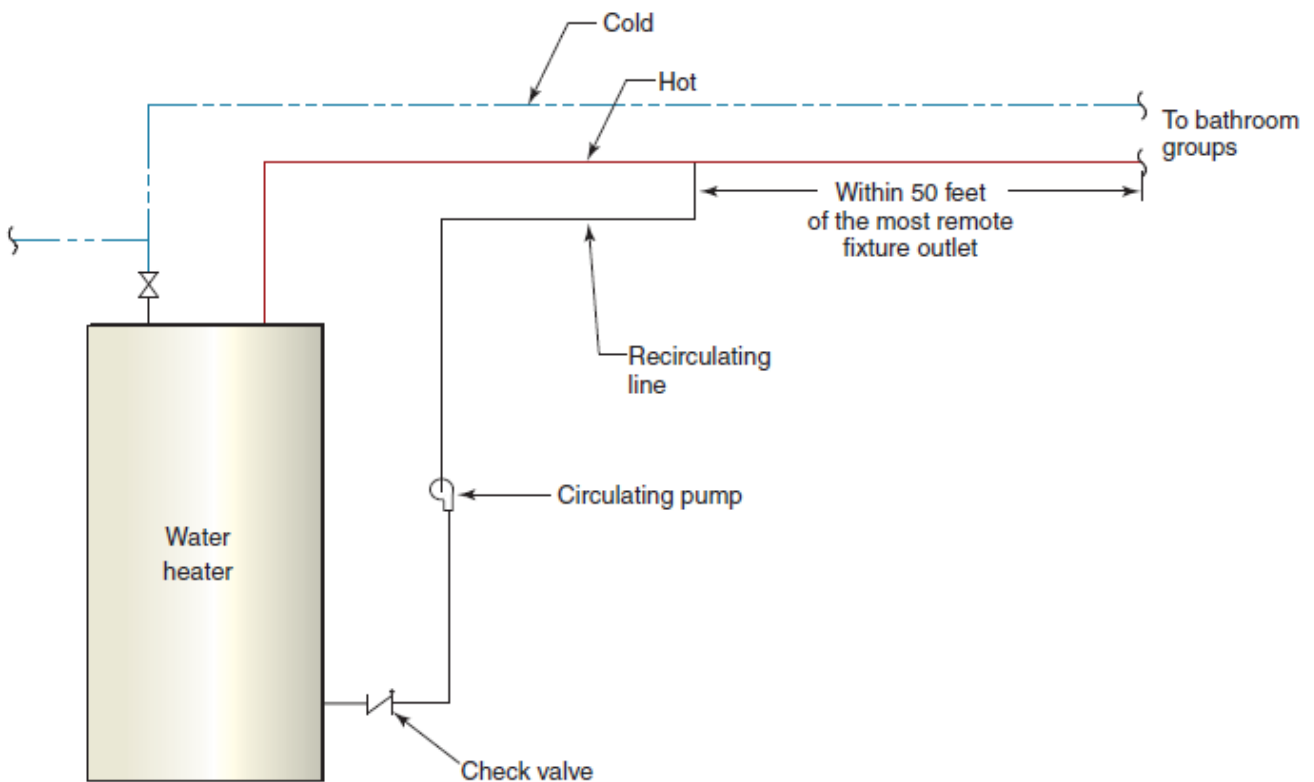
Topic	2012	2015
Minimum Required Drinking Fountains	410 The IBC provisions addressing the minimum required number of drinking fountains have been replicated in the IPC to provide clarity and consistency of application.	410.4 Definitions for drinking fountain, water dispenser and water cooler clarify Section 410 on drinking fountain requirements. The water dispenser definition expands the group of devices and apparatus that can be used as substitution for 50% of the required number of drinking fountains.
Food Waste Disposer Approval		413.1 Terminology for food waste grinders has been changed to a more industry-accepted term of food waste disposer. For electrical safety, domestic food waste disposers must be listed and labeled to a standard.
Walls and Floors in Bathtub and Shower Areas		417.4.1 Bathtub floors, shower floors and the walls above those areas need to be watertight and of the material that will be durable under wet conditions. This section has been modified to make the existing requirements more clear.
Shower Pan Liner Materials	417.5.2.6 Recognition of an acceptable shower pan liner system using liquid type, trowel-applied, load bearing, bonded waterproof material has been added to the current listing of acceptable shower floor liner methods.	
Water Closet Approval		420.1 Dual-flush water closets have become popular in recent years. The code now has a standard that covers those types of water closets.
Whirlpool Tub Approval		421.1 A standard for electrical safety for whirlpool tubs has been added to the code.
Footbaths, Pedicure Baths and Head Shampoo Sinks		423.3 Water-temperature-limiting devices are required for footbaths (integral or not integral to pedicure chairs) and head shampoo sinks.
Deck-Mounted Bath/Shower Transfer Valves		424.8 The standard to which deck-mounted bath/shower transfer valves must comply has changed.
Water Closet Personal Hygiene Devices	424.9 The recognition of performance standard AMSE A112.4.2 now ensures the protection of the public by setting temperature limits and minimum acceptable backflow protection requirements for water closet personal hygiene devices.	
Water Heater Drain Valves		501.3 The standard covering water heater drain valves has been discontinued by the standard promulgator. Minimum criteria for drain size and the hose connection have been added to the code for these valves.
Water Heater Storage Tank Relief Valves	504.4.1 Water heaters with separate storage tanks shall be provided with complying temperature and pressure protection.	

**2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code –
Transition from the 2009**

Topic	2012	2015
Temperature and Pressure Relief Discharge Piping		504.6 The temperature and pressure relief valve discharge pipe termination must have an air gap suitable to protect the potable water supply distribution system of the building.
Water Heater Pans	504.7 It has been clarified that drain pans are only required for storage-tank-type water heaters for hot water storage tanks.	504.7.2 In a replacement water heater installation situation, there might not be a nearby drain point for a required pan for the water heater. This code modification allows the pan to not have a drain line if one is not present.
Rehabilitation of Piping Systems by Internal Lining		601.5 An epoxy lining system standard has been added to the code for rehabilitation of existing piping systems.
Polyethylene of Raised- Temperature (PE-RT) Plastic Tubing	605 Polyethylene of raised-temperature (PE-RT) plastic hot and cold water tubing and distribution systems are now recognized by the IPC.	
Lead Content of Components Conveying Drinking Water		605.2.1 The code now has a more stringent limitation of 0.25% lead content in pipe, pipe fittings, joints, valves, faucets and fixture fittings that convey water used for drinking and cooking.
Polyethylene (PE) and PEX Water Service Pipe CPVC /AL / CPVC Water Service and Water Distribution Piping Asbestos Cement Pipe	Table 605.3 Reference standard AWWA C901, "Polyethylene (PE) Pressure Pipe and Tubing, 1/2 inch Through 3 in for Water Service," has been added to the list of standards in Table 605.3 regulating PE plastic water service pipe and tubing. Reference standard AWWA C904, "Cross-Linked Polyethylene (PEX) Pressure Pipe, ½ in. through 3 in. for Water Service," has been added to the list of standards in Table 605.3 regulating PEX water service piping.	Tables 605.3, 605.4, Section 605.16, Tables 702.2, 702.3, 702.4, 1102.4, 1102.5 A new type of CPVC pipe has been added. References to asbestos cement pipe and applicable referenced standards have been removed from the code.
Groove and Shouldered Mechanical Joints and Press-Connect Fittings		Table 605.5, Sections 605.14.3, 605.14.5, 605.18.3, 605.22.2, 605.23.3 Two standards for groove and shouldered mechanical drawings in a press-connect fitting standard have been added to the code.
Valve Compliance to Standards		Table 605.7, 605.7 All types of valves that supply drinking water must now comply with NSF 61. Standards for numerous types of valves have been added to the code.
Labeling of Water Distribution Pipes in Bundles	606.7 Water distribution piping installed in bundles must be labeled with content and direction of flow.	
Water-Temperature-Limiting Means	607.1.1 The water heater thermostat is prohibited from being used as a temperature-limiting device where the code requires a limit for hot or tempered water.	

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

Topic	2012	2015
Hot or Tempered Water Supply to Fixtures	607.2 The maximum distance between a hot water supply source and all fixtures served by the supply source has been reduced from 100 ft. to 50 ft.	
Hot Water Temperature Maintenance System Controls		607.2.1 Changes in the commercial portion of the IECC caused changes in the IECC controlled section of the IPC. This section requires temperature maintenance systems (for maintaining hot water temperature near plumbing fixtures) to be automatically turned off when there is not the demand for hot water. The code change also makes it clear that Section 607.2.1 and its subsections 6007.2.1.1 do not apply to Group R2, R3 and R4 occupancies that are 3 stories or less in height above grade plane, because those are covered by the residential portion of the IECC.



**2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code –
Transition from the 2009**

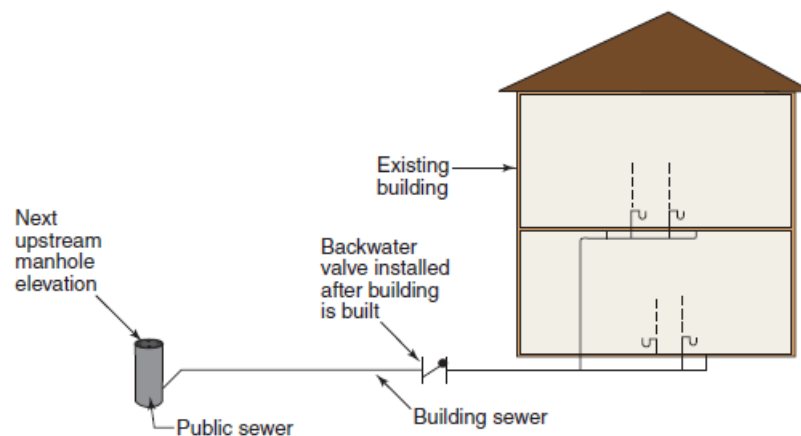
Topic	2012	2015
Hot Water Thermal Expansion Pressure Control		607.3 The available method to control closed-system pressure increases caused by the heating of water has been limited to the use of thermal expansion tanks only.
Hot Water Piping Insulation	607.5 The IECC requirement for insulating hot water piping in automatic temperature maintenance systems is now included in the IPC.	
Identification of Nonpotable Water	608.8 Wherever nonpotable water systems are installed, including outside of the building, the piping must be identified.	608.8, 608.8.1, 608.8.2 Fixtures such as water closets and urinals that utilize nonpotable water must be identified with the words and a symbol indicating that nonpotable water is being used. The color purple is established for identifying distribution piping conveying nonpotable water.



Topic	2012	2015
Temperature Rating of Drainage Piping		702.5 Wastewater having a temperature greater than higher than 40° F does not need to be cooled before it enters the drainage system if the drainage system piping is rated for the higher temperature.
Connection to Combined Sanitary and Storm Public Sewer		703.6 Building sanitary sewers and building storm sewers must be independent even when connecting to a combined sanitary/storm public sewer.
Horizontal Branch Connections	704.3, 711.2.1 Horizontal branches are now permitted to connect at any point in a stack above or below the horizontal offset. In addition, horizontal branches are now allowed to connect to the base of stacks at a point located not less than 10 times the diameter of the drainage stack downstream from the stack.	
Exception of Solvent Cementing PVC Piping 4 inches and Smaller		705.11.2 The application of a primer to drain, waste and vent PVC pipe and fitting prior to solvent cementing is not required for 4-inch pipe size and smaller.

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

Topic	2012	2015
Cleanouts for Drainage and Waste Systems		708 The section on cleanouts has been completely reorganized and reworded for clarity. Brass cleanout plugs are permitted for metallic piping only. Where located at the finished wall, cleanout must be within 1½ inches of the finished surface. A cleanout is no longer required at the base of each waste or soil stack.
Drainage Fixture Units for Bathroom Groups	Table 709.1 Where fixtures are provided in addition to those in a bathroom group, the footnote addressing additional drainage fixture unit values is now also applicable to those bathroom groups not located within dwelling units.	
Sump Pump and Ejector Discharge Pipe and Fittings	712.3.3 Materials acceptable for use in sump pump and ejector pipe and fitting materials are now specifically listed.	
Sump Pump Connection to the Drainage System	712.3.5 Where sump pumps connect to the drainage system, they are now allowed to connect to a building sewer, building drain, soil stack, waste stack, or horizontal branch drain.	
Fixture Protection from Sewage Backflow	715.1 In the determination of backwater valve protection from sewage backflow, the use of the finished floor elevation where the fixtures are installed rather than the flood level rim of the fixtures provides a new point of reference.	715.1 In existing buildings, fixtures above the elevation of the manhole cover of the next upstream manhole are now permitted to discharge through a backwater valve. Without this new exception, it is very difficult to retrofit with a backwater valve in accordance with the code in an existing building.

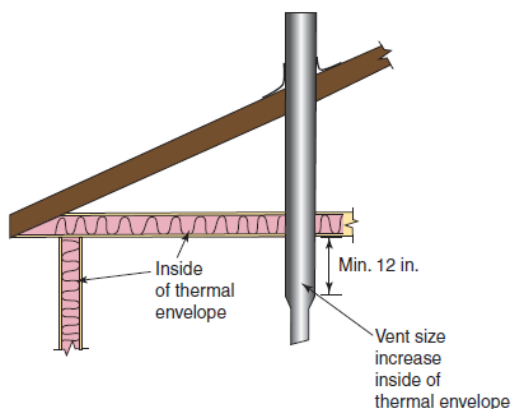


**2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code –
Transition from the 2009**

Topic	2012	2015
Vacuum Drainage Systems		716 Vacuum drainage system provisions (as opposed to gravity drainage system provisions) have been moved from the appendix into the body of the code.
Replacement of Sewers by Pipe-Bursting Method		717 Replacement of building sewers by the pipe-bursting method has been used for many decades and is useful especially where excavation of the existing sewer is difficult and costly because of parking lots and other items on the ground surface that would need to be removed and replaced.
Indirect Connection for Food-Handling Equipment	802.1.8 Sinks used for food preparation and consumption purposes are no longer permitted to connect directly to the drainage system.	802.1, 802.1.1, 802.1.8 The code has been clarified to indicate that Section 802.1 and its subsections do not apply to fixtures and equipment in dwelling units. The section was modified to indicate the types of food-handling equipment that section 802.1 through 802.1.8 covered.
Installation of Indirect Waste Piping	802.2 The threshold at which indirect waste piping is required to be trapped has been increased and an exception has been added to address clear waste water.	
Waste Receptors	802.3 The list of prohibited locations for waste receptors has been expanded to specifically include plenums, crawl spaces, attics and interstitial spaces above ceilings and below floors.	802.3 The code has clarified that standpipes are waste receptors. Some limitations for where waste receptors could not be located have been removed. Hub drains now require a strainer.
Air Admittance Valves for Chemical Waste Vent Systems	901.3, 918.8 Air admittance valves complying with reference standard ASSE 1049, "Performance Requirements for Individual and Branch-Type Air admittance Valves for Chemical Waste Systems," are now permitted to be used for venting chemical waste systems.	

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

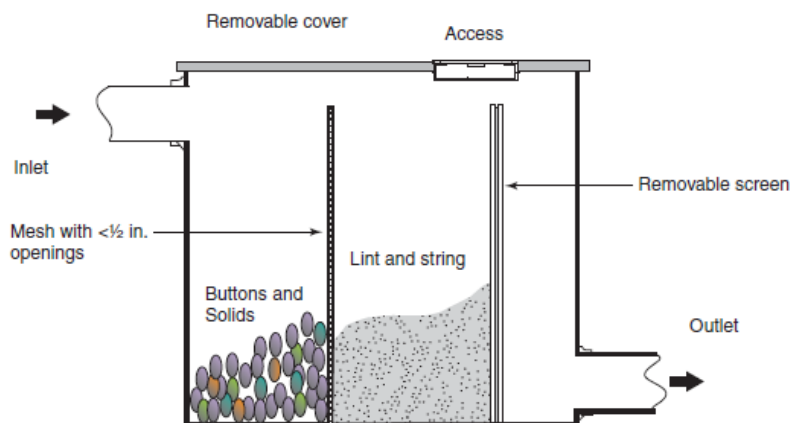
Topic	2012	2015
Vent Terminations to Outdoors		903.1, 903.2 This change clarifies vent terminations to outdoors where roofs are used for purposes other than weather protection and where very cold weather conditions occur. The vent size increase to protect against frost closure must occur at least 12 inches inside the thermal envelope.



Topic	2012	2015
Location of Vent Terminals	903.5 The prohibited locations for vent terminals related to building openings and air intakes have been revised to provide consistency with the IMC.	
Combination Waste and Vent System Sizing	915.2 The length of a combination waste and vent system is unlimited.	
Single-Stack Vent Systems	917 The single-stack vent system method, similar to the Philadelphia stack drainage system, has been added as an acceptable venting system.	
Floor Drain Traps in Parking Structures	1002.1 Floor drains in multi-level parking garages are no longer required to have individual traps, provided the drains are connected to the main trap before discharged to a combined sewer.	1002.1 Traps are not required for parking garage floor drains where the drains are connected to a storm sewer system.
Trap Seal Protection against Evaporation		1002.4, 1002.4.1 Trap seal protection against evaporation can now be accomplished in a variety of ways, including barrier-type trap seal protection devices.
Interceptors and Separators	1003.1 It has been clarified that required interceptors and separators are permitted to be located downstream of the building drain.	
Alternate Grease Interceptor Locations	1003.3.1 Grease interceptors are now permitted to be installed in series instead of requiring replacement of an existing grease interceptor that is too small.	

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

Topic	2012	2015
Hydromechanical Grease Interceptors	1003.3.4 In regard to grease interceptors, the new term “hydromechanical” provides a clear distinction from gravity interceptors to clarify the applicable requirements for each type of interceptor.	
Gravity Grease Interceptors		1003.3.6 A section and standard covering gravity grease interceptors have been added to the code.



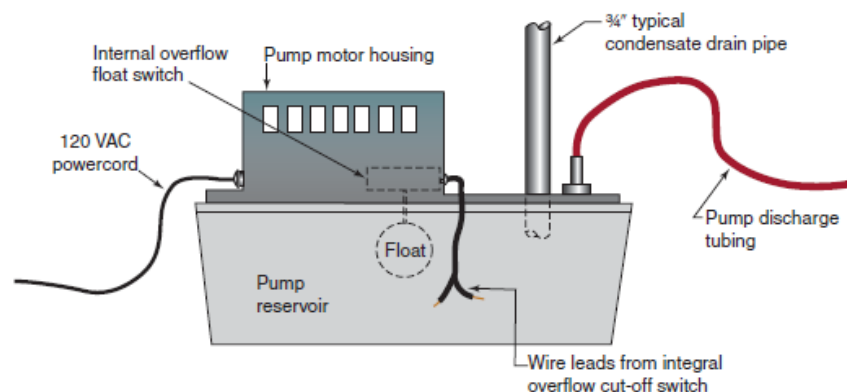
Topic	2012	2015
Direct Connection of Grease Interceptor Discharge		1003.3.7 Grease interceptor discharge piping must connect directly to the sanitary drainage system.
Oil Separator Required		1003.4 Section 1003.4 has been clarified to indicate where oil separators are required. An addition to the exception concerning alarm systems has been made.
Clothes Washer Discharge Interceptor		1003.6 The requirement for interceptors for clothes washer discharges has been clarified.
Venting of Interceptors and Separators		1003.9 Interceptors and separators must be vented.
Roof Drains	1105 Outdated code requirements have been replaced with new provisions that address installation and sizing of roof drains.	
Sizing of Roof Drains, Vertical and Horizontal Storm Drain Piping		1105.2, 1106.2 Testing of many different sizes and configurations of roof drains from a variety of manufacturers indicated that the roof drain assembly is the limiting factor in the design of storm drain systems. Storm drainage piping must now be sized based on the published roof drain flow rate and anticipated ponding at the roof drain.

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

Topic	2012	2015
Sizing of Gutters and Leaders		1106.3, 1106.6 The 2012 table 1106.2(2), which covered the vertical leader sizing requirements, has been replaced by the simplified table 1106.3. The 2012 Table 1106.6, which covered horizontal gutter sizing requirements, has been replaced by the simplified Table 1106.6. The sizing methods correspond with American Society of Plumbing Engineers' (ASPE) sizing tables.
Siphonic Roof Drainage Systems	1107 New requirements have been added to address the design of siphonic roof drainage systems by referencing the standard ASPE 45 for design of the system and ASME A112.6.9 for use of the roof drain.	
Nonpotable Water Systems	Chapter 13 The provisions addressing gray-water recycling systems have been relocated from appendix C to Chapter 13 in the body of the code.	Chapter 13 Chapter 13 has been expanded to include various types of systems for the collection, storage and distribution of nonpotable water. Examples include gray water, on-site reclaimed water, collected rainwater, captured condensate and rejected water from reverse osmosis systems.
Subsurface Landscape Irrigation Systems		Chapter 14 Provisions for subsurface landscape irrigation systems using gray water have been relocated from Chapter 13 to a new Chapter 14 and expanded to include connection to any nonpotable water from on-site water reuse systems.

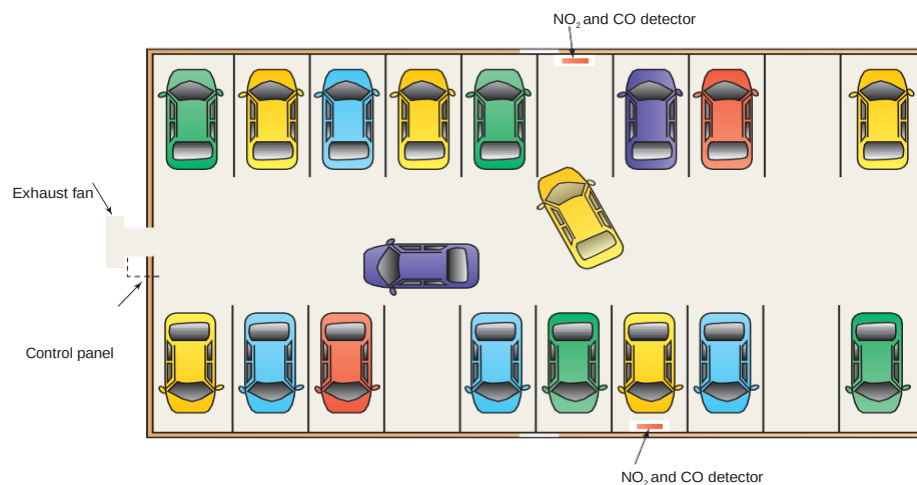
2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

Topic	2012	2015
International Mechanical Code (IMC)		
Maintenance	102.3 ASHREA/ACCA/ANSI Standard 180 is now specified for inspection for maintenance of an HVAC system.	
Environmental Air	202 The definition of <i>environmental air</i> has been expanded through the addition of parking garage exhaust.	
Fall-Arresting Restraint Systems		304.11 The exception allows for fall-arresting restraint systems to be employed instead of guards on roofs.
Access		306.1 In addition to appliances, access is also required for controls devices, heat exchangers and HVAC system components for inspection, service, replacement and repair.
Equipment and Appliances on Roofs or Elevated Structures	306.5 Permanent access is required to equipment and appliances on a roof or elevated structure higher than 16 feet above grade.	
Condensate Drain Line Maintenance		307.2.5 The code requires that condensate drains be configured or equipped to allow maintenance of the drain without the drain pipe or tubing being cut.
Condensate Pumps in Uninhabitable Spaces		307.3 Condensate pumps located in uninhabitable spaces and used with condensing fuel-fired appliances and cooling equipment must be connected to the appliance or equipment served by the pump to prevent water damage in the event of pump failure.



2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

Topic	2012	2015
Labeled Assemblies	308.4.1 (308.5) Allowable clearance reductions must now be based on listed and labeled reduced-clearance protective assemblies in accordance with UL 1618.	
Ventilation Required		401.2, 407.1, Table 403.3.1.1 Occupancies including hospitals, nursing homes, detoxification facilities and ambulatory care facilities must be ventilated in accordance with a new standard, ASHRAE 170.
Intake Opening Location	401.4 Minimum clearance between an air intake opening and any public way is measured from the opening to the lot line, not the centerline of the public way.	
Recirculation of Air		403.2.1, Table 403.3.1.1 The revisions to Section 403.2.1 and notes b and g of Table 403.3.1.1 clarify that recirculation of air within a space is permitted.
Outdoor Air and Local Exhaust Airflow Rates		403.3 The new text introduces the basic requirements of ASHRAE 62.2 related to mechanical ventilation for Group R-2, R-3 and R-4 buildings three stories or less in height.
Minimum Ventilation Rates for Nail Salons (Manicure and Pedicure Stations)	Table 403.3.1.1 (Table 403.3) Nail stations in nail salons must now each be provided with a source capture system.	Table 403.3.1.1 The revised note h to Table 403.3.1.1 recognizes new Section 502.20 for the design of manicure and pedicure station exhaust systems and also specifies the applicability to both. Note h addresses the relationship between the source capture system exhaust-flow rate and the exhaust-flow rate specified within the table for nail salons.
Intermittent Operation of Mechanical Ventilation Systems for Enclosed Parking Garages	404.1 Mechanical ventilation systems in parking garages are now permitted to be operated automatically by carbon monoxide detectors in conjunction with nitrogen dioxide detectors.	404.1 For enclosed parking garages, the ventilation system must operate continuously or must be automatically controlled for intermittent operation utilizing both carbon monoxide and nitrogen dioxide detectors. The option to detect vehicle operation or occupant presence has been deleted.

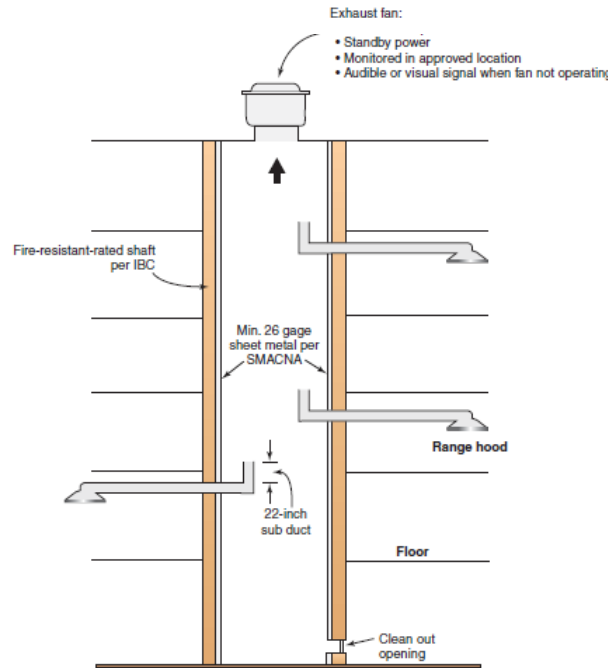


**2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code –
Transition from the 2009**

Topic	2012	2015
Mechanical Exhaust System Discharge		501.3 Mechanical exhaust cannot create a public nuisance. The adjective “public” was added to “nuisance” to make this requirement more enforceable. The new exception correlates with Section 505.1, exception 1.
Independent Exhaust Systems Required	501.2 Those locations where an independent exhaust system is required are now established in a single code provision.	
Manicure and Pedicure Station Exhaust System		502.20 New text specifically covers manicure and pedicure stations and states exhaust requirements in addition to those in Table 403.3.1.1. In previous editions of the code, pedicure stations were not specifically called out, as the text in Table 403.3.1.1 referred only to nail salons generically.
Dryer Exhaust Duct Power Ventilators		504.5, 504.8.4.3 New text recognizes the use of dryer exhaust duct power ventilators (DEDPVs) for installations that exceed the allowable exhaust duct length for clothes dryers.
Dryer Exhaust Duct Installation		504.8.2 Instead of prohibiting all duct fasteners such as screws and rivets, the code now limits the penetration of fasteners where installed to secure dryer duct joints.
Domestic Kitchen Exhaust Systems	505.1 Domestic kitchen exhaust ducts are now required to be independent of all other exhaust systems.	505.1, 505.4 The scope of domestic kitchen hoods coverage has been expanded to beyond dwellings units. Domestic hoods are mandated for other than Group R occupancies in new Section 505.4.

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

Topic	2012	2015
Domestic Kitchen Exhaust Systems in Multistory Buildings		505.3 New text regulates the design and construction of exhaust shafts that serve domestic kitchen exhaust systems in multistory buildings.



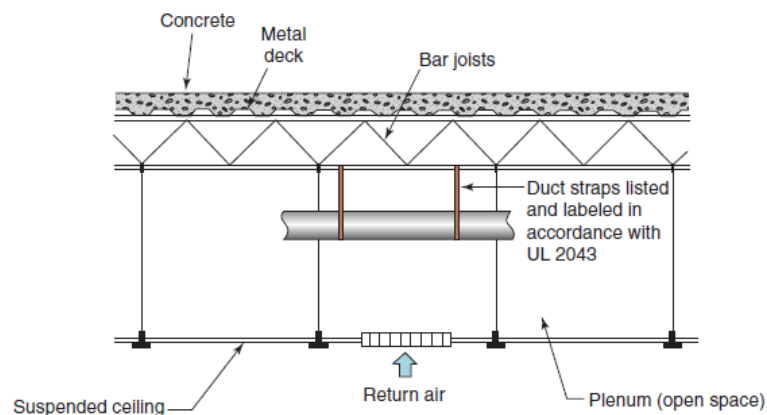
Topic	2012	2015
Grease Duct Reservoirs	506.3.7.1 Criteria are now provided for the construction of a grease reservoir in a grease duct system.	506.3.7.1 A grease duct reservoir must now be the full width of the duct in all cases, and the reservoir must be provided with a drain opening.
Grease Duct Cleanouts and Openings	506.3.8 For grease duct cleanouts, gasket and sealing materials on grease duct doors must be rated at a min. of 1500°F	506.3.8 The cleanout spacing provisions have been added to be consistent with Section 506.3.9 for horizontal ducts.
Grease Duct Horizontal Cleanouts	506.3.9 Criteria for cleanouts for horizontal grease ducts have been rearranged and several technical provisions have been added.	
Underground Grease Duct Installations	506.3.10 Underground grease ducts are now regulated based on new provisions.	
Grease Duct Enclosures		506.3.11 The code specifically prohibits the installation of fire and smoke dampers in grease ducts.
Field-Applied Grease Duct Enclosures	506.3.11.2 Field-applied grease duct enclosure systems are specifically prohibited from being used to reduce clearance from combustibles.	

**2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code –
Transition from the 2009**

Topic	2012	2015
In-Line Fan Location in Exhaust Ducts Serving Commercial Kitchen Hoods		506.5.1.2 New text addresses the enclosure requirements for in-line exhaust fans located in kitchen hood exhaust ducts, in effect treating them the same as ducts.
Hinged Up-Blast Fans for Type I Hoods		506.5.3 The code now requires that hinged exhaust fans be provided with a means to limit the travel of the fan assembly to prevent injury to personnel and damage to the building and fan.
Type I Hood Installation		507.1 A requirement has been added for Type I hood installations to comply with all aspects of a Type I exhaust system, whether the Type I hood is required by the code or installed by choice.
Commercial Kitchen Exhaust Hood System Operation		507.1.1 The requirement for automatic activation of the exhaust system has been revised to provide the intended performance requirements and to clarify that an interlock arrangement is an alternative to automatic hood operation.
Heat Sensors for Multiple Commercial Kitchen Hoods		507.1.1.1 New text prohibits the use of a single sensor mounted in the common ductwork for commercial kitchen hood systems having multiple hoods manifolded together.
Type I or Type II Hood Required	507.1 (507.2) Type I or Type II commercial kitchen hoods are not required for appliances with integral downdraft exhaust systems.	
Type I Hoods	507.2 (507.2.1) Type I hoods are no longer required for complying electric appliances.	
Operation of Type I Hoods	507.1.1 (507.2.1.1) The kitchen exhaust fan interlock is not permitted to shut off the pilot burners.	
Exhaust Flow Rate Label of Type I Hoods	507.2.2 (507.2.1.2) Type I commercial cooking hoods require a label with the minimum exhaust air flow rate based on the appliance classification.	
Type I Hood Grease Filters		507.2.8 The code now recognizes the use of disposable grease filters.
Type II Hoods	507.3 (507.2.2) Where the HVAC system or a separate exhaust system is used in lieu of a Type II hood, the code now specifies the exhaust rate.	
Air Balance for Commercial Kitchen Ventilation Systems		508.1.2 This new section requires that an air balance schedule be submitted with the design plans for commercial kitchen ventilation systems.
Hazardous Exhaust Systems		510.4, 510.5 The code clarifies that hazardous exhaust systems must always be independent of other systems. New Section 510.5 clarifies the conditions for laboratory exhaust systems with a common shaft.

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

Topic	2012	2015
Hazardous Exhaust Duct Penetrations of Shafts		510.7.1.1 The code adds a pointer to the <i>International Building Code</i> (IBC) provisions for hazardous exhaust duct penetrations of shafts.
Fire Suppression Required for Hazardous Exhaust Ducts	510.8 (510.7) Automatic fire suppression is no longer required in exhaust ducts in semiconductor fabricated facilities	
Energy Recovery Ventilation Systems		514.2 Energy recovery ventilation (ERV) systems of the coil-type heat exchanger (run-around coils) are no longer limited in their application.
Return Air Openings		601.5 The provisions for return air have been relocated from a section specific to forced-air/warm-air furnaces in Chapter 9 to a more generic section in Chapter 6. The provisions have been clarified and streamlined to capture the desired intent.
Contamination Prevention in Plenums	601.4 Chimneys and vents are now permitted to pass through a plenum where in compliance with one of three new allowances.	
Plenums Limited to One Fire Area		602.1 The revision clarifies that a plenum in a fire area cannot be connected to a plenum in an adjoining fire area by means of transfer ducts or openings, regardless of the presence of fire dampers.
Plenum Construction		602.2 Materials enclosing plenums must be noncombustible or must meet the 25/50 flame spread/smoke-developed limits.



**2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code –
Transition from the 2009**

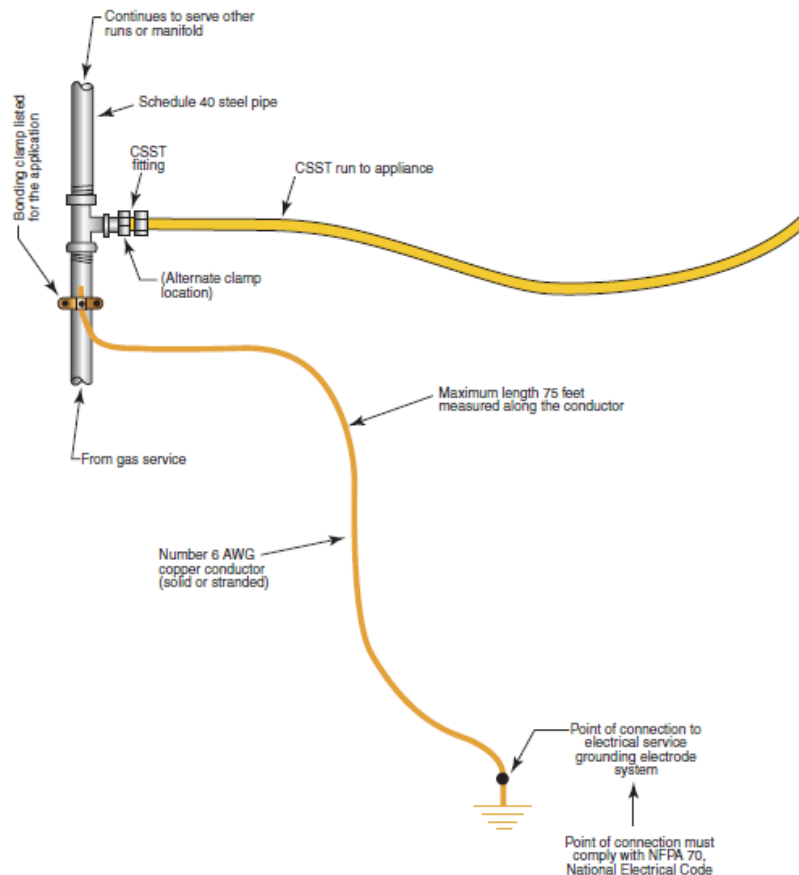
Topic	2012	2015
Materials within Plenums	602.2.1 Any material or assembly within a plenum must be noncombustible, gypsum board, or listed and labeled.	602.2.1.5 The code now addresses those products that in previous editions of the code did not fall under the category of piping, wiring, ductwork, tubing, insulation and other continuous large surface area materials installed in plenums. A definition has been added to describe what is meant by discrete products.
Duct Construction Minimum Sheet Metal Thickness for Single Dwelling Units		Table 603.4 The table for duct gages for dwelling units has been replaced with thicknesses consistent with the SMACNA sheet metal construction standard.
Rigid Duct Penetrations	603.7 Ducts that penetrate a wall or ceiling between the dwelling and adjacent private garage must be continuous and constructed of minimum 26 gage steel.	
Duct Joints, Seams and Connections	603.9 Unlisted duct tape is no longer permitted as a sealant on nonmetallic ducts	603.9 Duct sealant tapes used on sheet-metal ducts must be listed to UL 181 B as is required for sealing tapes and mastics for flexible ducts. Snap-lock and button-lock seams are no longer exempt from the sealing requirements.
Air Dispersion Systems	603.17, 202 Air dispersion systems listed and labeled to UL 2518 are now permitted.	
Dampened Openings		701.2 Where dampers are installed on combustion air openings, the code now requires an interlock with the appliance to prevent operation of the appliance when the damper is closed. Manual dampers are prohibited on combustion air openings.
Door Clearance to Vent Terminals		802.9 To prevent damage to the vent, door or surrounding materials, doors are not permitted to swing within 12 inches of an appliance vent terminal.
Factory-Built Chimney Offsets	805.3 The maximum offset in a factory-built chimney is 30 degrees from vertical and the number of elbows is limited to 4.	
Gasketed Fireplace Doors		903.4 Gasketed (sealed) doors are prohibited on factory- built fireplaces except where the fireplaces are listed for use with such doors.
Evaporative Cooling Equipment	928 Requirements for the installation of evaporative coolers have been added to the IMC in a new Section 928.	
Locking Access Port Caps	1101.10 Locking caps are no longer required on refrigerant access ports if the equipment is located in a secure location.	

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

Topic	2012	2015
Refrigerant Access Port Protection		1102.3 The requirement for making refrigerant access ports tamper resistant has been expanded to apply to existing systems when service to such systems involves adding or removing refrigerant.
Machinery Room Ventilation	1105.6, 1105.6.3 The min. ventilation rates in ammonia machinery rooms must now be in accordance with IIAR2.	
Flammable Refrigerants	1106.4 The ventilation requirements for ammonia machinery rooms are now mandatory in order to be exempt from the Class 1 Division 2 hazardous location requirements in NFPA 70.	

**2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code –
Transition from the 2009**

Topic	2012	2015
International Fuel Gas Code (IFGC)		
Combustion Air for Appliances with Power Burners		304.1 This change clarifies that the prescriptive combustion air provisions of Section 304 do not apply to appliances having power burners.
Condensate Pumps		307.6 Condensate pumps located in uninhabitable spaces and used with condensing fuel-fired appliances and cooling equipment must be connected to the appliance or equipment served by the pump to prevent water damage in the event of pump failure.
Clearance to Combustible Materials	308.1 Gypsum Board is considered a combustible material for purposes of determining required clearances and for determining reductions in clearances.	
Electrical Bonding of Corrugated Stainless Steel Tubing		310.1.1 For CSST systems, text has been added to address the allowable length of the bonding jumper wire and the methods of making the bonding connections.

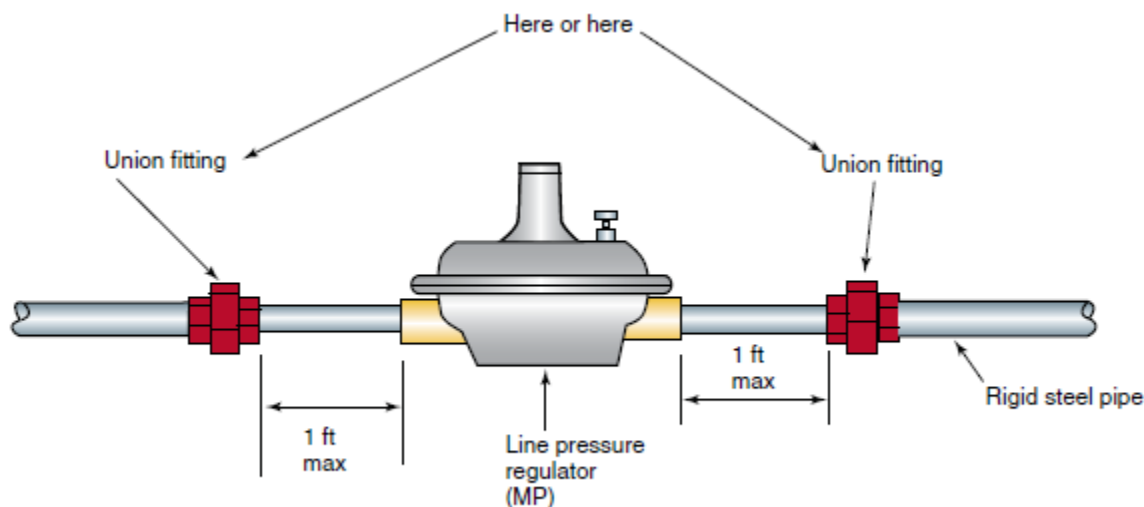


2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

Topic	2012	2015
Identification, Testing and Certification	401.9, 410.10, 404.1, 202 Each section of pipe and each fitting utilized in a fuel gas system requires the identification of the manufacturer.	
Maximum Gas Demand for Pipe Sizing		402.2 Table 402.2 for estimated gas input for typical appliances and the reference to the table have been deleted as a result of the code requiring the actual maximum input rating of the appliances to be known and used for sizing purposes.
Plastic Pipe, Tubing and Fittings		403.6 PVC and CPVC pipe are expressly prohibited materials for supplying fuel gas.
Drilled and Tapped Metallic Pipe Fittings		403.10.4 The code now expressly prohibits the practice of drilling and tapping pipe fittings in the field except where performed in accordance with five criteria that strictly limit such practice.
CSST Piping Systems	404.2 CSST piping systems must be installed in accordance with their listing and the manufacturer's instructions.	
Fittings in Concealed Locations		404.5 This section retains its basic intent, while being completely reorganized to clarify the correct application. Threaded elbows, tees and couplings are now specifically approved for concealed locations as the code always intended. The code now provides the applicable referenced standards for fittings that are listed for concealed locations.
Protection of Concealed Piping against Physical Damage		404.7 The section on protection of piping has been completely rewritten to address more than just bored holes and notches in structural members. It now addresses piping parallel to framing members and piping within framing members. The new text requires that the protection extend well beyond the edge of members that are bored or notched.
Prohibited Devices	404.19 (404.18) Excess flow valves and similar devices are now permitted to be placed in gas piping systems that have been sized to accommodate the pressure drop.	
Pipe cleaning		404.18 The code now specifically prohibits the practice of using fuel gas as a medium for flushing foreign matter and debris from fuel-supply piping.
Sediment Traps	408.4 An illustration of a sediment trap has been added to clarify the intent.	

**2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code –
Transition from the 2009**

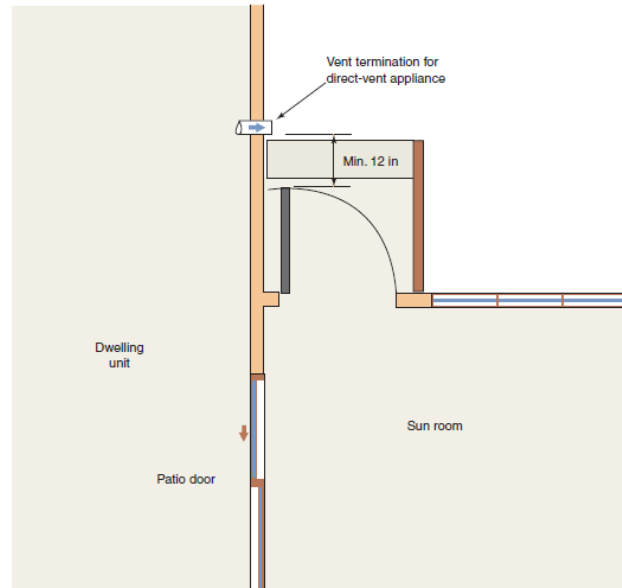
Topic	2012	2015
Medium-Pressure Regulators		410.2 Medium pressure line regulators installed in rigid piping must have a union installed to allow removal of the regulator.



Topic	2012	2015
Excess Flow Valves	410.4 An excess flow valve must be listed, sized and installed in accordance with the manufacturer's instructions.	
Flashback Arrestor Check Valve	410.5, 202 A combination flashback arrestor and backflow check valve is required on any fuel gas system used with oxygen in any hot work operation.	
Connecting Portable Outdoor Appliances		411.1 Where portable gas appliances are used outdoors, such as gas grills and patio heaters, the options for connecting to the gas distribution system are practically limited to gas hoses designed for the purpose. Such hoses must comply with ANSI Z21.54.
Connectors for Commercial Cooking Appliances		411.1.1 Specific installation requirements have been added for the safe installation of ANSI Z21.69 connectors for commercial cooking appliances. The options to connect the cooking appliance with semi-rigid tubing or rigid pipe have been removed.

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

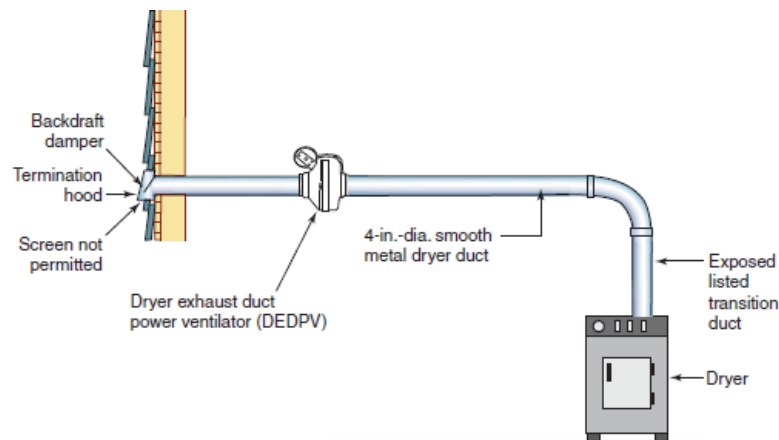
Topic	2012	2015
Door Clearance to Vent Terminals		502.7.1 A minimum 12 inches clearance is required between a vent terminal and the swing arc of a door to prevent impact and ensure proper vent operation.



Topic	2012	2015
Plastic Piping for Appliance Vents		503.4.1 The approval of plastic pipe for venting appliances is no longer a responsibility of the code official; instead, that responsibility rests with the appliance manufacturer and the appliance listing agency.
Sizing of Plastic Pipe Vents		503.6.9.3 Because plastic pipes such as PVC, ABS and CPVC plumbing pipes are not listed and labeled as appliance vents, (see the definition of "vent"), the code was silent on how to size such pipes. The sizing is covered in the appliance manufacturer's instructions, and the code requires compliance with such instructions. This section has been modified to address both listed vents and unlisted materials used as vents.

**2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code –
Transition from the 2009**

Topic	2012	2015
Venting System Termination Location		503.8 Text has been added to address the location of sidewall vent terminals with respect to adjoining buildings. The concern is that combustion gases will enter the adjacent building through openings in the exterior walls that face the appliance vent terminal. This section applies only to Category IV (condensing) appliances that are sidewall vented.
Dryer Exhaust Duct Power Ventilators		614.5 New text recognizes the use of dryer exhaust duct power ventilators (DEDPVs) for installations that exceed the allowable exhaust duct length for clothes dryers.



Topic	2012	2015
Prohibited Sources of Return Air	618.4 Return air may be taken from a garage provided with a dedicated forced-air system.	
Prohibited Location of Commercial Cooking Appliances		623.2 The code has been clarified so that it would not inadvertently prohibit the installation of cooking appliances that are listed as both commercial and domestic appliances.

***2015 International Plumbing Code, International Mechanical Code, International
Fuel Gas Code – Transition from the 2009***

Notes:

INTERNATIONAL MECHANICAL CODE

International Mechanical Code Adopted

The 2015 International Mechanical Code which is on file in the office of the Building Official is hereby adopted and designated as the Mechanical Code of the City of Lake Dallas, to the same extent as if such code was copied verbatim, subject to the deletions, amendments and additions prescribed by this ordinance.

Adoption of the NCTCOG Recommended Amendments to the 2015 International Mechanical Code

The 2015 International Mechanical Code is hereby amended as recommended by the North Central Texas Council of Governments ("NCTCOG"), which amendments are incorporated herein by reference and on file in the office of the Building Official of the City of Lake Dallas.

Recommended Amendments to the 2015 International Mechanical Code North Central Texas Council of Governments Region

The following sections, paragraphs, and sentences of the *2015 International Mechanical Code* (IMC) are hereby amended as follows: Standard type is text from the IMC. Underlined type is text inserted. ~~Lined through type is deleted text from the IMC.~~ A double asterisk (**) at the beginning of a section identifies an amendment carried over from the 2012 edition of the code and a triple asterisk (***) identifies a new or revised amendment with the 2015 edition of the code. A quadruple asterisk (****) identifies a local amendment.

Note: Historically the North Central Texas Council of Governments (NCTCOG) has limited Chapter 1 amendments in order to allow each city to insert their local policies and procedures. We now have suggested certain items to be brought to the attention of cities considering adoption of the code that may be of concern to several jurisdictions. **It is still intended to be discretionary to each city to determine which Chapter 1 amendments to include.**

****Section 102.8; change to read as follows:**

102.8 Referenced Codes and Standards. The codes and standards referenced herein shall be those that are listed in Chapter 15 and such codes, when specifically adopted, and standards shall be considered part of the requirements of this code to the prescribed extent of each such reference. Where differences occur between provisions of this code and the referenced standards, the provisions of this code shall apply. Whenever amendments have been adopted to the referenced codes and standards, each reference to said code and standard shall be considered to reference the adopted amendments. Any reference to NFPA 70 or the *National Electrical Code* (NEC) shall mean the Electrical Code as adopted.

(Reason: Legal wording to recognize locally adopted codes and amendments adopted with referenced codes.)

****Section 306.3; change to read as follows:**

306.3 Appliances in Attics. Attics containing appliances shall be provided . . . *{bulk of paragraph unchanged}* . . . side of the appliance. The clear access opening dimensions shall be a minimum of 20 inches by 30 inches (508 mm by 762 mm), or larger where such dimensions are not large enough to allow removal of the largest appliance. A walkway to an appliance shall be rated as a floor as approved by the building official. As a minimum, for access to the attic space, provide one of the following:

1. A permanent stair.
2. A pull down stair with a minimum 300 lb. (136 kg) capacity.
3. An access door from an upper floor level.
4. Access Panel may be used in lieu of items 1, 2, and 3 with prior approval of the code official due to building

conditions.

Exceptions:

1. The passageway and level service space are not required where the appliance is capable of being serviced and removed... *{remainder of section unchanged}*

(Reason: To provide a safe means of accessibility to appliances in attics and to allow for different types of construction limitations. Consistent with regional amendment to International Fuel and gas Code (IFGC) 306.3.)

****Section 306.5; change to read as follows:**

306.5 Equipment and Appliances on Roofs or Elevated Structures. Where *equipment* requiring access or appliances are located on an elevated structure or the roof of a building such that personnel will have to climb higher than 16 feet (4877 mm) above grade to access, ~~an~~ a permanent interior or exterior means of access shall be provided. Permanent exterior ladders providing roof access need not extend closer than 12 feet (2438 mm) to the finish grade or floor level below and shall extend to the equipment and appliances' level service space. Such access shall . . . *{bulk of section to read the same}* . . . on roofs having a slope greater than 4 units vertical in 12 units horizontal (33-percent slope). ... *{bulk of section to read the same}*.

(Reason: To assure safe access to roof appliances and provide a greater level of security for equipment locate more than 16 feet above grade. Consistent with IFGC amendments.)

****Section 306.5.1; change to read as follows:**

306.5.1 Sloped Roofs. Where appliances, *equipment*, fans or other components that require service are installed on a roof having a slope of 3 units vertical in 12 units horizontal (25-percent slope) or greater and having an edge more than 30 inches (762 mm) above grade at such edge, a catwalk at least 16 inches in width with substantial cleats spaced not more than 16 inches apart shall be provided from the roof access to a level platform at the appliance. The level platform shall be provided on each side of the appliance to which access is required for service, repair or maintenance. The platform shall be not less than 30 inches (762 mm) in any dimension and shall be provided with guards. The guards shall extend not less than 42 inches (1067 mm) above the platform, shall be constructed so as to prevent the passage of a 21-inch-diameter (533 mm) sphere and shall comply with the loading requirements for guards specified in the International Building Code.

(Reason: To assure safe access to roof appliances. Consistent with IFGC amendments.)

****Section 306; add Section 306.6 to read as follows:**

306.6 Water Heaters Above Ground or Floor. When the mezzanine or platform in which a water heater is installed is more than eight (8) feet (2438 mm) above the ground or floor level, it shall be made accessible by a stairway or permanent ladder fastened to the building.

Exception: A maximum 10 gallon water heater (or larger with approval) is capable of being accessed through a lay-in ceiling and the water heater installed is not more than ten (10) feet (3048 mm) above the ground or floor level and may be reached with a portable ladder.

(Reason: To provide safe access to water heaters and to provide lighting and receptacle for maintenance of equipment. Consistent with regional amendments to IFGC 306.7 and International Plumbing Code (IPC) 502.5.)

****Section 307.2.3; amend item 2 to read as follows:**

2. A separate overflow drain line shall be connected to the drain pan provided with the equipment. Such overflow drain shall discharge to a conspicuous point of disposal to alert occupants in the event of a stoppage of the primary drain. The overflow drain line shall connect to the drain pan at a higher level than the primary drain connection. However, the conspicuous point shall not create a hazard such as dripping over a walking surface or other areas so as to create a nuisance.

(Reason: Greater specificity in prohibited locations for condensate discharge. Consistent with regional amendment to IPC 314.2.1.)

****Section 403.2.1; add an item 5 to read as follows:**

5. Toilet rooms within private dwellings that contain only a water closet, lavatory, or combination thereof may be ventilated with an *approved* mechanical recirculating fan or similar device designed to remove odors from the air.

(Reason: Consistent with common regional practice. Consistent with regional amendment to International Residential Code (IRC) R303.3.)

****Section 501.3; add an exception to read as follows:**

501.3 Exhaust Discharge. The air removed by every mechanical exhaust system shall be discharged outdoors at a point where it will not cause a public nuisance and not less than the distances specified in Section 501.3.1. The air shall be discharged to a location from which it cannot again be readily drawn in by a ventilating system. Air shall not be exhausted into an attic, crawl space, or be directed onto walkways.

Exceptions:

1. Whole-house ventilation-type attic fans shall be permitted to discharge into the attic space of dwelling units having private attics.
2. Commercial cooking recirculating systems.
3. Where installed in accordance with the manufacturer's instructions and where mechanical or natural ventilation is otherwise provided in accordance with Chapter 4, listed and labeled domestic ductless range hoods shall not be required to discharge to the outdoors.
4. Toilet room exhaust ducts may terminate in a warehouse or shop area when infiltration of outside air is present.

(Reason: Provide a reasonable alternative in areas where a large volume of outside air is present.)

****Section 607.5.1; change to read as follows:**

607.5.1 Fire Walls. Ducts and air transfer openings permitted in fire walls in accordance with Section 705.11 of the International Building Code shall be protected with listed fire dampers installed in accordance with their listing. For hazardous exhaust systems see Section 510.1-510.9 IMC.

(Reason: Correspond with un-amended IBC 710.7.)

END



CODE COUNCIL
TRAINING

**2009
2012
2015**

2015 Transition from the 2009: Plumbing, Mechanical, Fuel Gas

Based on the International Plumbing Code® (IPC®), the International Mechanical Code® (IMC®), and the International Fuel Gas Code® (IFGC®)



2015 Transition from the 2009: Plumbing, Mechanical, Fuel Gas

First Printing: March 2015

COPYRIGHT © 2015
by
International Code Council, Inc.

ALL RIGHTS RESERVED. The 2015 Transition from the 2009: Plumbing, Mechanical, Fuel Gas is a copyrighted work owned by the International Code Council, Inc. Without advance written permission from the copyright owner, no part of this book may be reproduced, distributed, or transmitted in any form or by any means, including, without limitation, electronic, optical or mechanical means (by way of example and not limitation, photocopying, or recording by or in an information storage retrieval system). For information on permission to copy material exceeding fair use, please contact: ICC Publications, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
Phone 1-888-ICC-SAFE (422-7233).

Trademarks: “International Code Council,” the “International Code Council” logo, the “IPC”, “IMC”, “IFGC” and the “International Plumbing Code, “International Mechanical Code”, “International Fuel Gas Code” are trademarks of the International Code Council, Inc.

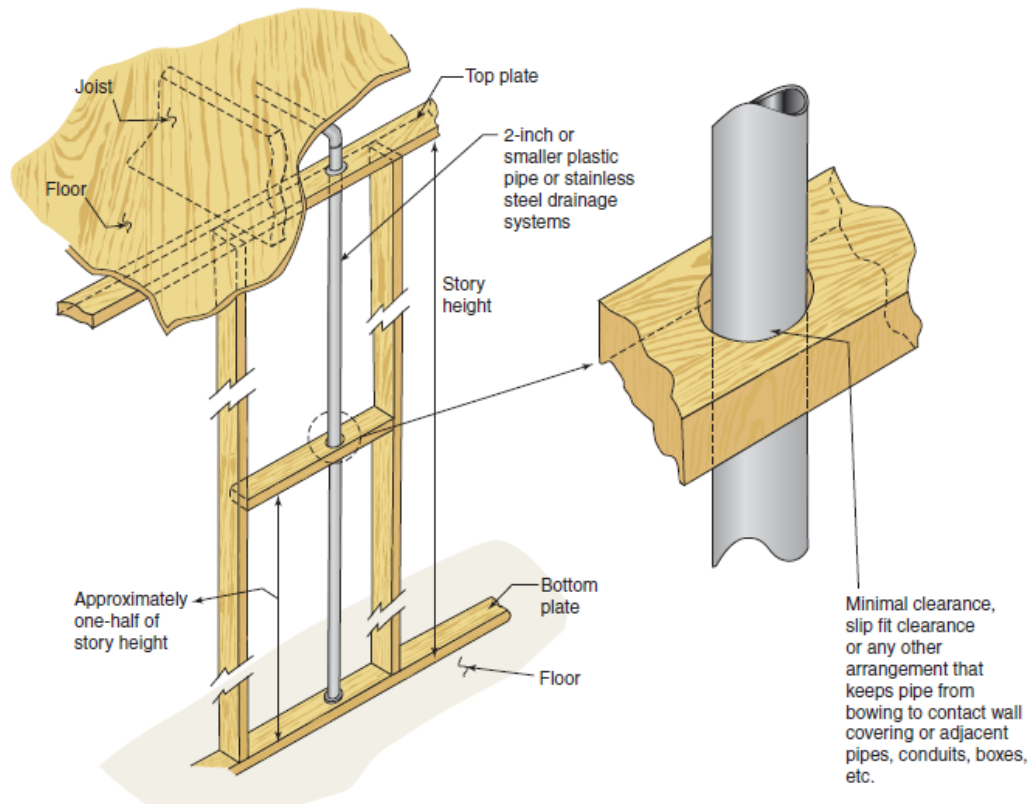
PRINTED IN THE U.S.A.

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

Topic	2012	2015
International Plumbing Code (IPC)		
Alternate Onsite Nonpotable Water Definition		202 This term has been added to support a revised Chapter 13 that covers various nonpotable waters to be collected, stored and distributed. Examples include gray water, on-site reclaimed water, collected rainwater, captured condensate and rejected water from reverse osmosis systems.
Backflow Preventer Definition		202 This definition has been made more specific about what constitutes a backflow preventer: a backflow prevention assembly, a backflow prevention device or other means or methods.
Drinking Fountain, Water Cooler and Water Dispenser Definitions; Substitution for Drinking Fountains		202, 410.4 Definitions for drinking fountain, water dispenser and water cooler clarify Section 410 on drinking fountain requirements. The water dispenser definition expands the group of devices and apparatus that can be used as substitution for 50% of the required number of drinking fountains.
Grease Interceptor Hydro mechanical Gravity Fats, Oils and Grease (FOG) Disposal Systems	202 The definition of a “grease interceptor” has been modified for consistency with current industry terms for the two general types of grease interceptors: “hydro mechanical” and “gravity”.	202 Another type of grease interceptor, the Fats, Oils and Grease (FOG) disposal system, has been added to support the revised text in Section 1003.3.4 covering grease interceptors.
Plumbing Appliance Definition	202 The definition of “plumbing appliance” has been changed to clarify the difference between appliance and fixtures.	
Plumbing Fixture Definition	202 The definition of “plumbing fixture” has been modified to include fixtures that are not connected to a water supply such as waterless urinals.	
Toilet Facility Definition		202 This definition has been added to clarify that a toilet facility is a room or space that contains not less than one water closet and one lavatory.
Waste Receptor Definition		202 This definition has been added to clarify that floor sinks, standpipes, hub drains and floor drains receiving indirect waste are considered waste receptors.
Material Identification and Third-Party Certification	303.1, 303.4 Plumbing products and materials must be listed by a third-party certification agency and bear required identification.	

**2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code –
Transition from the 2009**

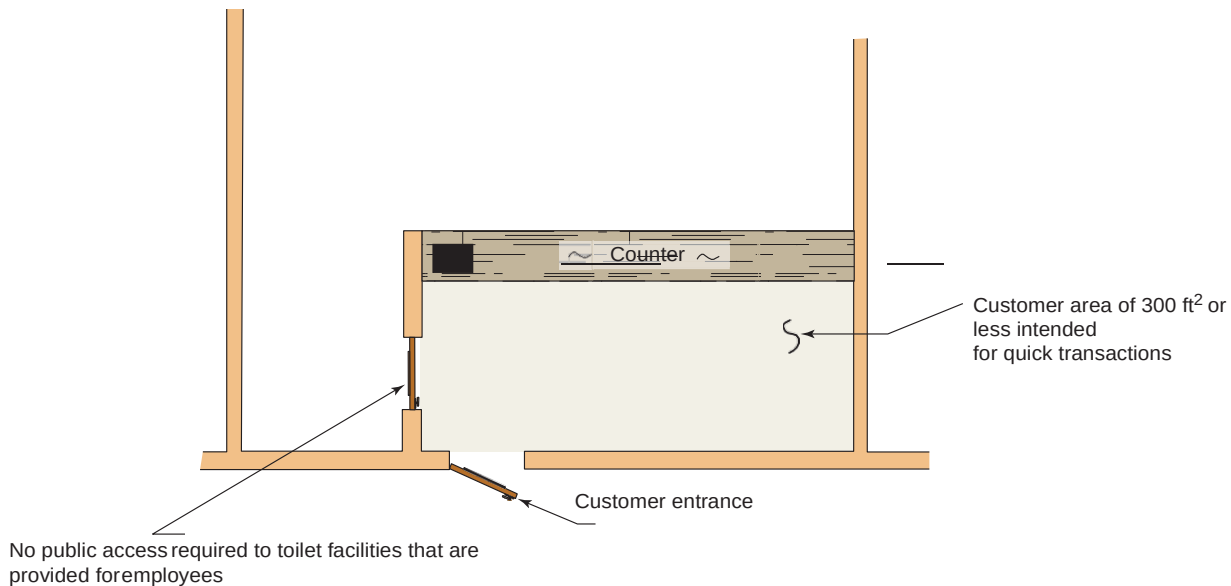
Topic	2012	2015
Mid-Story Pipe Guide		Table 308.5 Footnote 'b' of Table 308.5 clarifies the mid-story guide requirement for plastic pipe 2 inches and smaller. The guide must restrain the pipe perpendicular to its axis at the midpoint between required vertical supports.



Topic	2012	2015
Parallel Water Distribution Systems	308.9 In parallel water distribution systems, the hot and cold water piping may now be grouped in the same pipe bundle.	
Sealing of Annular Spaces at Penetrations	315.1 The provisions for sealing any annular spaces created at piping penetrations have been revised to be consistent with the building envelope sealing requirements of the IECC.	

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

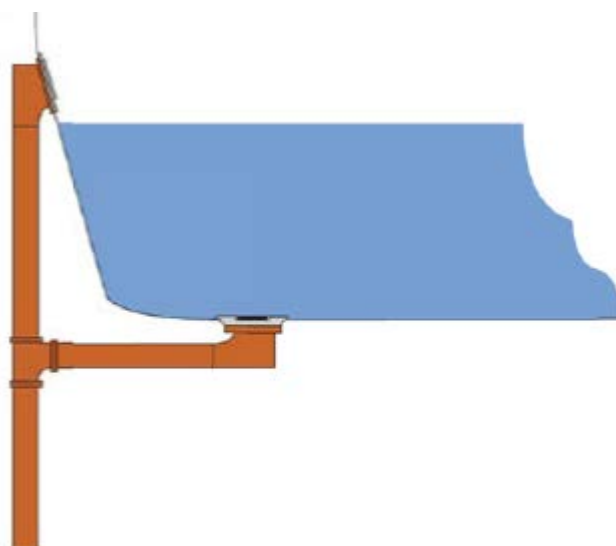
Topic	2012	2015
Minimum Number of Required Plumbing Fixtures	Table 403.1 Service sinks are no longer required in Group B and M occupancies where the occupant load does not exceed 15.	Table 403.1 The IBC occupancy classifications (A, B, M, etc) are no longer used to determine which row in Table 403.1 to use for fixture quantities. The actual use of the building or space determines which row in the table to use.



Topic	2012	2015
Separate Toilet Facilities in Group M Occupancies	403.2 The exemption from separate plumbing facilities for each sex in Group M mercantile occupancies now applies where the occupant load of the occupancy does not exceed 100.	
Family or Assisted-Use Toilet Facilities Serving as Separate Facilities	403.2.1 Where separate toilet facilities for each sex are required and only one water closet is mandated in each facility, two family or assisted-use toilet facilities are now permitted to satisfy the separate facilities. requirement	
Required Public Toilet Facilities Exception		403.3 Occupancies that have limited areas for public access, such as dry cleaners, takeout only restaurants and automated teller machine lobbies, do not require public toilet facilities where the public access area is limited to 300 ft² or less.
Relationship of Toilet Rooms and Food Preparation Areas	403.3.2 The IBC requirement prohibiting the opening of toilet rooms directly into food preparation areas is now also placed in the IPC.	
Locking of Toilet Room Doors	403.3.6 Locking devices are now specifically prohibited on the egress doors of toilet rooms designed for multiple occupants.	

**2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code –
Transition from the 2009**

Topic	2012	2015
Directional Signage for Location of Public Toilet Facilities		403.4.1 The provision for directional signs to public toilet facilities now requires that the signage be located at the main entrance to the building or tenant space.
Drinking Fountain Locations	403.5 The permitted locations of drinking fountains in multi-tenant facilities are now similar to the permitted locations for required public toilet facilities: travel distance of 300 feet for a mall and 500 feet for other buildings.	
Minimum Water Closet Compartment Size	405.3.1 The minimum depth of a water closet compartment containing a wall-hung water closet has been reduced from 60 inches to 56 inches.	
Floor and Wall Drainage Connections	405.4 The use of a waste connector and sealing gasket is now permitted as an acceptable means to connect floor outlet plumbing fixtures, allowing for water closet installations that are provided with a gasketed waste tube outlet connection.	
Backflow Protection for Clothes Washing and Dishwashing Machines		406.1, 409.2 This modification adds the standards designations with which air gaps must comply, so that the enforcement can be accomplished by the inspector identifying those standard numbers either on the machines or in the literature for the machines.
Bathtub Waste Outlets and Overflows	407.2 Bathtubs are now required to be equipped with an overflow and the required stopper must be watertight.	



Bathtub Overflow Cross Section

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

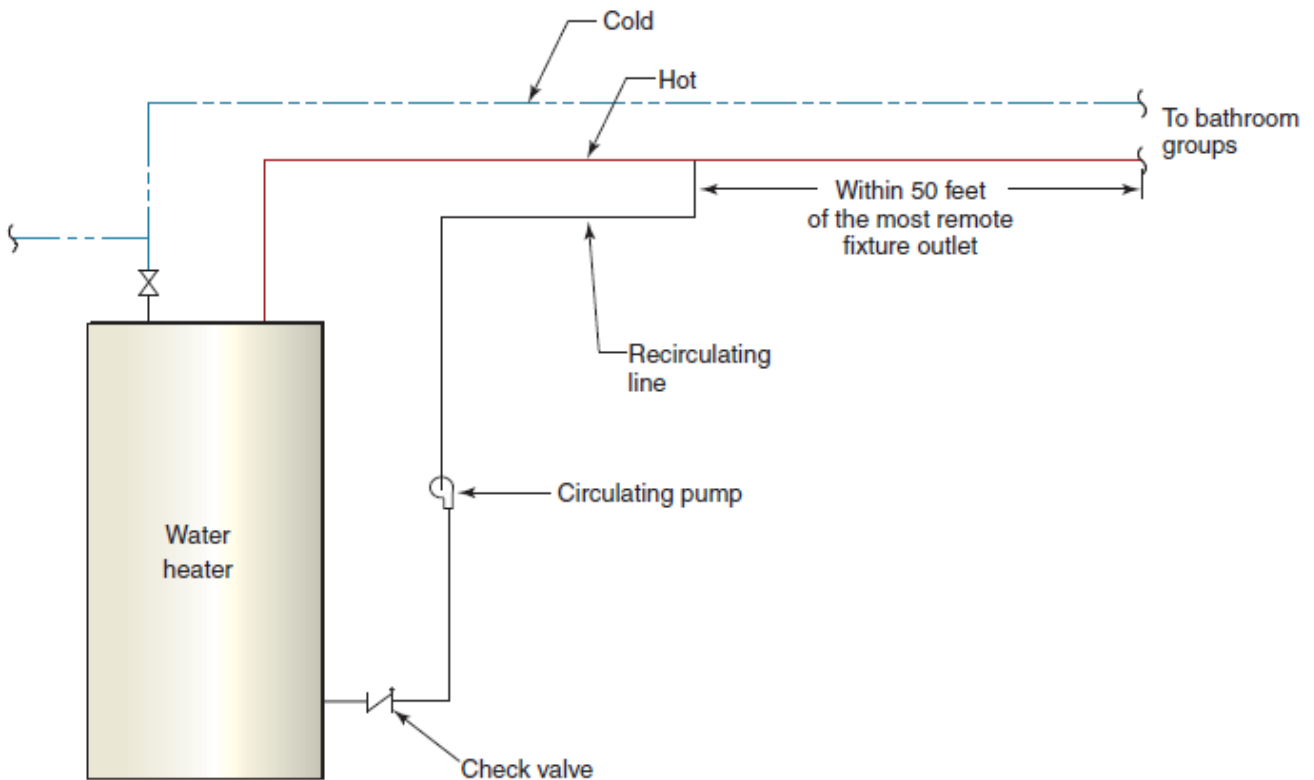
Topic	2012	2015
Minimum Required Drinking Fountains	410 The IBC provisions addressing the minimum required number of drinking fountains have been replicated in the IPC to provide clarity and consistency of application.	410.4 Definitions for drinking fountain, water dispenser and water cooler clarify Section 410 on drinking fountain requirements. The water dispenser definition expands the group of devices and apparatus that can be used as substitution for 50% of the required number of drinking fountains.
Food Waste Disposer Approval		413.1 Terminology for food waste grinders has been changed to a more industry-accepted term of food waste disposer. For electrical safety, domestic food waste disposers must be listed and labeled to a standard.
Walls and Floors in Bathtub and Shower Areas		417.4.1 Bathtub floors, shower floors and the walls above those areas need to be watertight and of the material that will be durable under wet conditions. This section has been modified to make the existing requirements more clear.
Shower Pan Liner Materials	417.5.2.6 Recognition of an acceptable shower pan liner system using liquid type, trowel-applied, load bearing, bonded waterproof material has been added to the current listing of acceptable shower floor liner methods.	
Water Closet Approval		420.1 Dual-flush water closets have become popular in recent years. The code now has a standard that covers those types of water closets.
Whirlpool Tub Approval		421.1 A standard for electrical safety for whirlpool tubs has been added to the code.
Footbaths, Pedicure Baths and Head Shampoo Sinks		423.3 Water-temperature-limiting devices are required for footbaths (integral or not integral to pedicure chairs) and head shampoo sinks.
Deck-Mounted Bath/Shower Transfer Valves		424.8 The standard to which deck-mounted bath/shower transfer valves must comply has changed.
Water Closet Personal Hygiene Devices	424.9 The recognition of performance standard AMSE A112.4.2 now ensures the protection of the public by setting temperature limits and minimum acceptable backflow protection requirements for water closet personal hygiene devices.	
Water Heater Drain Valves		501.3 The standard covering water heater drain valves has been discontinued by the standard promulgator. Minimum criteria for drain size and the hose connection have been added to the code for these valves.
Water Heater Storage Tank Relief Valves	504.4.1 Water heaters with separate storage tanks shall be provided with complying temperature and pressure protection.	

**2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code –
Transition from the 2009**

Topic	2012	2015
Temperature and Pressure Relief Discharge Piping		504.6 The temperature and pressure relief valve discharge pipe termination must have an air gap suitable to protect the potable water supply distribution system of the building.
Water Heater Pans	504.7 It has been clarified that drain pans are only required for storage-tank-type water heaters for hot water storage tanks.	504.7.2 In a replacement water heater installation situation, there might not be a nearby drain point for a required pan for the water heater. This code modification allows the pan to not have a drain line if one is not present.
Rehabilitation of Piping Systems by Internal Lining		601.5 An epoxy lining system standard has been added to the code for rehabilitation of existing piping systems.
Polyethylene of Raised- Temperature (PE-RT) Plastic Tubing	605 Polyethylene of raised-temperature (PE-RT) plastic hot and cold water tubing and distribution systems are now recognized by the IPC.	
Lead Content of Components Conveying Drinking Water		605.2.1 The code now has a more stringent limitation of 0.25% lead content in pipe, pipe fittings, joints, valves, faucets and fixture fittings that convey water used for drinking and cooking.
Polyethylene (PE) and PEX Water Service Pipe CPVC /AL / CPVC Water Service and Water Distribution Piping Asbestos Cement Pipe	Table 605.3 Reference standard AWWA C901, "Polyethylene (PE) Pressure Pipe and Tubing, 1/2 inch Through 3 in for Water Service," has been added to the list of standards in Table 605.3 regulating PE plastic water service pipe and tubing. Reference standard AWWA C904, "Cross-Linked Polyethylene (PEX) Pressure Pipe, ½ in. through 3 in. for Water Service," has been added to the list of standards in Table 605.3 regulating PEX water service piping.	Tables 605.3, 605.4, Section 605.16, Tables 702.2, 702.3, 702.4, 1102.4, 1102.5 A new type of CPVC pipe has been added. References to asbestos cement pipe and applicable referenced standards have been removed from the code.
Groove and Shouldered Mechanical Joints and Press-Connect Fittings		Table 605.5, Sections 605.14.3, 605.14.5, 605.18.3, 605.22.2, 605.23.3 Two standards for groove and shouldered mechanical drawings in a press-connect fitting standard have been added to the code.
Valve Compliance to Standards		Table 605.7, 605.7 All types of valves that supply drinking water must now comply with NSF 61. Standards for numerous types of valves have been added to the code.
Labeling of Water Distribution Pipes in Bundles	606.7 Water distribution piping installed in bundles must be labeled with content and direction of flow.	
Water-Temperature-Limiting Means	607.1.1 The water heater thermostat is prohibited from being used as a temperature-limiting device where the code requires a limit for hot or tempered water.	

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

Topic	2012	2015
Hot or Tempered Water Supply to Fixtures	607.2 The maximum distance between a hot water supply source and all fixtures served by the supply source has been reduced from 100 ft. to 50 ft.	
Hot Water Temperature Maintenance System Controls		607.2.1 Changes in the commercial portion of the IECC caused changes in the IECC controlled section of the IPC. This section requires temperature maintenance systems (for maintaining hot water temperature near plumbing fixtures) to be automatically turned off when there is not the demand for hot water. The code change also makes it clear that Section 607.2.1 and its subsections 6007.2.1.1 do not apply to Group R2, R3 and R4 occupancies that are 3 stories or less in height above grade plane, because those are covered by the residential portion of the IECC.



**2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code –
Transition from the 2009**

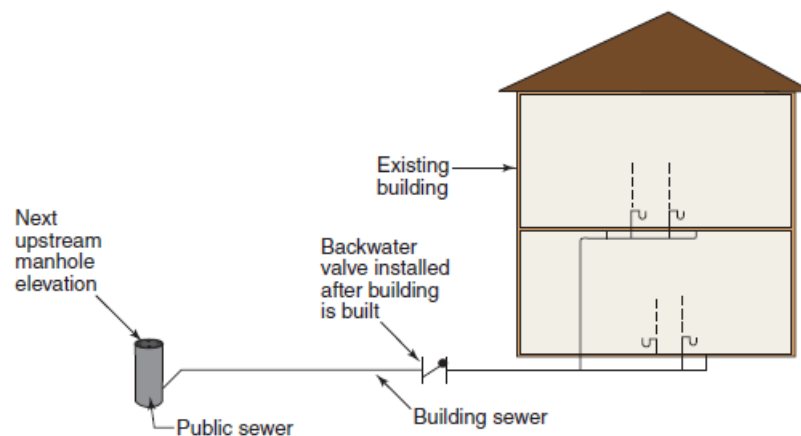
Topic	2012	2015
Hot Water Thermal Expansion Pressure Control		607.3 The available method to control closed-system pressure increases caused by the heating of water has been limited to the use of thermal expansion tanks only.
Hot Water Piping Insulation	607.5 The IECC requirement for insulating hot water piping in automatic temperature maintenance systems is now included in the IPC.	
Identification of Nonpotable Water	608.8 Wherever nonpotable water systems are installed, including outside of the building, the piping must be identified.	608.8, 608.8.1, 608.8.2 Fixtures such as water closets and urinals that utilize nonpotable water must be identified with the words and a symbol indicating that nonpotable water is being used. The color purple is established for identifying distribution piping conveying nonpotable water.



Topic	2012	2015
Temperature Rating of Drainage Piping		702.5 Wastewater having a temperature greater than higher than 40° F does not need to be cooled before it enters the drainage system if the drainage system piping is rated for the higher temperature.
Connection to Combined Sanitary and Storm Public Sewer		703.6 Building sanitary sewers and building storm sewers must be independent even when connecting to a combined sanitary/storm public sewer.
Horizontal Branch Connections	704.3, 711.2.1 Horizontal branches are now permitted to connect at any point in a stack above or below the horizontal offset. In addition, horizontal branches are now allowed to connect to the base of stacks at a point located not less than 10 times the diameter of the drainage stack downstream from the stack.	
Exception of Solvent Cementing PVC Piping 4 inches and Smaller		705.11.2 The application of a primer to drain, waste and vent PVC pipe and fitting prior to solvent cementing is not required for 4-inch pipe size and smaller.

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

Topic	2012	2015
Cleanouts for Drainage and Waste Systems		708 The section on cleanouts has been completely reorganized and reworded for clarity. Brass cleanout plugs are permitted for metallic piping only. Where located at the finished wall, cleanout must be within 1½ inches of the finished surface. A cleanout is no longer required at the base of each waste or soil stack.
Drainage Fixture Units for Bathroom Groups	Table 709.1 Where fixtures are provided in addition to those in a bathroom group, the footnote addressing additional drainage fixture unit values is now also applicable to those bathroom groups not located within dwelling units.	
Sump Pump and Ejector Discharge Pipe and Fittings	712.3.3 Materials acceptable for use in sump pump and ejector pipe and fitting materials are now specifically listed.	
Sump Pump Connection to the Drainage System	712.3.5 Where sump pumps connect to the drainage system, they are now allowed to connect to a building sewer, building drain, soil stack, waste stack, or horizontal branch drain.	
Fixture Protection from Sewage Backflow	715.1 In the determination of backwater valve protection from sewage backflow, the use of the finished floor elevation where the fixtures are installed rather than the flood level rim of the fixtures provides a new point of reference.	715.1 In existing buildings, fixtures above the elevation of the manhole cover of the next upstream manhole are now permitted to discharge through a backwater valve. Without this new exception, it is very difficult to retrofit with a backwater valve in accordance with the code in an existing building.

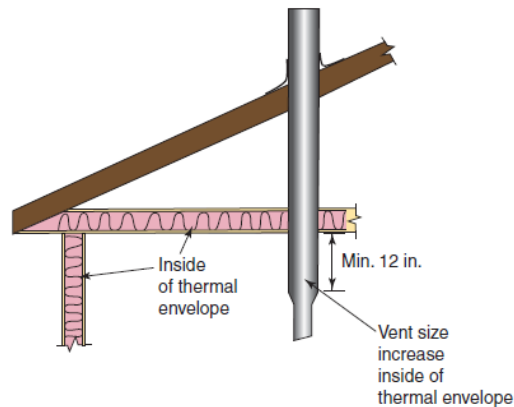


**2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code –
Transition from the 2009**

Topic	2012	2015
Vacuum Drainage Systems		716 Vacuum drainage system provisions (as opposed to gravity drainage system provisions) have been moved from the appendix into the body of the code.
Replacement of Sewers by Pipe-Bursting Method		717 Replacement of building sewers by the pipe-bursting method has been used for many decades and is useful especially where excavation of the existing sewer is difficult and costly because of parking lots and other items on the ground surface that would need to be removed and replaced.
Indirect Connection for Food-Handling Equipment	802.1.8 Sinks used for food preparation and consumption purposes are no longer permitted to connect directly to the drainage system.	802.1, 802.1.1, 802.1.8 The code has been clarified to indicate that Section 802.1 and its subsections do not apply to fixtures and equipment in dwelling units. The section was modified to indicate the types of food-handling equipment that section 802.1 through 802.1.8 covered.
Installation of Indirect Waste Piping	802.2 The threshold at which indirect waste piping is required to be trapped has been increased and an exception has been added to address clear waste water.	
Waste Receptors	802.3 The list of prohibited locations for waste receptors has been expanded to specifically include plenums, crawl spaces, attics and interstitial spaces above ceilings and below floors.	802.3 The code has clarified that standpipes are waste receptors. Some limitations for where waste receptors could not be located have been removed. Hub drains now require a strainer.
Air Admittance Valves for Chemical Waste Vent Systems	901.3, 918.8 Air admittance valves complying with reference standard ASSE 1049, "Performance Requirements for Individual and Branch-Type Air admittance Valves for Chemical Waste Systems," are now permitted to be used for venting chemical waste systems.	

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

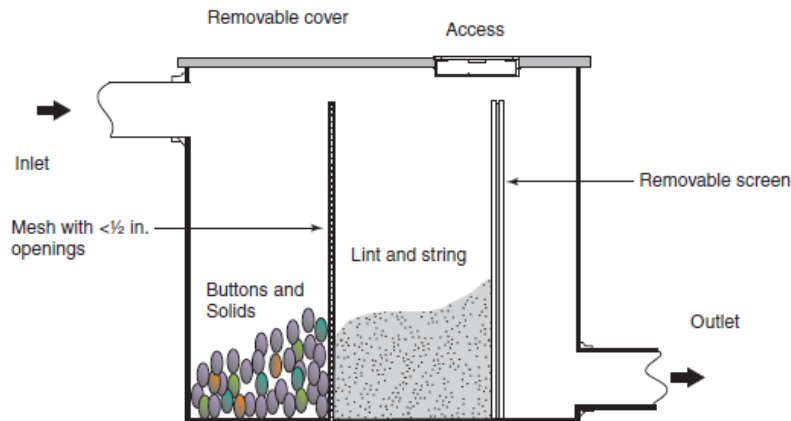
Topic	2012	2015
Vent Terminations to Outdoors		903.1, 903.2 This change clarifies vent terminations to outdoors where roofs are used for purposes other than weather protection and where very cold weather conditions occur. The vent size increase to protect against frost closure must occur at least 12 inches inside the thermal envelope.



Topic	2012	2015
Location of Vent Terminals	903.5 The prohibited locations for vent terminals related to building openings and air intakes have been revised to provide consistency with the IMC.	
Combination Waste and Vent System Sizing	915.2 The length of a combination waste and vent system is unlimited.	
Single-Stack Vent Systems	917 The single-stack vent system method, similar to the Philadelphia stack drainage system, has been added as an acceptable venting system.	
Floor Drain Traps in Parking Structures	1002.1 Floor drains in multi-level parking garages are no longer required to have individual traps, provided the drains are connected to the main trap before discharged to a combined sewer.	1002.1 Traps are not required for parking garage floor drains where the drains are connected to a storm sewer system.
Trap Seal Protection against Evaporation		1002.4, 1002.4.1 Trap seal protection against evaporation can now be accomplished in a variety of ways, including barrier-type trap seal protection devices.
Interceptors and Separators	1003.1 It has been clarified that required interceptors and separators are permitted to be located downstream of the building drain.	
Alternate Grease Interceptor Locations	1003.3.1 Grease interceptors are now permitted to be installed in series instead of requiring replacement of an existing grease interceptor that is too small.	

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

Topic	2012	2015
Hydro mechanical Grease Interceptors	1003.3.4 In regard to grease interceptors, the new term “hydro mechanical” provides a clear distinction from gravity interceptors to clarify the applicable requirements for each type of interceptor.	
Gravity Grease Interceptors		1003.3.6 A section and standard covering gravity grease interceptors have been added to the code.



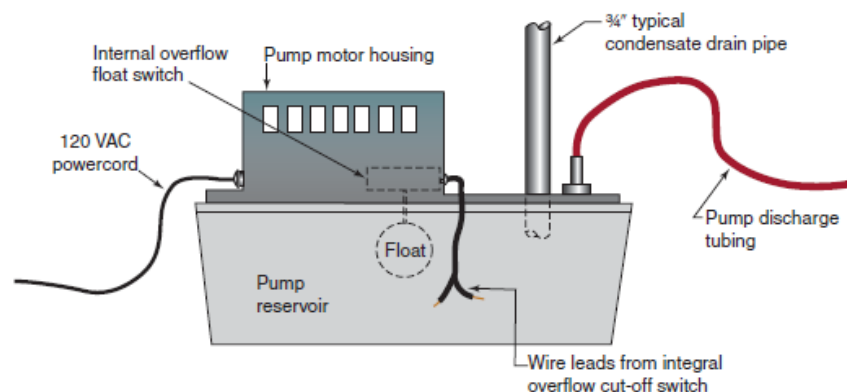
Topic	2012	2015
Direct Connection of Grease Interceptor Discharge		1003.3.7 Grease interceptor discharge piping must connect directly to the sanitary drainage system.
Oil Separator Required		1003.4 Section 1003.4 has been clarified to indicate where oil separators are required. An addition to the exception concerning alarm systems has been made.
Clothes Washer Discharge Interceptor		1003.6 The requirement for interceptors for clothes washer discharges has been clarified.
Venting of Interceptors and Separators		1003.9 Interceptors and separators must be vented.
Roof Drains	1105 Outdated code requirements have been replaced with new provisions that address installation and sizing of roof drains.	
Sizing of Roof Drains, Vertical and Horizontal Storm Drain Piping		1105.2, 1106.2 Testing of many different sizes and configurations of roof drains from a variety of manufacturers indicated that the roof drain assembly is the limiting factor in the design of storm drain systems. Storm drainage piping must now be sized based on the published roof drain flow rate and anticipated ponding at the roof drain.

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

Topic	2012	2015
Sizing of Gutters and Leaders		1106.3, 1106.6 The 2012 table 1106.2(2), which covered the vertical leader sizing requirements, has been replaced by the simplified table 1106.3. The 2012 Table 1106.6, which covered horizontal gutter sizing requirements, has been replaced by the simplified Table 1106.6. The sizing methods correspond with American Society of Plumbing Engineers' (ASPE) sizing tables.
Siphonic Roof Drainage Systems	1107 New requirements have been added to address the design of siphonic roof drainage systems by referencing the standard ASPE 45 for design of the system and ASME A112.6.9 for use of the roof drain.	
Nonpotable Water Systems	Chapter 13 The provisions addressing gray-water recycling systems have been relocated from appendix C to Chapter 13 in the body of the code.	Chapter 13 Chapter 13 has been expanded to include various types of systems for the collection, storage and distribution of nonpotable water. Examples include gray water, on-site reclaimed water, collected rainwater, captured condensate and rejected water from reverse osmosis systems.
Subsurface Landscape Irrigation Systems		Chapter 14 Provisions for subsurface landscape irrigation systems using gray water have been relocated from Chapter 13 to a new Chapter 14 and expanded to include connection to any nonpotable water from on-site water reuse systems.

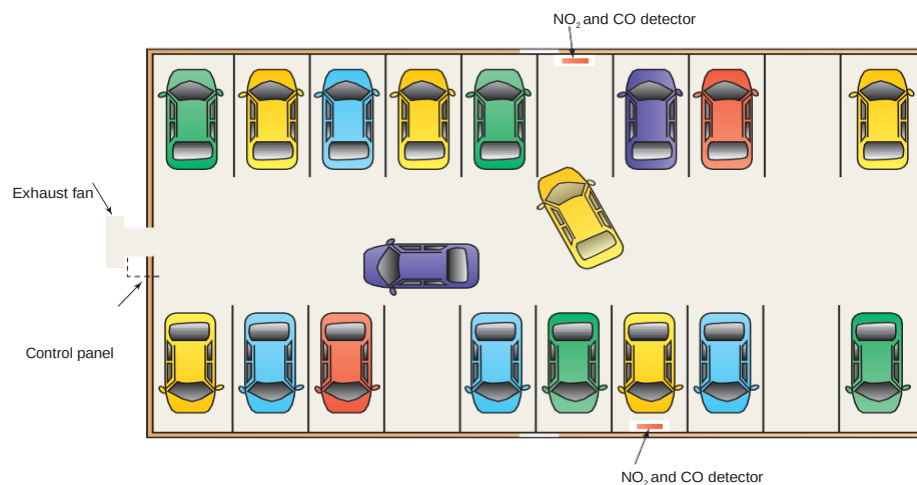
**2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code –
Transition from the 2009**

Topic	2012	2015
International Mechanical Code (IMC)		
Maintenance	102.3 ASHREA/ACCA/ANSI Standard 180 is now specified for inspection for maintenance of an HVAC system.	
Environmental Air	202 The definition of <i>environmental air</i> has been expanded through the addition of parking garage exhaust.	
Fall-Arresting Restraint Systems		304.11 The exception allows for fall-arresting restraint systems to be employed instead of guards on roofs.
Access		306.1 In addition to appliances, access is also required for controls devices, heat exchangers and HVAC system components for inspection, service, replacement and repair.
Equipment and Appliances on Roofs or Elevated Structures	306.5 Permanent access is required to equipment and appliances on a roof or elevated structure higher than 16 feet above grade.	
Condensate Drain Line Maintenance		307.2.5 The code requires that condensate drains be configured or equipped to allow maintenance of the drain without the drain pipe or tubing being cut.
Condensate Pumps in Uninhabitable Spaces		307.3 Condensate pumps located in uninhabitable spaces and used with condensing fuel-fired appliances and cooling equipment must be connected to the appliance or equipment served by the pump to prevent water damage in the event of pump failure.



2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

Topic	2012	2015
Labeled Assemblies	308.4.1 (308.5) Allowable clearance reductions must now be based on listed and labeled reduced-clearance protective assemblies in accordance with UL 1618.	
Ventilation Required		401.2, 407.1, Table 403.3.1.1 Occupancies including hospitals, nursing homes, detoxification facilities and ambulatory care facilities must be ventilated in accordance with a new standard, ASHRAE 170.
Intake Opening Location	401.4 Minimum clearance between an air intake opening and any public way is measured from the opening to the lot line, not the centerline of the public way.	
Recirculation of Air		403.2.1, Table 403.3.1.1 The revisions to Section 403.2.1 and notes b and g of Table 403.3.1.1 clarify that recirculation of air within a space is permitted.
Outdoor Air and Local Exhaust Airflow Rates		403.3 The new text introduces the basic requirements of ASHRAE 62.2 related to mechanical ventilation for Group R-2, R-3 and R-4 buildings three stories or less in height.
Minimum Ventilation Rates for Nail Salons (Manicure and Pedicure Stations)	Table 403.3.1.1 (Table 403.3) Nail stations in nail salons must now each be provided with a source capture system.	Table 403.3.1.1 The revised note h to Table 403.3.1.1 recognizes new Section 502.20 for the design of manicure and pedicure station exhaust systems and also specifies the applicability to both. Note h addresses the relationship between the source capture system exhaust-flow rate and the exhaust-flow rate specified within the table for nail salons.
Intermittent Operation of Mechanical Ventilation Systems for Enclosed Parking Garages	404.1 Mechanical ventilation systems in parking garages are now permitted to be operated automatically by carbon monoxide detectors in conjunction with nitrogen dioxide detectors.	404.1 For enclosed parking garages, the ventilation system must operate continuously or must be automatically controlled for intermittent operation utilizing both carbon monoxide and nitrogen dioxide detectors. The option to detect vehicle operation or occupant presence has been deleted.

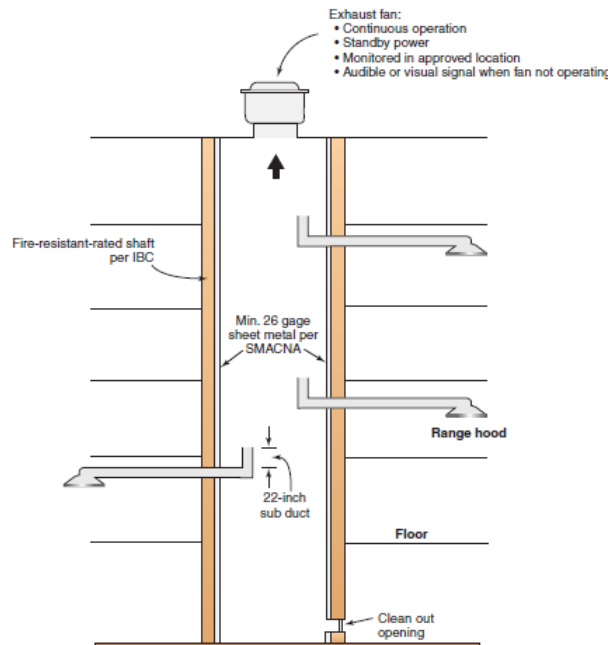


**2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code –
Transition from the 2009**

Topic	2012	2015
Mechanical Exhaust System Discharge		501.3 Mechanical exhaust cannot create a public nuisance. The adjective “public” was added to “nuisance” to make this requirement more enforceable. The new exception correlates with Section 505.1, exception 1.
Independent Exhaust Systems Required	501.2 Those locations where an independent exhaust system is required are now established in a single code provision.	
Manicure and Pedicure Station Exhaust System		502.20 New text specifically covers manicure and pedicure stations and states exhaust requirements in addition to those in Table 403.3.1.1. In previous editions of the code, pedicure stations were not specifically called out, as the text in Table 403.3.1.1 referred only to nail salons generically.
Dryer Exhaust Duct Power Ventilators		504.5, 504.8.4.3 New text recognizes the use of dryer exhaust duct power ventilators (DEDPVs) for installations that exceed the allowable exhaust duct length for clothes dryers.
Dryer Exhaust Duct Installation		504.8.2 Instead of prohibiting all duct fasteners such as screws and rivets, the code now limits the penetration of fasteners where installed to secure dryer duct joints.
Domestic Kitchen Exhaust Systems	505.1 Domestic kitchen exhaust ducts are now required to be independent of all other exhaust systems.	505.1, 505.4 The scope of domestic kitchen hoods coverage has been expanded to beyond dwellings units. Domestic hoods are mandated for other than Group R occupancies in new Section 505.4.

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

Topic	2012	2015
Domestic Kitchen Exhaust Systems in Multistory Buildings		505.3 New text regulates the design and construction of exhaust shafts that serve domestic kitchen exhaust systems in multistory buildings.



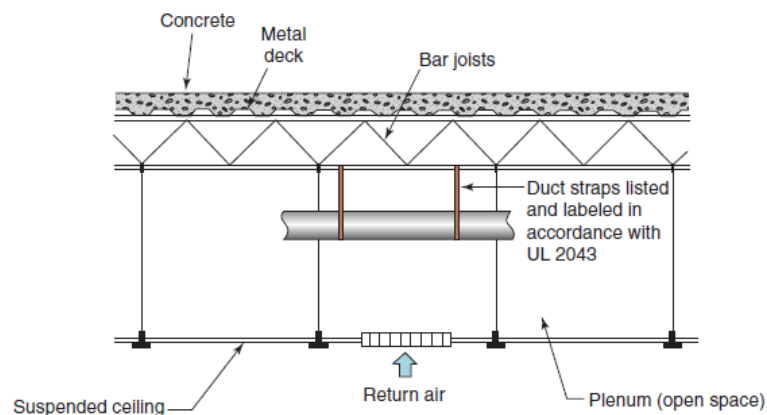
Topic	2012	2015
Grease Duct Reservoirs	506.3.7.1 Criteria are now provided for the construction of a grease reservoir in a grease duct system.	506.3.7.1 A grease duct reservoir must now be the full width of the duct in all cases, and the reservoir must be provided with a drain opening.
Grease Duct Cleanouts and Openings	506.3.8 For grease duct cleanouts, gasket and sealing materials on grease duct doors must be rated at a min. of 1500°F	506.3.8 The cleanout spacing provisions have been added to be consistent with Section 506.3.9 for horizontal ducts.
Grease Duct Horizontal Cleanouts	506.3.9 Criteria for cleanouts for horizontal grease ducts have been rearranged and several technical provisions have been added.	
Underground Grease Duct Installations	506.3.10 Underground grease ducts are now regulated based on new provisions.	
Grease Duct Enclosures		506.3.11 The code specifically prohibits the installation of fire and smoke dampers in grease ducts.
Field-Applied Grease Duct Enclosures	506.3.11.2 Field-applied grease duct enclosure systems are specifically prohibited from being used to reduce clearance from combustibles.	

**2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code –
Transition from the 2009**

Topic	2012	2015
In-Line Fan Location in Exhaust Ducts Serving Commercial Kitchen Hoods		506.5.1.2 New text addresses the enclosure requirements for in-line exhaust fans located in kitchen hood exhaust ducts, in effect treating them the same as ducts.
Hinged Up-Blast Fans for Type I Hoods		506.5.3 The code now requires that hinged exhaust fans be provided with a means to limit the travel of the fan assembly to prevent injury to personnel and damage to the building and fan.
Type I Hood Installation		507.1 A requirement has been added for Type I hood installations to comply with all aspects of a Type I exhaust system, whether the Type I hood is required by the code or installed by choice.
Commercial Kitchen Exhaust Hood System Operation		507.1.1 The requirement for automatic activation of the exhaust system has been revised to provide the intended performance requirements and to clarify that an interlock arrangement is an alternative to automatic hood operation.
Heat Sensors for Multiple Commercial Kitchen Hoods		507.1.1.1 New text prohibits the use of a single sensor mounted in the common ductwork for commercial kitchen hood systems having multiple hoods manifolded together.
Type I or Type II Hood Required	507.1 (507.2) Type I or Type II commercial kitchen hoods are not required for appliances with integral downdraft exhaust systems.	
Type I Hoods	507.2 (507.2.1) Type I hoods are no longer required for complying electric appliances.	
Operation of Type I Hoods	507.1.1 (507.2.1.1) The kitchen exhaust fan interlock is not permitted to shut off the pilot burners.	
Exhaust Flow Rate Label of Type I Hoods	507.2.2 (507.2.1.2) Type I commercial cooking hoods require a label with the minimum exhaust air flow rate based on the appliance classification.	
Type I Hood Grease Filters		507.2.8 The code now recognizes the use of disposable grease filters.
Type II Hoods	507.3 (507.2.2) Where the HVAC system or a separate exhaust system is used in lieu of a Type II hood, the code now specifies the exhaust rate.	
Air Balance for Commercial Kitchen Ventilation Systems		508.1.2 This new section requires that an air balance schedule be submitted with the design plans for commercial kitchen ventilation systems.
Hazardous Exhaust Systems		510.4, 510.5 The code clarifies that hazardous exhaust systems must always be independent of other systems. New Section 510.5 clarifies the conditions for laboratory exhaust systems with a common shaft.

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

Topic	2012	2015
Hazardous Exhaust Duct Penetrations of Shafts		510.7.1.1 The code adds a pointer to the <i>International Building Code</i> (IBC) provisions for hazardous exhaust duct penetrations of shafts.
Fire Suppression Required for Hazardous Exhaust Ducts	510.8 (510.7) Automatic fire suppression is no longer required in exhaust ducts in semiconductor fabricated facilities	
Energy Recovery Ventilation Systems		514.2 Energy recovery ventilation (ERV) systems of the coil-type heat exchanger (run-around coils) are no longer limited in their application.
Return Air Openings		601.5 The provisions for return air have been relocated from a section specific to forced-air/warm-air furnaces in Chapter 9 to a more generic section in Chapter 6. The provisions have been clarified and streamlined to capture the desired intent.
Contamination Prevention in Plenums	601.4 Chimneys and vents are now permitted to pass through a plenum where in compliance with one of three new allowances.	
Plenums Limited to One Fire Area		602.1 The revision clarifies that a plenum in a fire area cannot be connected to a plenum in an adjoining fire area by means of transfer ducts or openings, regardless of the presence of fire dampers.
Plenum Construction		602.2 Materials enclosing plenums must be noncombustible or must meet the 25/50 flame spread/smoke-developed limits.



**2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code –
Transition from the 2009**

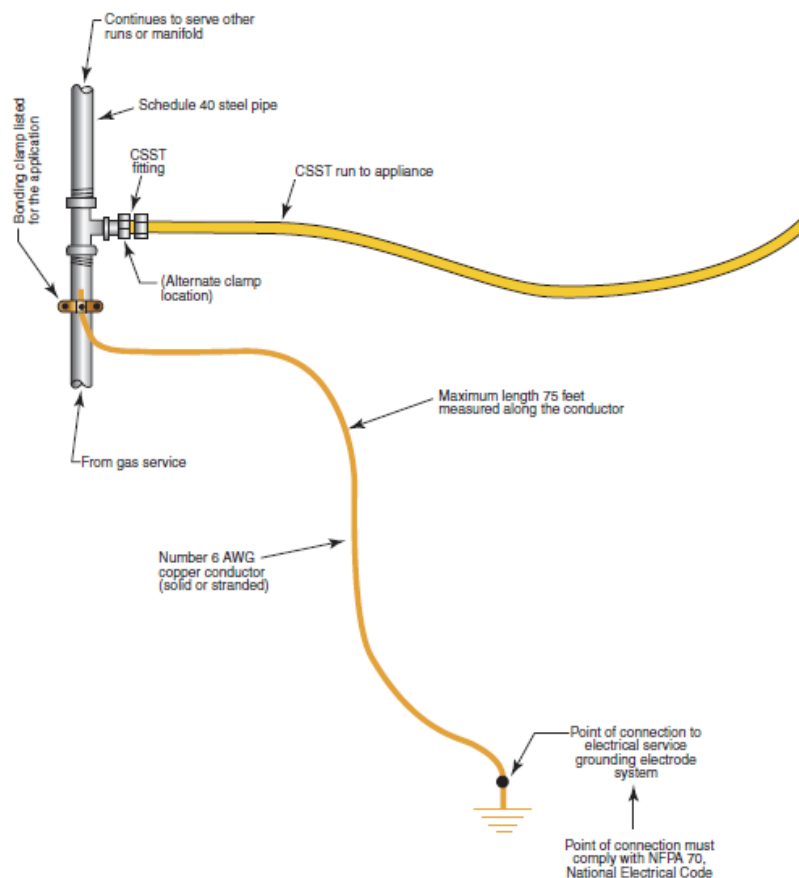
Topic	2012	2015
Materials within Plenums	602.2.1 Any material or assembly within a plenum must be noncombustible, gypsum board, or listed and labeled.	602.2.1.5 The code now addresses those products that in previous editions of the code did not fall under the category of piping, wiring, ductwork, tubing, insulation and other continuous large surface area materials installed in plenums. A definition has been added to describe what is meant by discrete products.
Duct Construction Minimum Sheet Metal Thickness for Single Dwelling Units		Table 603.4 The table for duct gages for dwelling units has been replaced with thicknesses consistent with the SMACNA sheet metal construction standard.
Rigid Duct Penetrations	603.7 Ducts that penetrate a wall or ceiling between the dwelling and adjacent private garage must be continuous and constructed of minimum 26 gage steel.	
Duct Joints, Seams and Connections	603.9 Unlisted duct tape is no longer permitted as a sealant on nonmetallic ducts	603.9 Duct sealant tapes used on sheet-metal ducts must be listed to UL 181 B as is required for sealing tapes and mastics for flexible ducts. Snap-lock and button-lock seams are no longer exempt from the sealing requirements.
Air Dispersion Systems	603.17, 202 Air dispersion systems listed and labeled to UL 2518 are now permitted.	
Dampened Openings		701.2 Where dampers are installed on combustion air openings, the code now requires an interlock with the appliance to prevent operation of the appliance when the damper is closed. Manual dampers are prohibited on combustion air openings.
Door Clearance to Vent Terminals		802.9 To prevent damage to the vent, door or surrounding materials, doors are not permitted to swing within 12 inches of an appliance vent terminal.
Factory-Built Chimney Offsets	805.3 The maximum offset in a factory-built chimney is 30 degrees from vertical and the number of elbows is limited to 4.	
Gasketed Fireplace Doors		903.4 Gasketed (sealed) doors are prohibited on factory- built fireplaces except where the fireplaces are listed for use with such doors.
Evaporative Cooling Equipment	928 Requirements for the installation of evaporative coolers have been added to the IMC in a new Section 928.	
Locking Access Port Caps	1101.10 Locking caps are no longer required on refrigerant access ports if the equipment is located in a secure location.	

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

Topic	2012	2015
Refrigerant Access Port Protection		1102.3 The requirement for making refrigerant access ports tamper resistant has been expanded to apply to existing systems when service to such systems involves adding or removing refrigerant.
Machinery Room Ventilation	1105.6, 1105.6.3 The min. ventilation rates in ammonia machinery rooms must now be in accordance with IIAR2.	
Flammable Refrigerants	1106.4 The ventilation requirements for ammonia machinery rooms are now mandatory in order to be exempt from the Class 1 Division 2 hazardous location requirements in NFPA 70.	

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

Topic	2012	2015
International Fuel Gas Code (IFGC)		
Combustion Air for Appliances with Power Burners		304.1 This change clarifies that the prescriptive combustion air provisions of Section 304 do not apply to appliances having power burners.
Condensate Pumps		307.6 Condensate pumps located in uninhabitable spaces and used with condensing fuel-fired appliances and cooling equipment must be connected to the appliance or equipment served by the pump to prevent water damage in the event of pump failure.
Clearance to Combustible Materials	308.1 Gypsum Board is considered a combustible material for purposes of determining required clearances and for determining reductions in clearances.	
Electrical Bonding of Corrugated Stainless Steel Tubing		310.1.1 For CSST systems, text has been added to address the allowable length of the bonding jumper wire and the methods of making the bonding connections.

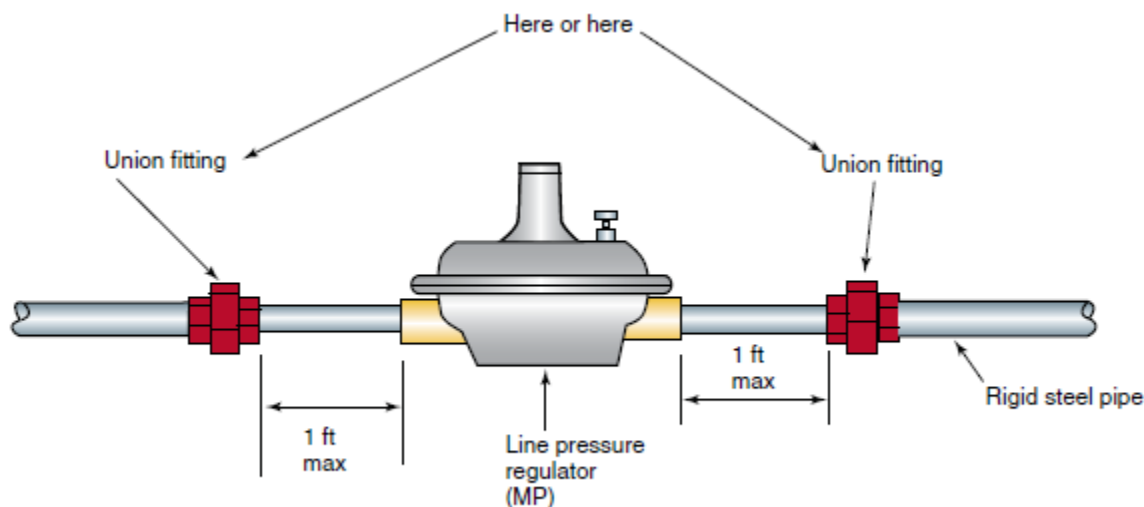


2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

Topic	2012	2015
Identification, Testing and Certification	401.9, 410.10, 404.1, 202 Each section of pipe and each fitting utilized in a fuel gas system requires the identification of the manufacturer.	
Maximum Gas Demand for Pipe Sizing		402.2 Table 402.2 for estimated gas input for typical appliances and the reference to the table have been deleted as a result of the code requiring the actual maximum input rating of the appliances to be known and used for sizing purposes.
Plastic Pipe, Tubing and Fittings		403.6 PVC and CPVC pipe are expressly prohibited materials for supplying fuel gas.
Drilled and Tapped Metallic Pipe Fittings		403.10.4 The code now expressly prohibits the practice of drilling and tapping pipe fittings in the field except where performed in accordance with five criteria that strictly limit such practice.
CSST Piping Systems	404.2 CSST piping systems must be installed in accordance with their listing and the manufacturer's instructions.	
Fittings in Concealed Locations		404.5 This section retains its basic intent, while being completely reorganized to clarify the correct application. Threaded elbows, tees and couplings are now specifically approved for concealed locations as the code always intended. The code now provides the applicable referenced standards for fittings that are listed for concealed locations.
Protection of Concealed Piping against Physical Damage		404.7 The section on protection of piping has been completely rewritten to address more than just bored holes and notches in structural members. It now addresses piping parallel to framing members and piping within framing members. The new text requires that the protection extend well beyond the edge of members that are bored or notched.
Prohibited Devices	404.19 (404.18) Excess flow valves and similar devices are now permitted to be placed in gas piping systems that have been sized to accommodate the pressure drop.	
Pipe cleaning		404.18 The code now specifically prohibits the practice of using fuel gas as a medium for flushing foreign matter and debris from fuel-supply piping.
Sediment Traps	408.4 An illustration of a sediment trap has been added to clarify the intent.	

**2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code –
Transition from the 2009**

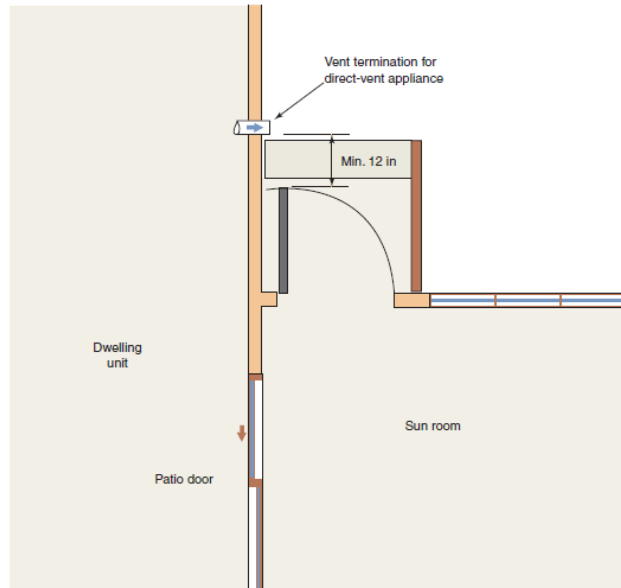
Topic	2012	2015
Medium-Pressure Regulators		410.2 Medium pressure line regulators installed in rigid piping must have a union installed to allow removal of the regulator.



Topic	2012	2015
Excess Flow Valves	410.4 An excess flow valve must be listed, sized and installed in accordance with the manufacturer's instructions.	
Flashback Arrestor Check Valve	410.5, 202 A combination flashback arrestor and backflow check valve is required on any fuel gas system used with oxygen in any hot work operation.	
Connecting Portable Outdoor Appliances		411.1 Where portable gas appliances are used outdoors, such as gas grills and patio heaters, the options for connecting to the gas distribution system are practically limited to gas hoses designed for the purpose. Such hoses must comply with ANSI Z21.54.
Connectors for Commercial Cooking Appliances		411.1.1 Specific installation requirements have been added for the safe installation of ANSI Z21.69 connectors for commercial cooking appliances. The options to connect the cooking appliance with semi-rigid tubing or rigid pipe have been removed.

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

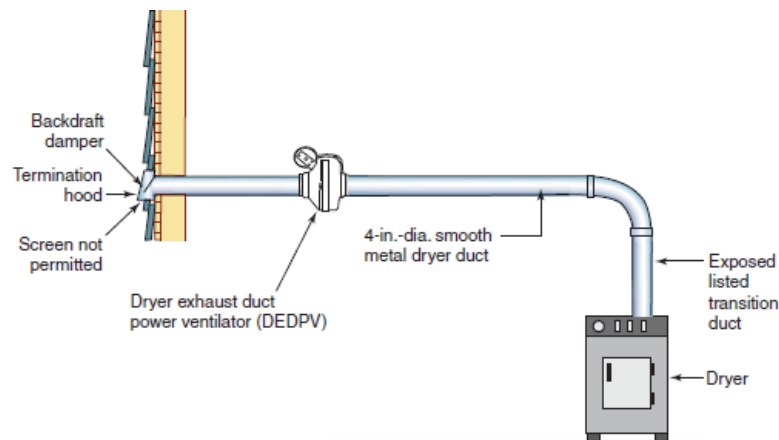
Topic	2012	2015
Door Clearance to Vent Terminals		502.7.1 A minimum 12 inches clearance is required between a vent terminal and the swing arc of a door to prevent impact and ensure proper vent operation.



Topic	2012	2015
Plastic Piping for Appliance Vents		503.4.1 The approval of plastic pipe for venting appliances is no longer a responsibility of the code official; instead, that responsibility rests with the appliance manufacturer and the appliance listing agency.
Sizing of Plastic Pipe Vents		503.6.9.3 Because plastic pipes such as PVC, ABS and CPVC plumbing pipes are not listed and labeled as appliance vents, (see the definition of "vent"), the code was silent on how to size such pipes. The sizing is covered in the appliance manufacturer's instructions, and the code requires compliance with such instructions. This section has been modified to address both listed vents and unlisted materials used as vents.

**2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code –
Transition from the 2009**

Topic	2012	2015
Venting System Termination Location		503.8 Text has been added to address the location of sidewall vent terminals with respect to adjoining buildings. The concern is that combustion gases will enter the adjacent building through openings in the exterior walls that face the appliance vent terminal. This section applies only to Category IV (condensing) appliances that are sidewall vented.
Dryer Exhaust Duct Power Ventilators		614.5 New text recognizes the use of dryer exhaust duct power ventilators (DEDPVs) for installations that exceed the allowable exhaust duct length for clothes dryers.



Topic	2012	2015
Prohibited Sources of Return Air	618.4 Return air may be taken from a garage provided with a dedicated forced-air system.	
Prohibited Location of Commercial Cooking Appliances		623.2 The code has been clarified so that it would not inadvertently prohibit the installation of cooking appliances that are listed as both commercial and domestic appliances.

***2015 International Plumbing Code, International Mechanical Code, International
Fuel Gas Code – Transition from the 2009***

Notes:

INTERNATIONAL FUEL GAS CODE

International Fuel Gas Code Adopted

The 2015 International Fuel Gas Code which is on file in the office of the Building Official is hereby adopted and designated as the Fuel Gas Code of the City of Lake Dallas, to the same extent as if such code was copied verbatim, subject to the deletions, amendments and additions prescribed by this ordinance.

Adoption of the NCTCOG Recommended Amendments to the 2015 International Fuel Gas Code

The 2015 International Fuel Gas Code is hereby amended as recommended by the North Central Texas Council of Governments ("NCTCOG"), which amendments are incorporated herein by reference and on file in the office of the Building Official of the City of Lake Dallas

Recommended Amendments to the 2015 International Fuel Gas Code

North Central Texas Council of Governments Region

The following sections, paragraphs, and sentences of the *2015 International Fuel Gas Code* are hereby amended as follows: Standard type is text from the IFGC. Underlined type is text inserted. ~~Lined through type is deleted text from IFGC.~~ A double asterisk (***) at the beginning of a section identifies an amendment carried over from the 2012 edition of the code and a triple asterisk identifies a new or revised amendment with the 2015 code. A quadruple asterisk (****) identifies a local ordinance.

****Section 101.2**

{Local amendments to Section 101.2 may be necessary to correspond with the State Plumbing Licensing Law.}

****Section 102.2; add an exception to read as follows:**

Exception: Existing dwelling units shall comply with Section 621.2.

(Reason: Previous code provisions made unvented heater provisions retroactive except as provided for in local amendment. This amendment and amendment to IFGC 621.2 better clarify what the code already states: existing systems may stay unless considered unsafe.)

****Section 102.8; change to read as follows:**

102.8 Referenced codes and standards. The codes and standards referenced in this code shall be those that are listed in Chapter 8 and such codes, when specifically adopted, and standards shall be considered part of the requirements of this code to the prescribed extent of each such reference. Where differences occur between provisions of this code and the referenced standards, the provisions of this code shall apply. Whenever amendments have been adopted to the referenced codes and standards, each reference to said code and standard shall be considered to reference the amendments as well. Any reference to NFPA 70 or the ICC Electrical Code shall mean the Electrical Code as adopted.

(Reason: Legal wording to recognize locally adopted codes and amendments adopted with referenced codes.)

****Section 306.3; change to read as follows:**

[M] 306.3 Appliances in attics. Attics containing appliances shall be provided . . . *{bulk of paragraph unchanged}* . . . side of the *appliance*. The clear access opening dimensions shall be a minimum of 20 inches by 30 inches (508 mm by 762 mm), and or larger where such dimensions are not large enough to North Central Texas Council of

allow removal of the largest *appliance*. A walkway to an appliance shall be rated as a floor as approved by the building official. As a minimum, for access to the attic space, provide one of the following:

1. A permanent stair.
2. A pull down stair with a minimum 300 lb (136 kg) capacity.
3. An access door from an upper floor level.
4. Access Panel may be used in lieu of items 1, 2, and 3 with prior approval of the code official due to building conditions.

Exceptions:

1. The passageway and level service space are not required where the *appliance* is capable of being serviced and removed through the required opening.
2. Where the passageway is not less than ... *{bulk of section to read the same}*.

(Reason: To provide a safe means of accessibility to appliances in attics and to allow for different types of construction limitations. Consistent with regional amendment to IMC 306.3.)

****Section 306.5; change to read as follows:**

[M] 306.5 Equipment and appliances on roofs or elevated structures. Where *equipment* requiring access or appliances are located on an elevated structure or the roof of a building such that personnel will have to climb higher than 16 feet (4877 mm) above grade to access, ~~an a permanent~~ interior or exterior means of access shall be provided. Permanent exterior ladders providing roof access need not extend closer than 8 12 feet (2438 mm) to the finish grade or floor level below and shall extend to the equipment and appliances' level service space. Such access shall . . . *{bulk of section to read the same}*. . . on roofs having a slope greater than 4 units vertical in 12 units horizontal (33-percent slope). ... *{bulk of section to read the same}*.

(Reason: To assure safe access to roof appliances. Consistent with IMC amendments.)

****Section 306.5.1; change to read as follows:**

[M] 306.5.1 Sloped roofs. Where appliances, *equipment*, fans or other components that require service are installed on a roof having a slope of 3 units vertical in 12 units horizontal (25-percent slope) or greater and having an edge more than 30 inches (762 mm) above grade at such edge, a catwalk at least 16 inches in width with substantial cleats spaced not more than 16 inches apart shall be provided from the roof access to a level platform at the appliance. The level platform shall be provided on each side of the appliance to which access is required for service, repair or maintenance. The platform shall be not less than 30 inches (762 mm) in any dimension and shall be provided with guards. The guards shall extend not less than 42 inches (1067 mm) above the platform, shall be constructed so as to prevent the passage of a 21-inch-diameter (533 mm) sphere and shall comply with the loading requirements for guards specified in the *International Building Code*.

(Reason: To assure safe access to roof appliances. Consistent with IMC amendments.)

****Section 306; add Section 306.7 with exception and subsection 306.7.1 to read as follows:**

306.7 Water heaters above ground or floor. When the attic, roof, mezzanine or platform in which a water heater is installed is more than eight (8) feet (2438 mm) above the ground or floor level, it shall be made accessible by a stairway or permanent ladder fastened to the building.

(Reason: To provide more stringent safe access to water heaters. Consistent with regional amendments to IPC 502.5 and IMC 306.6.)

****Section 401.5; add a second paragraph to read as follows:**

Both ends of each section of medium pressure gas piping shall identify its operating gas pressure with an *approved* tag. The tags are to be composed of aluminum or stainless steel and the following wording shall be stamped into the tag:

"WARNING
1/2 to 5 psi gas pressure
Do Not Remove"

(Reason: To protect homeowners and plumbers.)

****Section 402.3; add an exception to read as follows:**

Exception: Corrugated stainless steel tubing (CSST) shall be a minimum of 1/2" (18 EHD).

(Reason: Pipe less than 1/2" has a history in this region of causing whistling.)

****Section 404.12; change to read as follows:**

404.12 Minimum burial depth. Underground piping systems shall be installed a minimum depth of ~~12~~ 18 inches (~~305~~ 458 mm) top of pipe below grade, ~~except as provided for in Section 404.12.1.~~

(Reason: To provide increased protection to piping systems and address reference number change.)

****Section 406.1; change to read as follows:**

406.1 General. Prior to acceptance and initial operation, all piping installations shall be inspected and pressure tested to determine that the materials, design, fabrication, and installation practices comply with the requirements of this code. The permit holder shall make the applicable tests prescribed in Sections 406.1.1 through 406.1.5 to determine compliance with the provisions of this code. The permit holder shall give reasonable advance notice to the code official when the piping system is ready for testing. The equipment, material, power and labor necessary for the inspections and test shall be furnished by the permit holder and the permit holder shall be responsible for determining that the work will withstand the test pressure prescribed in the following tests.

(Reason: To utilize language used in the IPC regarding who is responsible for testing procedures.)

****Section 406.4; change to read as follows:**

406.4 Test pressure measurement. Test pressure shall be measured with a monometer or with a pressure-measuring device designed and calibrated to read, record, or indicate a pressure loss caused by leakage during the pressure test period. The source of pressure shall be isolated before the pressure tests are made. ~~Mechanical gauges used to measure test pressures shall have a range such that the highest end of the scale is not greater than five times the test pressure.~~

(Reason: To require the use of more accurate diaphragm gauges. Spring gauges do not provide accurate measurement below approximately 17 psig.)

****Section 406.4.1; change to read as follows:**

406.4.1 Test pressure. The test pressure to be used shall be no less than ~~1 1/2 times the proposed maximum working pressure, but no less than 3~~ 3 psig (20 kPa gauge), or at the discretion of the Code Official, the piping and valves may be tested at a pressure of at least six (6) inches (152 mm) of mercury, measured with a manometer or slope gauge, irrespective of design pressure. Where the test pressure exceeds 125 psig (862 kPa gauge), the test pressure shall not exceed a value that produces a hoop stress in the piping greater than 50 percent of the specified minimum yield strength of the pipe. For tests requiring a pressure of 3 psig, diaphragm gauges shall utilize a dial with a minimum diameter of three and one half inches (3 1/2"), a set hand, 1/10 pound incrementation and pressure range not to exceed 6 psi for tests requiring a pressure of 3 psig. For tests requiring a pressure of 10 psig, diaphragm gauges shall utilize a dial with a minimum diameter of three and one-half inches (3 1/2"), a set hand, a minimum of 2/10 pound incrementation and a pressure range not to exceed 20 psi. For welded piping, and for piping carrying gas at pressures in excess of fourteen (14) inches water column pressure (3.48 kPa) (1/2 psi) and less than 200 inches of water column pressure (52.2 kPa) (7.5 psi), the test pressure shall not be less than ten (10) pounds per square inch (69.6 kPa). For piping carrying gas at a pressure that exceeds 200 inches of water column (52.2 kPa) (7.5 psi), the test pressure shall be not less than one and one-half times the proposed maximum working pressure.

Diaphragm gauges used for testing must display a current calibration and be in good working condition. The appropriate test must be applied to the diaphragm gauge used for testing.

(Reason: To provide for lesser pressures to coordinate with the use of more accurate diaphragm gauges.)

****Section 406.4.2; change to read as follows:**

406.4.2 Test duration. Test duration shall be held for a length of time satisfactory to the Code Official, but in no case for less than fifteen (15) minutes. For welded piping, and for piping carrying gas at pressures in excess of fourteen (14) inches water column pressure (3.48 kPa), the test duration shall be held for a length of time satisfactory to the Code Official, but in no case for less than thirty (30) minutes. (Delete remainder of section.)

(Reason: To comply with accepted regional practices.)

****Section 409.1; add Section 409.1.4 to read as follows:**

409.1.4 Valves in CSST installations. Shutoff valves installed with corrugated stainless steel (CSST) piping systems shall be supported with an approved termination fitting, or equivalent support, suitable for the size of the valves, of adequate strength and quality, and located at intervals so as to prevent or damp out excessive vibration but in no case greater than 12-inches from the center of the valve. Supports shall be installed so as not to interfere with the free expansion and contraction of the system's piping, fittings, and valves between anchors. All valves and supports shall be designed and installed so they will not be disengaged by movement of the supporting piping.

(Reason: To provide proper security to CSST valves. These standards were established in this region in 1999 when CSST was an emerging technology.)

****Section 410.1; add a second paragraph and exception to read as follows:**

Access to regulators shall comply with the requirements for access to appliances as specified in Section 306.

Exception: A passageway or level service space is not required when the regulator is capable of being serviced and removed through the required attic opening.

(Reason: To require adequate access to regulators.)

****Section 621.2; add exception as follows:**

621.2 Prohibited use. One or more unvented room heaters shall not be used as the sole source of comfort heating in a dwelling unit.

Exception: Existing *approved* unvented heaters may continue to be used in dwelling units, in accordance with the code provisions in effect when installed, when *approved* by the Code Official unless an unsafe condition is determined to exist as described in Section 108.7.

(Reason: Gives code official discretion.)

END



CODE COUNCIL
TRAINING

~~2009~~
~~2012~~
2015

2015 Transition from the 2009: Plumbing, Mechanical, Fuel Gas

Based on the International Plumbing Code® (IPC®), the International Mechanical Code® (IMC®), and the International Fuel Gas Code® (IFGC®)



2015 Transition from the 2009: Plumbing, Mechanical, Fuel Gas

First Printing: March 2015

COPYRIGHT © 2015
by
International Code Council, Inc.

ALL RIGHTS RESERVED. The 2015 Transition from the 2009: Plumbing, Mechanical, Fuel Gas is a copyrighted work owned by the International Code Council, Inc. Without advance written permission from the copyright owner, no part of this book may be reproduced, distributed, or transmitted in any form or by any means, including, without limitation, electronic, optical or mechanical means (by way of example and not limitation, photocopying, or recording by or in an information storage retrieval system). For information on permission to copy material exceeding fair use, please contact: ICC Publications, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
Phone 1-888-ICC-SAFE (422-7233).

Trademarks: “International Code Council,” the “International Code Council” logo, the “IPC”, “IMC”, “IFGC” and the “International Plumbing Code, “International Mechanical Code”, “International Fuel Gas Code” are trademarks of the International Code Council, Inc.

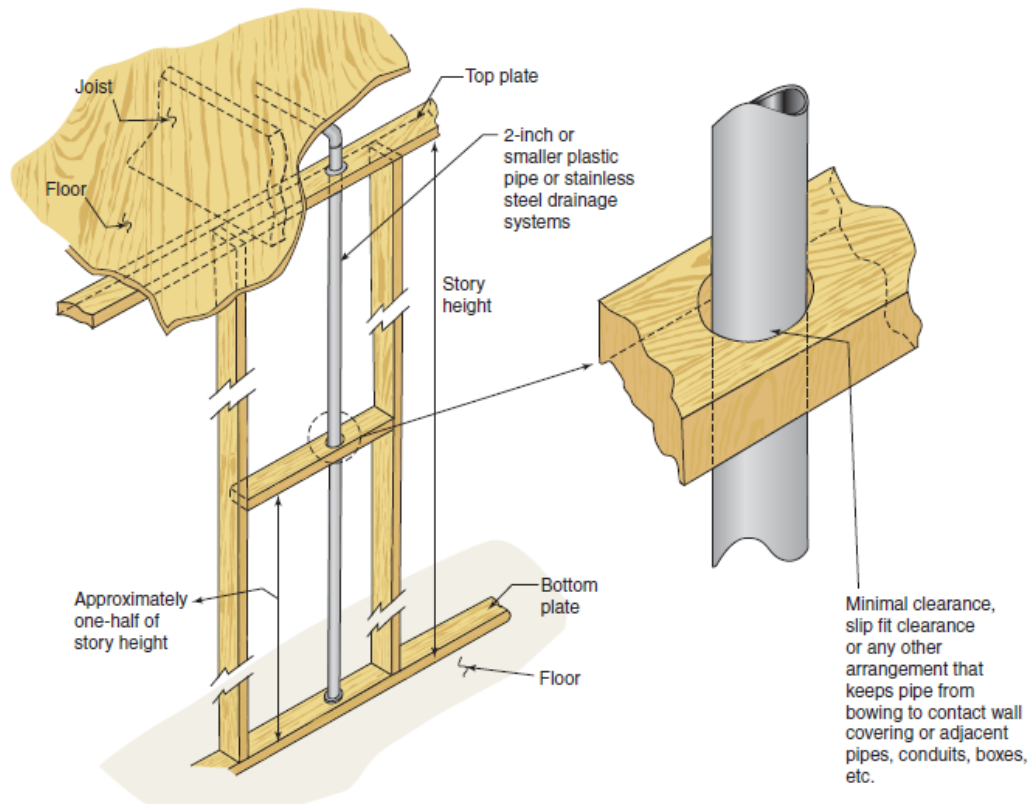
PRINTED IN THE U.S.A.

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

Topic	2012	2015
International Plumbing Code (IPC)		
Alternate Onsite Nonpotable Water Definition		202 This term has been added to support a revised Chapter 13 that covers various nonpotable waters to be collected, stored and distributed. Examples include gray water, on-site reclaimed water, collected rainwater, captured condensate and rejected water from reverse osmosis systems.
Backflow Preventer Definition		202 This definition has been made more specific about what constitutes a backflow preventer: a backflow prevention assembly, a backflow prevention device or other means or methods.
Drinking Fountain, Water Cooler and Water Dispenser Definitions; Substitution for Drinking Fountains		202, 410.4 Definitions for drinking fountain, water dispenser and water cooler clarify Section 410 on drinking fountain requirements. The water dispenser definition expands the group of devices and apparatus that can be used as substitution for 50% of the required number of drinking fountains.
Grease Interceptor Hydro mechanical Gravity Fats, Oils and Grease (FOG) Disposal Systems	202 The definition of a “grease interceptor” has been modified for consistency with current industry terms for the two general types of grease interceptors: “hydro mechanical” and “gravity”.	202 Another type of grease interceptor, the Fats, Oils and Grease (FOG) disposal system, has been added to support the revised text in Section 1003.3.4 covering grease interceptors.
Plumbing Appliance Definition	202 The definition of “plumbing appliance” has been changed to clarify the difference between appliance and fixtures.	
Plumbing Fixture Definition	202 The definition of “plumbing fixture” has been modified to include fixtures that are not connected to a water supply such as waterless urinals.	
Toilet Facility Definition		202 This definition has been added to clarify that a toilet facility is a room or space that contains not less than one water closet and one lavatory.
Waste Receptor Definition		202 This definition has been added to clarify that floor sinks, standpipes, hub drains and floor drains receiving indirect waste are considered waste receptors.
Material Identification and Third-Party Certification	303.1, 303.4 Plumbing products and materials must be listed by a third-party certification agency and bear required identification.	

**2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code –
Transition from the 2009**

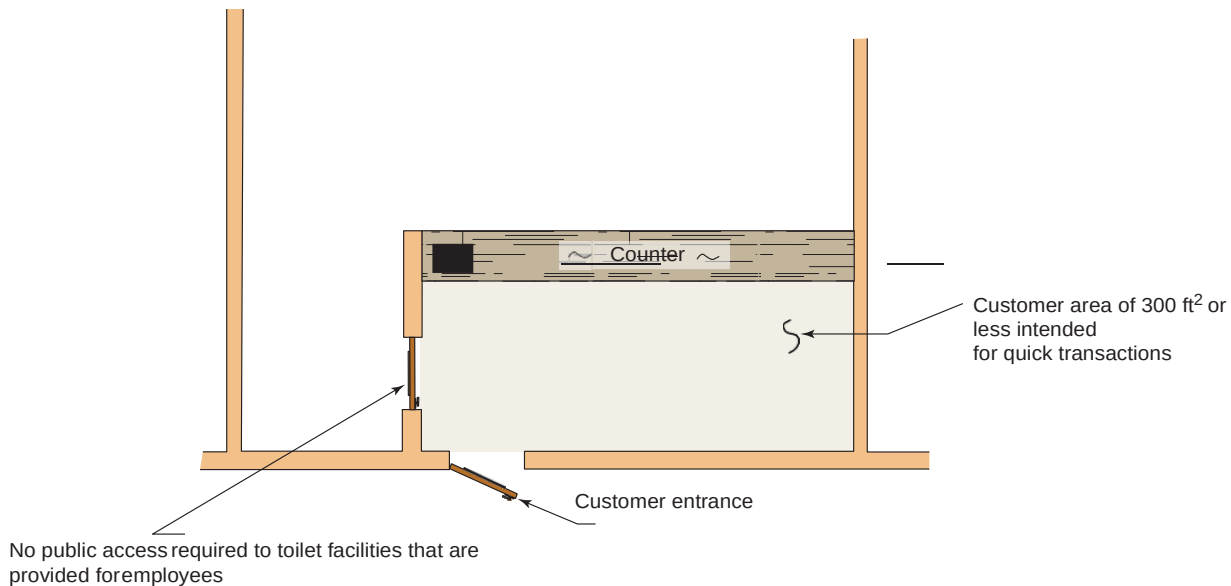
Topic	2012	2015
Mid-Story Pipe Guide		Table 308.5 Footnote 'b' of Table 308.5 clarifies the mid-story guide requirement for plastic pipe 2 inches and smaller. The guide must restrain the pipe perpendicular to its axis at the midpoint between required vertical supports.



Topic	2012	2015
Parallel Water Distribution Systems	308.9 In parallel water distribution systems, the hot and cold water piping may now be grouped in the same pipe bundle.	
Sealing of Annular Spaces at Penetrations	315.1 The provisions for sealing any annular spaces created at piping penetrations have been revised to be consistent with the building envelope sealing requirements of the IECC.	

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

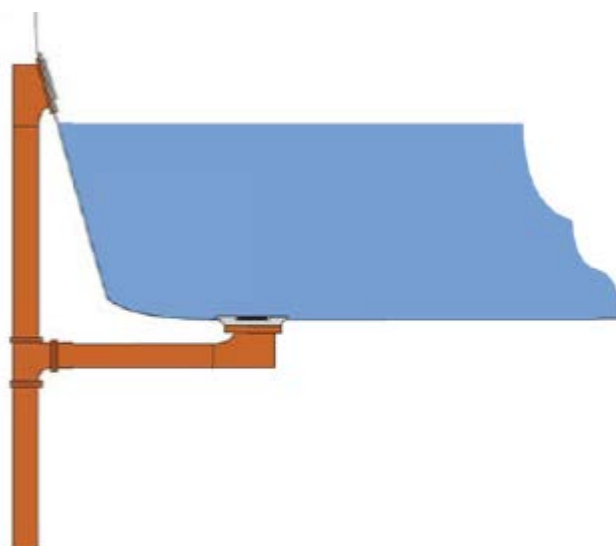
Topic	2012	2015
Minimum Number of Required Plumbing Fixtures	Table 403.1 Service sinks are no longer required in Group B and M occupancies where the occupant load does not exceed 15.	Table 403.1 The IBC occupancy classifications (A, B, M, etc) are no longer used to determine which row in Table 403.1 to use for fixture quantities. The actual use of the building or space determines which row in the table to use.



Topic	2012	2015
Separate Toilet Facilities in Group M Occupancies	403.2 The exemption from separate plumbing facilities for each sex in Group M mercantile occupancies now applies where the occupant load of the occupancy does not exceed 100.	
Family or Assisted-Use Toilet Facilities Serving as Separate Facilities	403.2.1 Where separate toilet facilities for each sex are required and only one water closet is mandated in each facility, two family or assisted-use toilet facilities are now permitted to satisfy the separate facilities. requirement	
Required Public Toilet Facilities Exception		403.3 Occupancies that have limited areas for public access, such as dry cleaners, takeout only restaurants and automated teller machine lobbies, do not require public toilet facilities where the public access area is limited to 300 ft² or less.
Relationship of Toilet Rooms and Food Preparation Areas	403.3.2 The IBC requirement prohibiting the opening of toilet rooms directly into food preparation areas is now also placed in the IPC.	
Locking of Toilet Room Doors	403.3.6 Locking devices are now specifically prohibited on the egress doors of toilet rooms designed for multiple occupants.	

**2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code –
Transition from the 2009**

Topic	2012	2015
Directional Signage for Location of Public Toilet Facilities		403.4.1 The provision for directional signs to public toilet facilities now requires that the signage be located at the main entrance to the building or tenant space.
Drinking Fountain Locations	403.5 The permitted locations of drinking fountains in multi-tenant facilities are now similar to the permitted locations for required public toilet facilities: travel distance of 300 feet for a mall and 500 feet for other buildings.	
Minimum Water Closet Compartment Size	405.3.1 The minimum depth of a water closet compartment containing a wall-hung water closet has been reduced from 60 inches to 56 inches.	
Floor and Wall Drainage Connections	405.4 The use of a waste connector and sealing gasket is now permitted as an acceptable means to connect floor outlet plumbing fixtures, allowing for water closet installations that are provided with a gasketed waste tube outlet connection.	
Backflow Protection for Clothes Washing and Dishwashing Machines		406.1, 409.2 This modification adds the standards designations with which air gaps must comply, so that the enforcement can be accomplished by the inspector identifying those standard numbers either on the machines or in the literature for the machines.
Bathtub Waste Outlets and Overflows	407.2 Bathtubs are now required to be equipped with an overflow and the required stopper must be watertight.	



Bathtub Overflow Cross Section

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

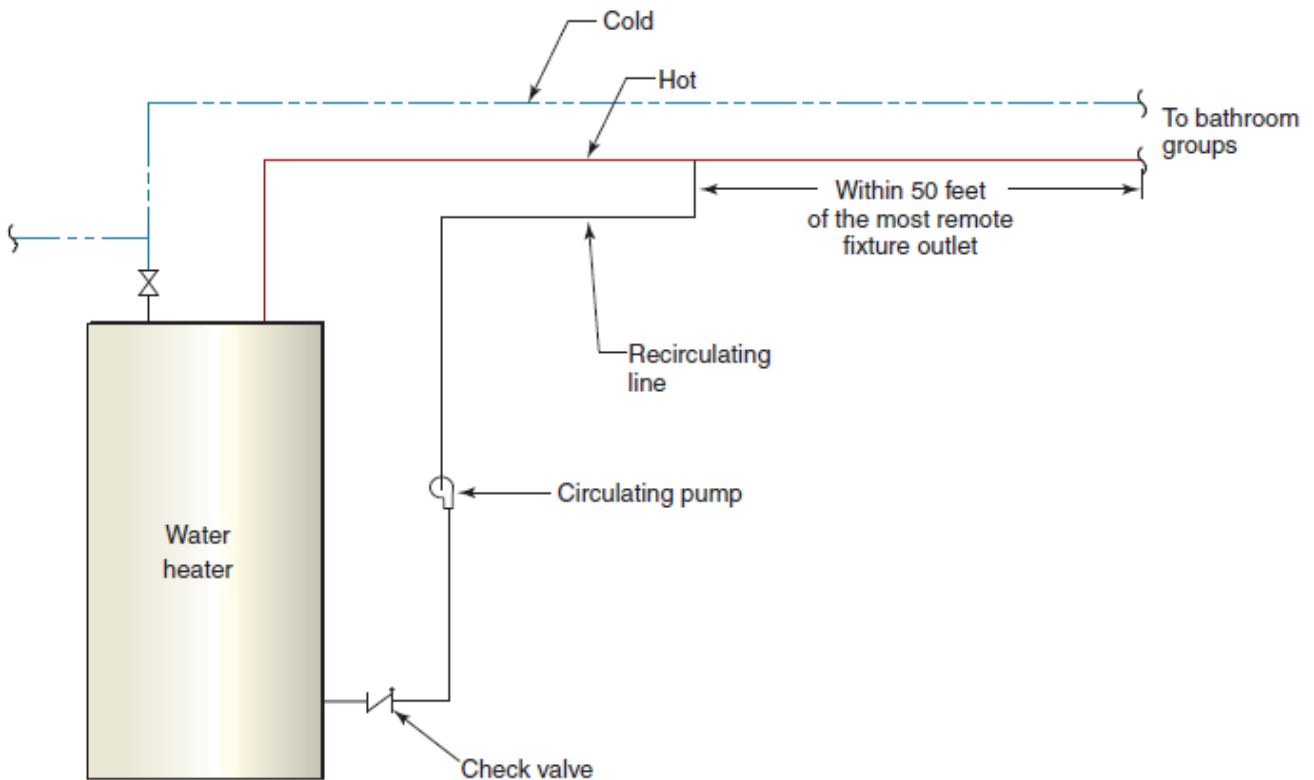
Topic	2012	2015
Minimum Required Drinking Fountains	410 The IBC provisions addressing the minimum required number of drinking fountains have been replicated in the IPC to provide clarity and consistency of application.	410.4 Definitions for drinking fountain, water dispenser and water cooler clarify Section 410 on drinking fountain requirements. The water dispenser definition expands the group of devices and apparatus that can be used as substitution for 50% of the required number of drinking fountains.
Food Waste Disposer Approval		413.1 Terminology for food waste grinders has been changed to a more industry-accepted term of food waste disposer. For electrical safety, domestic food waste disposers must be listed and labeled to a standard.
Walls and Floors in Bathtub and Shower Areas		417.4.1 Bathtub floors, shower floors and the walls above those areas need to be watertight and of the material that will be durable under wet conditions. This section has been modified to make the existing requirements more clear.
Shower Pan Liner Materials	417.5.2.6 Recognition of an acceptable shower pan liner system using liquid type, trowel-applied, load bearing, bonded waterproof material has been added to the current listing of acceptable shower floor liner methods.	
Water Closet Approval		420.1 Dual-flush water closets have become popular in recent years. The code now has a standard that covers those types of water closets.
Whirlpool Tub Approval		421.1 A standard for electrical safety for whirlpool tubs has been added to the code.
Footbaths, Pedicure Baths and Head Shampoo Sinks		423.3 Water-temperature-limiting devices are required for footbaths (integral or not integral to pedicure chairs) and head shampoo sinks.
Deck-Mounted Bath/Shower Transfer Valves		424.8 The standard to which deck-mounted bath/shower transfer valves must comply has changed.
Water Closet Personal Hygiene Devices	424.9 The recognition of performance standard AMSE A112.4.2 now ensures the protection of the public by setting temperature limits and minimum acceptable backflow protection requirements for water closet personal hygiene devices.	
Water Heater Drain Valves		501.3 The standard covering water heater drain valves has been discontinued by the standard promulgator. Minimum criteria for drain size and the hose connection have been added to the code for these valves.
Water Heater Storage Tank Relief Valves	504.4.1 Water heaters with separate storage tanks shall be provided with complying temperature and pressure protection.	

**2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code –
Transition from the 2009**

Topic	2012	2015
Temperature and Pressure Relief Discharge Piping		504.6 The temperature and pressure relief valve discharge pipe termination must have an air gap suitable to protect the potable water supply distribution system of the building.
Water Heater Pans	504.7 It has been clarified that drain pans are only required for storage-tank-type water heaters for hot water storage tanks.	504.7.2 In a replacement water heater installation situation, there might not be a nearby drain point for a required pan for the water heater. This code modification allows the pan to not have a drain line if one is not present.
Rehabilitation of Piping Systems by Internal Lining		601.5 An epoxy lining system standard has been added to the code for rehabilitation of existing piping systems.
Polyethylene of Raised- Temperature (PE-RT) Plastic Tubing	605 Polyethylene of raised-temperature (PE-RT) plastic hot and cold water tubing and distribution systems are now recognized by the IPC.	
Lead Content of Components Conveying Drinking Water		605.2.1 The code now has a more stringent limitation of 0.25% lead content in pipe, pipe fittings, joints, valves, faucets and fixture fittings that convey water used for drinking and cooking.
Polyethylene (PE) and PEX Water Service Pipe CPVC /AL / CPVC Water Service and Water Distribution Piping Asbestos Cement Pipe	Table 605.3 Reference standard AWWA C901, "Polyethylene (PE) Pressure Pipe and Tubing, 1/2 inch Through 3 in for Water Service," has been added to the list of standards in Table 605.3 regulating PE plastic water service pipe and tubing. Reference standard AWWA C904, "Cross-Linked Polyethylene (PEX) Pressure Pipe, ½ in. through 3 in. for Water Service," has been added to the list of standards in Table 605.3 regulating PEX water service piping.	Tables 605.3, 605.4, Section 605.16, Tables 702.2, 702.3, 702.4, 1102.4, 1102.5 A new type of CPVC pipe has been added. References to asbestos cement pipe and applicable referenced standards have been removed from the code.
Groove and Shouldered Mechanical Joints and Press-Connect Fittings		Table 605.5, Sections 605.14.3, 605.14.5, 605.18.3, 605.22.2, 605.23.3 Two standards for groove and shouldered mechanical drawings in a press-connect fitting standard have been added to the code.
Valve Compliance to Standards		Table 605.7, 605.7 All types of valves that supply drinking water must now comply with NSF 61. Standards for numerous types of valves have been added to the code.
Labeling of Water Distribution Pipes in Bundles	606.7 Water distribution piping installed in bundles must be labeled with content and direction of flow.	
Water-Temperature-Limiting Means	607.1.1 The water heater thermostat is prohibited from being used as a temperature-limiting device where the code requires a limit for hot or tempered water.	

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

Topic	2012	2015
Hot or Tempered Water Supply to Fixtures	607.2 The maximum distance between a hot water supply source and all fixtures served by the supply source has been reduced from 100 ft. to 50 ft.	
Hot Water Temperature Maintenance System Controls		607.2.1 Changes in the commercial portion of the IECC caused changes in the IECC controlled section of the IPC. This section requires temperature maintenance systems (for maintaining hot water temperature near plumbing fixtures) to be automatically turned off when there is not the demand for hot water. The code change also makes it clear that Section 607.2.1 and its subsections 6007.2.1.1 do not apply to Group R2, R3 and R4 occupancies that are 3 stories or less in height above grade plane, because those are covered by the residential portion of the IECC.



**2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code –
Transition from the 2009**

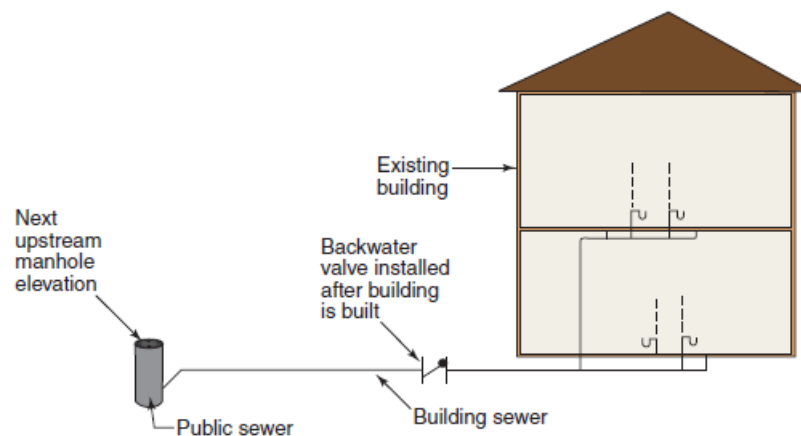
Topic	2012	2015
Hot Water Thermal Expansion Pressure Control		607.3 The available method to control closed-system pressure increases caused by the heating of water has been limited to the use of thermal expansion tanks only.
Hot Water Piping Insulation	607.5 The IECC requirement for insulating hot water piping in automatic temperature maintenance systems is now included in the IPC.	
Identification of Nonpotable Water	608.8 Wherever nonpotable water systems are installed, including outside of the building, the piping must be identified.	608.8, 608.8.1, 608.8.2 Fixtures such as water closets and urinals that utilize nonpotable water must be identified with the words and a symbol indicating that nonpotable water is being used. The color purple is established for identifying distribution piping conveying nonpotable water.



Topic	2012	2015
Temperature Rating of Drainage Piping		702.5 Wastewater having a temperature greater than higher than 40° F does not need to be cooled before it enters the drainage system if the drainage system piping is rated for the higher temperature.
Connection to Combined Sanitary and Storm Public Sewer		703.6 Building sanitary sewers and building storm sewers must be independent even when connecting to a combined sanitary/storm public sewer.
Horizontal Branch Connections	704.3, 711.2.1 Horizontal branches are now permitted to connect at any point in a stack above or below the horizontal offset. In addition, horizontal branches are now allowed to connect to the base of stacks at a point located not less than 10 times the diameter of the drainage stack downstream from the stack.	
Exception of Solvent Cementing PVC Piping 4 inches and Smaller		705.11.2 The application of a primer to drain, waste and vent PVC pipe and fitting prior to solvent cementing is not required for 4-inch pipe size and smaller.

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

Topic	2012	2015
Cleanouts for Drainage and Waste Systems		708 The section on cleanouts has been completely reorganized and reworded for clarity. Brass cleanout plugs are permitted for metallic piping only. Where located at the finished wall, cleanout must be within 1½ inches of the finished surface. A cleanout is no longer required at the base of each waste or soil stack.
Drainage Fixture Units for Bathroom Groups	Table 709.1 Where fixtures are provided in addition to those in a bathroom group, the footnote addressing additional drainage fixture unit values is now also applicable to those bathroom groups not located within dwelling units.	
Sump Pump and Ejector Discharge Pipe and Fittings	712.3.3 Materials acceptable for use in sump pump and ejector pipe and fitting materials are now specifically listed.	
Sump Pump Connection to the Drainage System	712.3.5 Where sump pumps connect to the drainage system, they are now allowed to connect to a building sewer, building drain, soil stack, waste stack, or horizontal branch drain.	
Fixture Protection from Sewage Backflow	715.1 In the determination of backwater valve protection from sewage backflow, the use of the finished floor elevation where the fixtures are installed rather than the flood level rim of the fixtures provides a new point of reference.	715.1 In existing buildings, fixtures above the elevation of the manhole cover of the next upstream manhole are now permitted to discharge through a backwater valve. Without this new exception, it is very difficult to retrofit with a backwater valve in accordance with the code in an existing building.

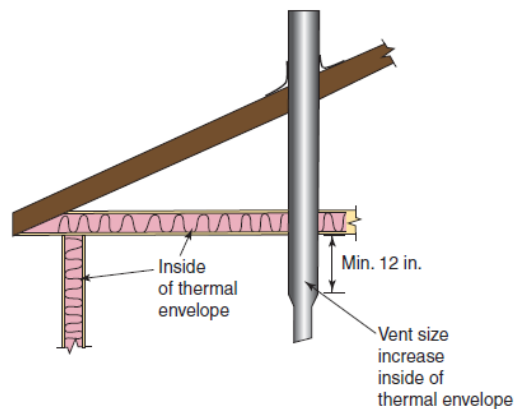


**2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code –
Transition from the 2009**

Topic	2012	2015
Vacuum Drainage Systems		716 Vacuum drainage system provisions (as opposed to gravity drainage system provisions) have been moved from the appendix into the body of the code.
Replacement of Sewers by Pipe-Bursting Method		717 Replacement of building sewers by the pipe-bursting method has been used for many decades and is useful especially where excavation of the existing sewer is difficult and costly because of parking lots and other items on the ground surface that would need to be removed and replaced.
Indirect Connection for Food-Handling Equipment	802.1.8 Sinks used for food preparation and consumption purposes are no longer permitted to connect directly to the drainage system.	802.1, 802.1.1, 802.1.8 The code has been clarified to indicate that Section 802.1 and its subsections do not apply to fixtures and equipment in dwelling units. The section was modified to indicate the types of food-handling equipment that section 802.1 through 802.1.8 covered.
Installation of Indirect Waste Piping	802.2 The threshold at which indirect waste piping is required to be trapped has been increased and an exception has been added to address clear waste water.	
Waste Receptors	802.3 The list of prohibited locations for waste receptors has been expanded to specifically include plenums, crawl spaces, attics and interstitial spaces above ceilings and below floors.	802.3 The code has clarified that standpipes are waste receptors. Some limitations for where waste receptors could not be located have been removed. Hub drains now require a strainer.
Air Admittance Valves for Chemical Waste Vent Systems	901.3, 918.8 Air admittance valves complying with reference standard ASSE 1049, "Performance Requirements for Individual and Branch-Type Air admittance Valves for Chemical Waste Systems," are now permitted to be used for venting chemical waste systems.	

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

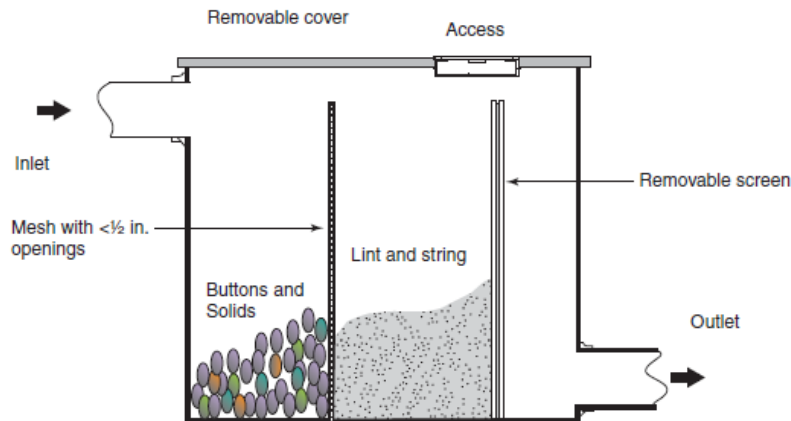
Topic	2012	2015
Vent Terminations to Outdoors		903.1, 903.2 This change clarifies vent terminations to outdoors where roofs are used for purposes other than weather protection and where very cold weather conditions occur. The vent size increase to protect against frost closure must occur at least 12 inches inside the thermal envelope.



Topic	2012	2015
Location of Vent Terminals	903.5 The prohibited locations for vent terminals related to building openings and air intakes have been revised to provide consistency with the IMC.	
Combination Waste and Vent System Sizing	915.2 The length of a combination waste and vent system is unlimited.	
Single-Stack Vent Systems	917 The single-stack vent system method, similar to the Philadelphia stack drainage system, has been added as an acceptable venting system.	
Floor Drain Traps in Parking Structures	1002.1 Floor drains in multi-level parking garages are no longer required to have individual traps, provided the drains are connected to the main trap before discharged to a combined sewer.	1002.1 Traps are not required for parking garage floor drains where the drains are connected to a storm sewer system.
Trap Seal Protection against Evaporation		1002.4, 1002.4.1 Trap seal protection against evaporation can now be accomplished in a variety of ways, including barrier-type trap seal protection devices.
Interceptors and Separators	1003.1 It has been clarified that required interceptors and separators are permitted to be located downstream of the building drain.	
Alternate Grease Interceptor Locations	1003.3.1 Grease interceptors are now permitted to be installed in series instead of requiring replacement of an existing grease interceptor that is too small.	

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

Topic	2012	2015
Hydromechanical Grease Interceptors	1003.3.4 In regard to grease interceptors, the new term “hydromechanical” provides a clear distinction from gravity interceptors to clarify the applicable requirements for each type of interceptor.	
Gravity Grease Interceptors		1003.3.6 A section and standard covering gravity grease interceptors have been added to the code.



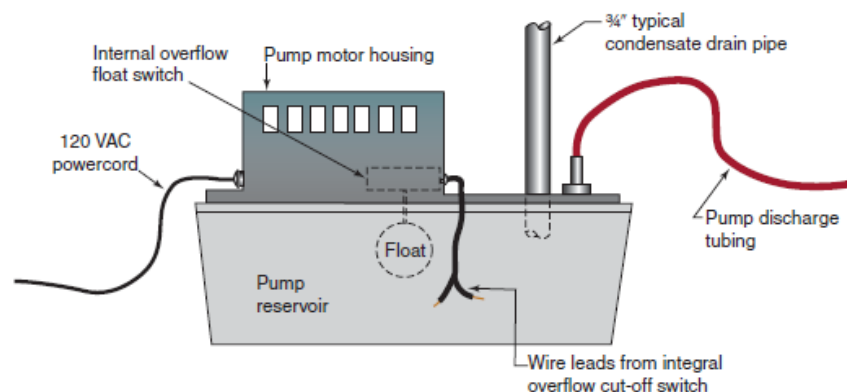
Topic	2012	2015
Direct Connection of Grease Interceptor Discharge		1003.3.7 Grease interceptor discharge piping must connect directly to the sanitary drainage system.
Oil Separator Required		1003.4 Section 1003.4 has been clarified to indicate where oil separators are required. An addition to the exception concerning alarm systems has been made.
Clothes Washer Discharge Interceptor		1003.6 The requirement for interceptors for clothes washer discharges has been clarified.
Venting of Interceptors and Separators		1003.9 Interceptors and separators must be vented.
Roof Drains	1105 Outdated code requirements have been replaced with new provisions that address installation and sizing of roof drains.	
Sizing of Roof Drains, Vertical and Horizontal Storm Drain Piping		1105.2, 1106.2 Testing of many different sizes and configurations of roof drains from a variety of manufacturers indicated that the roof drain assembly is the limiting factor in the design of storm drain systems. Storm drainage piping must now be sized based on the published roof drain flow rate and anticipated ponding at the roof drain.

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

Topic	2012	2015
Sizing of Gutters and Leaders		1106.3, 1106.6 The 2012 table 1106.2(2), which covered the vertical leader sizing requirements, has been replaced by the simplified table 1106.3. The 2012 Table 1106.6, which covered horizontal gutter sizing requirements, has been replaced by the simplified Table 1106.6. The sizing methods correspond with American Society of Plumbing Engineers' (ASPE) sizing tables.
Siphonic Roof Drainage Systems	1107 New requirements have been added to address the design of siphonic roof drainage systems by referencing the standard ASPE 45 for design of the system and ASME A112.6.9 for use of the roof drain.	
Nonpotable Water Systems	Chapter 13 The provisions addressing gray-water recycling systems have been relocated from appendix C to Chapter 13 in the body of the code.	Chapter 13 Chapter 13 has been expanded to include various types of systems for the collection, storage and distribution of nonpotable water. Examples include gray water, on-site reclaimed water, collected rainwater, captured condensate and rejected water from reverse osmosis systems.
Subsurface Landscape Irrigation Systems		Chapter 14 Provisions for subsurface landscape irrigation systems using gray water have been relocated from Chapter 13 to a new Chapter 14 and expanded to include connection to any nonpotable water from on-site water reuse systems.

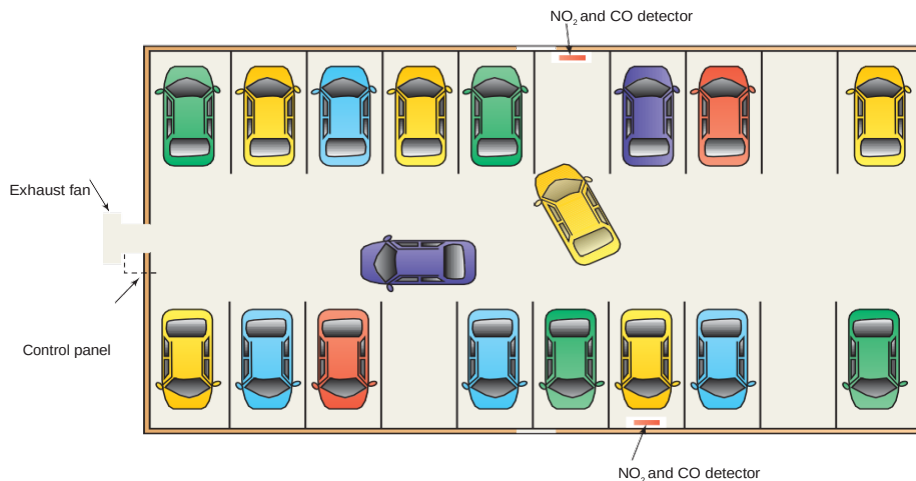
**2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code –
Transition from the 2009**

Topic	2012	2015
International Mechanical Code (IMC)		
Maintenance	102.3 ASHREA/ACCA/ANSI Standard 180 is now specified for inspection for maintenance of an HVAC system.	
Environmental Air	202 The definition of <i>environmental air</i> has been expanded through the addition of parking garage exhaust.	
Fall-Arresting Restraint Systems		304.11 The exception allows for fall-arresting restraint systems to be employed instead of guards on roofs.
Access		306.1 In addition to appliances, access is also required for controls devices, heat exchangers and HVAC system components for inspection, service, replacement and repair.
Equipment and Appliances on Roofs or Elevated Structures	306.5 Permanent access is required to equipment and appliances on a roof or elevated structure higher than 16 feet above grade.	
Condensate Drain Line Maintenance		307.2.5 The code requires that condensate drains be configured or equipped to allow maintenance of the drain without the drain pipe or tubing being cut.
Condensate Pumps in Uninhabitable Spaces		307.3 Condensate pumps located in uninhabitable spaces and used with condensing fuel-fired appliances and cooling equipment must be connected to the appliance or equipment served by the pump to prevent water damage in the event of pump failure.



2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

Topic	2012	2015
Labeled Assemblies	308.4.1 (308.5) Allowable clearance reductions must now be based on listed and labeled reduced-clearance protective assemblies in accordance with UL 1618.	
Ventilation Required		401.2, 407.1, Table 403.3.1.1 Occupancies including hospitals, nursing homes, detoxification facilities and ambulatory care facilities must be ventilated in accordance with a new standard, ASHRAE 170.
Intake Opening Location	401.4 Minimum clearance between an air intake opening and any public way is measured from the opening to the lot line, not the centerline of the public way.	
Recirculation of Air		403.2.1, Table 403.3.1.1 The revisions to Section 403.2.1 and notes b and g of Table 403.3.1.1 clarify that recirculation of air within a space is permitted.
Outdoor Air and Local Exhaust Airflow Rates		403.3 The new text introduces the basic requirements of ASHRAE 62.2 related to mechanical ventilation for Group R-2, R-3 and R-4 buildings three stories or less in height.
Minimum Ventilation Rates for Nail Salons (Manicure and Pedicure Stations)	Table 403.3.1.1 (Table 403.3) Nail stations in nail salons must now each be provided with a source capture system.	Table 403.3.1.1 The revised note h to Table 403.3.1.1 recognizes new Section 502.20 for the design of manicure and pedicure station exhaust systems and also specifies the applicability to both. Note h addresses the relationship between the source capture system exhaust-flow rate and the exhaust-flow rate specified within the table for nail salons.
Intermittent Operation of Mechanical Ventilation Systems for Enclosed Parking Garages	404.1 Mechanical ventilation systems in parking garages are now permitted to be operated automatically by carbon monoxide detectors in conjunction with nitrogen dioxide detectors.	404.1 For enclosed parking garages, the ventilation system must operate continuously or must be automatically controlled for intermittent operation utilizing both carbon monoxide and nitrogen dioxide detectors. The option to detect vehicle operation or occupant presence has been deleted.

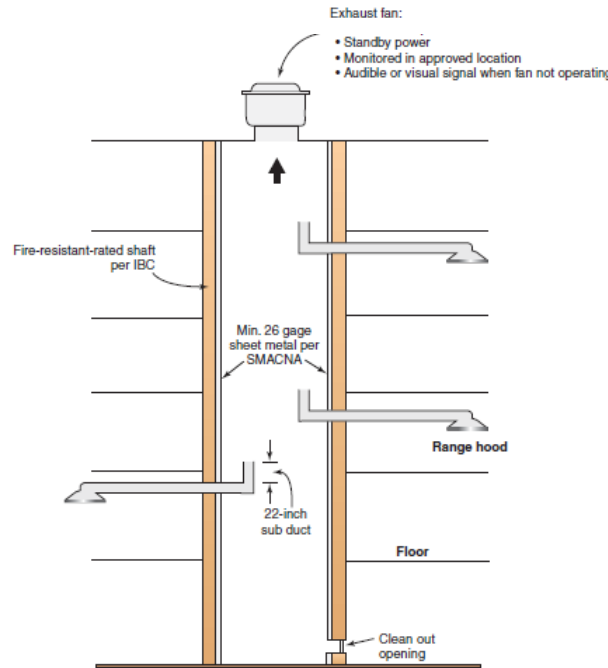


**2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code –
Transition from the 2009**

Topic	2012	2015
Mechanical Exhaust System Discharge		501.3 Mechanical exhaust cannot create a public nuisance. The adjective “public” was added to “nuisance” to make this requirement more enforceable. The new exception correlates with Section 505.1, exception 1.
Independent Exhaust Systems Required	501.2 Those locations where an independent exhaust system is required are now established in a single code provision.	
Manicure and Pedicure Station Exhaust System		502.20 New text specifically covers manicure and pedicure stations and states exhaust requirements in addition to those in Table 403.3.1.1. In previous editions of the code, pedicure stations were not specifically called out, as the text in Table 403.3.1.1 referred only to nail salons generically.
Dryer Exhaust Duct Power Ventilators		504.5, 504.8.4.3 New text recognizes the use of dryer exhaust duct power ventilators (DEDPVs) for installations that exceed the allowable exhaust duct length for clothes dryers.
Dryer Exhaust Duct Installation		504.8.2 Instead of prohibiting all duct fasteners such as screws and rivets, the code now limits the penetration of fasteners where installed to secure dryer duct joints.
Domestic Kitchen Exhaust Systems	505.1 Domestic kitchen exhaust ducts are now required to be independent of all other exhaust systems.	505.1, 505.4 The scope of domestic kitchen hoods coverage has been expanded to beyond dwellings units. Domestic hoods are mandated for other than Group R occupancies in new Section 505.4.

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

Topic	2012	2015
Domestic Kitchen Exhaust Systems in Multistory Buildings		505.3 New text regulates the design and construction of exhaust shafts that serve domestic kitchen exhaust systems in multistory buildings.



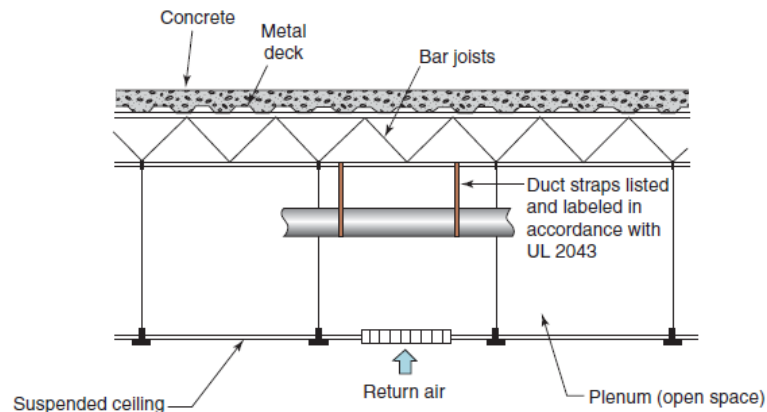
Topic	2012	2015
Grease Duct Reservoirs	506.3.7.1 Criteria are now provided for the construction of a grease reservoir in a grease duct system.	506.3.7.1 A grease duct reservoir must now be the full width of the duct in all cases, and the reservoir must be provided with a drain opening.
Grease Duct Cleanouts and Openings	506.3.8 For grease duct cleanouts, gasket and sealing materials on grease duct doors must be rated at a min. of 1500°F	506.3.8 The cleanout spacing provisions have been added to be consistent with Section 506.3.9 for horizontal ducts.
Grease Duct Horizontal Cleanouts	506.3.9 Criteria for cleanouts for horizontal grease ducts have been rearranged and several technical provisions have been added.	
Underground Grease Duct Installations	506.3.10 Underground grease ducts are now regulated based on new provisions.	
Grease Duct Enclosures		506.3.11 The code specifically prohibits the installation of fire and smoke dampers in grease ducts.
Field-Applied Grease Duct Enclosures	506.3.11.2 Field-applied grease duct enclosure systems are specifically prohibited from being used to reduce clearance from combustibles.	

**2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code –
Transition from the 2009**

Topic	2012	2015
In-Line Fan Location in Exhaust Ducts Serving Commercial Kitchen Hoods		506.5.1.2 New text addresses the enclosure requirements for in-line exhaust fans located in kitchen hood exhaust ducts, in effect treating them the same as ducts.
Hinged Up-Blast Fans for Type I Hoods		506.5.3 The code now requires that hinged exhaust fans be provided with a means to limit the travel of the fan assembly to prevent injury to personnel and damage to the building and fan.
Type I Hood Installation		507.1 A requirement has been added for Type I hood installations to comply with all aspects of a Type I exhaust system, whether the Type I hood is required by the code or installed by choice.
Commercial Kitchen Exhaust Hood System Operation		507.1.1 The requirement for automatic activation of the exhaust system has been revised to provide the intended performance requirements and to clarify that an interlock arrangement is an alternative to automatic hood operation.
Heat Sensors for Multiple Commercial Kitchen Hoods		507.1.1.1 New text prohibits the use of a single sensor mounted in the common ductwork for commercial kitchen hood systems having multiple hoods manifolded together.
Type I or Type II Hood Required	507.1 (507.2) Type I or Type II commercial kitchen hoods are not required for appliances with integral downdraft exhaust systems.	
Type I Hoods	507.2 (507.2.1) Type I hoods are no longer required for complying electric appliances.	
Operation of Type I Hoods	507.1.1 (507.2.1.1) The kitchen exhaust fan interlock is not permitted to shut off the pilot burners.	
Exhaust Flow Rate Label of Type I Hoods	507.2.2 (507.2.1.2) Type I commercial cooking hoods require a label with the minimum exhaust air flow rate based on the appliance classification.	
Type I Hood Grease Filters		507.2.8 The code now recognizes the use of disposable grease filters.
Type II Hoods	507.3 (507.2.2) Where the HVAC system or a separate exhaust system is used in lieu of a Type II hood, the code now specifies the exhaust rate.	
Air Balance for Commercial Kitchen Ventilation Systems		508.1.2 This new section requires that an air balance schedule be submitted with the design plans for commercial kitchen ventilation systems.
Hazardous Exhaust Systems		510.4, 510.5 The code clarifies that hazardous exhaust systems must always be independent of other systems. New Section 510.5 clarifies the conditions for laboratory exhaust systems with a common shaft.

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

Topic	2012	2015
Hazardous Exhaust Duct Penetrations of Shafts		510.7.1.1 The code adds a pointer to the <i>International Building Code</i> (IBC) provisions for hazardous exhaust duct penetrations of shafts.
Fire Suppression Required for Hazardous Exhaust Ducts	510.8 (510.7) Automatic fire suppression is no longer required in exhaust ducts in semiconductor fabricated facilities	
Energy Recovery Ventilation Systems		514.2 Energy recovery ventilation (ERV) systems of the coil-type heat exchanger (run-around coils) are no longer limited in their application.
Return Air Openings		601.5 The provisions for return air have been relocated from a section specific to forced-air/warm-air furnaces in Chapter 9 to a more generic section in Chapter 6. The provisions have been clarified and streamlined to capture the desired intent.
Contamination Prevention in Plenums	601.4 Chimneys and vents are now permitted to pass through a plenum where in compliance with one of three new allowances.	
Plenums Limited to One Fire Area		602.1 The revision clarifies that a plenum in a fire area cannot be connected to a plenum in an adjoining fire area by means of transfer ducts or openings, regardless of the presence of fire dampers.
Plenum Construction		602.2 Materials enclosing plenums must be noncombustible or must meet the 25/50 flame spread/smoke-developed limits.



**2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code –
Transition from the 2009**

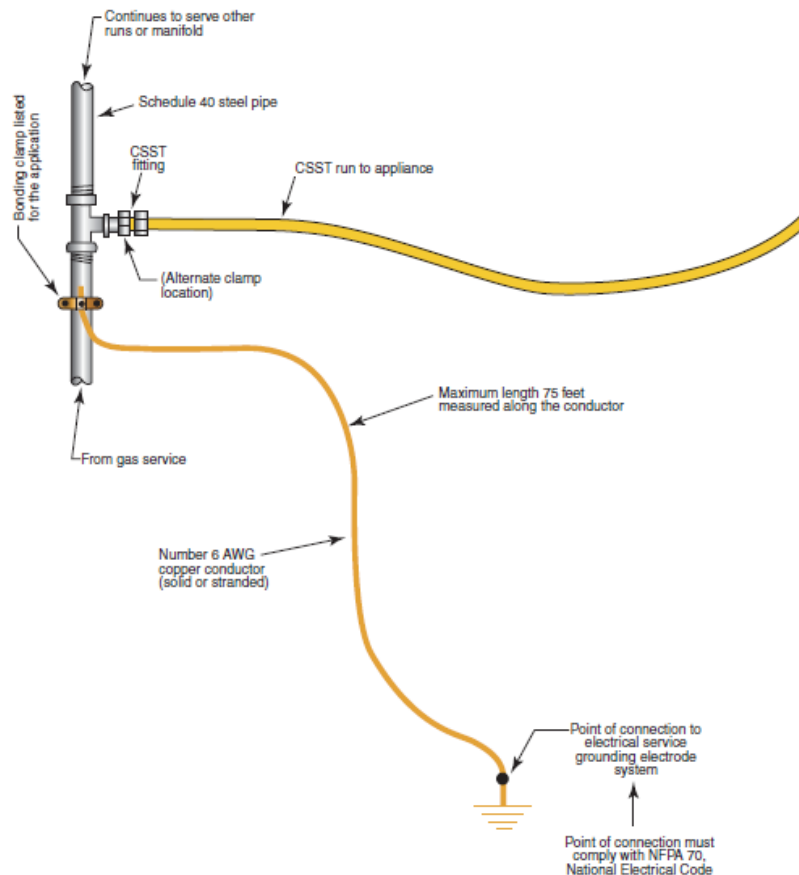
Topic	2012	2015
Materials within Plenums	602.2.1 Any material or assembly within a plenum must be noncombustible, gypsum board, or listed and labeled.	602.2.1.5 The code now addresses those products that in previous editions of the code did not fall under the category of piping, wiring, ductwork, tubing, insulation and other continuous large surface area materials installed in plenums. A definition has been added to describe what is meant by discrete products.
Duct Construction Minimum Sheet Metal Thickness for Single Dwelling Units		Table 603.4 The table for duct gages for dwelling units has been replaced with thicknesses consistent with the SMACNA sheet metal construction standard.
Rigid Duct Penetrations	603.7 Ducts that penetrate a wall or ceiling between the dwelling and adjacent private garage must be continuous and constructed of minimum 26 gage steel.	
Duct Joints, Seams and Connections	603.9 Unlisted duct tape is no longer permitted as a sealant on nonmetallic ducts	603.9 Duct sealant tapes used on sheet-metal ducts must be listed to UL 181 B as is required for sealing tapes and mastics for flexible ducts. Snap-lock and button-lock seams are no longer exempt from the sealing requirements.
Air Dispersion Systems	603.17, 202 Air dispersion systems listed and labeled to UL 2518 are now permitted.	
Dampened Openings		701.2 Where dampers are installed on combustion air openings, the code now requires an interlock with the appliance to prevent operation of the appliance when the damper is closed. Manual dampers are prohibited on combustion air openings.
Door Clearance to Vent Terminals		802.9 To prevent damage to the vent, door or surrounding materials, doors are not permitted to swing within 12 inches of an appliance vent terminal.
Factory-Built Chimney Offsets	805.3 The maximum offset in a factory-built chimney is 30 degrees from vertical and the number of elbows is limited to 4.	
Gasketed Fireplace Doors		903.4 Gasketed (sealed) doors are prohibited on factory- built fireplaces except where the fireplaces are listed for use with such doors.
Evaporative Cooling Equipment	928 Requirements for the installation of evaporative coolers have been added to the IMC in a new Section 928.	
Locking Access Port Caps	1101.10 Locking caps are no longer required on refrigerant access ports if the equipment is located in a secure location.	

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

Topic	2012	2015
Refrigerant Access Port Protection		1102.3 The requirement for making refrigerant access ports tamper resistant has been expanded to apply to existing systems when service to such systems involves adding or removing refrigerant.
Machinery Room Ventilation	1105.6, 1105.6.3 The min. ventilation rates in ammonia machinery rooms must now be in accordance with IIAR2.	
Flammable Refrigerants	1106.4 The ventilation requirements for ammonia machinery rooms are now mandatory in order to be exempt from the Class 1 Division 2 hazardous location requirements in NFPA 70.	

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

Topic	2012	2015
International Fuel Gas Code (IFGC)		
Combustion Air for Appliances with Power Burners		304.1 This change clarifies that the prescriptive combustion air provisions of Section 304 do not apply to appliances having power burners.
Condensate Pumps		307.6 Condensate pumps located in uninhabitable spaces and used with condensing fuel-fired appliances and cooling equipment must be connected to the appliance or equipment served by the pump to prevent water damage in the event of pump failure.
Clearance to Combustible Materials	308.1 Gypsum Board is considered a combustible material for purposes of determining required clearances and for determining reductions in clearances.	
Electrical Bonding of Corrugated Stainless Steel Tubing		310.1.1 For CSST systems, text has been added to address the allowable length of the bonding jumper wire and the methods of making the bonding connections.

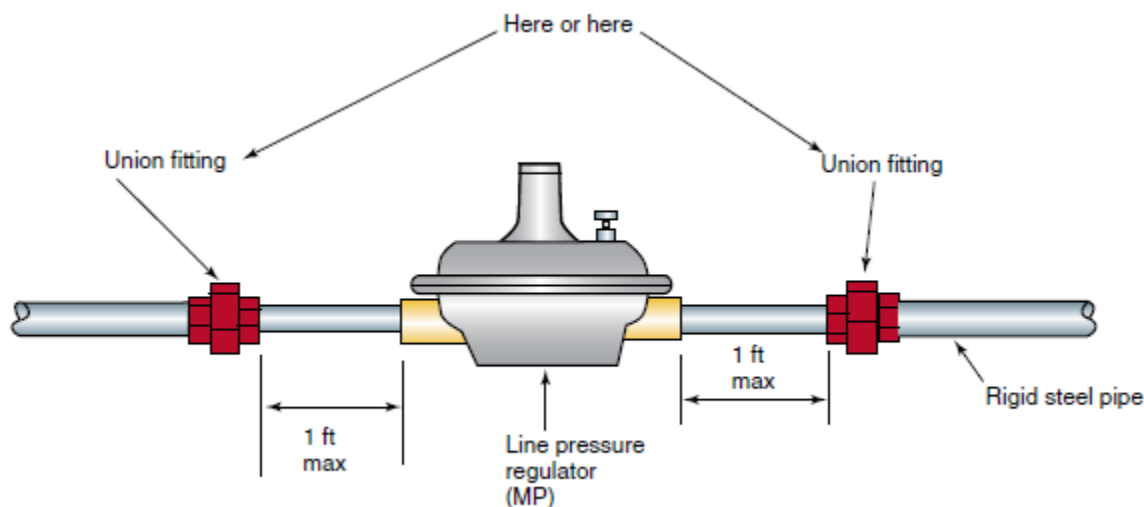


2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

Topic	2012	2015
Identification, Testing and Certification	401.9, 410.10, 404.1, 202 Each section of pipe and each fitting utilized in a fuel gas system requires the identification of the manufacturer.	
Maximum Gas Demand for Pipe Sizing		402.2 Table 402.2 for estimated gas input for typical appliances and the reference to the table have been deleted as a result of the code requiring the actual maximum input rating of the appliances to be known and used for sizing purposes.
Plastic Pipe, Tubing and Fittings		403.6 PVC and CPVC pipe are expressly prohibited materials for supplying fuel gas.
Drilled and Tapped Metallic Pipe Fittings		403.10.4 The code now expressly prohibits the practice of drilling and tapping pipe fittings in the field except where performed in accordance with five criteria that strictly limit such practice.
CSST Piping Systems	404.2 CSST piping systems must be installed in accordance with their listing and the manufacturer's instructions.	
Fittings in Concealed Locations		404.5 This section retains its basic intent, while being completely reorganized to clarify the correct application. Threaded elbows, tees and couplings are now specifically approved for concealed locations as the code always intended. The code now provides the applicable referenced standards for fittings that are listed for concealed locations.
Protection of Concealed Piping against Physical Damage		404.7 The section on protection of piping has been completely rewritten to address more than just bored holes and notches in structural members. It now addresses piping parallel to framing members and piping within framing members. The new text requires that the protection extend well beyond the edge of members that are bored or notched.
Prohibited Devices	404.19 (404.18) Excess flow valves and similar devices are now permitted to be placed in gas piping systems that have been sized to accommodate the pressure drop.	
Pipe cleaning		404.18 The code now specifically prohibits the practice of using fuel gas as a medium for flushing foreign matter and debris from fuel-supply piping.
Sediment Traps	408.4 An illustration of a sediment trap has been added to clarify the intent.	

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

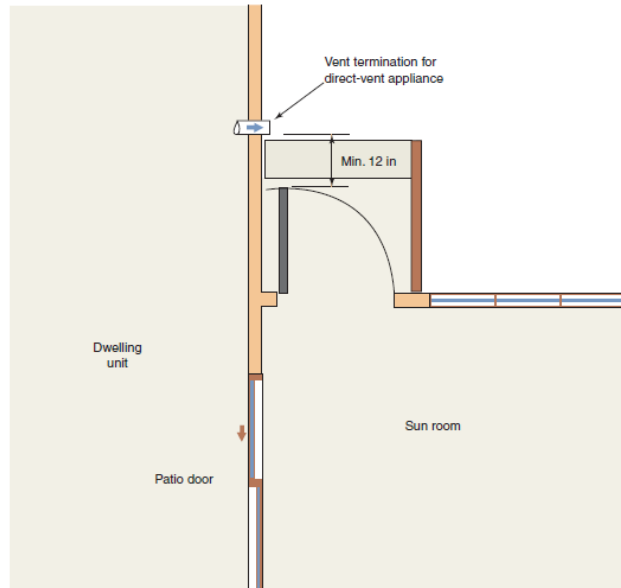
Topic	2012	2015
Medium-Pressure Regulators		410.2 Medium pressure line regulators installed in rigid piping must have a union installed to allow removal of the regulator.



Topic	2012	2015
Excess Flow Valves	410.4 An excess flow valve must be listed, sized and installed in accordance with the manufacturer's instructions.	
Flashback Arrestor Check Valve	410.5, 202 A combination flashback arrestor and backflow check valve is required on any fuel gas system used with oxygen in any hot work operation.	
Connecting Portable Outdoor Appliances		411.1 Where portable gas appliances are used outdoors, such as gas grills and patio heaters, the options for connecting to the gas distribution system are practically limited to gas hoses designed for the purpose. Such hoses must comply with ANSI Z21.54.
Connectors for Commercial Cooking Appliances		411.1.1 Specific installation requirements have been added for the safe installation of ANSI Z21.69 connectors for commercial cooking appliances. The options to connect the cooking appliance with semi-rigid tubing or rigid pipe have been removed.

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

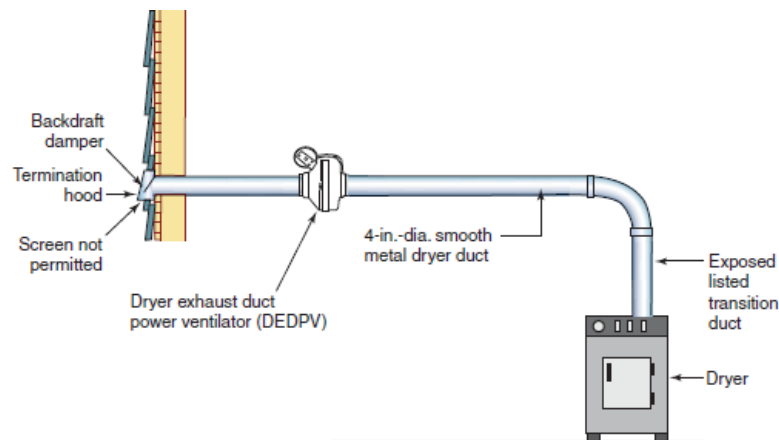
Topic	2012	2015
Door Clearance to Vent Terminals		502.7.1 A minimum 12 inches clearance is required between a vent terminal and the swing arc of a door to prevent impact and ensure proper vent operation.



Topic	2012	2015
Plastic Piping for Appliance Vents		503.4.1 The approval of plastic pipe for venting appliances is no longer a responsibility of the code official; instead, that responsibility rests with the appliance manufacturer and the appliance listing agency.
Sizing of Plastic Pipe Vents		503.6.9.3 Because plastic pipes such as PVC, ABS and CPVC plumbing pipes are not listed and labeled as appliance vents, (see the definition of "vent"), the code was silent on how to size such pipes. The sizing is covered in the appliance manufacturer's instructions, and the code requires compliance with such instructions. This section has been modified to address both listed vents and unlisted materials used as vents.

**2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code –
Transition from the 2009**

Topic	2012	2015
Venting System Termination Location		503.8 Text has been added to address the location of sidewall vent terminals with respect to adjoining buildings. The concern is that combustion gases will enter the adjacent building through openings in the exterior walls that face the appliance vent terminal. This section applies only to Category IV (condensing) appliances that are sidewall vented.
Dryer Exhaust Duct Power Ventilators		614.5 New text recognizes the use of dryer exhaust duct power ventilators (DEDPVs) for installations that exceed the allowable exhaust duct length for clothes dryers.



Topic	2012	2015
Prohibited Sources of Return Air	618.4 Return air may be taken from a garage provided with a dedicated forced-air system.	
Prohibited Location of Commercial Cooking Appliances		623.2 The code has been clarified so that it would not inadvertently prohibit the installation of cooking appliances that are listed as both commercial and domestic appliances.

2015 International Plumbing Code, International Mechanical Code, International Fuel Gas Code – Transition from the 2009

Notes:

NATIONAL ELECTRIC CODE

National Electric Code Adopted

The 2017 National Electric Code which is on file in the office of the Building Official is hereby adopted and designated as the Electric Code of the City of Lake Dallas, to the same extent as if such code was copied verbatim, subject to the deletions, amendments and additions prescribed by this ordinance.

Adoption of the NCTCOG Recommended Amendments to the 2017 National Electric Code

The 2017 National Electric Code is hereby amended as recommended by the North Central Texas Council of Governments ("NCTCOG"), which amendments are incorporated herein by reference and on file in the office of the Building Official of the City of Lake Dallas.

Recommended Amendments to the 2017 National Electrical Code

North Central Texas Council of Governments

The following articles, paragraphs, and sentences of the *2017 National Electrical Code (NEC)* are hereby amended as follows: Standard type is text from the NEC. Highlighted with gray shading is text inserted. Lined through type is deleted text from NEC. A double asterisk (**) at the beginning of an article identifies an amendment carried over from the 2014 edition of the code and a triple asterisk (***) identifies a new or revised amendment with the 2017 code.

****Article 100; add the following to definitions:**

Engineering Supervision. Supervision by a Qualified State of Texas Licensed Professional Engineer engaged primarily in the design or maintenance of electrical installations.

(REASON FOR CHANGE: To better define the qualifications for engineering supervision. This term is used twenty four times in the 2017 National Electrical Code.)

*****Article 100; remove the amendment to the following definition:**

Intersystem Bonding Termination. A device that provides a means for connecting intersystem bonding conductors for communication systems and other systems such as metallic gas piping systems to the grounding electrode system. ~~Bonding conductors for other systems shall not be larger than 6 AWG.~~

(REASON FOR CHANGE: Remove the above amendment. Updates to the 2017 National Electrical Code Article 250.94(A) only accommodate connecting communication systems to an intersystem bonding termination device, but Article 250.94(B) provides an alternative or other means. To allow for a termination point for other bonding conductors in addition to communication systems that are required by the various model codes. 6 AWG was chosen to coincide with the minimum size of bonding conductor required to the intersystem bonding jumper.)

****Article 110.2; change the following to read as follows:**

110.2 Approval. The conductors and equipment required or permitted by this Code shall be acceptable only if approved. Approval of equipment may be evident by listing and labeling of equipment by a Nationally Recognized Testing Lab (NRTL) with a certification mark of that laboratory or a qualified third party inspection agency approved by the AHJ.

Exception: Unlisted equipment that is relocated to another location within a jurisdiction or is field modified is subject to the approval by the AHJ. This approval may be by a field evaluation by a NRTL or qualified third party inspection agency approved by the AHJ.

~~Manufacturer's self-certification of any equipment shall not be used as a basis for approval by the AHJ.~~

Informational Note No. 1: See 90.7, Examination of Equipment for Safety, and 110.3, Examination, Identification, Installation, and Use of Equipment. See definitions of *Approved*, *Identified*, *Labeled*, and *Listed*.

Informational Note No. 2: Manufacturer's self-certification of equipment may not necessarily comply with U.S. product safety standards as certified by an NRTL.

Informational Note No. 3: National Fire Protection Association (NFPA) 790 and 791 provide an example of an approved method for qualifying a third party inspection agency.

(REASON FOR CHANGE: To add clarity and provide more positive options for enforcement and approval of unlisted equipment.)

*****Article 210.52(G) (1) Garages: remove the amendment that deleted the following:**

(1) Garages. In each attached garage and in each detached garage with electric power. The branch circuit supplying this receptacle(s) shall not supply outlets outside of the garage. At least one receptacle outlet shall be installed for each car space.

~~*(REASON FOR CHANGE: Installations in compliance with this Code are not necessarily efficient, convenient, or adequate for good service or future expansion of electrical use.)*~~

(REASON FOR CHANGE: Updates to this section in the 2017 National Electrical Code provided relief by removing "shall not supply outlets outside of the garage.")

*****Article 230.71(A); remove the amendment that added the following exception:**

~~Exception: Multi-occupant buildings. Individual service disconnecting means is limited to six for each occupant. The number of individual disconnects at one location may exceed six.~~

~~(REASON FOR CHANGE: This is currently the accepted installation practice of the region. No noteworthy complaints have surfaced. It is more reasonable than the current NEC requirements. It allows more than six disconnects grouped at one location. This also allows designers more flexibility in the placement of electrical meters and main service disconnects.)~~

(REASON FOR CHANGE: This is below the minimum standard of the 2017 National Electrical Code adopted by the State of Texas.)

*****Article 300.11; remove the amendment that added the following exception:**

~~Exception: Ceiling grid support wires may be used for structural supports when the associated wiring is located in that area, not more than two raceways or cables supported per wire, with a maximum nominal metric designation 16 (trade size 1/2").~~

~~(REASON FOR CHANGE: To provide limited support of raceways and cables by ceiling grid support wire.)~~

(REASON FOR CHANGE: This is below the minimum standard of the 2017 National Electrical Code adopted by the State of Texas.)

*****Article 310.15(B) (7); remove the amendment that changed the following to read as follows:**

~~(7) This Article shall not be used in conjunction with 220.82.~~

~~(REASON FOR CHANGE: 310.15(B) (7) has been revised and the table has been deleted.)~~

(REASON FOR CHANGE: Upon review of the 2014 and 2017 code-making panel 6 and in conjunction with the wire manufacturing industry, based on the diversification of loads in modern construction, this amendment becomes irrelevant.)

****Article 500.8 (A) (3); change to read as follows:**

500.8 Equipment.

Articles 500 through 504 require equipment construction and installation that ensure safe performance under conditions of proper use and maintenance.

Informational Note No. 1: It is important that inspection authorities and users exercise more than ordinary care with regard to installation and maintenance.

Informational Note No. 2: Since there is no consistent relationship between explosion properties and ignition temperature, the two are independent requirements.

Informational Note No. 3: Low ambient conditions require special consideration. Explosion proof or dust-ignition proof equipment may not be suitable for use at temperatures lower than -25°C (-13°F) unless they are identified for low-temperature service. However, at low ambient temperatures, flammable concentrations of vapors may not exist in a location classified as Class I, Division 1 at normal ambient temperature.

(A) Suitability. Suitability of identified equipment shall be determined by one of the following:

- (1) Equipment listing or labeling;
- (2) Evidence of equipment evaluation from a qualified testing laboratory or inspection agency concerned with product evaluation; or,
- (3) Evidence acceptable to the authority having jurisdiction such as a manufacturer's self-evaluation or ~~an owner's engineering judgment.~~ **an engineering judgment signed and sealed by a qualified Registered licensed Professional Engineer in the State of Texas.**

Informational Note: Additional documentation for equipment may include certificates demonstrating compliance with applicable equipment standards, indicating special conditions of use, and other pertinent information.

(REASON FOR CHANGE: Carry over from previous amendment with change to better define the qualifications for an engineering judgment.)

****Article 505.7 (A) changed to read as follows:**

505.7 Special Precaution.

Article 505 requires equipment construction and installation that ensures safe performance under conditions of proper use and maintenance.

Informational Note No. 1: It is important that inspection authorities and users exercise more than ordinary care with regard to the installation and maintenance of electrical equipment in hazardous (classified) locations.

Informational Note No. 2: Low ambient conditions require special consideration. Electrical equipment depending on the protection techniques described by 505.8(A) may not be suitable for use at temperatures lower than -20°C (-4°F) unless they are identified for use at lower temperatures. However, at low ambient temperatures, flammable concentrations of vapors may not exist in a location classified Class I, Zones 0, 1, or 2 at normal ambient temperature.

(A) Implementation of Zone Classification System. Classification of areas, engineering and design, selection of equipment and wiring methods, installation, and inspection shall be performed by a qualified persons Registered licensed Professional Engineer in the State of Texas.

(REASON FOR CHANGE: Carry over from previous amendment with change to better define the qualifications for an engineering judgment.)

*****Article 517.30 Essential Electrical Systems for Hospitals; remove the amendment that created a new (H) and added the following language:**

(G) Coordination. Overcurrent protective devices serving the equipment branch of the essential electrical system shall be coordinated for the period of time that a fault's duration extends beyond 0.1 second.

Exception No. 1: Between transformer primary and secondary overcurrent protective devices, where only one overcurrent protective device or set of overcurrent protective devices exists on the transformer secondary.

Exception No. 2: Between overcurrent protective devices of the same size (ampere rating) in series.

Informational Note: The terms coordination and coordinated as used in this section do not cover the full range of overcurrent conditions.

~~**(H) Selective Coordination.** Overcurrent protective devices serving the life safety, and critical branches of the essential electrical system shall be selectively coordinated with all supply-side overcurrent protective devices.~~

~~Exception No. 1: Between transformer primary and secondary overcurrent protective devices, where only one overcurrent protective device or set of overcurrent protective devices exists on the transformer secondary.~~

~~Exception No. 2: Between overcurrent protective devices of the same size (ampere rating) in series.~~

~~Informational Note: The terms coordination and coordinated as used in this section do not cover the full range of overcurrent conditions.~~

~~*(REASON FOR CHANGE: Changes made by deleting the definition of emergency systems in Article 517 Health Care Facilities and removing emergency systems as "Essential Electrical Systems for Hospitals in 517.30(B) (2), plus the new addition of section 517.30(G) for "Coordination" instead of using selective coordination, has diminished the reliability of the "Life Safety and Critical Branches of the Essential Electrical System" to deliver power to vital loads. By providing only "coordination," the instantaneous portion of the time-current curve has been eliminated from the overcurrent device settings.)*~~

(REASON FOR CHANGE: Due to no action by the 2017 code-making panel 15 and NFPA 99, this amendment is not applicable.)

*****Article 600.6(A) (1) At Point of Entry to a Sign; Exception 1 changed to read as follows:**

Exception No.1: A disconnect shall not be required for branch circuits(s) or feeder conductor(s) passing through the sign where enclosed in a Chapter 3 listed raceway or metal-jacketed cable identified for the location. The conductor(s) shall not serve the sign body or sign enclosure where passing through.

*****Article 600.6(A) (1) At Point of Entry to a Sign; create a new Exception No. 2 to add the following language:**

Exception No. 2. A disconnect shall not be required at the point of entry to a sign body, sign enclosure, or pole for branch circuit conductor(s). The conductors shall be enclosed in a Chapter 3 listed raceway or metal-jacketed cable identified for the location. The conductor(s) shall be routed to a device box which contains the disconnect. A field-applied permanent warning label that is visible during servicing shall be applied to the raceway at or near the point of entry into the sign enclosure or sign body. The warning label shall comply with 110.21(B) and state the following: "Danger. This raceway contains energized conductors." The marking shall include the location of the disconnecting means for the energized conductor(s). The disconnecting means shall be capable of being locked in the open position in accordance with 110.25.

*****Article 600.6(A) (1) At Point of Entry to a Sign; move the original Exception 2 to create a new Exception No. 3 and add the following language:**

Exception No. 3: A disconnect shall not be required at the point of entry to a sign enclosure or sign body for branch circuit(s) or feeder conductor(s) that supply an internal panelboard(s) in a sign enclosure or sign body. The conductors shall be enclosed in a Chapter 3 listed raceway or metal-jacketed cable identified for the location. A field-applied permanent warning label that is visible during servicing shall be applied to the raceway at or near the point of entry into the sign enclosure or sign body. The warning label shall comply with 110.21(B) and state the following: "Danger. This raceway contains energized conductors." The marking shall include the location of the disconnecting means for the energized conductor(s). The disconnecting means shall be capable of being locked in the open position in accordance with 110.25.

(2017 Code) Informational Note: The location of the disconnect is intended to allow service or maintenance personnel complete and local control of the disconnecting means.

(REASON FOR CHANGE: This is a modification of the nationwide sign manufacturing practice that was standard before the 2014 Code revision. It is more reasonable but not less than the current Code requirements. It provides local control of the disconnect by service personnel as the informational note suggests, while requiring a sign disconnect to be at or within sight of the sign. This also allows sign designers more flexibility in the placement of the disconnecting means in relation to the location of the sign.)

*****Article 680.25(A) remove the amendment that added the following language and exception:**

680.25 Feeders.

These provisions shall apply to any feeder on the supply side of panelboards supplying branch circuits for pool equipment covered in Part II of this article and on the load side of the service equipment or the source of a separately derived system.

(A) Wiring Methods.

(1) Feeders. Feeders shall be installed in rigid metal conduit, intermediate metal conduit. The following wiring methods shall be permitted if not subject to physical damage:

- (1) Liquidtight flexible nonmetallic conduit
- (2) Rigid polyvinyl chloride conduit
- (3) Reinforced thermosetting resin conduit
- (4) Electrical metallic tubing where installed on or in a building
- (5) Electrical nonmetallic tubing where installed within a building
- (6) Type MC Cable where installed within a building and if not subject to corrosive environment
- ~~(7) Nonmetallic-sheathed cable~~
- ~~(8) Type SE cable~~

~~Exception: A feeder within a one-family dwelling or two-family dwelling unit between remote panelboard and service equipment shall be permitted to run in flexible metal conduit or an approved cable assembly that includes an insulated equipment grounding conductor within its outer sheath. The equipment grounding conductor shall comply with 250.24(A) (5).~~

~~(REASON FOR CHANGE: Carry over from previous amendments. Text changed to reflect 2014 National Electrical Code. Exception deleted per Errata No.70-14-2)~~

~~(REASON FOR CHANGE: Updates to this section in the 2017 National Electrical Code provided relief by recognizing these wiring methods.)~~

END



CITY COUNCIL
AGENDA MEMO

Prepared By: John Cabrales Jr, Interim City Manager

Dec. 14, 2017

iChoosr

DESCRIPTION:

Receive a report, hold a discussion, and give staff direction regarding a proposal by iChoosr, a company that helps electric consumers get access to better energy rates.

BACKGROUND INFORMATION:

iChoosr was formed in 2008 with the underlying idea that in the near future, the focus of providing power and the way in which is provided will increasingly shift from the provider, to the consumer, who expresses their intention to purchase the product. Many cities look for ways to improve their residents' quality of life, and by taking this idea, iChoosr has developed an approach where a municipality lends its name to a specific group switching program or a residential electricity aggregation program. iChoosr has its head office in Amsterdam (The Netherlands) with satellite offices in Antwerp (Belgium), London (England), and Houston (Texas). From these offices, iChoosr currently organizes group switching programs in those countries.

Through extensive market research, iChoosr has identified great similarities between the Texas energy market and those in Europe. Specifically: many people are not aware that they are paying too much for their electricity; people do not shop for better energy rates due to the complexity of the energy market; and people don't know whom to trust. iChoosr has found a unique way to educate consumers and help them get access to better energy rates. iChoosr has organized a pilot with the City of Fate (Rockwall County) in the Spring of 2017 and a second program in Fate and Waco in the summer of 2017.

It should be noted that there will not be an electricity contract between iChoosr and participating residents, because they do not take ownership of the electricity load. Instead iChoosr acts as an intermediate aggregator between customers and the winning electricity provider. Also, the City will be asked to promote the program, but iChoosr does the rest: customer service, provider management, auction, platform & project management. In return iChoosr shares a portion of the commission fee with the City.

Attached is a Question and Answer sheet that provides more information on the Texas iChoosr Group Switching Program. A presentation, sample press release and letter have also been attached for your review.

FINANCIAL CONSIDERATION:

This does not cost the City any money because iChoosr receives a fee from the prevailing retail energy supplier for each resident who accepts the prevailing retail energy supplier's offer and executes a residential agreement. iChoosr in turn shares a part of this fee with the City for every residential agreement.

RECOMMENDED MOTIONS:

None, discussion only

ATTACHMENT(S):

1. Texas iChoosr Group Switching Program Q & A Sheet
2. iChoosr Presentation
3. iChoosr Press Release Fate Decision
4. iChoosr Letter Fate Registration

<first name> <last name>
<street number> <street name>
City of Fate, Texas
<zip code>



www.cityoffate.com/fatepowerswitch

September 11, 2017

Join the second Fate Power Switch program. Together we will get a lower rate!

Electric bills can be very high in the hot summer months, and many people are still overpaying for their electricity. That is why the City of Fate is organizing a second edition of the Fate Power Switch.

The first Fate Power Switch program was a great success

The first Fate Power Switch program organized by the City of Fate exceeded our expectations greatly. Participating Fate residents will save an average of \$336 a year compared to similar plans in the market. Because of the group program, they did not need to go through the hassle of talking with multiple energy companies or comparing complex rates online. You can do the same.

How can you sign-up?

Grab a current power bill and go to www.cityoffate.com/fatepowerswitch. Register for free and without obligation by **September 27, 2017**. It only takes a few minutes. If you do not have access to Internet, ask a relative, neighbor, or friend to help out. One email address can make up to five registrations. Please note: Farmers Electric Cooperative customers cannot participate.

How does it work?

To get a fair and competitive rate, we will form a group of Fate residents and organize an electricity auction among electricity providers. This way we can secure you a fair and competitive rate all year round. You will get a personal energy offer by email on or after October 9. The personal offer will show you how much you can save. If you decide to switch to the winning rate, we will do the all work for you.

Questions?

You can find more information at www.cityoffate.com/fatepowerswitch. Or you can call the toll-free phone number 888-376-2077 from 8am to 10pm, Monday through Saturday. You can also send us an email at texaspowerswitch@ichoosr.com, and we will get back to you as soon as possible.

DON'T MISS OUT! REGISTRATION WILL CLOSE ON WEDNESDAY, SEPTEMBER 27, 2017

Best regards,

Michael Kovacs
City Manager

Group Energy Switching for *residential* consumers in partnership with Local Government



1. SIGN UP FOR FREE

2. AUCTION

3. PERSONAL OFFER

4. ACCEPT OR DECLINE



- High electricity prices place a burden on household budgets
- Deregulation has given consumers choice, but many are not aware or do not act
- Consumers find energy complex
- Consumers don't know who to trust

Texas average annual bill size snap shot

12m fixed, best in market 'standard' rate @ 12,000 kWh / year



With 6 small
Texas providers

\$1,060 / year

Saving for a
small household:

\$325 / year

With Texas big 6
providers

\$1,385 / year



Pricing structures are overly complex



Free Nights are Back and Better than Ever.

Now choose what time your Free Nights start. After that? Nine blissful hours of free electricity.

You choose when.

[START SAVING >](#)



TXU Energy offers a 'Free Nights' rate:

- TXU 'Free Nights' customers pay **\$1,930** / year
- TXU 'Simple Rate' customers pay **\$1,561** / year



Customers can get rewarded and penalized

Electricity Price	TDU	Average Monthly Use			Energy Charge (Cents/kWh)
		500 kWh	1,000 kWh	2,000 kWh	
		(Average price per kWh by TDU Service Area)			
	AEP Texas Central	13.1¢	2.1¢	9.1¢	8.412¢
	AEP Texas North	14.1¢	2.9¢	9.8¢	8.252¢
	CenterPoint Energy	13.5¢	2.8¢	10.0¢	7.216¢
	Oncor Delivery	11.6¢	1.0¢	8.1¢	8.156¢
	Sharyland Utilities	18.2¢	7.0¢	13.9¢	7.758¢
	Texas-New Mexico Power	12.9¢	1.9¢	8.9¢	
These average prices are examples. Your average price for electricity service will vary according to your usage. The price you pay each month includes the following: Energy Charge (cents per kWh) as shown above; Base Charge of \$1.50 (flat fee per billing cycle); \$4.95 Minimum Usage Fee (flat fee per billing cycle only if your usage is below 500 kWh); \$100 Usage Credit per billing cycle if your usage is greater than 999 and less than 1,501 kWh; \$50 Usage Credit per billing cycle if your usage is greater than 1,500 and less than 2,001 kWh; and regulated Transmission & Distribution Utility (TDU) delivery charges in effect for the associated billing cycle, passed through at cost (with no mark-up).					
Other Key Terms and Questions	See Terms of Service document for a full listing of fees, deposit policy and other terms.				
Disclosure Chart	Type of Product	Fixed Price			
	Contract Term	Twelve (12) Months			
	Do I have a termination fee or any fees associated with terminating service?	Yes; \$200 if you terminate your service prior to the end of the contract term. No termination fee with proof of a move-out.			
	Can my price change during my contract period?	Yes			
	If my price can change, how will it change and by how much?	The price applied in the first billing cycle may be different from the price in this EFL if there are changes in TDU charges; changes to the Electric Reliability Council of Texas or Texas Regional Entity administrative fees charged to loads; or changes resulting from federal, state or local laws or regulatory actions that impose new or modified fees or costs that are outside our control.			
	What other fees may I be charged?	You will incur a fee of \$5.00 per billing period if you are not enrolled in Autopay. Information on other charges and non-recurring fees is available in the Pricing and Possible Nonrecurring Fees sections of the Terms of Service document.			
	Is this a pre-pay or pay in advance product?	No			
	Does Infuse Energy purchase excess distributed renewable generation?	No			
	Renewable Content	10%			
	The statewide average for Renewable Content is	12%			
Infuse Energy LLC, 2020 SW Freeway, Suite 325, Houston, TX 77098 www.infuseenergy.com / email: customercare@infuseenergy.com Phone: Toll-free at (844) 463-8732 8:30am to 5:30pm CPT, Monday-Friday (except federal holidays) PUCT Certificate Number: 10223 Version #PTCTTrueBlueInfusion12-20160706-173807(ENG)					

Get your spread sheet out and keep a (very) close eye on your monthly electricity usage!

Power companies use all sorts of names to describe charges and fees

Beware, you may face an early termination fee of a whopping \$200

Providers game comparison tables



Shop. Compare. Choose.

77024

REFRESH RESULTS

TDU Area
CENTERPOINT ...

Estimated Use
1,001 - 2,000 kWh

Price/kWh
¢ to ¢

Contract Length
12 to 12 mo

Pricing and Billing
☒ Show All Plans
☐ Plans Without Minimum Usage Fees/Credits

Plan Type

1-10 ... SORT BY PRICE/kWh VIEW 10 PER ...

Top of the table rate

COM	Details	Price/kWh ▲	Pricing Details	Ordering Info
▼	No SCORECARD DATA HISTORY - Fixed Rate 12 Months 12% Renewable - NEW CUSTOMERS	1,000 kWh 2.8¢ 500 kWh 2000 kWh 13.5¢ 10¢	Minimum Usage Fees / Credits Cancellation Fee: \$200.00 Fact Sheet Terms of Service	Special Terms (844) 463-8732 OR SIGN UP
▼	DISCOUNT POWER COMPANY RATING ★★★★☆ HISTORY - Prime Plus - 12 - Fixed Rate 12 Months 12% Renewable	1,000 kWh 2.9¢ 500 kWh 2000 kWh 12¢ 6.9¢	Minimum Usage Fees / Credits Cancellation Fee: \$125.00 Fact Sheet Terms of Service	Special Terms (866) 750-7775 OR SIGN UP
▼	pe power express COMPANY RATING ★★★★☆ HISTORY #Super12 - Fixed Rate 12 Months 12% Renewable	1,000 kWh 3.3¢ 500 kWh 2000 kWh 11.3¢ 7.3¢	Minimum Usage Fees / Credits Cancellation Fee: \$150.00 Fact Sheet Terms of Service	Special Terms (877) 400-0232 OR SIGN UP
▼	Prime 12-Month	1,000 kWh	Minimum Usage Fees /	Special Terms

How do we address these problems?



1. Easy to understand rate structure (no complex price tiers, no penalties)
2. Easy to understand language
3. We vet and select providers
4. The City's endorsement gives people the confidence to switch

Project cycle is 2-3 months



Education &
Registration

1-2 months

Auction

1 day

Accept or
decline offer

2-3 weeks

Close out
& support

Who does what?

- The City and iChoosr jointly promote the program
- iChoosr does the rest: customer service, provider management, auction, platform & project management

- It's a positive service that saves people real money
- Money that will stay in the local economy
- iChoosr will guide your residents through the process to ensure a smooth switch
- iChoosr will share a part of the commission fee with the City

City of Fate example



Search Fate...



Community Center

Community Events

Community News

Community Photos

Comprehensive Plan

Emergency Services

Fate Power Switch

Neighborhood Associations

Parks & Facilities

Public Documents

[Home](#) > [Residents](#) > [Fate Power Switch](#)

Fate Power Switch



Looking for a fair and competitive electric rate? Join the Fate Power Switch!

We have secured a great auction-winning rate: households can save \$336 on average

Already registered?

If you have already signed up with the Fate Power Switch, you will receive an email with your personal energy offer by May 15th.

Not registered yet?

As the auction was so successful, we have extended the registration period so you can still sign up. Join the [Fate Power Switch](#) and get your personal offer from May 15th onward. [Registration](#) is free and easy to do. Have a monthly power bill close by. It only takes 5 minutes to register and there is no obligation to switch.



Your City logo

Your slogan

Your City
photo spread

Join the Fate power switch

Lower your energy bill

Join our group energy switch today. It's free and without obligation.

SIGN UP TODAY →

Why sign up today?

- ✓ Taking part is free
- ✓ We organize an energy auction
- ✓ There's no obligation to switch
- ✓ You deserve a fair deal



1,855 citizens

have already signed up for our group energy switch. Join them today!

SIGN UP TODAY →

How does it work



1. SIGN UP FOR FREE

Register for our program by clicking on the 'Sign up today' button. Registration is free and without obligation.



2. AUCTION

On Tuesday, May 30th we will hold a reverse auction. The provider who offers the cheapest rate gets to offer you a new electricity contract.



3. PERSONAL OFFER

From January 13, 2017 and onwards you will receive your personal offer and you can see how much money you could save.



4. ACCEPT OR DECLINE

You decide whether to accept your personal offer or not. If you accept the offer we will take care of the entire switching process for you.

MORE INFORMATION

Lower your energy bills, join today

SIGN UP TODAY →

Aggregated results of two Texas Programs



- Registrations: 1,816
- Switchers: 584 (32%)
- Average savings per household: \$347
- Savings that stay in local economy: \$203,000
- Winning providers: Discount Power & Champion Energy

What do residents think about it?



- 70% indicated they have not switched in the last 3 year
- 78% indicated they switched because of the savings they can make
- 81% of residents thinks it is a good idea for the City to help residents to save money on their electric bills
- 78% thinks the City should organize more of these programs

This image is a collage of several distinct elements. At the top left, a small portion of a newspaper's navigation bar is visible, showing categories like 'Foundation Repair', 'NEWS', 'OPINION', 'OBITUARIES', 'SPORTS', 'ENTERTAINMENT', 'PHOTOS', and 'VIDEO'. Below this, a large, bold masthead for the 'Waco Tribune-Herald' is displayed diagonally. To the right of the masthead is a logo for 'TEXAS POWER SWITCH' featuring a map of Texas and three stars. Below the masthead, there is a small image of a bed and a logo for 'saatva'. Further down, a snippet of a social media post is visible, showing a headline 'Power Switch to save participants annually' and a date 'Oct 19, 2017'. At the bottom right, a small circular icon with a right-pointing arrow is shown.

Waco Power & Light Co.
\$368 annually

Bank C.D.'s Due?
CALL US NOW
...s - IRA's
...lovers



DALLASNEWS
Powered by *The Dallas Morning News*

TOPICS ▾

MY ACCOUNT ▾

NEWS

ELECTIONS

CRIME

TEXAS LEGISLATURE

POLITICS

EDUCATION

INVESTIGATIONS

SUBSCRIBE NOW

City of Fate secures electricity deal

On the delivery charges, are \$525 per month and 2.25 cents per kWh, said "people can still register with and will receive electricity."

The program will be a success, said the city's public works director, who said the city will be able to save money on electricity bills.

The city will be able to save money on electricity bills, said the city's public works director, who said the city will be able to save money on electricity bills.

The city will be able to save money on electricity bills, said the city's public works director, who said the city will be able to save money on electricity bills.

10

Staff Report

The City of Fate has secured a "very competitive" auction-winning electricity deal for its residents who have registered for the Fate Power Switch.

This is a program endorsed by the City of Fate to help residents save on their electric bills.

monthly bills especially for the summer months, said Michael Kovacs, a household program, hold in 10 has a real result — an inde — with a decide — no want —

Secures electricity deal

shows increasing
than in recent
indicating they have
people
a good
spending on
the rate lower
not done so
in other
many
and Russia
www.
parade

ROCKWALL COUNTY SEP 4

With its Fate Power Switch, city shops the deregulated electricity market for residents and outsiders

How has iChoosr evolved in Texas



- First Texas based employee to find and assist cities
- Office in Houston and Houston based customer service centre (WestPark Communication)
- 6 'high quality' electric providers on contract
- PUCT broker registration
- Planning two programs in 2018: Spring-Summer and Summer-Fall

How has Program has evolved



- Cheap and Fair energy deal for residents (no usage based penalties and multi-tiered rate allowed in auction)
- Solution for people with termination fee
- “Send us your bill and we do the math for you”
- Communication approach for Texas cities that works:
 - Utility bill insert
 - Letter/postcard
 - Getting City affiliates involved
 - Getting local press involved
 - “Bring your bill day”

Planning 2018: A switch window of 8 consecutive months



TPS-3

Registration: Monday March 5 – Monday April 16

Auction: Tuesday April 17

Decision: Monday April 30 – Tuesday May 22

Switch window: Monday April 30 – Friday August 31

TPS-4

Registration: Monday July 9 - Monday August 20

Auction: Tuesday August 21

Decision: Tuesday September 4 – Tuesday September 25

Switch window: Tuesday September 4 – Monday December 31

Texas iChoosr Group Switching Programs – Q&A

Contents

About iChoosr, LLC	page 1
Home electricity and Texas consumers	page 5
The role of the City	page 7
Website example	page 12

1. About iChoosr, LLC

What is iChoosr?

- iChoosr was formed in 2008 with the underlying idea that in the near future, the focus of providing power and the way in which is provided will increasingly shift from the provider, to the consumer, who expresses their intention to purchase the product.
- Many cities look for ways to improve their residents' quality of life, and by taking this idea, iChoosr has developed an approach where a municipality lends its name to a specific group switching program or a residential electricity aggregation program.
- iChoosr has always taken the existing relationship and confidence between a city or town and its residents as a starting point.
- iChoosr has its head office in Amsterdam (The Netherlands) with satellite offices in Antwerp (Belgium), London (England), and Houston (Texas). from these offices, iChoosr currently organizes group switching programs in those countries.

iChoosr, LLC
5868 A1 Westheimer, #601
Houston, Texas 77057
832.455.5499
daniel@ichoosr.com
www.ichoosr.us

What has iChoosr accomplished so far?

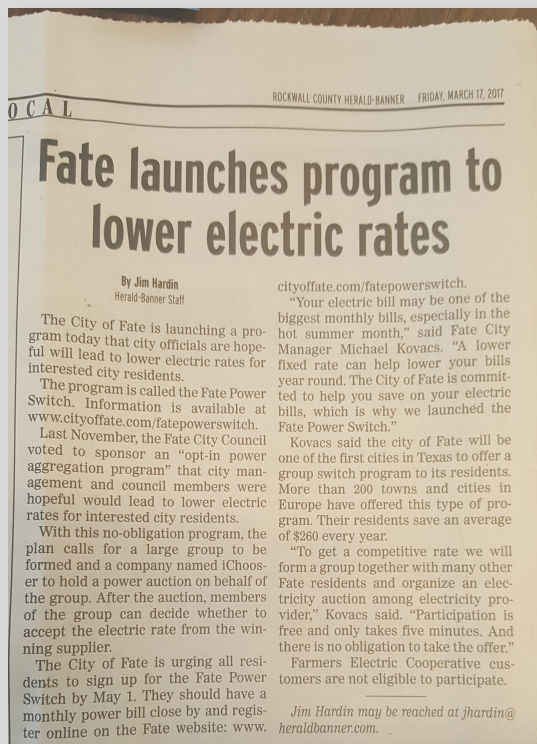
- iChoosr currently works with 200 small and large municipalities in The Netherlands, Belgium, Great Britain and Texas.
- Since 2008, iChoosr has organized 450 group switching programs, resulting in more than 1.4 million Belgian, Dutch, British and Texan households switching to better energy contracts.
- Participating households have saved an average of \$260 per year on their energy bills. Average savings in Texas are \$350 per year.

iChoosr and Texas

- Through extensive market research, iChoosr has identified great similarities between the Texas energy market and those in Europe. Specifically:
 - Many people are not aware that they are paying too much for their electricity.
 - People do not shop for better energy rates due to the complexity of the energy market.
 - People don't know whom to trust.
- iChoosr has found a unique way to educate consumers and help them get access to better energy rates.
- iChoosr spent 2016 preparing to enter the Texas energy market. During 2016, we
 1. established relationships with Texas electricity providers;
 2. met the regulatory requirements of the Public Utility Commission (PUCT aggregator registration #80419); and
 3. ensured that our business model and working practices met the existing PUCT regulations for the retail electricity market in Texas.
 4. iChoosr has organized a pilot with the City of Fate (Rockwall County) in the Spring of 2017 and a second program in Fate and Waco in the summer of 2017.

FATE POWER SWITCH – first program of its kind in Texas (Currently starting 3rd campaign)

- The program was promoted by the City of Fate (executed by iChoosr) through sending out utility bills inserts (see below) and a mailer to the 3,500 households in Fate.
- 513 households registered for the “Fate Power Switch” which means that 1 in 6 households participated in the program.
- Auction winner was electric provider Discount Power from Houston.
- 175 households switched to the winning rate, which means that 1 in 3 of registered households decided to take up the offer.
- The average household in the group will save \$336 a year in comparison with similar plans in the market.
- Which means that these Fate families will save approx. \$55,000 on their electric bills and this money that will stay in the local community.



CAN YOU GET A BETTER POWER DEAL?

JOIN THE FATE POWER SWITCH TODAY!

- ✓ By joining forces we are able to get a fair & competitive rate.
- ✓ Registering is free and only takes 5 minutes.
- ✓ Grab a current power bill and we'll do the math.
- ✓ No access to Internet? Ask a relative, neighbor or friend to help out.

Register on the Fate website: www.cityoffate.com/fatepowerswitch

WACO POWER SWITCH (Currently starting it's 2nd campaign)

- 1,025 households registered for the “Waco Power Switch”.
- Auction winner was electric provider Champion Energy from Houston.
- 325 households switched to the winning rate, which means that 1 in 3 of registered households decided to take up the offer.
- The average household in the group will save \$368 a year in comparison with similar plans in the market.
- Which means that these Waco families will save approx. \$119,600 on their electric bills and this money that will stay in the local community of Waco.



References

iChoosr can put interested municipalities in touch with city officials who have worked with the iChoosr group switch program. For more information, contact us at 512.687.3439 or daniel@ichoosr.com

2. Home Electricity and Texas Consumers

Why would cities and towns organize group switches for their residents?

- High electricity costs place a burden on household budgets.
- Deregulation has given consumers a choice, but many customers are not aware of their options or do not change providers due to the complexity of the Texas market.
- Consumers need help making sense of the Texas market from a trusted source.

Can people save money on their electricity bills?

- Many people do not shop regularly and pay a higher rate for their electricity than they should.
- The average Texas household spends \$1,750 per year on electricity.
- By switching to a better rate, households can drop their rate, on average, to less than \$1,400 per year.

What issues do customers face when shopping for better electricity rates?

- Texas pricing structures can be overly complex.
 - a. Usage based penalties and usage based multiple tiered rates can be confusing.
 - b. Customers need a spreadsheet to track their monthly usage and rates.
- Power companies use confusing names to describe their rates and fees, making it hard to compare one provider with another.
- Online comparison tables are complex and use differing metrics, making it hard to compare one company's rates with another.
- Some power companies charge steep early termination fees.

How does iChoosr address these problems?

- iChoosr organizes reverse auctions among electricity providers, which gives customers access to competitive rates.
- iChoosr only allows easy to understand rate structures - no complex usage -based price tiers, no usage penalties, and no usage rewards.
- iChoosr will explain consumer options and price structures in easy to understand language.
- Customers will enjoy a preferred status with the electricity provider.
- iChoosr will quickly resolve customer issues and complaints with the winning electricity provider.
- iChoosr vets its providers during the selection process.

- People do not know who to trust, therefore the City's endorsement gives people the confidence to switch.

What is the benefit to participating cities?

- iChoosr provides a positive service that saves customers real money - money that stays in the local economy.
- iChoosr guides residents through the process to ensure a smooth switch.
- iChoosr shares a portion of the commission fee with participating cities.

What kind of rates do you offer to residents who participate?

- Many energy consumers view energy rate structures as complex and difficult to understand. We provide complete transparency with Cheap and Fair energy rates for residents.
- Participating energy providers are only allowed to bid with 12-month fixed contracts that have an easy to understand rate structure (no usage based penalties and multi-tiered rate allowed in auction).

Will there be an electricity contract between iChoosr and participating residents?

No. iChoosr does not take ownership of the electricity load. We act as an intermediate aggregator between customers and the winning electricity provider.

Once residents have registered to participate in the program, will they have to make the switch to a new provider?

No. Participation in the program is free, and the winning offer comes without an obligation to switch.

Will participating customers receive support throughout the program and beyond?

- Yes. The program website will have clear information on how to contact iChoosr. Our customer service staff will be available by e-mail, chat, and phone to help resolve problems and answer questions from interested customers.
- Once participants have switched to the winning electricity provider, they can still contact customer service if they have questions or issues that need to be resolved.

3. The Role of the City

What is the role of the city?

- The City and iChoosr jointly promote the program.
- iChoosr does the rest: customer service, provider management, auction, platform & project management.

Who manages the program?

- An experienced iChoosr project team will execute, maintain and manage the program.
- iChoosr project management includes improving and maintaining the IT platform, organizing customer care, supporting the city's communication and plan to educate its residents, soliciting electricity providers, conducting the reverse auctions, and managing the winning electricity provider.

How does iChoosr benefit financially from the program?

- iChoosr does not charge participating cities for its services, and residents can use the service for free.
- iChoosr gets paid a commission from the winning electricity provider for every household that switches.
- iChoosr shares a portion of this commission fee with the city. The income from the program can be used by the city for various purposes including communication and education plans for subsequent group switch programs and support for municipal initiatives aimed at promoting energy efficient products or measures.
- iChoosr uses the remaining commission fees for taking care of project management (coordination among the city, the winning provider, and participating households), maintaining and enhancing the IT switching program, providing customer service, soliciting electricity providers to participate in subsequent auctions, conducting auctions, and managing conversion to new energy suppliers.

Does iChoosr have a standard agreement that it uses with participating cities?

Based on our experience working with 200 towns and cities in several countries, and with the help of a Texas-based attorney with experience working in the Texas local government structure, iChoosr has drawn up an agreement to work with participating municipalities.

Will iChoosr be able to respond to statutory procurement procedures if required?

- iChoosr has experience working with procurement methods with towns and cities in Europe.
- If a statutory procurement procedure is required in Texas, we have access to an experienced Texas-based legal counsel to help us.

What is the cost to participating cities?

- We do not charge cities for our services.
- iChoosr shares a portion of the commissions it earns from winning electricity providers with participating cities.
- The out-of-pocket cost for the city is in the communication budget. The cost for communication can be partially recouped from the fee share. iChoosr will assist cities with their communication plans.

What are estimates staffing requirements for the city?

- Preparation approx. 4 weeks: once approved by the Council the project manager will talk to:
 - iChoosr (checking webpages and emails);
 - the City's comms team (for setting up the promo campaign);
 - affiliates/home owners associations to get their support to promote the Program
 - the front-line desk people at City Hall (provide them with an instruction and a FAQ list supplied by us if people would call City Hall during the program, see more information below).
- Registration & Promo campaign 4-6 weeks: to execute the campaign plan and monitor reporting supplied by us and keep the program top of mind with stakeholders.
- Decision period 3 weeks: to monitor reporting supplied by us and keep the program top of mind with stakeholders.

How can cities promote the program in a cost efficient way?

- Through our experience in working with local governments, iChoosr has many examples of how towns and cities can promote the group switch programs.
- Towns and cities can often promote the program through existing channels.
- iChoosr provides participating cities with templates for e-mails, letters, and websites branded with the city's logo.
- iChoosr can help create an inexpensive but effective campaign to inform residents about the program.

What are examples of cost effective ways for cities to promote the program?

- Sending a letter to residents on the city's official letterhead
- Including a leaflet in monthly utility bills
- Sending e-mails to residents with a reminder of the registration deadline
- Setting up information booths at local events
- Sending press releases to local press and media sources
- Holding a press conference to announce the mayor's registration as a participant in the program

- Partnering with city affiliates, community groups, and home owner associations to promote the program

Will city staff be overwhelmed by calls from interested residents?

- No. The program website will include specific instructions on how residents can contact iChoosr for more information (phone, email, chat).
- iChoosr customer support will resolve problems or take questions from residents who are interested in the program through e-mail, chat, or phone calls. Calls will be handled by a Texas-based Customer Service Team.
- iChoosr will provide instructions to city switchboard staff on how to handle requests from interested residents. The information will include the number of the iChoosr help desk line, the e-mail address for customer support and a short list with the most frequently asked questions.
- Escalation route: if consumers call the city with complaints, iChoosr will handle the complaint and inform the city of how the issue is resolved and when.

What are the stages of the project plan?

- In basic terms, the city promotes the project, and iChoosr organizes the program.
- The group switching cycle is divided into five phases. A program takes approximately two months in total.
- An experienced iChoosr project team will execute the program and take care of the project management, which includes coordinating with the city, the winning electricity provider, and participating residents; providing IT customer care; creating communication and education plans; conducting the auction; and managing the winning energy provider.
- The workload for the city is limited and will primarily occur in the first and second phases. The activities include preparing for and executing the promotional campaign.

1. Preparation

2. Registration

3. Auction

4. Fulfillment

5. After Care

Step 1: Preparation

- iChoosr will supply sample e-mails and letters, campaign branding examples, and informational text for the city's website.
- The city will prepare a communication plan (letters and e-mails); provide images (logo of City); and create a page on the city's website with a link to the iChoosr registration page (iChoosr will provide text).

Step 2: Registration (4 weeks)

- iChoosr will create registration webpages and accompanying e-mails, reporting tools, and customer service programs.
- iChoosr will recruit electricity providers to participate in the auctions.
- The city will execute a communication plan consisting of letters, e-mails, and flyers.

Step 3: Reverse Auction (1 day)

- iChoosr will conduct the reverse auction, organize the winning provider meeting, prepare customer care briefing and presentation, prepare customer acceptance agreement, and prepare winning rate and provider briefing for the city.
- The city will circulate the winning rate and provider briefing to relevant people within city government.

Step 4: Fulfillment (3 weeks)

- iChoosr will send out a personalized offer to potential customers, organize a reminder campaign, handle customer inquiries, and expand the reporting tool.
- iChoosr will reduce the effort required from the city.

Step 5: After Care

- iChoosr will formulate and send out a customer satisfaction survey, analyze the results, and draw up a report.
- iChoosr will reduce the effort required from the city.

What will happen the year after?

- iChoosr will organize multiple programs a year, and the city can choose how often they want to participate.
- The following year we will organize a program on the same dates, making sure that people can switch again if their contract expires.

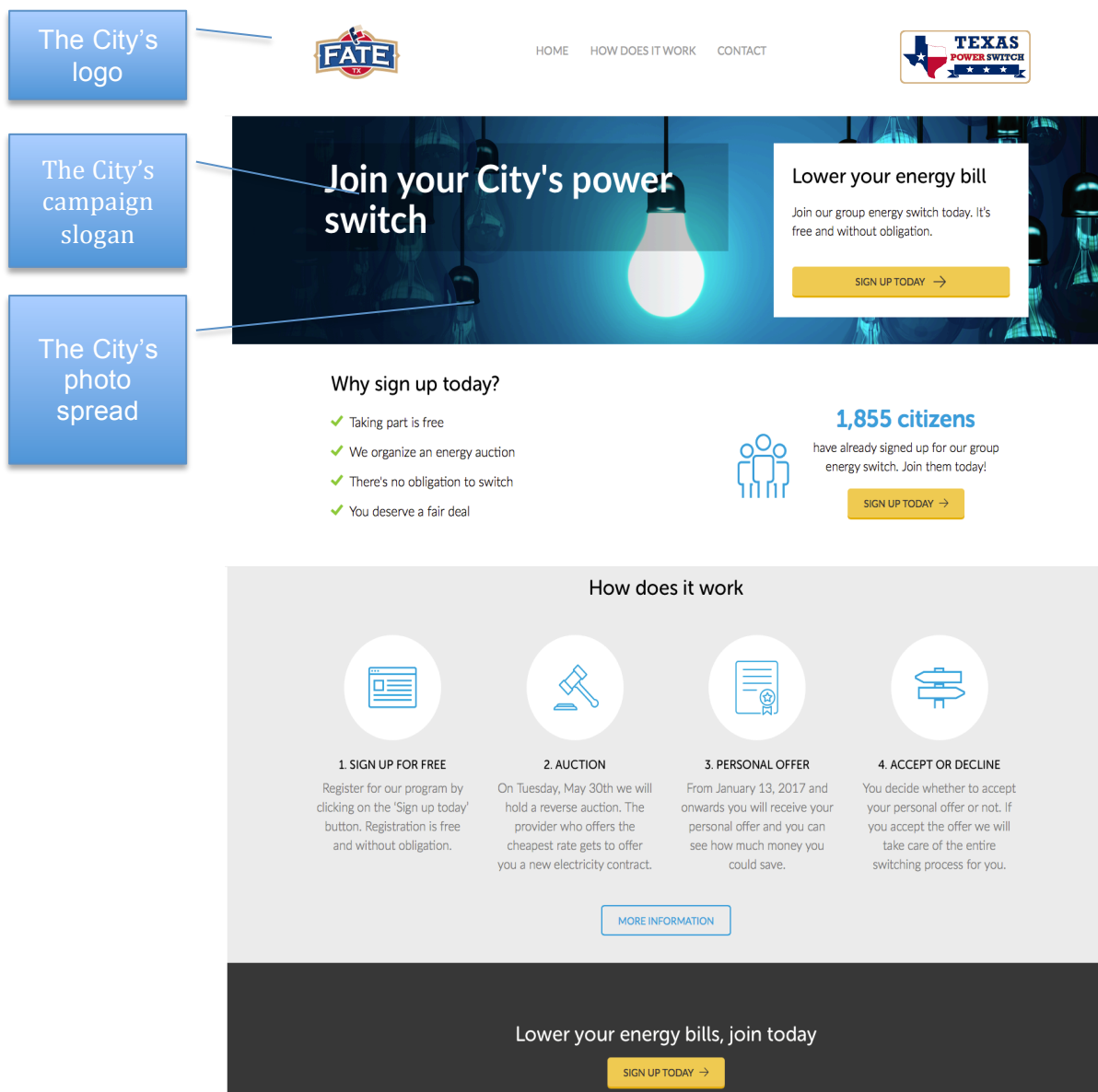
How does iChoosr mitigate risk associated with these programs?

- Customers are worried about running into unexpected costs. Therefore, iChoosr will inform customers in a transparent and easy to understand way whenever information is unclear. The program offers customers to lock-in on a 12 months fixed rate plan. This way they pay the same rate for electricity for the duration of the plan and this protects them from price spikes.
- Another risk for the program is that customers have a bad customer experience due to something going wrong with their switch to the new provider. iChoosr's main focus will be to ensure that customers have an excellent customer experience when enrolling into the program and when they decide to switch to a new provider. The iChoosr 'Provider Agreement' demands that providers have a robust enrollment process in place. iChoosr also agrees with the winning provider how both sides will deal with customer queries and agrees on a robust route for escalating any problem cases.

- Registrants can reach iChoosr by phone and email. Queries and complaints are categorized and forwarded to 1st, 2nd and 3rd line agents in our helpdesk. When a query or complaint is escalated to the 3rd line, which is the assistant project lead, then this query is dealt with in the project team or is taken up with the provider directly.
- iChoosr's service and IT platform are specifically designed for group switching programs and the company has organized over 450 successful large scale group switching programs since 2008. Over 4 million consumers participated, and over 1.2 million consumers accepted their offer for an energy contract through iChoosr in four different countries.
- iChoosr typically get high ratings for customer satisfaction in their customer surveys.

4. What does the website look like?

- The program's webpage will be accessible from the city's website.
- iChoosr will track the number of residents who register for the program.
- All the pages and emails will show the city's logo.
- The website is also accessible from mobile phone and tablets.



Press Release



Release Date: Tuesday October 3, 2017

City of Fate secures a competitive auction-winning electricity deal Fate residents can save an average \$368 per year

The City of Fate has secured an auction-winning electricity deal for its residents who have registered for the second Fate Power Switch program. This is a program endorsed by the City of Fate to help residents save money on their electric bills. Fate's City Manager, Michael Kovacs, explains, "With the auction-winning rate, people in the group will save on average \$368 per year compared to similar rates in the market."

Together with iChoosr, an independent service provider with a proven track record in this field, the City of Fate has secured a very competitive rate through an auction among electric providers. Champion Energy Services is the winning provider, and the fixed energy charges of the winning rate are: \$5.25 per month and 3.1¢ per kWh. (The Oncor delivery charges are \$5.25 per month and 3.6513¢ per kWh. These delivery charges are the same with all providers.)

Mr. Kovacs continues, "Equally important, it is a fair and transparent rate. To avoid energy bill surprises, the rate does not have complex multiple-tiered rates built in, and no usage-based penalties. It is an easy-to-understand, one-year rate with fixed energy charges, which will help residents lower their bills all year round. And finally, if you are locked-in until January 31st of 2018, you can still switch to this rate. This means more people will be able to switch to this rate without incurring a termination fee from their current provider."

People who have registered will receive a personal offer beginning October 9 in their email box, and they can decide until October 31 whether or not they want to take the offer. There is no obligation to switch. Mr. Kovacs continues, "As the Program has been exceeding our expectations, we have decided to keep the registration open. People can still register via www.cityoffate.com/fatepowerswitch."

Mr. Kovacs says, "This is the second Fate Power Program endorsed by the City of Fate. As before, the program shows interesting statistics. When asked during registration, more than 71% of Fate registrants indicated they have not switched electric providers in the past three years. For these people, the program may be a good opportunity to check their electricity costs."

The City of Fate is urging all residents to sign up for the Fate Power Switch if they have not done so already, even if they live in other parts of Rockwall County. Make sure you have a monthly power bill close by and register online on the Fate website: www.cityoffate.com/fatepowerswitch. There is free phone number available if people have any questions. Unfortunately, Farmers Electric Cooperative customers cannot participate in the program.

ENDS For media enquiries: Email mkovacs@cityoffate.com or phone 469-402-1064.



CITY COUNCIL
AGENDA MEMO

Prepared By: John Cabrales Jr, Interim City Manager

Dec. 14, 2017

Denton Central Appraisal District Board Appointment

DESCRIPTION:

Consider and act on a resolution voting on members to the Board of Directors of the Denton Central Appraisal District; and declaring an effective date.

BACKGROUND INFORMATION:

The City received a letter (see attached) from the Denton Central Appraisal District (DCAD) with names of candidates wishing to be appointed to the DCAD Board of Directors. The City has eight (8) votes that it can cast. The number of votes a taxing unit has is determined by their proportional share of the total levy in the district from the prior tax year. There are a total of 5,000 votes throughout the district.

The City may cast all its votes for one candidate, or may distribute the votes among any number of candidates. All votes cast must be for a person that was nominated and named on the ballot. There is no provision for write-in candidates. The Tax Code does not permit the Chief Appraiser to count votes cast for someone not listed on the official ballot. The five nominees receiving the most votes will become the Board of Directors.

FINANCIAL CONSIDERATION:

None

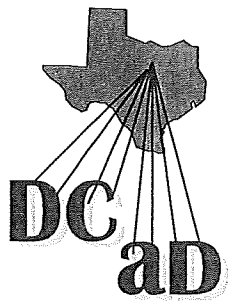
RECOMMENDED MOTIONS:

I move to vote for _____, for the Board of Directors of the Denton Central Appraisal District; direct the City Manager to submit a written resolution with the City's vote to the Chief Appraiser; and declare an effective date.

ATTACHMENT(S):

1. Denton Central Appraisal District letter (Oct. 26, 2017)

2. Resolution



DENTON CENTRAL APPRAISAL DISTRICT

3911 MORSE STREET, P O BOX 2816
DENTON, TEXAS 76202-2816

MEMO

TO: All Taxing Jurisdictions

FROM: Rudy Durham, Chief Appraiser

DATE: October 26, 2017

SUBJECT: Candidates to Board of Directors of Denton Central Appraisal District

Candidates to the Denton Central Appraisal District Board of Directors are listed below. The list is in alphabetical order by last name.

Each voting unit must cast its vote by written resolution and submit it to the Chief Appraiser before December 15th. The unit may cast all its votes for one candidate or may distribute the votes among any number of candidates. When a voting unit casts its votes, it must cast the votes for a person that was nominated and is named on the ballot. There is no provision for write-in candidates. The Tax Code does not permit the Chief Appraiser to count votes cast for someone not listed on the official ballot. The five nominees receiving the most votes will become the Board of Directors.

The candidates nominated by the taxing jurisdictions are: (Please note Asterisk below)

<u>Candidate</u>	<u>Nominating Jurisdiction</u>
1. Roy Atwood	Lewisville ISD, City of Carrollton
2. Robert Gallagher *	Town of Trophy Club
3. Mike Hassett	Lewisville ISD, City of Lewisville, Town of Flower Mound, Town of Trophy Club
4. George Pryor	Denton County
5. Connie Smith	Town of Trophy Club, City of Lewisville, Town of Flower Mound
6. Charles Stafford	Town of Trophy Club, City of Lewisville, Aubrey ISD, Lewisville ISD
7. David Terre	Lewisville ISD, City of The Colony, Denton County, Northwest ISD Town of Trophy Club, City of Lewisville, City of Frisco

*Robert Gallagher has indicated that he does not want to be reappointed to the Board of Directors.

Since some of you may not be familiar with the process of selecting the Board, please do not hesitate to contact Kathy Williams at (940) 349-3974 for clarification and/or information.

DENTON CENTRAL APPRAISAL DISTRICT 2017 DISTRIBUTION OF VOTES				
JURISDICTIONS	2016 LEVY	%OF TOTAL LEVIES	NUMBER OF VOTES	
SCHOOL DISTRICTS:				
S01 ARGYLE ISD	24,268,557.39	1.4557%	73	
S02 AUBREY ISD	12,363,170.95	0.7416%	37	
S03 CARROLLTON-FB ISD	48,142,581.32	2.8876%	144	
S04 CELINA ISD	391,045.31	0.0235%	1	
S05 DENTON ISD	219,694,795.75	13.1775%	658	
S15 ERA ISD	2,727.25	0.0002%	1	
S06 FRISCO ISD	129,164,592.16	7.7474%	387	
S07 KRUM ISD	10,194,531.49	0.6115%	31	
S08 LAKE DALLAS ISD	26,220,441.64	1.5727%	79	
S09 LEWISVILLE ISD	460,594,336.33	27.6269%	1381	
S10 LITTLE ELM ISD	49,086,035.96	2.9442%	147	
S11 NORTHWEST ISD	94,099,163.48	5.6442%	282	
S12 PILOT POINT ISD	7,196,449.60	0.4317%	22	
S13 PONDER ISD	8,972,869.46	0.5382%	27	
S17 PROSPER ISD	5,221,828.70	0.3132%	16	
S14 SANGER ISD	12,636,013.60	0.7579%	38	
S16 SLIDELL ISD	467,606.19	0.0280%	1	
SCHOOL DISTRICTS TOTALS	\$1,108,716,746.58	66.502%	3325	
G01 DENTON COUNTY	\$197,577,331.97	11.85%	593	
CITIES:				
C26 TOWN OF ARGYLE.....	2,184,044.35	0.1310%	7	
C01 CITY OF AUBREY.....	1,055,677.81	0.0633%	3	
C31 TOWN OF BARTONVILLE..	631,787.92	0.0379%	2	
C02 CITY OF CARROLLTON	38,888,307.21	2.3326%	115	
C49 CITY OF CELINA.....	5,549.59	0.0003%	1	
C03 CITY OF THE COLONY...	24,415,468.69	1.4645%	73	
C21 TOWN OF COPPELL	937,425.62	0.0562%	3	
C27 TOWN OF COPPER CANYON	649,532.61	0.0390%	2	
C04 CITY OF CORINTH.....	10,509,683.29	0.6304%	32	
C47 TOWN OF DRAPER	8,217.69	0.0005%	1	
C20 CITY OF DALLAS.....	10,208,152.45	0.6123%	31	
C05 CITY OF DENTON.....	64,302,599.15	3.8569%	191	
C42 CITY OF DISH.....	125,470.82	0.0075%	1	
C30 TOWN OF DOUBLE OAK...	979,984.89	0.0588%	3	
C07 TOWN OF FLOWER MOUND.	41,287,914.95	2.4765%	122	
C36 CITY OF FORT WORTH.....	12,067,337.59	0.7238%	36	
C32 CITY OF FRISCO.....	42,581,062.96	2.5541%	125	
C39 CITY OF GRAPEVINE.....	194.98	0.0000%	1	
C22 TOWN OF HACKBERRY....	126,624.53	0.0076%	1	
C38 CITY OF HASLET.....	4,990.76	0.0003%	1	
C19 TOWN OF HICKORY CREEK.	1,657,786.99	0.0994%	5	
C08 CITY OF HIGHLAND VILLAGE	11,599,268.94	0.6957%	35	
C09 CITY OF JUSTIN.....	1,822,922.09	0.1093%	5	
C18 CITY OF KRUGERVILLE..	502,066.92	0.0301%	2	
C10 CITY OF KRUM.....	1,913,205.13	0.1148%	6	
C11 CITY OF LAKE DALLAS..	2,707,832.98	0.1624%	8	
C25 CITY OF LAKEWOOD VILLAGE	265,021.25	0.0159%	1	
C12 CITY OF LEWISVILLE...	36,618,908.05	2.1964%	109	
C13 TOWN OF LITTLE ELM...	18,490,410.60	1.1091%	54	
C33 TOWN OF NORTHLAKE....	1,175,586.11	0.0705%	4	
C24 CITY OF OAK POINT....	1,946,255.35	0.1167%	6	
C14 CITY OF PILOT POINT..	1,443,726.62	0.0866%	4	
C29 CITY OF PLANO.....	5,093,232.89	0.3055%	15	
C15 TOWN OF PONDER.....	733,805.87	0.0440%	2	
C48 CITY OF PROSPER	1,166,654.94	0.0700%	4	
C51 TOWN OF PROVIDENCE VILLAGE	3,552,928.11	0.2131%	11	
C17 CITY OF ROANOKE.....	6,509,645.41	0.3905%	20	
C16 CITY OF SANGER.....	3,625,622.99	0.2175%	11	
C34 TOWN OF SHADY SHORES	842,603.44	0.0505%	3	
C37 CITY OF SOUTHLAKE.....	582,976.96	0.0350%	2	
C28 CITY OF TROPHY CLUB..	7,676,161.09	0.4604%	23	
C44 CITY OF WESTLAKE	1,586.60	0.0001%	1	
CITY TOTAL	\$360,898,237.19	21.65%	1082	
TOTAL ALL JURISDICTIONS	\$1,667,192,315.74	100.00%	5000	

Nominee Information
Denton Central Appraisal District Board of Directors

Your name has been submitted as a candidate for the DCAD Board of Directors. The term is for two years beginning January 1, 2018, and ending December 31, 2019. Please complete the following information and feel free to attach any additional information. Please return this form by October 25, 2017, so that a copy can be sent to the jurisdictions with their voting ballot.

Ron T. Atwood
Name

1816 Countryside
Address

Carrollton 75007
City Zip

214-559-7399
Daytime Phone

214-616-0528
Evening Phone

1. Are you a resident of Denton County and have you resided in Denton County for at least two years immediately preceding the beginning of this term? Yes/No
2. Are you an employee of a taxing unit that participates in the Denton Appraisal District? Yes/No

Please provide work or personal experiences that would be applicable to serve on the DCAD Board of Directors.

Please see attached.
I have been a practicing attorney in this
area since 1988 and a resident of Carrollton
since 1991. I have served on numerous
Boards and Commissions in Carrollton over
the last 18 years, including chairing the
Capital Improvements ^{Plan} Advisory Commission and,
currently, the Property Standards Board/
Board of Adjustment.

Return to:
Kathy Williams
Denton Central Appraisal District
P.O. Box 2816
Denton, TX 76202

State & Local Taxation Disputes
Multidistrict Litigation

HONORS AND DISTINCTIONS

National Law Journal "Defense Verdicts of the Year" (2001 and 2002)
Texas Super Lawyers (2009, 2010, 2011, 2012, 2013, 2014 2015, 2016)
Best Lawyers in America – Commercial Litigation (2014, 2015, 2016)
Best Law Firms in America – 2014, 2015, 2016
D Magazine Best Lawyers in Dallas (2014, 2105, 2016)
2011 Milton P. Levy Jr. Volunteer Award, LaunchAbility
Member, Dallas Bar Foundation
Member, Texas Bar Foundation

EDUCATION

Southern Methodist University (J.D. cum laude 1988; Order of the Coif; Editor-in-Chief, Journal of Air Law and Commerce; National Moot Court and Mock Trial Teams)
University of Illinois (B.S. 1979)

BAR ADMISSIONS

Texas
Federal Courts for the Northern, Eastern, Southern and Western Districts of Texas

REPRESENTATIVE EXPERIENCE

Construction

- The Brandt Companies LLC arbitrates claims stemming from construction of satellite antenna station - represented The Brandt Companies LLC in a dispute with a subcontractor that arose during the construction of a satellite antenna station south of Austin, Texas
- The Brandt Companies LLC construction contracts -- reviewed and negotiated construction subcontracts for The Brandt Companies LLC on a wide variety of construction projects, including government projects
- Bridgestone defends against action involving failure of Louisiana Superdome roof during Hurricane Katrina - represented BFS Diversified Products, LLC in connection with a suit brought by the State of Louisiana and the Louisiana Stadium & Exposition District as a result of the failure of the roof of the Louisiana Superdome during Hurricane Katrina*
- Vetrotex CertainTeed defends against arbitration brought by electrical contractor - represented Vetrotex CertainTeed Corporation in an arbitration brought by an electrical contractor*
- City of Austin challenges cost overruns on nuclear power plant construction - represented the City of Austin in a suit, which culminated in a four and a half month jury trial, over cost overruns during the construction of the South Texas Nuclear Project power plant*
- Anatole Partners achieves substantial settlement in action for faulty design and construction of hotel masonry - represented Anatole Partners, LP, the owner, in claims against design professionals and contractors for faulty design and construction of the hotel's masonry system, resulting in a substantial settlement payment to the owner*

Commercial Disputes

with claims filed by two workers alleging exposure to cadmium while repairing helicopters at the Corpus Christi Army Depot*

Textron successfully defends respirator product liability claims - successfully defended respirator manufacturer Textron, Inc. in product liability litigation brought by over 50 plaintiffs who had worked at diatomaceous earth mines in Lompoc, California*

Brush Wellman wins complete defense verdict in beryllium exposure action by workers at Rocky Flats Nuclear Weapons Facility - successfully defended Brush Wellman Inc. from beryllium exposure claims filed by workers at the Rocky Flats Nuclear Weapons Facility in Golden, Colorado*

U.S. Silica wins defense verdict in silicosis case - successfully defended U.S. Silica Company against silica exposure claims filed by workers at Tyler Pipe, obtaining a defense jury verdict*

Excess insurer sues primary insurer over contaminated housing development – represented an excess insurance carrier in a suit against the primary carrier after the excess carrier dropped down and paid claims related to ground water contamination of a neighborhood bordering a toxic waste disposal site*

Manufacturers of respiratory protection devices successfully defend against docket of product liability claims - for more than a decade, acted as national coordinating counsel and lead trial counsel for the four entities that owned the former Welsh Respirator Company in toxic exposure cases, the majority of which involved alleged exposure to silica dust*

*(prior to establishment of Atwood Gameros LLP)

PUBLICATIONS

A More "In Depth" Look at What's Left Of "Loser Pays"

Texas Tort Reform: What's In It, What Isn't

Texas Governor Signs Tort Reform Legislation Aimed at Attracting Businesses to Texas

Solving the Problems in Mass Tort Litigation, Practice Perspectives: Product Liability & Tort Litigation

In Silica Litigation, the Numbers Alone Dictate Careful Scrutiny of Injury and Causation, Andrews, Toxic Chemicals, Vol. 21, Issue 21, p. 2-7

Discovery of Personnel Files and an Employees Right to Privacy, Dallas Bar Association Headnotes
Admissibility of National Transportation Safety Board Reports in Civil Air Crash Litigation, 53 Air L.& Com. 469

SPEAKING ENGAGEMENTS

Construction Law Update, Dallas and Houston, Texas

Litigation Breakfast Series, Controlling Litigation Costs, Dallas, Texas

Building Protections Into Your Real Estate And Construction Deals, Jones Day CLE University, Dallas, Texas

Innovative and Cutting Edge Uses of Technology in the Courtroom, Dallas, Texas

Innovative and Cutting Edge Uses of Technology in the Courtroom, Dallas Bar Association Trial Skills Section, Dallas, Texas

Workpaper Confidentiality, BDO Tax Conference, Dallas, Texas

Workpaper Confidentiality, Hogan and Taylor Tax Conference, Tulsa, Oklahoma

Workpaper Confidentiality, Tax Executives Institute, Dallas Chapter, Dallas, Texas

Jones Day MCLE University - Dallas

Update on FIN 48, Financial Disclosure, Textron and Confidentiality of Various Risk Analyses and Workpapers, Dallas, Texas

Current Ethics Issues for In-House Counsel, Jones Day Dallas MCLE University

Witness Preparation, Dallas, Texas

Nominee Information
Denton Central Appraisal District Board of Directors

Your name has been submitted as a candidate for the DCAD Board of Directors. The term is for two years beginning January 1, 2018, and ending December 31, 2019. Please complete the following information and feel free to attach any additional information. Please return this form by October 25, 2017, so that a copy can be sent to the jurisdictions with their voting ballot.

MICHAEL HASSETT
Name

3500 BERINGER COURT
Address

FLOWER MOUND 75022
City Zip

817-265-0440
Daytime Phone

972-691-1055
Evening Phone

1. Are you a resident of Denton County and have you resided in Denton County for at least two years immediately preceding the beginning of this term? Yes/No No
2. Are you an employee of a taxing unit that participates in the Denton Appraisal District? Yes/No No

Please provide work or personal experiences that would be applicable to serve on the DCAD Board of Directors.

PLEASE SEE ATTACHED.
(See back)

Return to:
Kathy Williams
Denton Central Appraisal District
P.O. Box 2816
Denton TX 76202

Denton County Boards & Committees
Application for Appointment

Date: Sept. 20, 2017 Commissioner Precinct #: 1
Name: George H. Pryor Years in Denton County: 10
Home Address: 957 Pasatiempo Dr. Zip Code: 75034
Home Phone: 214-469-1473 ^{Cell} Work Phone: 214-548-7581
Fax: N/A E-Mail: george.pryor@att.net
Profession/Type of Work: Retired Senior Ex.-Associates First Capital
Board or committee applying for: Denton County Appraisal District
Special experience, knowledge or skills you will bring to this position: _____
Served 6 years on the D.C. Appraisal Review
Board (ARB). The last 2 as Vice Chair - ending 12/31/17.
Reason you wish to serve: To provide quality experience
to this very important county function
Have you ever served on a Denton County appointed board or committee? Yes
If yes, give name of board or committee and dates served: _____
See above

Community Activity: Past Tournament Director
AND V.P. of Frisco Lake Men's Golf
Assn.

Signature: George H. Pryor Date: 9-20-17

Boards and Committee Applications are kept on file for two (2) years in the Aide-to-the-Court's Office.
Board and Committee information is available in the Aide-to-the-Court's Office.

Return to: Aide-to-the-Court's Office
Courthouse-on-the-Square
110 West Hickory
Denton, Texas 76201

Attach Resume/Bio

Nominee Information
Denton Central Appraisal District Board of Directors

Your name has been submitted as a candidate for the DCAD Board of Directors. The term is for two years beginning January 1, 2018, and ending December 31, 2019. Please complete the following information and feel free to attach any additional information. Please return this form by October 25, 2017, so that a copy can be sent to the jurisdictions with their voting ballot.

CONNIE SMITH

Name

2700 PECAN LEAF LN

Address

FLOWER MANSO

75022

City

Zip

(214) 600-3256

Daytime Phone

(214) 600-3256

Evening Phone

1. Are you a resident of Denton County and have you resided in Denton County for at least two years immediately preceding the beginning of this term? ☒ Yes/No
2. Are you an employee of a taxing unit that participates in the Denton Appraisal District? ☒ Yes/No

Please provide work or personal experiences that would be applicable to serve on the DCAD Board of Directors.

I have 7 years of real estate experience, and over 15 years of accounting experience. I have run my own business, and am very cognizant of working within budgets. I have had the privilege to serve on the Denton CAD Board of Directors for 4 years, the most recent 2 as Vice-Chairman. I would be honored to be appointed to another term.

Return to:
Kathy Williams
Denton Central Appraisal District
P.O. Box 2816
Denton, TX 76202

Nominee Information
Denton Central Appraisal District Board of Directors

Your name has been submitted as a candidate for the DCAD Board of Directors. The term is for two years beginning January 1, 2018, and ending December 31, 2019. Please complete the following information and feel free to attach any additional information. **Please return this form by October 25, 2017, so that a copy can be sent to the jurisdictions with their voting ballot.**

Charles Stafford
Name

1903 Williamsburg Row
Address

Denton, Tx 76209
City Zip

940 595 7253
Daytime Phone

u
Evening Phone

1. Are you a resident of Denton County and have you resided in Denton County for at least two years immediately preceding the beginning of this term? Yes/No
2. Are you an employee of a taxing unit that participates in the Denton Appraisal District? Yes/No

Please provide work or personal experiences that would be applicable to serve on the DCAD Board of Directors.

I currently serve on the Denton ISD board of trustees.

I have a real estate Broker's License.

I have served on the CAD's board of directors for 15 years.

I'd be delighted to answer any questions.

My cell # is 940.595.7253

Return to:
Kathy Williams
Denton Central Appraisal District
P.O. Box 2816
Denton, TX 76202

Denton County Boards & Committees

Application for Appointment

Date: 9.15.17 Commissioner Precinct #: 2
Name: David Terre Years in Denton County: 18
Home Address: 3941 Teal Cove Zip Code: 75056
Home Phone: None Work Phone: 972.740.4526
Fax: None E-Mail: terre.david@yahoo.com

Profession/Type of Work: Retired

Board or committee applying for: DCAD Board

Special experience, knowledge or skills you will bring to this position: _____

2011-2017 The Colony City Council

2008-2011 The Colony P&Z Board

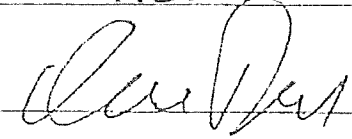
Reason you wish to serve: I believe in service and my
4 year record on DCAD Board has been productive and
enjoyable.

Have you ever served on a Denton County appointed board or committee? DCAD only

If yes, give name of board or committee and dates served: _____

DCAD 2013 to Present

- Community Activity:
- The Colony City Council 2011 to Present
 - The Colony P&Z Board 2008 to 2011
 - The Colony Chamber of Commerce Ambassador
 - Metro Relief Friend

Signature:  Date: 9-15-2017

Boards and Committee Applications are kept on file for two (2) years in the Aide-to-the-Court's Office
Board and Committee information is available in the Aide-to-the-Court's Office.

Return to: Aide-to-the-Court's Office
Courthouse-on-the-Square
110 West Hickory
Denton, Texas 76201

Attach Resume/Bio

Why I believe I am uniquely qualified and very much desire to continue serving on the Denton Appraisal District Board of Directors:

- Throughout my life I have served in leadership positions, particularly during my Wilson career and my City Council work. My formula for success has always been to work hard, stay organized, use common sense and live by the Golden Rule.
- I have enjoyed serving on this Board and I believe I have made significant contributions during my two terms. Based on my experience and performance, I am asking for your votes so I can win reelection to a third term. Thank you for your consideration of this request.

ACCOMPLISHMENTS

During my 1st two year term I have worked with my fellow Board Members to achieve the following meaningful results:

1. Make sure we have a Quorum and I personally am able to contribute to each Board of Directors meeting by being there.
2. Help develop Annual Operating Budget and ensure that spending stays within budgeted funds while always looking for opportunities to save on expenses.
3. Participate in the development and actual evaluation of the Chief Appraisal Officer each year.
4. To better serve all Denton County property owners. We have opened an offsite location in the Lewisville Career Center so that folks who live or work in that area can go to an alternate location as opposed to driving all the way to Denton to file a property tax protest.
5. We have also started an online service that permits property owners to file property tax protest electronically. Thus eliminating the need to have to drive to our Denton location and file in person.
6. To improve employee morale, we have implemented a structured very successful flex work schedule for ALL employees.

If you have any questions or desire additional information, please contact me by phone @972-740-4526 or via email terre.david@yahoo.com

**CITY OF LAKE DALLAS, TEXAS
RESOLUTION 12142017-_____**

**A RESOLUTION BY THE CITY OF LAKE DALLAS EXERCISING THEIR RIGHT
TO CAST VOTES FOR THE ELECTION OF THE DENTON COUNTY APPRAISAL
DISTRICT BOARD OF DIRECTORS**

WHEREAS, The City of Lake Dallas is a member of the Denton County Appraisal District and is entitled to cast eight (8) votes in the election of the Board of Directors; and,

WHEREAS, each voting unit must cast its vote by written resolution and submit it to the Chief Appraiser before December 15, 2017.

NOW THEREFORE BE IT RESOLVED BY THE CITY OF LAKE DALLAS AS FOLLOWS:

THAT THE EIGHT (8) VOTES ENTITLED TO THE CITY OF LAKE DALLAS BE CAST IN FAVOR OF

This Resolution is hereby introduced and adopted by the City of Lake Dallas at its Regular City Council meeting on Thursday, December 14, 2017.

PASSED AND APPROVED this the 14th day of December 2017.

ATTEST:

APPROVED:

Codi Delcambre, City Secretary

Michael Barnhart, Mayor

APPROVED AS TO FORM:

Kevin B. Laughlin, City Attorney



CITY COUNCIL
AGENDA MEMO

Prepared By: Devin Shields, Public Works Manager

Dec 14th, 2017

AC/Heating Unit Replacement at City Hall and Library

DESCRIPTION:

Approval of a Resolution authorizing a contract to repair or replace damaged heating units at Lake Dallas City Hall, and replacement of a non-functioning AC unit at the Library.

BACKGROUND INFORMATION:

Several months ago, during an inspection of the AC units at City Hall, it was discovered that there (3) of the older (2002 model) units' heat exchangers had developed holes rendering them unusable. Staff got quotes from several Heating & AC companies for repair and replacement. The Library's AC unit has been non-functional for several months and was decided to be put off being repaired until this current fiscal year.

FINANCIAL CONSIDERATION:

The financial considerations are as follows:

City Hall – To replace the three damaged units will cost \$19,704. To replace the heat exchangers only will cost \$5,100, but it is not known how long the replaced units will continue to function.

Library – To replace the non-functioning AC/Heating unit will cost \$7450.

Staff recommends being given the authority to replace the three damaged units at City Hall and the unit at the Library. Staff plans to move forward with replacing only one of the units at City Hall and then determine if the other two need to be replaced this winter. If not, the replace of the other two units will be delayed and included in the budget discussion for next year. Also, staff plans to replace the Library unit in late winter or early spring.

RECOMMENDED MOTIONS:

I move to approve/deny a Resolution authorizing the City Manager to purchase three (3) new Heating/AC units for City Hall and one (1) new Heating/AC unit for the Library.

ATTACHMENT(S):

1. Quotes from three AC/Heating vendors
2. Resolution

**CITY OF LAKE DALLAS, TEXAS
RESOLUTION NO. 12142017- _____**

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LAKE DALLAS,
TEXAS, AUTHORIZING NEGOTIATION AND EXECUTION OF CONTRACTS
FOR REPLACEMENT OF HEATING AND AIR CONDITIONING UNITS AT CITY
HALL AND THE LIBRARY; AND PROVIDING AN EFFECTIVE DATE**

WHEREAS, several heating/air conditions units at City Hall and the heating/air conditioning unit at the Library Building are in need of significant repair and/or replacement; and

WHEREAS, City Administration has solicited quotes from various contractors regarding repair and/or replacement of such units and requests the Interim City Manager be authorized to negotiate and enter into one or more agreements for replacement of said units; and

WHEREAS, the City Council finds it to be in the public interest and necessary for the public health and protection and preservation of public property to concur in the foregoing recommendation;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LAKE DALLAS, TEXAS, THAT:

SECTION 1. The Interim City Manager is hereby authorized to negotiate and sign an agreement on behalf of the City with Master Air Conditioning and Heating, Inc. as follows:

- A. For replacement of the Library heating and air condition unit in the amount of \$7450.00; and
- B. For replacement of three air handling units at City Hall in the amount of \$19,704.00.

Subject to City policy, state law, and, in the event of an increase in contract price, the availability of current funds, the Interim City Manager is further authorized to execute such change orders to said agreements as he determines to be in the public interest and necessary to properly complete the above project.

SECTION 2. This Resolution shall be effective immediately upon approval.

PASSED AND APPROVED this the 14th day of December, 2017.

APPROVED:

Michael Barnhart, Mayor

ATTEST:

Codi Delcambre, TRMC, City Secretary

APPROVED AS TO FORM:

Kevin B. Laughlin, City Attorney
(kbl:12/6/17:93838)



TACLA27740E

DATE: 10/26/17

TO: City of Lake Dallas
C/O Codi Delcambre

PROPOSAL: Replace existing 5-ton Trane package unit with gas heat. Existing unit is a high efficiency cooling model. The new model Trane high efficiency replacement will require a curb adapter. The standard efficiency replacement unit will fit the existing curb. I have included pricing for both systems. Both units carry a 5-year compressor warranty and 1 year on all other parts. There is also a 1-year warranty on Labor. Price include all material, labor and crane rental.

High Efficiency: \$9035.00

Standard Efficiency: \$7450.00

Prepared By: Mark Esterer

Date: 10/26/17

Accepted By : _____ **Date:** _____

Able Mechanical Payment Terms are Net 10 from Date of Invoice; all Invoices are considered Past Due after 30 Days from Date of Invoice

North Texas Heating & Air Conditioning, Inc.

P.O. Box 23, Argyle, TX 76226
940/349-9212 or 972/221-6162
Fax 940/382-3199

TACLA014867C

Devin Shields
City of Lake Dallas
Public Works Supervisor
212 Main St.
Lake Dallas, TX 75065

November 28, 2017

RE: Replace or repair three 5-ton RTU's

OPTION 1- Replace faulty heat exchangers in all three units. These heat exchangers will have to be ordered. I spoke with Trane and they told me that there is one available at the factory. The other two will have to be manufactured. There will be several weeks waiting period for the remaining two heat exchangers. The total for replacing the heat exchangers will be \$5,100.00 for all three, including shipping. No tax was included. This price is for replacing the heat exchangers only. It does not include any other unforeseen repairs to the existing units that may or may not be required. All three units were checked for mechanical flaws. All appeared to be functioning properly other than the heat exchangers.

OPTION 2- Replace all three RTU's with new Carrier gas-pack units. The new units will include code required economizers and enthalpy controls for the economizers. Curb adapters will be provided to adapt the existing curbs to the new unit. The price includes a licensed electrician to reconnect the new units to the existing line voltage power. The existing temperature controls will be reused. The total for replacing all three units will be \$21,268.00. This price does not include any sales tax. No money was added to this price for permitting.

Please give me a call if you have any questions or concerns.

Thank you,

Rodney Preston
President

North Texas Heating & Air Conditioning, Inc.

P.O. Box 23, Argyle, TX 76226
940/349-9212 or 972/221-6162
Fax 940/382-3199

TACLA014867C

Devin Shields
City of Lake Dallas
Public Works Supervisor
212 Main St.
Lake Dallas, TX 75065

December 5, 2017

RE: Replace 5-ton heat pump complete system in the Public Library

Description: Remove and replace the 5-ton heat pump system in the Public Library. Included in this proposal is the following.

- Provide and install a Carrier 14 SEER heat pump outdoor unit #25HCE460A003
- Provide and install a Carrier 14 SEER 20kW heat pump air handler indoor unit #FX4DNF061L00
- Provide and install a new Carrier matching 7-day programmable thermostat.
- Job includes connecting the new unit to the existing duct system, Freon lines, and drain piping.
- Complete start-up
- One year labor warranty, 5-years on all parts.

The total for all work as described will be \$7,100.00. No sales tax or permit fees were added to this bid.

Please give me a call if you have any questions or concerns.

Thank you,

Rodney Preston
President



MASTEN
Air Conditioning & Heating, Inc.

SALES | SERVICE | INSTALLATION
RESIDENTIAL | COMMERCIAL

380 Main Street
Lake Dallas, TX 75065
Phone: 940.321.5392
www.mastenair.com

Proposal

Date: 7/24/2017
Proposal #: 2113

Bill To:

Lake Cities Library
302 S. Shady Shores Road
Lake Dallas, Texas 75065

Description	Amount
Remove and replace current 5 ton system with new Trane equipment. We will hang and level new system inside the drop tile ceiling. Replace secondary drip pan and clear drains. Install new thermostat. Hang system with uni-strut and metal strap. Install new outdoor unit with new concrete pad, electrical whip, and disconnect.	8,480.00
Option 1: XR14 standard 5 Ton heat pump \$8,480.00	
Option 2: XR16 variable speed indoor heat pump \$9,808.00	
Option 3: XV20i Variable speed indoor and outdoor communicating \$15,239.00	
Please feel free to contact me at anytime Thank you Matt Stanley 940-300-8447	
Sales Tax	0.00
Please do not hesitate to call with any questions. Thank you!	
Total	\$8,480.00

Customer Approval: _____



CITY COUNCIL
AGENDA MEMO

Prepared By: Devin Shields, Public Works Manager

December 14th, 2017

Lake Dallas Drainage Discussion

DESCRIPTION:

Discuss various past and current drainage projects, new and outstanding drainage issues, and possible solutions.

BACKGROUND INFORMATION:

Council has requested a discussion on drainage issues in response to flooding issues being experienced by some residents. Staff has been working on identifying areas with drainage issues. Some of the issues involve replacing damaged culverts, digging out bar ditches, and opening blocked drainage paths. Others will require major renovations to public infrastructure in order to adequately address storm water runoff.

In the FY16-17 budget \$20,000 was allocated for “drainage” repairs. Staff assessed the areas with drainage issues and prioritize some drainage projects. In September 2017, City Council authorized a contract for drainage repairs to the locations below for a combined total cost of \$15,166.

- Repair the drainage on Shady Shores near the 300 block where the water pools after rainfalls events.
- Repair the headwalls at the 500 block of Lake Dallas Drive where the drainage backs up and is starting to erode the driveway into the property.
- Replace the culvert at Hundley Drive and Donald Lane, the culvert is undersized and too short for the radius of the street which causes drainage backups and erosion of the street.
- Replace the culvert at Nick St and Julian St, where the culvert has been rendered completely ineffective.

Staff has been working with HALFF Associates to explore options to address some larger drainage issues. We will present the estimated costs for drainage improvements on Lakeview Drive, Shore Drive and Lake Drive.

Staff has also been reviewing the City’s drainage requirements and development review procedures for new development. Development plans are being reviewed to ensure compliance with drainage requirements and standards. However, it appears that on-site inspection to ensure

compliance with approved drainage plans was not being done. Staff has received a proposal from HALFF to assist with the on-site inspection of drainage construction to ensure work was done in accordance with approved plans and specifications. Staff is recommending that we amend the Master Fee Schedule to allow for any costs charged to the City by HALFF for this service, be charged on to the developer.

FINANCIAL CONSIDERATION:

None, Discussion Only

RECOMMENDED MOTIONS:

Discussion Only

ATTACHMENT(S):

1. Lake Dallas Drainage Work Presentation – PowerPoint
2. Engineering Statement on of Probable Cost for Drainage Improvements
3. HALFF Proposal for on-site drainage inspection services



October 19, 2017
AVO 32011

John Cabrales
Interim City Manager
212 Main Street
Lake Dallas, TX 75065

**Re: Lake Dallas Construction Inspection Services
Proposal for Engineering Services**

Dear Mr. Cabrales,

Halff Associates, Inc. (Halff) is pleased to present our proposal for professional services required for Construction Inspection services for the City of Lake Dallas. Halff Associates Inc. (HAI) will conduct inspections to observe the construction work for progress and quality, and to assist with assurance that the work is proceeding in accordance with the approved plans, specifications, and/or standards set forth by the City of Lake Dallas for the following types of construction work.

The scope of this proposal shall include the following;

Storm Drainage/Water/Wastewater

Storm Drainage Pipe/Inlets/Manhole Structures
Culvert pipe
Wastewater Line/Appurtenances
Water Line/Appurtenances
Detention Ponds
Flume Construction
Levee Rehabilitation
Spillway Construction
SWPPP/Erosion Control
Underground Detention Structures
Weir Construction
Alternate Drainage Systems

Paving/Subgrade Treatment/Striping & Signage

Concrete Paving
Concrete Paving Repair
Asphalt Paving
Asphalt Paving Repair
Alley Paving
Curb/Gutter Paving

Drive Approach Paving
Flat Work Paving (General)
On-Street Parking
Sidewalk Paving
Trail Paving
Turn Lane/Deceleration Lane Paving
Barrier Free Ramps
Cement-Treated Base
Flex Base Subgrade
Subgrade Treatment - Cement
Subgrade Treatment - Lime
Traffic Striping/Signage
Temporary Traffic Control (for adequacy of the device and placement to specification)

Structural

Bridge Inspection
Building Slab
Gabion Mattress
Gabion Tie-Backs
Gabion Walls
Grading Operations
Gunite Walls
Pier Drilling
Retaining Walls
Soil Nails
Structural Steel
Structural Welding
Structure Removal

Specifically, HAI's scope includes: (1) Visits to the construction site as directed by the City. A minimum 48 hour notice is required for each request. (2) Preparation of site observation reports including a summary of the contractor's activities with photos. (3) Communication with the contractor as to the work schedule. (4) Email site observations and project status updates to the City as needed/requested. (5) Attend meetings as requested by the HAI project manager and/or City.

HAI's scope does not include: (1) Coordination of construction materials testing and/or schedule. (2) To provide or coordinate inspection, other than as provided above, of work done within rights-of-way owned and controlled by entities other than the City of Lake Dallas. (3) Full time inspection services. Inspections will be performed and completed with each individual request by the City.

Client understands and agrees that HAI is performing a professional service and HAI's role does not include construction site safety or construction means and methods as these are and shall remain the sole and exclusive responsibility of the construction contractor.

COMPENSATION

Inspection services will be compensated based on the inspector's hourly rate. HAI rates for inspection services are:

HAI Construction Inspection	
Position	Rate/HR
Supervising Inspector	\$95.00
Inspector 1	\$65.00

Unless otherwise stated, fees quoted in this proposal exclude state and federal sales taxes on professional services. Current Texas law requires assessment of sales tax on certain kinds of surveying services, but does not require sales taxes on other professional services. In the event that new or additional state or federal taxes are imposed on the professional services provided under this contract during the term of the work, such taxes will be added to the applicable billings and will be in addition to the quoted fees.

Exhibit "B" provides standard terms and conditions that can be used as a form of contract. The fees quoted in this proposal will be honored for up to 45 days from the date of this proposal.

We trust this proposal meets your requirements for this service request. We appreciate the opportunity to be of service and trust that our association on this project will be mutually beneficial. If this proposal meets with your approval, please execute Exhibit "B". Return one (1) copy as notification to proceed, approval of the budget and agreement to fee schedule and basis of compensation. Please feel free to contact us if you have any questions or comments concerning this matter.

Sincerely,

HALFF ASSOCIATES, INC.



Jay Reissig, P.E.
Project Manager

EXHIBIT B
STANDARD FORM OF AGREEMENT FOR PROFESSIONAL SERVICES
BETWEEN
CITY OF LAKE DALLAS (CLIENT) AND HALFF ASSOCIATES, INC. (ENGINEER)

I. SCOPE - Halff Associates, Inc. (hereinafter "Engineer") agrees to perform the professional services described in the attached Scope of Services which incorporates these terms and conditions. Unless modified in writing by the Parties hereto (i.e. Client and Engineer), the duties of Halff shall not be construed to exceed those services specifically set forth in the Scope of Services. The Scope of Services and this Standard form of Agreement, when executed by ***City of Lake Dallas*** a ***Municipal Entity*** (hereinafter "Client"), shall constitute a binding Agreement on both Parties. Engineer shall perform its obligations under this agreement as an independent contractor and not as an agent or fiduciary of any other Party.

II. COMPENSATION - Client agrees to pay monthly invoices or their undisputed portions within 30 days of receipt. Payment later than 30 days shall include interest at 1-1/2 percent per month or lesser maximum enforceable interest rate, from the date the Client received the invoice until the date Engineer receives payment. Such interest is due and payable when the overdue payment is made.

It is understood and agreed by the Parties that Engineer's receipt of payment(s) from Client is not contingent upon Client's receipt of payment, funding, reimbursement or any other remuneration from others.

Time-related charges will be billed as specified in this Agreement. Unless stated otherwise in this Agreement, direct expenses, subcontracted services and direct costs will be billed at actual cost plus a service charge of 10 percent. Mileage will be billed at current IRS rates.

III. RESPONSIBILITY - Engineer is employed to render a professional service only, and any payments made by Client are compensation solely for the services rendered and the recommendations made in carrying out the work. Engineer agrees to follow the standard practices of the engineering profession to make findings, provide opinions, make factual presentations, and provide professional advice and recommendations. Nothing contained herein shall be argued to have created any warranty or certification, and Engineer shall not be required to provide any certification, assignment or warranty of its work, but upon request and for a separate mutually agreed fee and fully executed contract amendment and at Engineer's sole discretion, Engineer may agree to provide certain specific written statements regarding its services. Such statements shall be in a form prepared by and acceptable to Engineer and shall be requested with sufficient advance notice to allow Engineer to review the documents and prepare a suitable statement.

Engineer's review or supervision of work prepared or performed by Client or by other individuals or firms employed by Client shall not relieve Client or those individuals or firms of complete responsibility for the adequacy of their work. It is understood that any resident engineering or inspection services provided or performed by Engineer shall be for the sole and exclusive purpose of reviewing the general compliance of such activities with respect to the technical provisions of the project specifications and such services by Engineer shall not constitute any form of guarantee with respect to the performance of any contractor. Engineer does not assume responsibility for methods or appliances used by a contractor, for safety conditions, or for compliance by contractors with applicable laws, rules and regulations.

IV. SCOPE OF CLIENT SERVICES - Client agrees to provide site access, and to provide those services described in the attached Scope of Services.

V. OWNERSHIP OF DOCUMENTS - Upon Engineer's completion of services and receipt of payment in full, Engineer shall grant to Client a non-exclusive license to possess the final drawings and instruments produced in connection with Engineer's performance of the work under this Agreement, if any. Said drawings and instruments may be copied, duplicated, reproduced and used by Client for the purpose of constructing, operating and maintaining the improvements. Client agrees that such documents are not intended or represented to be suitable for reuse by Client or others for purposes outside the Scope of Services of this Agreement. Notwithstanding the foregoing, Client understands and agrees that any and all computer programs, GIS applications, proprietary data or processes, and certain other items related to the services performable under this Agreement are and shall remain the sole and exclusive property of Engineer and may not be used or reused, in any form, by Client without the express written authorization of Engineer. Client agrees that any reuse by Client, or by those who obtain said information from or through Client, without written verification or adaptation by Engineer, will be at Client's sole risk and without liability or legal exposure to Engineer or to Engineer's employees, agents, representatives, officers, directors, affiliates, shareholders, owners, members, managers, attorneys, subsidiary entities, advisors, subconsultants or independent contractors or associates. Client agrees to indemnify Engineer, Engineer's subconsultants and independent associates for all damages, liability or cost arising from such reuse.

Engineer may reuse all drawings, reports, data and other information developed in performing the services described by this Agreement in Engineer's other activities.

VI. INDEMNIFICATION - Engineer agrees to indemnify Client from direct damages to the extent caused by the negligent act or omission or willful misconduct of Engineer, Engineer's employees, agents, representatives, officers, directors, affiliates, shareholders, owners, members, managers, attorneys, subsidiary entities, advisors, subconsultants or independent contractors or associates.

Client agrees to indemnify Engineer from damages to the extent caused by the negligent act or omission or willful misconduct of Client.

In the event that Client is found to be concurrently negligent, Engineer shall not indemnify for the proportionate negligence of Client, but shall only indemnify for the portion of negligence solely attributable to Engineer, its agents, servants, employees, subcontractors of any tier and their agents, servants and employees. Likewise, Client shall not indemnify Engineer for the proportionate negligence of Engineer.

Neither Party shall be liable to the other for lost profits or for incidental, special, speculative, remote or consequential damages, whether or not the possibility of such has been disclosed or could have been reasonably foreseen.

The Parties agree to indemnify one another against damages of third parties recoverable from the indemnitee to the extent caused by the comparative negligence of the indemnitor. Such negligence shall be measured by standards in effect at the time services are rendered, not by later standards.

Client acknowledges that Engineer may perform work at facilities that may contain hazardous materials or conditions, and that Engineer had no prior role in the generation, treatment, storage, or disposition of such materials. Engineer shall be indemnified and defended by Client for any and all claims arising out of the presence of hazardous materials or conditions except for those claims as determined by final judgment of a court of competent jurisdiction to arise out of the sole negligence of Engineer.

VII. INSURANCE - Engineer agrees to maintain during the life of the Agreement the following minimum insurance:

- A. Commercial general liability insurance, including personal injury liability, blanket contractual liability, and broad form property damage liability in an amount of not less than \$1,000,000.
- B. Automobile bodily injury and property damage liability insurance with a limit of not less than \$1,000,000.
- C. Statutory workers' compensation and employers' liability insurance as required by state law.
- D. Professional liability insurance (Errors and Omissions) with a limit of \$1,000,000 per claim/annual aggregate.

VIII. SUBCONTRACTS - Engineer shall be entitled to subcontract any portion of the work described in the Scope of Services.

IX. ASSIGNMENT - This Agreement is binding on the heirs, successors, and assigns of the Parties hereto. Neither this Agreement, nor any claims, rights, obligations, suits or duties associated hereto, shall be assigned or assignable by either Client or Engineer without the prior written consent of the other Party.

X. INTEGRATION - This Standard Form of Agreement and the Scope of Services, including fee and schedule are fully incorporated herein and represent the entire understanding of Client and Engineer. No prior oral or written understanding shall be of any force or effect with respect to those matters covered herein. The Agreement may not be modified or altered except in writing signed by both Parties.

XI. JURISDICTION AND VENUE - This Agreement shall be administered under the substantive laws of the State Texas (and not its conflicts of law principles) which shall be used to govern all matters arising out of, or relating to, this Agreement and all of the transactions it contemplates, including without limitation, its validity, interpretation, construction, performance and enforcement. Exclusive venue shall lie in **Denton** County, Texas.

XII. SUSPENSION OF SERVICES - If work under this Agreement is suspended for more than thirty (30) calendar days in the aggregate, the Engineer shall be compensated for services performed and charges incurred prior to receipt of notice to suspend, including an equitable adjustment in fees resulting from the demobilization and, as appropriate, remobilization. Additionally, Client agrees to equitably adjust the work schedule based on the delay caused by the suspension. If work under this Agreement is suspended for more than ninety (90) calendar days in the aggregate, the Engineer may, at its option, terminate this Agreement upon giving notice in writing to the Client. Further, Engineer may request that the work be suspended by notifying Client, in writing, of circumstances or conditions interfering with normal progress of the work. If the Client fails to make timely payments to Engineer or is otherwise in breach of this Agreement, the Engineer may suspend performance of services upon five (5) calendar days' notice to the Client. The Engineer shall have no liability to the Client for any costs or damages resulting from a suspension occasioned by any breach or perceived breach of this Agreement by Client.

XIII. TERMINATION OF WORK - Either the Client or the Engineer may terminate this Agreement at any time with or without cause upon giving the other Party ten (10) calendar days' prior written notice. Client agrees that termination of Engineer for Client's convenience shall only be utilized in good faith, and shall not be utilized if either the purpose or the result of such termination is the performance of all or part of Engineer's services under this Agreement by Client or by another service provider. Following Engineer's receipt of such termination notice the Client shall, within ten (10) calendar days of Client's receipt of Engineer's final invoice, pay the Engineer for all services rendered and all costs incurred up to the date of Engineer's receipt of such notice of termination.

XIV. TAXES - The fees and costs stated in this Agreement, unless stated otherwise, exclude all sales, consumer, use and other taxes. Client agrees to fully reimburse Engineer and its subconsultants for taxes paid or assessed in association with the work under this Agreement, whether those taxes were in effect as of the date of this Agreement or were promulgated after the date of this Agreement. This clause shall not apply to taxes associated with reimbursable or other project related expenses, which shall be identified in the applicable invoice for reimbursement by Client.

XV. ALTERNATIVE DISPUTE RESOLUTION - Any conflicts or disputes that arise under or through this Agreement or that may exist following the completion thereof shall be discussed at a meeting of one senior management person from Client and one from Engineer. This meeting shall be a condition precedent to the institution of any legal or equitable proceedings, unless such meeting will infringe upon schedules defined by applicable statutes of limitation or repose. Should such a situation arise, the Parties agree that such meeting shall still be required, but the institution of said proceedings shall not be precluded for failure to meet this specific meeting requirement.

XVI. MERGER AND SEVERABILITY - This Agreement constitutes, represents and is intended by the Parties to be the complete and final statement and expression of all of the terms and arrangements between the Parties to this Agreement with respect to the matters provided for in this Agreement. This Agreement supersedes any and all prior or contemporaneous agreements, understandings, negotiations, and discussions between the Parties and all such matters are merged into this Agreement. Should any one or more of the provisions contained in this Agreement be determined by a court of competent jurisdiction or by legislative pronouncement to be void, invalid, illegal, or unenforceable in any respect, such voiding, invalidity, illegality, or unenforceability shall not affect any other provision hereof, and this Agreement shall be considered as if the entirety of such void, invalid, illegal, or unenforceable provision had never been contained in this Agreement.

XVII. EXCLUSIVITY OF REMEDIES - The Parties acknowledge and agree that the remedies set forth in this Agreement, including those set forth in Article VI. Indemnification and Article XIX. Agreed Remedies are and shall remain the Parties' sole and exclusive remedy with respect to any claim arising from, or out of, or related to, the subject matter of this Agreement. The Parties agree that Engineer is to have no liability or responsibility whatsoever to Client for any claim(s) or loss(es) of any nature, except as set forth in this Agreement. No Party shall be able to avoid the limitations expressly set forth in this Agreement by electing to pursue some other remedy.

XVIII. TIMELINESS OF PERFORMANCE - Engineer shall perform its professional services with due and reasonable diligence consistent with sound professional practices.

XIX. AGREED REMEDIES - IN RECOGNITION OF THE RELATIVE RISKS AND BENEFITS OF THE PROJECT

TO BOTH THE CLIENT AND THE ENGINEER, AND ACKNOWLEDGING THAT THE ALLOCATION OF RISKS AND LIMITATIONS OF REMEDIES ARE BUSINESS UNDERSTANDINGS BETWEEN THE PARTIES AND THESE RISKS AND REMEDIES SHALL APPLY TO ALL POSSIBLE LEGAL THEORIES OF RECOVERY. CLIENT FURTHER AGREES, TO THE FULLEST EXTENT PERMITTED BY LAW, AND NOTWITHSTANDING ANY OTHER PROVISIONS OF THIS AGREEMENT OR ANY REFERENCE TO INSURANCE OR THE EXISTENCE OF APPLICABLE INSURANCE COVERAGE, THAT THE TOTAL LIABILITY, IN THE AGGREGATE, OF THE ENGINEER AND ENGINEER'S OFFICERS, DIRECTORS, EMPLOYEES, AGENTS, AND SUBCONSULTANTS TO THE CLIENT OR TO ANYONE CLAIMING BY, THROUGH OR UNDER THE CLIENT, FOR ANY AND ALL CLAIMS, LOSSES, COSTS OR DAMAGES WHATSOEVER ARISING OUT OF, RESULTING FROM, OR IN ANY WAY RELATED TO, THE SERVICES UNDER THIS AGREEMENT FROM ANY CAUSE OR CAUSES OF THE ENGINEER OR THE ENGINEER'S OFFICERS, DIRECTORS, EMPLOYEES, AGENTS, AND SUBCONSULTANTS, SHALL NOT EXCEED THE ENGINEER'S FEE FOR THE SERVICES PERFORMED UNDER THIS AGREEMENT OR \$50,000, WHICHEVER IS GREATER. INCREASED LIMITS MAY BE NEGOTIATED FOR ADDITIONAL FEE.

Further, it is the intent of the Parties to this Agreement that Engineer's services under this Agreement shall not subject Engineer's individual employees, officers or directors to any personal legal exposure for claims and risks associated with the services performed or performable under this Agreement.

XX. **WAIVER** - Any failure by Engineer to require strict compliance with any provision of this Agreement shall not be construed as a waiver of such provision, and Engineer may subsequently require strict compliance at any time, notwithstanding any prior failure to do so.

APPROVED:

Engineer: HALFF ASSOCIATES, INC.

Signature: 

Name: DAN W. WARFIELD

Title: DIRECTOR OF LAND DEVELOPMENT

Date: 10-19-2017

APPROVED: CITY OF LAKE DALLAS

Client: _____

Signature: _____

Name: _____

Title: _____

Date: _____

ENGINEER'S STATEMENT OF PROBABLE COST

Lakeview\Shore\Lake Drive Drainage Improvements

Project: Lakeview\Lake\Shore Drive Drainage Improvements
Client: City of Lake Dallas

Prepared by: Brian C. Haynes, P.E., CFM
Date: November 22, 2017

Current Date: 2017 year
 Estimated Construction Date: 2018 year

ITEM NO.	DESCRIPTION	UNIT	QTY	Engineer's Estimate	
				UNIT PRICE	EXTENDED PRICE
Section I - Lakeview Drive Drainage Improvements					
1	Road Preparation (5% Maximum)	LS	1	\$7,000.00	\$7,000.00
2	Mobilization (5% Maximum)	LS	1	\$7,000.00	\$7,000.00
3	Project Signs	EA	2	\$750.00	\$1,500.00
4	Barricades, Signs and Traffic Handling	MO	12	\$2,500.00	\$30,000.00
5	Construction Staking	STA	1.5	\$750.00	\$1,125.00
6	Remove and Dispose of Concrete Pavement	SY	275	\$12.00	\$3,300.00
7	Earthwork (Excavation)(Assuming 1-ft depth)	CY	2,500	\$12.00	\$30,000.00
8	Flexible Base (6")	SY	275.0	\$25.00	\$6,875.00
9	Concrete Pavement (8") (4,000 PSI)	SY	275	\$60.00	\$16,500.00
10	Concrete Pavement (6") (4,000 PSI)	SY	6	\$45.00	\$247.50
11	Erosion Control	LS	1.0	\$2,500.00	\$2,500.00
12	Pavement Markings and Signage	LS	1.0	\$1,000.00	\$1,000.00
13	Reinforced Concrete Pipe (CL III) (18 IN)	LF	150.0	\$60.00	\$9,000.00
14	Reinforced Concrete Pipe (CL III) (24 IN)	LF	90.0	\$80.00	\$7,200.00
15	Trench Safety	LF	240.0	\$2.50	\$600.00
16	Inlets (Curb or Grate)	EA	5.0	\$4,000.00	\$20,000.00
17	18" Rock Rip Rap	SY	15	\$100.00	\$1,500.00
Subtotal Section I					\$145,347.50
Section II - Lake Drive Drainage Improvements					
1	Trench Drain	LF	20.0	\$275.00	\$5,500.00
2	8" PVC Pipe	LF	50.0	\$50.00	\$2,500.00
Subtotal Section II					\$8,000.00

ITEM NO.	DESCRIPTION	UNIT	QTY	Engineer's Estimate	
				UNIT PRICE	EXTENDED PRICE
Section III - Shore Drive Drainage Improvements					
1	Road Preparation (5% Maximum)	LS	1	\$8,000.00	\$8,000.00
2	Mobilization (5% Maximum)	LS	1	\$8,000.00	\$8,000.00
3	Project Signs	EA	2	\$750.00	\$1,500.00
4	Barricades, Signs and Traffic Handling	MO	12	\$2,500.00	\$30,000.00
5	Construction Staking	STA	7.7	\$750.00	\$5,775.00
6	Erosion Control	LS	1.0	\$2,500.00	\$2,500.00
7	Pavement Markings and Signage	LS	1.0	\$2,000.00	\$2,000.00
8	Remove and Dispose of Asphalt Pavement	SY	1,000	\$5.00	\$5,000.00
9	Earthwork (Excavation)(Assuming 1-ft depth)	CY	1,000	\$12.00	\$12,000.00
10	Cement Treated Subgrade (6")	SY	1,000.0	\$6.00	\$6,000.00
11	Cement Slurry (40 lbs./SY)	TON	20.0	\$225.00	\$4,500.00
12	Concrete Pavement (6") (4,000 PSI)	SY	1,000	\$45.00	\$45,000.00
13	Reinforced Concrete Pipe (CL III) (18 IN)	LF	550.0	\$60.00	\$33,000.00
14	Trench Safety	LF	550.0	\$2.50	\$1,375.00
15	Inlets (Curb or Grate)	EA	2.0	\$4,000.00	\$8,000.00
16	Headwall (18" RCP)	EA	1.0	\$3,000.00	\$3,000.00
Subtotal Section III					\$175,650.00
SUBTOTAL CONSTRUCTION IMPROVEMENTS					\$329,000.00
CONTINGENCY (20%)					\$65,800.00
TOTAL CONSTRUCTION					\$394,800.00
BASIC ENGINEERING SERVICES					\$40,000.00
SPECIAL ENGINEERING SERVICES (SURVEYING)					\$6,000.00
CONSTRUCTION MATERIAL TESTING (2.5%)					\$8,000.00
TOTAL PROJECT COSTS					\$448,800.00
INFLATION ADJUSTMENT (2.5% PER YEAR)					\$8,200.00
TOTAL IMPROVEMENTS (ASSUMING CONSTRUCTION BEGINS IN 2019)					\$460,000.00
Notes:					
1. Street lighting is <u>excluded</u> from this estimate.					
2. An inflation rate of 2.5% was assumed based on the average Consumer Price Index from 2000 to 2013.					
3. Right-of-Way Acquisition Services are excluded from this estimate.					
4. Construction Material Testing costs were estimated at 2.5% of the overall construction cost.					
NOTE: This statement was prepared utilizing standard cost and/or estimating practices. It is understood and agreed that this is a statement of probable construction cost only, and the Engineer shall not be liable to the Owner or any Third Party.					



CITY COUNCIL
AGENDA MEMO

Prepared By: Devin Shields, Public Works Manager

December 14th, 2017

Willow Grove Park Pavilion Rental Rate Adjustment

DESCRIPTION:

Discussion regarding the Parks Board recommendation to alter the fee schedule as it pertains to the Willow Grove Park Pavilion rental.

BACKGROUND INFORMATION:

On October 17th, 2017 discussions and a vote took place to adjust the Pavilion rental rates. The board voted unanimously to move from \$30/hour plus a \$200 deposit, to \$75/day plus a \$75 deposit.

FINANCIAL CONSIDERATION:

A reduction in rates may impact the revenues for Willow Grove Park, however the Pavilion has not been rented often, which may be due in part to the current rates.

RECOMMENDED MOTIONS:

N/A; Discussion Only

ATTACHMENT(S):

Parks Board Meeting Minutes from October 17th, 2017

Lake Dallas Parks and Rec. Board

Meeting Minutes

October 17, 2017

I. Call to order

Meeting called to order at 7:05pm

II. Roll call

Roll Call Conducted by Wayne James. In Attendance Were Board Members, Dana Rhodes, Wayne James, Raymond Daniels and Margaret McCarty. Cheryl McClain was present as Council liaison. Devin Shields Present as City of Lake Dallas Liaison.

III. Open issues

- 1) No Public Comments
- 2) City Manager John Cabrales gave an update on upcoming and future events.
- 3) Update given on Parks
- 4) Discussion and vote on Willow Grove Park Pavilion rate adjustment. From current \$30/hr (\$15/hr for non-profits) and \$200 deposit, to \$75/day and a \$75 deposit. Unanimously voted in favor of the rate adjustment.
- 5) Park Financial Reports given to members. No discussion.
- 6) City Manager John Cabrales gave a brief presentation to discuss the future uses and plans for Willow Grove Park

IV. New business

- a) Further discussion of future uses and policies of Willow Grove Park

V. Adjournment

Meeting Adjourned by Wayne James at 8:02pm.

Minutes submitted by: Devin Shields

Minutes approved by: