City of Lake Dallas
City Council
Regular Meeting
City Hall
212 Main Street, Lake Dallas, TX 75065
Thursday, April 25, 2019 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. 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.

   B. Proclamation for Motorcycle Safety and Awareness Month.

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. Approval of Minutes of the Meeting held April 11, 2019.
B. Approval of Resolution authorizing a reduction in certain Development Fees due relating to an application for final plat of 6.75± acres out of the Thomas White, Jr. Survey, Abstract No. 1376 generally located at the southwest corner of Dobbs Road and River Oak Way.
C. Approval of Resolution authorizing a reduction in certain Development Fees due relating to development of 0.94± acres out the Thomas White, Jr. Survey Abstract No. 1355 generally located West of Alamo Avenue in the 100 Block of Market Street.
D. Approval of Resolution ratifying the agreement with Pool Butler Partnership d/b/a Lawn Butler for mowing and property remediation and authorizing expenditures pursuant to said agreement.

Section III – Planning & Development:

6. Receive a report and hold a discussion regarding amendments to the Lake Dallas Code of Ordinances amending Chapter 22, "Buildings and Regulations," to update the International Building Code, International Residential Code, International Energy Conservation Code, International Plumbing Code, the International Mechanical Code and the International Fuel Code to the 2018 edition with local amendments.

7. Receive a report and hold a discussion regarding amending, in its entirety, Chapter 46 "Fire Prevention and Protection," Article II "Fire Code" of the Code of Ordinances, by adopting the 2018 edition of the International Fire Code with local amendments

Section IV- General Items

8. Receive a report and hold a discussion regarding the Children's Advocacy Center for Denton County.
9. Consider and Act on a Resolution authorizing negotiation and execution of Children's Services Funding Agreement with Children's Advocacy Center for Denton County for the FY 2018-19.
10. Receive a report and hold a discussion regarding the Lake Dallas Library Department's accomplishments for the current fiscal year and goals for the upcoming fiscal year.

11. Receive a report and hold a discussion regarding the formation of a Rental Registration Program Committee of stakeholders to help staff in the determination of language for a Property Maintenance Code, and the development of a Rental Registration Program.

Section V – Elected Official Requested Items

12. 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.

Section VII – Return to Open Session

13. Discuss and take appropriate action, if any, resulting from the discussions conducted in Closed Session.

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 April 22, 2019 at 5:00 p.m.

Codi Delcambre

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.

PROCLAMATION
MOTORCYCLE SAFETY AND AWARENESS MONTH

WHEREAS, today's society is finding more citizens involved in motorcycling on the roads of our country; and

WHEREAS, motorcyclists are roughly unprotected and therefore more prone to injury or death in a crash than other vehicle drivers; and

WHEREAS, campaigns have helped inform riders and motorists alike on motorcycle safety issues to reduce motorcycle related risks, injuries, and most of all, fatalities, through a comprehensive approach to motorcycle safety; and

WHEREAS, it is the responsibility of all who put themselves behind the wheel, to become aware of motorcyclists, regarding them with the same respect as any other vehicle traveling the highways of this country; and it is the responsibility of riders and motorists alike to obey all traffic laws and safety rules; and

WHEREAS, urging all citizens of our community to become aware of inherent danger involved in operating a motorcycle, and for riders and motorists alike to give each other the mutual respect they deserve:

NOW, THEREFORE, I, Michael Barnhart, Mayor of City of Lake Dallas, Texas do hereby proclaim the month of May, as Motorcycle Safety and Awareness Month in the city. Further, I urge all residents to do their part to increase safety and awareness in our community.

IN WITNESS WHEREOF, I have set my hand and caused the Seal of the City to be affixed this 28th day of April, 2019.

City of Lake Dallas, Texas

_____

Michael Barnhart, Mayor

State of Texas
County of Denton
City of Lake Dallas

The Lake Dallas City Council met in a regular meeting on April 11, 2019 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 7:05 p.m.

1. Roll Call

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

Absent:

Kathy Brownlee	Councilmember 2

Staff Present: City Manager John Cabrales, City Secretary Codi Delcambre, Police Chief Carolla, Public Works Manager Devin Shields, Director of Development Services Jeremy Tennant, Director of Library Services Natalie McAdams, Michele Sanchez, Finance Director, Daniel Rusnak, Code Enforcement Officer and City Attorney Kevin Laughlin.

2. Invocation and Pledges of Allegiance
John Moore led the invocation and Mayor Barnhart pledges.

3. Announcements & Special Recognitions.

A. City Manager's Report
Presentation of Officer of the Quarter to Officer Farrell and Det. Hall.
Presentation to Kenneth Gordan and Wilma Yancy for Beautification of Lake Dallas.

4. Citizen Agenda & Public Comments
Mayor Barnhart opened the Visitors/Citizens Agenda.

No one spoke.

5. Consider and Act on the Consent Agenda

A. Receive Monthly Budget & Financial Report for January.
B. Approval of Minutes of the Meeting held February 14, 2019 and March 28, 2019.
C. Approval of Resolution authorizing the City Manager to negotiate and sign an Interlocal Agreement with Denton County for Police Communication Services for FY 2019-20.
D. Approval of Resolution authorizing the negotiation and execution of agreement with Thomas Carnival, Inc. to conduct a carnival in City Park.

E. Approval of Resolution authorizing Change Order to Contract with RPM Construction for Replacement of City Hall Roof to add replacement of roofs for Boys and Girls Club Building and Fire Station No. 1.

Councilmember Price pulled items 5A and 5E.

Motion: to approve the consent agenda item 5B, 5C, 5D and 5F was made by Councilmember Ray and second by Councilmember McClain.

Ayes: Councilmembers Ray, McClain, Price, and Nolan
Noes: None

Motion Passed 4-0.

Motion: to approve the consent agenda item 5A was made by Councilmember Price and second by Councilmember Ray.

Ayes: Councilmembers Ray, McClain, Price and Nolan
Noes: None

Motion Passed 4-0.

Motion: to approve the consent agenda item 5E was made by Councilmember Ray and second by Councilmember Nolan.

Ayes: Councilmembers Ray, McClain, Price and Nolan
Noes: None

Motion Passed 4-0.

6. Receive a report and hold a discussion regarding a request by the applicant for River Oak Way, Mentor Homes, LLC for a fee waiver for the submission of a new final plat request, and request by the applicant for the Lantrip Bungalow Developments for a fee credit for engineer review fees by the City's third-party engineering firm.

Council received a presentation from Development Services Director Jeremy Tennant regarding a request by the applicant for River Oak Way, Mentor Homes, LLC for a fee waiver for the submission of a new final plat request, and request by the applicant for the Lantrip Bungalow Developments for a fee credit for engineer review fees by the City's third-party engineering firm.

Council directed staff to proceed with a Resolution for the fee waivers.

7. Receive a presentation and discuss safety issues and possible solutions for the DCTA Rail Trail crossings.

Council received a presentation from Public Works Managers Devin Shields regarding safety issues and possible solutions for the DCTA Rail Trail crossings.

8. **Receive a report and hold a discussion regarding the Lake Dallas Police Department's accomplishments for the current fiscal year and goals for the upcoming fiscal year.**

   Council received a presentation from Police Chief Dan Carolla regarding the Lake Dallas Police Department's accomplishments for the current fiscal year and goals for the upcoming fiscal year.

9. **Receive a report and hold a discussion regarding a possible ethics ordinance for the City of Lake Dallas.**

   Council received a presentation from City Manager John Cabrales regarding possible ethics ordinance for the City of Lake Dallas.

   Council directed staff to move forward with preparing an ordinance.

10. **Mayor & Council Member Announcements:**

    No announcements.

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

Council did not convene into executive session.

11. **Discuss and take appropriate action, if any, resulting from the discussions conducted in Closed Session.**

12. **Adjournment**

Mayor Barnhart adjourned the meeting at 9:23 p.m.

Approved:

_____
Michael Barnhart, Mayor

Attest:

_____
Codi Delcambre, City Secretary

AGENDA ITEM 5B

CITY COUNCIL
AGENDA MEMO

Prepared By: Jeremy Tennant, Director of Development Services **April 25, 2019**

Fee Waiver for Mentor Homes, LLC

DESCRIPTION:

Consider a Resolution of the City Council of Lake Dallas, Texas, B. authorizing a reduction in certain Development Fees due relating to an application for final plat of 6.75± acres out of the Thomas White, Jr. Survey, Abstract No. 1376 generally located at the southwest corner of Dobbs Road and River Oak Way.

BACKGROUND INFORMATION:

MENTOR HOMES, LLC aka RIVER OAK WAY SUBDIVISION

The applicant, Mentor Homes, LLC, submitted a preliminary plat request to re-subdivide one (1) lot of record into fifteen (15) lots of record. The applicant received approval for the preliminary plat in March 16, 2017, and the preliminary plat was approved by the City Council on March 23, 2017. On June 15, 2017, the final plat was deferred due to the lack of a site drainage plan and the request for a hydrology report by the City's engineers. In 2017, the fee schedule required a fee of $1,300.

On May 4, 2018, staff received the Hydrologic/Hydraulic Models to review. This submittal initiated the Final Plat request to proceed to the Planning and Zoning Commission. The Final Plat request went before the Planning and Zoning Commission on June 14, 2018; however, the request was tabled by the Commission due to the issues identified by the City's third-party engineering firm regarding the flood study and drainage plan as a result of the first round of review comments. Ultimately, the item was tabled until the November 15, 2018, at which time the Planning and Zoning Commission recommended to deny the applicant's final plat request. Subsequently, the City Council voted to deny the request as well on December 3, 2018. At the time of the denial, there were four (4) items that were yet to be addressed. They are as follows:

1. A geotechnical sub-surface report has not been provided.
2. The engineer has not provided soil condition assumptions and calculations used to design the retaining wall.
3. There are several comments from the third comment review letter and plan that have not been addressed.
4. Revised plans (including showing where the floodplain is located) and a plat for final review have not been received.

The applicant has stated that they have addressed the four outstanding items and are wanting to submit another application to complete the final plat subdivision request. The applicant is requesting a partial waiver of the application fee relating to the resubmission, desiring to pay the fee in accordance with the prior fee schedule for a total of $1,300.

Previously, the applicant requested a final plat for fifteen (15) lots. As per the FY 2017 Fee Schedule, a Major Plat was $1,000 plus $20 per lot; plus, professional review fees. The applicant did pay all fees in full.

Currently, the applicant is requesting a final plat for fourteen (14) lots. As per the FY 2019 Fee Schedule, a Major Plat is $1200 plus $30 per lot; plus, professional review fees. The balance of the fee request to be waived is $1620, plus professional review fees.

The applicant has requested that the City provide a waiver for the total cost of the fees for the filing of a new plat since there is only four more items remaining to finalize and complete the development. Staff recommends a waiver of $600.00 from the plat fee; leaving a balance of $1,020.00 plus review fees.

River Oak Way Subdivision Fees			
	Fees	**Fee w/o Adjustment**	**Fee w/ Adjustment**
	Plat Fee	$1,200	$600
	$30.00 per lot	$420	$420
TOTAL		$1,620	$1,020
	Notice Fee	$250	$250
	Eng. Review Fee	TBD	TBD
TOTAL		**$1,870**	**$1,270**

FINANCIAL CONSIDERATION:

By waiving certain development fees for the River Oak Way Final Plat second submittal, the developer will be responsible for $1,020.00 in fees, plus and notice and engineering review costs. The City will forego payment of $600 in development fees.

MOTIONS:

I move to **APPROVE/DENY** a resolution authorizing a reduction in certain Development Fees due relating to an application for final plat of 6.75± acres out of the Thomas White, Jr. Survey, Abstract No. 1376 generally located at the southwest corner of Dobbs Road and River Oak Way

ATTACHMENT(S):

1. Resolution for fee waivers for River Oak Way final plat

CITY OF LAKE DALLAS, TEXAS
RESOLUTION 04252019-_____

A RESOLUTION OF THE CITY COUNCIL OF LAKE DALLAS, TEXAS, AUTHORIZING A REDUCTION IN CERTAIN DEVELOPMENT FEES DUE RELATING TO AN APPLICATION FOR FINAL PLAT OF 6.75± ACRES OUT OF THE THOMAS WHITE, JR. SURVEY, ABSTRACT NO. 1376 GENERALLY LOCATED AT THE SOUTHWEST CORNER OF DOBBS ROAD AND RIVER OAK WAY; AND PROVIDING AN EFFECTIVE DATE

WHEREAS, an application for final plat of 6.75± acres out of the Thomas White, Jr, Survey, Abstract No. 1376, generally located at the southwest corner of Dobbs Road and River Oaks Way ("the River Oaks Plat Property") was denied by the City Council on December 13, 2018 for failure to comply with applicable City subdivision requirements; and

WHEREAS, the owner and developer of the River Oaks Plat Property have made the required corrections and submissions resulting in the prior denial of the River Oaks Plat application and desire to resubmit a new application for final plat of the River Oaks Plat Property; and

WHEREAS, prior to the denial of the prior plat application, the City Council revised the fees for an application for a final plat of property within the City; and

WHEREAS, the owner and developer of the River Oaks Plat Property have requested they only be required to pay an application fee for a new final plat application for the subdivision of the River Oaks Plat Property based on the fee schedule in effect at the time the first application for final plat of the River Oaks Plat Property was submitted; and

WHEREAS, the City Council of the City of Lake Dallas, having heard and considered the request of the owner and developer of the River Oaks Plat Property and the presentation and recommendation of City staff finds it to be in the public interest modify the amount of the application fee required for a new application for the final plat of the River Oaks Plat Property;

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

SECTION 1. The City Manager is hereby authorized to accept as full payment a reduced application fee for the final plat of the River Oaks Plat Property based on a rate of $600 plus $30 per lot provided such application is submitted and the fee paid not later than 90 days from the effective date of this resolution.

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

PASSED AND APPROVED this the 25th day of April 2019.

APPROVED:

_____
Michael Barnhart, Mayor

ATTEST:

_____
Codi Delcambre, TRMC, City Secretary

APPROVED AS TO FORM:

_____
Kevin B. Laughlin, City Attorney
(kbl:4/18/19:107456)

AGENDA ITEM 5C

CITY COUNCIL
AGENDA MEMO

Prepared By: Jeremy Tennant, Director of Development Services **April 25, 2019**

Fee Waiver Lantrip Duplex Development

DESCRIPTION:

Consider a Resolution of the City Council of Lake Dallas, Texas, authorizing a reduction in certain Development Fees due relating to development of 0.94± acres out the Thomas White, Jr. Survey Abstract No. 1355 generally located West of Alamo Avenue in the 100 Block of Market Street.

BACKGROUND INFORMATION:

LANTRIP'S BUNGALOW/DUPLEX

The applicant, Mr. Terry Lantrip, for the Bungalow/Duplex development has requested a waiver of the engineering fees due to the back and forth and miscommunication/errors on the part of the applicant in not understanding how to address the multiple comments that were required to complete and finalize the comment period. Due to Halff's multiple reviews, the applicant has requested a reduction in the fees for the Bungalow/Duplex development.

The development of the bungalows at 109 Market Street previously has had three plan reviews due to the minimum dwelling unit per square feet not being met and most recently has had four of plan review comments for not providing an adequate drainage plan.

Bungalow Engineering Review Fees			
	Invoice #	**Date**	**Amount**
	9836	2/28/2018	$ 326.74
	16091	4/30/2018	$ 1,368.51
	13836	6/30/2018	$ 563.94
TOTAL			**$ 2,259.19**

Due to the applicant's perceived misunderstanding of the development process as it relates to municipal code, staff recommends that a fee waiver to reduce the amount owed for engineering fees in half to total $1,129.59 in payment instead of the original balance in an interest to move the development along. Staff acknowledges that this fee must be paid prior to the issuance of an occupancy permit.

FINANCIAL CONSIDERATION:

By waiving certain development review costs for the Lantrip Bungalow/Duplex Development, the developer will be responsible for $1,129.59 and the City will be responsible for $1,129.60 of the engineering fees billed to the City.

MOTIONS:

I move to **APPROVE/DENY** a resolution authorizing a reduction in certain Development Fees due relating to development of 0.94± acres out the Thomas White, Jr. Survey Abstract No. 1355 generally located West of Alamo Avenue in the 100 Block of Market Street.

ATTACHMENT(S):

1. Resolution for fee waivers for Lantrip Bungalow/Duplex Development

CITY OF LAKE DALLAS, TEXAS
RESOLUTION 04252019-_____

A RESOLUTION OF THE CITY COUNCIL OF LAKE DALLAS, TEXAS, AUTHORIZING A REDUCTION IN CERTAIN DEVELOPMENT FEES DUE RELATING TO DEVELOPMENT OF 0.94± ACRES OUT OF THE THOMAS WHITE, JR. SURVEY ABSTRACT NO. 1355 GENERALLY LOCATED WEST OF ALAMO AVENUE IN THE 100 BLOCK OF MARKET STREET; AND PROVIDING AN EFFECTIVE DATE

WHEREAS, the owner of the 0.94± acres out of the Thomas White, Jr. Survey Abstract No. 1355 generally located west of Alamo Avenue in the 100 Block of Market Street, said property being more particularly described in Exhibit "A" attached hereto and incorporated herein by reference,("the Property") has made application for a development site plan relating to the Property in relation to obtaining on or more building permits to construct buildings on the Property ("the Site Plan"); and

WHEREAS, during the course of reviewing the application for the Site Plan by City staff and City's third-party professional engineer, multiple reviews of the Site Plan have occurred during the course of working with the Property's owner and the owner's engineer in developing the design of the drainage plan for the portion of the Property being developed that complies with applicable City ordinances; and

WHEREAS, pursuant to City ordinances, property developers are required to reimburse the City for the City's cost incurred in engaging a professional engineer to review development applications and consult with the City on whether such applications comply with City ordinances and regulations; and

WHEREAS, the owner of the Property has requested that he not be required to reimburse the City for some or all of the third-party engineering fees paid in relation to the review of the drainage plan design for the portion of the Property that is the subject of the Site Plan; and

WHEREAS, the City Council of the City of Lake Dallas, having heard and considered the request of the owner of the Property and the presentation and recommendation of City staff finds it to be in the public interest modify the amount of the outside engineering review fee otherwise required to be paid in relation to review of the Site Plan;

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

SECTION 1. The City Manager is hereby authorized to accept from Terry Lantrip as full payment for the plan review fees charged to the City by Halff Engineering relating to review of the Site Plan, as identified in the following table by invoice number and date, an amount equal to fifty percent (50%) of the amount billed to the City, which amount must be paid prior to (a) issuance of any certificates of occupancy for buildings under construction on the Property on the

effective date of this resolution and (b) the issuance of any buildings to be constructed on the Property for which permits have not already been issued prior to the effective date of this resolution:

Bungalow Engineering Review Fees			
	Invoice #	**Date**	**Amount**
	9836	2/28/2018	$326.74
	16091	4/30/2018	$1,368.51
	13836	6/30/2018	$563.94
TOTAL **50% of Total**			**$2,259.19** **$1,129.59**

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

PASSED AND APPROVED this the 25th day of April 2019.

APPROVED:

_____
Michael Barnhart, Mayor

ATTEST:

_____
Codi Delcambre, TRMC, City Secretary

APPROVED AS TO FORM:

_____
Kevin B. Laughlin, City Attorney
(kbl:4/18/19:107465)

Resolution No. 04252019-____
Exhibit "A" – Description of Property

Being approximately 0.94 acres of land (The Property) out of the Thomas White Jr Survey, Abstract No. 1355, including a portion of Lot 9 of Block 1, Gotcher Addition, and Lots 1 through 4 of the O.T. Garza Addition, commonly known as being located on the north side of the 100 block of Market Street, west of Alamo Avenue, and being composed of the following four tracts of land:

1. Being a portion of Lot 9 of Block 1, Gotcher Addition, specifically the south 70 feet (70') of the eastern ½ of lot, containing 0.29 acres of land and being addressed as 103 Market Street.

2. Being Tract 23 out of the Thomas White Jr Survey, Abstract No. 1355, containing 0.25 acres of land and being addressed as 105 Market Street.

3. Being Tract 24 out of the Thomas White Jr Survey, Abstract No. 1355, containing 0.12 acres of land and being situated on the north side of Market Street.

Being platted as Lots 1 through 4 of the O.T. Garza Addition, containing 0.28 acres of land and being situated at the northwest corner of Market Street and Alamo Avenue.

AGENDA ITEM 5D

CITY COUNCIL
AGENDA MEMO

Prepared By: Jeremy Tennant, Director of Development Services **April 25, 2019**

Lawn Butler Mowing and Property Remediation Contract

DESCRIPTION:

Consider and Act on a resolution of the City Council of the City of Lake Dallas, Texas ratifying the agreement with Pool Butler Partnership d/b/a Lawn Butler for mowing and property remediation and authorizing expenditures pursuant to said agreement; and providing an effective date.

BACKGROUND INFORMATION:

In an effort to free up the Public Works' Department staff time to work on street, drainage and facilities projects, staff is recommending increasing the expenditures in the agreement with Lawn Butler to a not exceed amount of $10,000 under the existing contract to provide mowing and property remediation. The $10,000 will also include any remediation necessary to address any issues on the recently purchased CDC properties, as necessary.

FINANCIAL CONSIDERATION:

Staff is recommending a not to exceed $10,000 for the mowing and property remediation contract. In the current FY18-19 Budget, there is $10,000 in abatement. For example, staff will be talking with the CDC Board about the maintenance of their recently acquired properties.

RECOMMENDED MOTIONS:

I move to **APPROVE/DENY** resolution authorizing the City Manager to negotiate and execute a service contract for the mowing and property remediation at various locations within the corporate limits of the City of Lake Dallas with Lawn Butler in an amount not to exceed $10,000.

ATTACHMENT(S):

1. Resolution
2. Mowing and Property Remediation Service Contract

CITY OF LAKE DALLAS, TEXAS
RESOLUTION NO. 04252019- _____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LAKE DALLAS, TEXAS, RATIFYING THE AGREEMENT WITH POOL BUTLER PARTNERSHIP D/B/A LAWN BUTLER FOR MOWING AND PROPERTY REMEDIATION AND AUTHORIZING EXPEDITURES PURSUANT TO SAID AGREEMENT; PROVIDING AN EFFECTIVE DATE

WHEREAS, pursuant to the authority granted to the City Manager pursuant to the City Charter and Section 2-93 of the Lake Dallas Municipal Code, the City Manager entered into an agreement with Pool Butler Partnership, a Texas general partnership, d/b/a Lawn Butler effective December 20, 2018 ("the Agreement"), to provide mowing and property remediation services to the City in relationship to the City's enforcement of various property maintenance and nuisance ordinances; and

WHEREAS, the City Manager anticipates that expenditures pursuant to the Agreement will exceed $5000 and has requested that the City Council ratify the Agreement and authorize expenditures exceeding $5000 under the Agreement; and

WHEREAS, the City Council of the City of Lake Dallas finds it to be in public interest to concur in the foregoing request;

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

SECTION 1. The City Council hereby ratifies and affirms the Agreement with Lawn Butler as if originally approved and authorized by the City Council prior to the effective date of the Agreement and further authorizes the City Manager to purchase services pursuant to the Agreement in an amount not to exceed $10,000.

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

PASSED AND APPROVED this the 25th day of April 2019.

APPROVED:

_____
Michael Barnhart, Mayor

ATTEST:

_____
Codi Delcambre, TRMC, City Secretary

APPROVED AS TO FORM:

_____

Kevin B. Laughlin, City Attorney
(kbl:4/22/19:107432)

STATE OF TEXAS	**§**	**MOWING AND PROPERTY REMEDIATION SERVICES AGREEMENT**
	§	
COUNTY OF DENTON	**§**	

This Mowing and Property Remediation Services Agreement ("Agreement") is made by and between the City of Lake Dallas, Texas ("City") and Pool Brother Partnership d.b.a. Lawn Butler "Contractor") (each a "Party" and collectively the "Parties"), acting by and through their authorized representatives.

RECITALS:

WHEREAS, City desires to engage the services of Contractor as an independent contractor and not as an employee in accordance with the terms and conditions set forth in this Agreement; and

WHEREAS, Contractor desires to render mowing and property remediation services at various locations within the corporate limits of City as identified from time to time;

NOW THEREFORE, in exchange for the mutual covenants set forth herein and other valuable consideration, the sufficiency and receipt of which are hereby acknowledged, the Parties agree as follows:

Article I
Term

1.1 The Term of this Agreement shall begin on the date of signed by the authorized representatives of all of the Parties (the "Effective Date"), and shall continue until October 1, 2019, (the "Initial Term") unless sooner terminated as provided herein. City shall have the option to extend the Term of this Agreement for three (3) additional one (1) year terms (each a "Renewal Term"). (The Initial Term and all Renewal Terms are collectively herein "the Term".)

1.2 Either Party may terminate this Agreement, with or without cause, by giving the other Party written notice not later than thirty (30) days prior to the date of termination. In the event of such termination, Contractor shall be entitled to compensation for any services completed to the reasonable satisfaction of City in accordance with this Agreement prior to such termination.

Article II
Scope of Services

The Parties agree that Contractor shall perform the services specifically set forth under Exhibit "A" ("Scope of Services").

Article III
Compensation

3.1 City shall compensate Contractor for mowing and property remediation services performed under this Agreement as set forth in Exhibit "A".

3.2 City shall pay Contractor within thirty (30) days of the receipt of a proper invoice provided there are no errors or discrepancies and that all work noted on the invoice has been completed. Any errors, discrepancies or the invoicing of work not completed may result in a delay in payment.

3.3 Contractor shall be responsible for all expenses related to the services provided pursuant to this Agreement including, but not limited to, travel, copying and facsimile charges, reproduction charges, and telephone, internet and e-mail charges, and payment of all employees and subcontractors hired by Contractor to assist in performance of the Scope of Services.

Article IV
Suspension of Work

City shall have the right to immediately suspend work by Contractor if City determines in its sole discretion that Contractor has, or will fail to perform, in accordance with this Agreement. In such event, any payments due Contractor shall be suspended until Contractor has taken satisfactory corrective action.

Article V
Devotion of Time; Personnel; and Equipment

5.1 Contractor shall devote such time as reasonably necessary for the satisfactory performance of the work under this Agreement. Should City require additional services not included under this Agreement, Contractor shall make reasonable efforts to provide such additional services at mutually agreed charges or rates, and within the time schedule prescribed by City, and without decreasing the effectiveness of the performance of services required under this Agreement.

5.2 To the extent reasonably necessary for Contractor to perform the services under this Agreement, Contractor shall be authorized to engage the services of any agents, assistants, persons, or corporations that Contractor may deem proper to aid or assist in the performance of the services under this Agreement. The cost of such personnel and assistance shall be borne exclusively by Contractor.

5.3 Contractor shall furnish the facilities, equipment, telephones, facsimile machines, email facilities, and personnel necessary to perform the services required under this Agreement unless otherwise provided herein.

Article VI
Insurance

During the term of this Agreement, Contractor shall maintain, at Contractor's sole cost, in full force and effect a Commercial General Liability policy of insurance for bodily injury, death and property damage insuring against all claims, demands or actions relating to Contractor's performance of the services pursuant to this Agreement with the following minimum coverage:

a. $500,000 combined single limit per occurrence for injury to persons (including death); and

b. $500,000 per occurrence for property damage.

All insurance shall (i) be endorsed to name City, its officers, agents and employees as additional insureds as to all applicable coverage, (ii) provide for at least thirty (30) days prior written notice to City for cancellation, non-renewal, or material change of the insurance; provided, however, such notice may be reduced to ten (10) days if the cancellation relates to failure to pay the premium; (iii) provide for a waiver of subrogation against City for injuries, including death, property damage, or any other loss to the extent the same is covered by the proceeds of insurance. All insurance companies providing the required insurance shall be authorized to transact business in Texas and rated at least "A" by AM Best or other equivalent rating service or approved by the City Manager. Contractor shall have a certificate of insurance issued to City evidencing the purchase of the insurance with endorsements as required by this Section VI prior to the commencement of services.

Article VII
Indemnification

City shall not be liable for any loss, damage, or injury of any kind or character to any person or property arising from the services of Contractor pursuant to this Agreement. Contractor hereby waives all claims against City, its officers, agents and employees (collectively referred to in this section as "City Indemnitees") for damage to any property or injury to, or death of, any person arising at any time and from any cause other than the negligence or willful misconduct of the City Indemnitees. Contractor agrees to indemnify and save harmless the City Indemnitees from and against any and all liabilities, damages, claims, suits, costs (including court costs, reasonable attorneys' fees and costs of investigation) and actions of any kind by reason of injury to or death of any person or damage to or loss of property to the extent caused by the negligent performance of services under this Agreement or by reason of any negligent act or omission on the part of Contractor, its officers, directors, servants, employees, representatives, consultants, licensees, successors or permitted assigns (except when such liability, claims, suits, costs, injuries, deaths or damages arise from or are attributed to negligence of a City Indemnitee, in whole or in part, in which case Contractor shall indemnify the City Indemnitee only to the extent or proportion of negligence attributed to Contractor, its officers, agents, or employees as determined by a court or other forum of competent jurisdiction). Contractor's obligations under this section shall not be limited to the limits of coverage of insurance maintained or required to be maintained by Contractor under this Agreement. This provision shall survive the termination of this Agreement

Article VIII
Miscellaneous

8.1 Entire Agreement. This Agreement constitutes the sole and only agreement between the Parties and supersedes any prior understandings written or oral agreements between the Parties with respect to this subject matter.

8.2 Assignment. Contractor may not assign this Agreement in whole or in part without the prior written consent of City. In the event of an assignment by Contractor to which City has consented, the assignee shall agree in writing with City to personally assume, perform, and be bound by all the covenants, and obligations contained in this Agreement.

8.3 Successors and Assigns. Subject to the provisions regarding assignment, this Agreement shall be binding on and inure to the benefit of the Parties to it and their respective heirs, executors, administrators, legal representatives, successors and assigns.

8.4 Governing Law. The laws of the State of Texas shall govern this Agreement; and venue for any action concerning this Agreement shall be in Dallas County, Texas. The Parties agree to submit to the personal and subject matter jurisdiction of said Court.

8.5 Amendments. This Agreement may be amended by the mutual written agreement of the Parties.

8.6 Severability. In the event any one or more of the provisions contained in this Agreement shall for any reason be held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provisions, and the Agreement shall be construed as if such invalid, illegal, or unenforceable provision had never been contained in it.

8.7 Independent Contractor. It is understood and agreed by and between the Parties that Contractor, in satisfying the conditions of this Agreement, is acting independently, and that City assumes no responsibility or liabilities to any third party in connection with these actions. All services to be performed by Contractor pursuant to this Agreement shall be in the capacity of an independent contractor, and not as an agent or employee of City. Contractor shall supervise the performance of its services and shall be entitled to control the manner and means by which its services are to be performed, subject to the terms of this Agreement.

8.8 Notice. Any notice required or permitted to be delivered hereunder may be sent by first class mail, overnight courier or by confirmed telefax or facsimile to the address specified below, or to such other party or address as either party may designate in writing, and shall be deemed received three (3) days after delivery set forth herein:

If intended for City:

City of Lake Dallas
Attn: City Manager
212 Main Street
Lake Dallas, Texas 75065

With a copy to:

Kevin B. Laughlin
Nichols, Jackson, Dillard, Hager & Smith, LLP
500 N. Akard Street, Suite 1800
Dallas, Texas 75201

If intended for Contractor:

Pool Butler Partnership d.b.a. Lawn Butler
Attn: _Tom Martin_____
_____
_____

Commented [KL1]: Need to fill in information.

8.9 Counterparts. This Agreement may be executed by the Parties hereto in separate counterparts, each of which when so executed and delivered shall be an original, but all such counterparts shall together constitute one and the same instrument. Each counterpart may consist of any number of copies hereof each signed by less than all, but together signed by all of the Parties hereto.

8.10 Exhibits. The exhibits attached hereto are incorporated herein and made a part hereof for all purposes.

8.11 Conflicts of Interests. Contractor represents that no official or employee of City has any direct or indirect pecuniary interest in this Agreement.

8.12 Compliance with Federal, State & Local Laws. Contractor shall comply in performance of services under the terms of this Agreement with all applicable laws, ordinances and regulations, judicial decrees or administrative orders, ordinances, and codes of federal, state and local governments, including all applicable federal clauses.

8.13 Force Majeure. No Party will be liable for any default or delay in the performance of its obligations under this Agreement if and to the extent such default or delay is caused, directly or indirectly, by fire, flood, earthquake, elements of nature or acts of God, riots, civil disorders, acts of terrorism or any similar cause beyond the reasonable control of such party, provided that the non-performing party is without fault in causing such default or delay. The non-performing Party agrees to use commercially reasonable efforts to recommence performance as soon as possible.

8.14 Prohibition of Boycott Israel. Contractor verifies that it does not Boycott Israel and agrees that during the term of this Agreement will not Boycott Israel as that term is defined in Texas Government Code Section 808.001, as amended.

(signature page to follow)

SIGNED AND AGREED this _____ day of _____, 2018.

City of Lake Dallas, Texas

By: _____
John Cabrales, Jr., City Manager

Attest:

_____
Codi Delcambre, City Secretary

Approved as to form:

_____
Kevin B Laughlin, City Attorney
(9/8/18:102521)

SIGNED AND AGREED this _____ day of _____, 2018.

Pool Butler Partners d.b.a. Lawn Butler

By: _____

Name: _____

Title: _____

EXHIBIT "A"
SCOPE OF SERVICES

I. Generally

Contractor agrees to perform the following services for City on properties located within the City of Lake Dallas, Texas:

1. Mowing properties with overgrown and/or dead vegetation, remove all trimmings, dead vegetation, and other yard waste from the property, and properly dispose of same by delivery to a permitted municipal solid waste landfill or composting facility ("Mowing Services").

2. Removal of trash, debris, and/or other personal property as identified by City and dispose of same in at a permitted municipal solid waste landfill ("Trash Abatement Services").

II. Assignment of Work

City shall deliver to Contractor a task order by hand delivery or email identifying by address the property on which the Mowing Services and/or Trash Abatement Services are to be performed and a general description of the services required.

III. Time for Performance

Contractor shall complete the Mowing Services and/or Trash Abatement Services not later than the third (3rd) business day after delivery of the task order for the work.

IV. Payment Rate

City agrees to pay Contractor as follows for the services provided pursuant to this Agreement:

1. $30.00 per hour for Mowing Services

2. $50.00 per hour for Trash Abatement Services

If upon arrival at the property identified in the task order Contractor estimates it will take more than _2_ hours to complete the services described in the task order, Contractor shall not commence work under the task order until Contractor has contacted City's Code Enforcement Officer and obtained consent to proceed with the work described in the task order based on the estimated time for completion determined by Contractor.

V. Invoicing

Contractor shall deliver an invoice for the work performed pursuant to the task order not later than 14 days after completion of the work. Such invoice shall be accompanied by the receipt for the cost of disposal of the yard waste and/or solid waste collected pursuant to the task order.

CITY OF LAKE DALLAS, TEXAS
RESOLUTION NO. 04252019- _____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LAKE DALLAS, TEXAS, RATIFYING THE AGREEMENT WITH POOL BUTLER PARTNERSHIP D/B/A LAWN BUTLER FOR MOWING AND PROPERTY REMEDIATION AND AUTHORIZING EXPEDITURES PURSUANT TO SAID AGREEMENT; PROVIDING AN EFFECTIVE DATE

WHEREAS, pursuant to the authority granted to the City Manager pursuant to the City Charter and Section 2-93 of the Lake Dallas Municipal Code, the City Manager entered into an agreement with Pool Butler Partnership, a Texas general partnership, d/b/a Lawn Butler effective December 20, 2018 ("the Agreement"), to provide mowing and property remediation services to the City in relationship to the City's enforcement of various property maintenance and nuisance ordinances; and

WHEREAS, the City Manager anticipates that expenditures pursuant to the Agreement will exceed $5000 and has requested that the City Council ratify the Agreement and authorize expenditures exceeding $5000 under the Agreement; and

WHEREAS, the City Council of the City of Lake Dallas finds it to be in public interest to concur in the foregoing request;

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

SECTION 1. The City Council hereby ratifies and affirms the Agreement with Lawn Butler as if originally approved and authorized by the City Council prior to the effective date of the Agreement and further authorizes the City Manager to purchase services pursuant to the Agreement in an amount not to exceed $10,000.

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

PASSED AND APPROVED this the 25th day of April 2019.

APPROVED:

_____
Michael Barnhart, Mayor

ATTEST:

_____
Codi Delcambre, TRMC, City Secretary

APPROVED AS TO FORM:

_____

Kevin B. Laughlin, City Attorney
(kbl:4/22/19:107432)

AGENDA ITEM 6

CITY COUNCIL
AGENDA MEMO

Prepared By: Jeremy Tennant, Director of Development Services **April 25, 2019**

Proposed Amendments to Chapter 22, "Buildings and Building Regulations"

DESCRIPTION:

Receive a report and hold a discussion 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 2015 International Building Code to the 2018 edition with amendments,
2. Update the 2015 International Residential Code to the 2018 edition with amendments,
3. Update the 2015 International Energy Conservation Code to the 2018 edition with amendments,
4. Update the 2015 International Plumbing Code to the 2018 edition with amendments,
5. Update the 2015 International Mechanical Code to the 2018 edition with amendments,
6. Update the 2015 International Fuel Gas Code to the 2018 edition with amendments

BACKGROUND INFORMATION:

The last update to the building codes for the City of Lake Dallas occurred in January of 2018. At that time, the City Council approved the 2015 edition of the International Codes and the 2017 National Electrical Code (NEC) with the North Central Texas Council of Governments (NCTCOG) amendments. Staff is now presenting the 2018 International Codes 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.

Insurance Service Office (ISO) - ISO collects information useful in many aspects of insurance underwriting. That information includes evaluations of public fire protection, flood risk, and the adoption and enforcement of building codes in individual communities. Information on municipal services helps the communities with their efforts to manage and mitigate their risk. ISO performs the evaluations as a service to the insurance industry as numerous insurance companies use the ISO ratings to calculate individual property insurance premiums. There are two key components to an ISO evaluation. The first is the Public Protection Classification (PPC). ISO uses the PPC to evaluate municipal fire-protection efforts in communities throughout the United States.

Insurance companies use PPC information to help establish fair premiums for fire insurance generally offering lower premiums in communities with better protection. Many communities use the PPC as a benchmark for measuring the effectiveness of their fire-protection services which includes fire code adoption, fire inspections, and plan reviews. The PPC program is also a tool that helps communities plan for, budget, and justify improvements. Recently, the Lake Cities Fire Department PPC was upgraded to a 2 (on a scale of 1-10, 1 being the best – 10 being the worst) which for the region is an excellent score. The City of Lake Dallas recently received an audit from the ISO.

The second component is the Building Code Effectiveness Grading Schedule (BCEGS). The ISO assesses the building codes in effect in individual communities and how those communities enforce their building codes. The assessments place special emphasis on mitigation of losses from natural hazards. The concept is simple: municipalities with well-enforced, up-to-date codes should demonstrate better loss experience, and insurance rates can reflect that. The prospect of lessening catastrophe-related damage and ultimately lowering insurance costs provides an incentive for communities to enforce their building codes. Generally, the ISO performs these services on a five-year rotation. If the building codes are not current or over one cycle (three years) then the ISO will lower the rating of the community until a more current code is adopted. The BCEGS can affect the PPC rating and combined has the potential, if codes are not current, to raise insurance premiums for fire, catastrophic weather loss as well as flood insurance for constituents. The resulting Building Code Effectiveness Grading Classification is 5 for Single- and Two-Family residential property and 5 for commercial and industrial property.

ANALYSIS

Staff requests City Council approval of the ordinances adopting the referenced codes and standards. The new codes are necessary to ensure that the City keep pace with state law, changing technology and practices of the construction industry. State law requires adoption of the International Building Codes but allows for local amendments. The International Code Council (ICC) updates the model codes every three years. Typically, there is a one-year delay in a City's code adoption process because NCTCOG assembles building officials from participating North Texas cities to discuss the updated changes and consider recommended local amendments.

NCTCOG representing 16 counties and 168 cities finalized their recommended local amendments in September 2018. Staff, in keeping with surrounding cities and NCTCOG's, proposed local amendments is requesting to update the construction and fire codes to the 2018 edition with local amendments. The NEC is on a different three-year rotation making the 2017 edition the most current NEC.

The State adopted the 2015 International Energy Conservation Code (IECC) and the energy efficiency Chapter 11 of the International Residential Code (IRC) and signed both 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. The 2018 IECC has some carry over amendments from the 2015 IECC allowing more options for energy conservation.

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	2018	2017
The Colony	2012	2011
Frisco	2015	2014
Coppell	2015	2014
Carrollton	2015	2014
Hickory Creek	2015	2014
Corinth	2018	2017
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:

2018 International Building Code (IBC)

- *Assembly Occupancies on Roofs – New classifications based on use of the main structure to increase Fire & Life Safety measures*
- *Greenhouse classifications base on use Assembly, Mercantile or Agricultural all have separate new Life Safety provisions.*
- *Storage rooms are now classified as part of the main occupancy use regardless of the size.*
- *Hospital & Assisted Living occupancies now have stricter smoke control, exit corridor protections.*
- *Occupant Load factor for B - Occupancies increased, more restrictive*
- *Owner occupied, and Bed & Breakfast uses can remain classified as residential when aggregate number of persons does not exceed 10 persons.*

- *Significant codes regarding building design of wood and Heavy Timber structures aligning with advances in the industry.*
- *Elevator and Conveying Systems required enhancements for accessible (ADA) elevators*
- *Regulations on Relocatable Buildings (Modular) to provide clear and consistent direction on relocation.*
- *Additional requirements for worker safety on multi-story buildings*
- *ASTM Referenced for the installation standards for fencing**

APPENDICES:

- *Appendix C – U-Occupancies – Agricultural Structures*
- *Appendix E – Supplementary Accessibility Requirements*
- *Appendix F – Rodent Proofing*
- *Appendix G – Flood-Resistant Construction*
- *Appendix I – Patio Covers*
- *Appendix J – Grading*
- *Appendix K -Administrative Provisions (Electrical)*

2018 International Residential Code

- *Energy Efficiency Chapter deleted, already within the 2018 International Energy Code*

APPENDICES:

- *Appendix H – Patio Covers*
- *Appendix I – Private Sewage Disposal*
- *Appendix J – Existing Buildings & Structures*
- *Appendix K – Sound Transmission*
- *Appendix L – Permit Fees (used for all valuation-based Building Permits)*
- *Appendix M – Home Day Care – R-3 Occupancies*
- *Appendix N – Venting Methods*
- *Appendix O – Automatic Vehicle Gates*
- *Appendix P – Piping Methods*
- *Appendix Q – Tiny Houses*
- *Appendix T – Solar Ready Provision**

2018 International Mechanical Code (IMC)

- *No significant changes*

2018 International Energy Conservation Code (IECC)

Residential

- *Slight increase in Energy Rating Index*

APPENDICES

- *Appendix RA – Solar Ready Provisions**

Commercial

- *New limits on Heated & Cooled Vestibules*
    - *Appendix CA – Solar Ready Provisions**

2018 International Fuel Gas Code (IFGC)

- *No Significant Changes*

2018 International Plumbing Code (IPC)

- *Minimum number of required plumbing fixtures revised*
- *Solar thermal heating systems compliance standards added*

  APPENDICIES:
  - *Appendix C – Structural Safety*
  - *Appendix E – Pipe Sizing*

2018 International Existing Building Code (IEBC)

- *Chapters reconfigured*
- *No significant changes*

  APPENDICIES:
  - *Appendix B – Supplementary Accessibility Requirements*
  - *Appendix C – Wind Retrofit of Existing Buildings*

FINANCIAL CONSIDERATION:

None

RECOMMENDED MOTION:

None, discussion only.

ATTACHMENTS:

1. 2018 International Building Code Update
2. 2018 International Residential Code Update
3. 2018 International Energy Conservation Code
4. 2018 International Plumbing Code Update
5. 2018 International Mechanical Code Update
6. 2018 International Fuel Gas Code Update

2018 IBC Update

Based on the 2018 International Building Code,® (IBC®)

ICC LEARNING CENTER

The *International Building Code*® (IBC®), establishes minimum regulations for building safety.

This handout will identify important changes in the IBC from 2015 to 2018 edition. Participants will be presented with those changes that will most impact their use of the code when they adopt these I-Codes. The learner will receive an overview of the most important code changes.

Goal

Participants will be able to use this document to identify changes between the 2015 and 2018 IBC allowing them to apply theses code requirements to design, plan submittals and/or inspection.

The lecture and activity format allows participants to discuss the changes, reasons for the changes, and answer knowledge review questions. Information presented will allow participants to apply these new code requirements to design, plan review, and/or inspection.

Objectives

Upon completion, participants will be better able to:

- Identify the most significant differences between the 2015 and the 2018 IBC.
- Explain the differences between the current and previous edition.
- Identify changes in organization and code requirements.
- Identify the applicability of design, plan review and inspection requirements.

Content

Chapters of the IBC included in this handout:

- Chapter 2, Definitions
- Chapter 3, Use and Occupancy Classification
- Chapter 4, Special Detailed Requirements Based on Use and Occupancy
- Chapter 5, Building Heights and Areas
- Chapter 6, Types of Construction
- Chapter 7, Fire and Smoke Protection Features
- Chapter 8, Interior Finishes
- Chapter 9, Fire Protection Systems
- Chapter 10, Means of Egress
- Chapter 11, Accessibility
- Chapter 12, Interior Environment
- Chapter 13 Energy Efficiency
- Chapter 14, Exterior Walls
- Chapter 15, Roof Assemblies and Rooftop Structures
- Chapter 16, Structural Design
- Chapter 17, Special Inspections and Tests
- Chapter 18, Soils and Foundations
- Chapter 19, Concrete
- Chapter 22, Steel
- Chapter 23, Wood
- Chapter 26, Plastic
- Chapter 30, Elevators and Conveying Systems
- Chapter 31, Special Construction
- Appendix G, Flood-Resistant Construction
- Appendix N, Replicable Buildings

Chapter 2: Definitions			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
202	202	**Definitions** **(Several definitions have been added to this edition of the IBC, as well as deleting and revising existing definitions.)**	New definitions include “Greenhouse” and “Repair garage”. The definition for “Sleeping unit” has been clarified while “Ambulatory care facility” and “Clinic, outpatient” have been deleted. **GREENHOUSE.** A structure or thermally isolated area of a building that maintains a specialized sunlit environment used for, and essential to, the cultivation, protection or maintenance of plants. **REPAIR GARAGE.** A building, structure or portion thereof used for servicing or repairing motor vehicles. **SLEEPING UNIT.** A ~~room or space in which people sleep, which can also include~~ single unit providing rooms or spaces for one or more persons that includes permanent provisions for sleeping, and can include provisions for living, eating, and either sanitation or kitchen facilities but not both. Such rooms and spaces that are also part of a dwelling unit are not sleeping units. ~~AMBULATORY CARE FACILITY.~~ ~~CLINIC, OUTPATIENT.~~

Chapter 3: Use and Occupancy			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
302.1 Clarification	302.1	**Classification of Outdoor Areas**	It has been clarified that occupied roofs are to be assigned one or more occupancy classifications in a manner consistent with the classification of uses inside the building, based upon the fire and life safety hazards posed by the rooftop activities.
303.4 Clarification	303.4	**Assembly Use of Greenhouses Classification**	Where the use of the greenhouse is assembly in nature due to public access for the viewing of plants, classification as a Group A-3 occupancy is appropriate.
309.1 Clarification	309.1	**Mercantile Use of Greenhouses Classification**	Where a greenhouse is provided with public access for the purpose of the display and sale of plants, a Group M occupancy shall be assigned.
310.3, 310.4 Clarification	310.3, 310.4	**Classification of Congregate Living Facilities**	Dormitories and similar nontransient uses now are to be considered as Group R-3 occupancies where the occupant load is 16 or less. In addition, transient lodging houses, such as bed-and-breakfast establishments, can only be considered as Group R-3 occupancies where their total occupant load is 10 or less.

Chapter 3: Use and Occupancy, Continued			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
310.4.2 Modification	310.4.2	**Owner-Occupied Lodging Houses**	The criteria permitting compliance with the IRC for the design and construction of owner-occupied lodging houses has been expanded by now also requiring that the total number of lodging house occupants be limited to 10.
311.1.1 Modification	311.1.1	**Classification of Accessory Storage Spaces**	Regardless of size, storage rooms and spaces that are accessory to other uses are to be classified as part of the occupancy to which they are accessory.
312.1.1 Clarification	312.1.1	**Classification of Agricultural Greenhouses**	Because a Group U occupancy includes those low-hazard structures that do not conform to any other specific occupancy classification, it has been clarified that greenhouses are only to be considered as Group U where they are not more appropriately classified as one of the other occupancies established in the IBC.

Chapter 4: Special Requirements for Use and Occupancy			
Code Section		Section Title	**Description of Change**
2018	**2015**		
403.2.1.1 Modification	403.2.1.1	**Type of Construction in High-Rise Buildings**	The reduction in the minimum required fire-resistance ratings for certain building elements of high-rise buildings is no longer applicable to Group H-2, H-3 and H-5 occupancies due to the high physical hazard level such uses pose.
404.6 Modification	404.6	**Enclosure of Atriums**	The requirement that those spaces not separated from an atrium be accounted for in the design of the smoke control system now applies only in those cases where the atrium is provided with a smoke control system.
406.1 Clarification	406.1	**Motor Vehicle-Related Occupancies**	Provisions specific to motor-vehicle-related uses have been reformatted in a manner such that those requirements that apply to all such uses have been relocated in a single Section 406.1.
407.5 Modification	407.5	**Maximum Smoke Compartment Size**	The allowance for larger smoke compartments in hospitals and other Group I-2, Condition 2 occupancies has now been modified to only include compartments containing single-patient sleeping rooms and suites, as well as those compartments without patient sleeping rooms.
407.5.4 Modification	407.5.4	**Required Egress from Smoke Compartments**	In Group I-2 occupancies, any smoke compartment that does not have an exit from the compartment must now provide direct access to a minimum of two adjacent smoke compartments.
420.7 Modification	420.7	**Corridor Protection in Assisted Living Units**	Shared living spaces, group meeting spaces and multipurpose therapeutic spaces are now permitted to be open to fire-rated corridors in Group I-1 assisted living housing facilities provided specific conditions are met.
420.8 Addition		**Group I-1 Cooking Facilities**	A room or space containing a cooking facility with domestic cooking appliances is now permitted to be open to a corridor in Group I-1 occupancies provided nine specific conditions are met.
420.10 Addition		**Dormitory Cooking Facilities**	The installation and use of domestic cooking appliances are now regulated in both common areas and sleeping rooms of Group R-2 college dormitories.

Chapter 4: Special Requirements for Use and Occupancy, Continued			
Code Section		Section Title	**Description of Change**
2018	**2015**		
427 Addition		**Medical Gas Systems**	In order to provide a more comprehensive and efficient compilation of construction regulations, those IFC medical gas system requirements related directly to building construction have now been replicated in the IBC.
428 Addition		**Higher Education Laboratories**	Higher education laboratories using hazardous materials can now be considered Group B occupancies provided such laboratories comply with new Section 428 which provides an alternative approach to the existing control area provisions.

Chapter 5: Heights and Areas			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
503.1, 706.1 Modification	503.1, 706.1	**Scope of Fire Wall Use**	The use of fire walls is now strictly limited to only the determination of permissible types of construction, based upon allowable building area and height.
503.1.4 Addition		**Allowable Height and Area of Occupied Roofs**	New criteria is now provided establishing the appropriate methodology in the regulation of building height in stories above grade plane where one or more occupancies is located on the roof.
Table 506.2, Note i Modification	Table 506.2, Note i	**Allowable Area of Type VB Greenhouses**	The tabular allowable area for nonsprinklered single-story greenhouses classified as Group U occupancies has been substantially increased for Type VB buildings to be consistent with those greenhouses classified as Group B, M, F-2 and E.
507.4 Clarification	507.4	**Sprinklers in Unlimited Area Group A-4 Buildings**	The sprinkler omission permitted for indoor participant sport areas of unlimited area Group A-4 buildings is now clearly not applicable to storage rooms, press boxes, concession areas and other ancillary spaces.
508.4.1, Table 508.4 Modification	508.4.1, Table 508.4	**508.4.1, Table 508.4 Separated Occupancies vs. Fire Area Separations**	New provisions in Section 508.4.1 and Table 508.4 clarify that the fire separations used for mixed occupancy purposes and those used for fire area purposes address different concerns, and as such the most restrictive fire-resistance-rated conditions shall apply.
510.2 Clarification	510.2	**Horizontal Building Separation**	Vertical offsets are permitted in the horizontal fire-resistance-rated separation mandated for “podium buildings” provided the minimum required fire-resistance rating is maintained for the offsets and their supporting elements.

Chapter 6: Types of Construction			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Table 601, Note b Modification	Table 601, Note b	**Fire Protection of Structural Roof Members**	All portions of the roof construction, including primary structural frame members such as girders and beams, are now selectively exempted from fire-resistance requirements based on Table 601 where every portion of the roof construction is at least 20 feet above any floor below.
602.3, 602.4.1 Clarification	602.3, 602.4.1	**FRT Wood Sheathing in Exterior Wall Assemblies**	It has now been clarified that wood sheathing, as well wood framing, is permitted in exterior walls of Type III and IV buildings where fire-retardant-treated wood is used.

Chapter 7: Fire and Smoke Protection Features			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
704.2, 704.4.1 Modification	704.2, 704.4.1	**Column Protection in Light-Frame Construction**	In walls of light-frame construction where primary structural frame members require fire-resistive protection, columns extending only between the bottom and top plates do not need to be provided with individual encasement protection.
Modification 705.2.3, 705.2.3.1, 705.2.4	1406.3, 1406.4	**Combustible Balconies, Projections, and Bay Windows**	Construction requirements for balconies, porches, decks, bay windows and oriel windows have been relocated from Section 1406 (Combustible Materials on the Exterior Side of Exterior Walls) to Section 705.2.3 (Combustible Projections).
706.1.1 Modification	706.1.1	**Party Walls Not Constructed as Fire Walls**	Construction as a fire wall is no longer required for a party wall provided the aggregate height and area of the buildings on each side of the party wall are compliant with Chapter 5 and applicable easements and agreements are established addressing the maintenance of all fire and life safety systems of both buildings.
706.2 Modification	706.2	**Structural Continuity of Double Fire Walls**	In Seismic Design Categories D through F, floor and roof sheathing is permitted to continue through light-frame double fire wall assemblies where the sheathing does not exceed a thickness of ¾ inch.
708.4 Clarification	708.4	**Continuity of Fire Partitions**	The continuity requirements for fire partitions have been reformatted to provide for increased clarity of their construction requirements.
708.4.2 Clarification	708.4.2	**Fireblocking and Draftstopping at Fire Partitions**	Fireblocking and draftstopping requirements for fire partitions of combustible construction have been consolidated and modified.
713.8.1 Modification	713.8.1	**Membrane Penetrations of Shaft Enclosures**	Membrane penetrations not related to the purpose of a shaft enclosure are no longer prohibited from penetrating the outside of the enclosure.
716.2.6.5 Addition		**Delayed-Action Self-Closing Doors**	Self-closing doors that are not also required to be automatic-closing are now permitted to be equipped with delayed-action closers.

Chapter 8: Interior Finishes			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
803.3 Modification	803.3	**Interior Finish Requirements for Heavy Timber Construction**	Materials considered heavy timber construction must now comply with interior finish requirements where exposed in interior exit stairways and exit passageways.
803.11, 803.12 Addition		**Flame Spread Testing of Laminates and Veneers**	Specific flame-spread testing provisions have been added to the IBC to address the use of factory-produced laminated products with a wood substrate as well as facings and wood veneers applied over a wood substrate on site.

Chapter 9: Fire Protection Systems			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
901.6.2 Addition		**Integrated Fire Protection System Testing**	Test criteria have been added to the code with a reference to new NFPA 4, *Standard for Integrated Fire Protection and Life Safety System Testing*, to ensure that where multiple fire protection systems or life safety systems are integrated, the acceptance process and subsequent testing must evaluate all of the integrated systems as a whole.
902.8 Addition		**Fire Pump and Fire Sprinkler Riser Rooms**	A number of prescriptive requirements have been added regulating the design and construction of automatic sprinkler system riser rooms and fire pump rooms.
903.2.1 Clarification	903.2.1	**Sprinklers Required in Group A Occupancies**	The extent to which automatic sprinkler systems are required in multi-story Group A occupancies has been clarified.
903.2.3 Modification	903.2.3	**Sprinklers in Group E occupancies**	Criteria for occupant load threshold and location within the building have been added as conditions that could require sprinkler protection in an Group E educational occupancy.
903.3.1.2.1 Modification	903.3.1.2.1	**Sprinkler Protection at Balconies and Decks**	Where nonrated balconies and similar combustible projections of dwelling and sleeping units are permitted in Type IIIA and VA buildings, it has been clarified that the sprinkler protection is to be extended to the area of the projections.
903.3.1.2.3 Addition		**Protection of Attics in Group R Occupancies**	Sprinkler protection or acceptable alternative methods for the protection of attics are now addressed for mid-rise buildings housing multi-family occupancies and equipped with an NFPA 13R sprinkler system.

Chapter 9: Fire Protection Systems, Continued			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
904.13 Modification	904.13	**Domestic Cooking Protection in Institutional and Residential Occupancies**	Where domestic-type cooking operations are present in Group I-1 occupancies and college dormitories classified as Group R-2, an automatic fire-extinguishing system is now mandated in conjunction with the required hood over any cooktop or range.
904.14 Addition		**Aerosol Fire Extinguishing Systems**	The installation, inspection, testing and maintenance of aerosol fire extinguishing systems are now addressed through applicable references to Sections 901 and 904.4 of the IBC and NFPA 2010, as well as the system's listing and manufacturer's instructions.
905.3.1 Modification:	905.3.1	**Class III Standpipes**	Standpipe system protection is now required in those buildings having four or more stories above or below grade plane regardless of the vertical distance between the floor level of the highest story and the level of the fire department vehicle access.
905.4 Modification	905.4	**Class I Standpipe Connection Locations**	Modifications have been made regarding the location of hose connections within interior exit stairway enclosures as well as the minimum number of connections required where open breezeways and open stairs are provided.
907.2.1 Modification	907.2.1	**Fire Alarms in Group A Occupancies**	An additional criterion now mandates the installation of a manual fire alarm system where there is a Group A occupant load of more than 100 located above or below the level of exit discharge.
907.2.10 Deletion	907.2.10	**Group R-4 Fire Alarm Systems**	The installation of a manual fire alarm system and an automatic smoke detection system are no longer required in Group R-4 occupancies.

Chapter 10: Means of Egress			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
1004.8, Table 1004.5 Modification	1004.8, Table 1004.5	**Occupant Load Calculation in Business Use Areas**	The method of calculating occupant load in business areas has been revised which will typically result in reduced design occupant loads. However, higher design occupant loads can be now be assigned to concentrated business areas such as telephone call centers and similar uses.
1006.2.1, Table 1006.2.1 Modification	1006.2.1, Table 1006.2.1	**Group R Spaces with One Exit or Exit Access Doorway**	Allowances for single-exit Group R spaces have been reformatted and the approach to accumulating occupant loads from adjacent rooms discharging through foyers and lobbies has been clarified.

Chapter 10: Means of Egress, Continued			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
1006.3 Clarification	1006.3	**Egress Through Adjacent Stories**	The determination of means of egress requirements has been clarified where the occupants must travel to an adjacent story to reach a complying exit or exits.
1010.1.1 Clarification	1010.1.1	**Size of Doors**	Provisions addressing limits to the width and height of door openings have been selectively reformatted and revised as necessary to correlate with the technical accessibility requirements of ICC A117.1.
1010.1.4.4 Addition		**Locking Arrangements in Educational Occupancies**	Guidance has been provided to allow for enhanced security measures on educational classroom egress doors and yet still continue to comply with applicable means of egress requirements.
1010.1.9.8 Modification	1010.1.9.8	**Use of Delayed Egress Locking Systems in Group E Classrooms**	The allowance for the use of delayed egress locking systems has been expanded to also include egress doors serving Group E classrooms with an occupant load of less than 50, as well as secondary exits or exit access doors serving courtrooms.
1010.3.2 Addition		**Security Access Turnstiles**	New conditions of use are now provided to the building official with criteria to evaluate security access turnstiles that are located in a manner to obstruct a means of egress.
1013.2 Modification	1013.2	**Floor Level Exit Sign Location**	The permitted location for low-level exit signs selectively required in Group R-1 occupancies has been expanded to now allow the bottom of such sign to be mounted up to 18 inches above the floor.
1023.3.1 Modification	1023.3.1	**Stairway Extensions**	Fire-resistance-rated separation is not required between an interior exit stairway and its exit passageway extension where both the stair enclosure and exit passageway are pressurized.
1026.4 Modification	1026.4	**Refuge Areas for Horizontal Exits**	The method for determining the minimum required refuge area size where a horizontal exit has been provided has been modified to allow for a more appropriate determination of the occupant load assigned to the refuge area.
1030.1 Clarification	1030.1	**Required Emergency Escape and Rescue Openings**	The occupancies where emergency openings are required have been clarified and the minimum number of required openings in a residential basement has been revised.

Chapter 11: Accessibility			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
1103.2.14 Modification	1103.2.14	**Access to Walk-In Coolers and Freezers**	Revised conditions have now been placed on the use of walk-in cooler and freezers exempted from accessibility provisions by requiring them to be accessed from only employee work areas and limiting the scope to only pieces of equipment.
1109.2.1.2 Modification	1109.2.1.2	**Fixtures in Family or Assisted-Use Toilet Rooms**	Family or assisted-use toilet rooms may now also contain a child height water closet and lavatory in order to provide a higher level of accommodation.

Chapter 12: Interior Environment			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
1206.2, 1207.3 Modification	1206.2, 1207.3	**Engineering Analysis of Sound Transmission**	A performance-based alternative approach for meeting the required sound transmission class ratings for unit separation walls and floor/ceiling assemblies in residential buildings has been introduced which allows for the use of an engineering analysis based upon a comparison to previously-tested assemblies.

Chapter 14:Exterior Walls			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Modification Table 1404.2	Table 1404.2	**Weather Covering Minimum Thickness**	The minimum required thicknesses of masonry and stone veneer weather coverings have been updated to align with current industry standards.

Chapter 15:Roof Assemblies and Rooftop Structures			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
1504.3.3 Addition		**Metal Roof Shingles**	Metal roof shingles are now addressed separately from other metal panel roof systems with reference made to applicable standards for the labeling and testing of wind resistance for the shingles.
1507.1 Clarification	1507.1	**Underlayment**	Reorganization: Underlayment and ice barrier requirements have been relocated from sections describing each type of roofing material and placed into one new section describing the type, attachment and application of underlayment.

Chapter 16: Structural Design			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
1603.1 Modification	1603.1	**Construction Documents**	The construction document requirements for environmental and special loads have been updated for rain, snow and wind forces and their components.
1604.3.7 Addition		**Deflection of Glass Framing**	Limits to the deflection of framing which supports glazing has been added to Section 1604.3.
1604.10 Addition		**Storm Shelters**	The development of loads for storm shelters is to be based on ICC 500 which provides wind speeds for tornado and hurricane shelter design using ASCE 7 load combinations.
Table 1607.1 Modification	Table 1607.1	**Deck Live Load**	Table 1607.1 is now consistent with the provisions in the 2010 and 2016 editions of ASCE 7 for minimum uniformly distributed live loads on decks and balconies by increasing the deck live load to one and one-half times the live load of the area served.
1607.14.2 Addition		**Minimum Fire Load**	The minimum lateral load that fire walls are required to resist has been established at five pounds per square foot.
1609 Modification	1609	**Wind Loads**	Section 1609 now has updated wind speed maps, including maps for the state of Hawaii. Terminology for describing wind speeds has been changed again with ultimate design wind speeds now called basic design wind speeds.
1613 Modification	1613	**Earthquake Loads**	The site coefficients contained in the IBC have now been brought into alignment with the newest generation of ground motion attenuation equations.
1613.3.1Modification	1613.3.1	**Seismic Maps**	The IBC seismic maps have been updated to match new maps in the 2015 NEHRP Provisions and 2016 ASCE 7 standard.
1615 Addition		**Tsunami Loads**	There are many coastal communities in the western United States and on islands in the Pacific Ocean which need tsunami-resistant design of critical infrastructure and essential facilities. New IBC Section 1615, Tsunami Loads, has been added to address design of these facilities.

Chapter 17: Special Inspections and Tests			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
1704.6 Modification	1704.6	**Structural Observations**	Section 1704.6.1 has been added requiring structural observation of buildings that are considered a high-rise or assigned to Risk Category IV.
1705.2.2 Modification	1705.2.2	**Metal-plate-connected Wood Trusses**	Five-foot tall wood trusses requiring permanent bracing now require a periodic special inspection to verify that the required bracing has been installed.
1705.12.6 Item 6 Addition		**Designated Seismic Systems**	Section 1705.12.6 adds a provision for minimum clearance of fire sprinkler components considered as a designated seismic system.

Chapter 18: Soils and Foundations			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
1807.2 Modification	1807.2	**Retaining Walls**	The requirement for consideration of a keyway in the sliding analysis of retaining walls has been deleted from Section 1807.2.1.
1810.3.8.3 Modification	1810.3.8.3	**Precast Prestressed Piles**	Equations in Section 1810.3.8.3 addressing precast prestressed piles have been updated.

Chapter 19: Concrete			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
1901.2 Modification	1901.2	**Seismic loads for precast concrete diaphragms**	New language adds a requirement for the design of precast concrete diaphragms in high seismic regions to use ASCE 7 Section 14.2.4.

Chapter 22: Steel			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
2207.1, Chapter 35 Modification	2207.1, Chapter 35	**SJI standard**	The 2015 edition of the combined SJI-100, Standard Specification for K-Series, LH-Series, and DLH-Series Open Web Steel Joists and Joist Girders, is the new referenced standard for steel joists.
2211 Modification	2211	**Cold-formed Steel Light-frame Construction**	The 2015 editions of the AISI standards for cold-formed steel are adopted in the 2018 IBC. These new standards include AISI S240, AISI S400 and AISI S202.

Chapter 23: Wood			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
2303.2.2 Modification	1203.2.2	**Fire-retardant treated wood**	The types of chemical treatment allowed for fire-resistant-treated lumber are clarified.
2303.6 Modification	2303.6	**Nails and Staples**	Nails and staples are required to conform to the standard ASTM F 1667 including Supplement 1. Minimum average bending moment values are added for staples.

Chapter 23: Wood			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Table 2304.9.3.2 Addition		**Mechanically Laminated Decking**	A new alternative fastener schedule for construction of mechanically laminated decking is added to the 2018 IBC giving equivalent power-driven fasteners for the 20 penny nail.
Table 2304.10.1 Modification	Table 2304.10.1	**Ring Shank Nails**	The 2018 IBC and IRC are now aligned by requiring an 8-penny common or ring shank nail when nailing 6:12 on center for roof sheathing.
2304.12.2.5, 2304.12.2.6 Modification	2304.12.2.5, 2304.12.2.6	**Supporting members for permeable floors and roofs**	The provisions for permeable floors and roofs are modified to require positive drainage of water and ventilation below the floor or roof to protect supporting wood construction.
Table 2308.4.1.1 (1) Modification	Table 2308.4.1.1 (1)	**Header and Girder Spans – Exterior Walls**	The header and girder spans for the exterior bearing wall table are updated to allow #2 Southern Pine design values rather than #1 Southern Pine thereby reducing span lengths.
Table 2308.4.1.1 (2) Modification	Table 2308.4.1.1 (2)	**Header and Girder Spans – Interior Bearing Walls**	The header and girder spans for the interior bearing walls table are updated to allow No. 2 Southern Pine design values for spans rather than No. 1 Southern Pine thereby reducing span lengths.

Chapter 26: Plastic			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
2603.13 Addition		**Cladding attachment over foam sheathing to wood framing**	Requirements for cladding over foam sheathing and wood framing are added to the *International Building Code* to match the *International Residential Code* and cold-framed steel stud requirements.

Chapter 30: Elevators and Conveying Systems			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
3001.2 Addition		**Emergency Elevator Communication Systems**	Additional communication capabilities are now required in accessible elevators to enhance the usability of the two-way communication system by individuals with varying degrees of hearing or speech impairments.

Chapter 30: Elevators and Conveying Systems			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
3007.1 Modification	3007.1	**Extent of Fire Service Access Elevator Travel**	Fire service access elevators, where required, now only need to provide access to those floor levels at and above the lowest level of fire department access. In addition, elevators that only connect a parking garage to a building's lobby need not serve as fire service access elevators.
3008.1 Modification	3008.1	**Required Number of Occupant Evacuation Elevators**	A reduction in the minimum number of elevators that must be considered as occupant evacuation elevators now reflects a more reasonable performance-based approach while still retaining the capacity to evacuate a high-rise building more quickly than stairs alone.

Chapter 31: Special Construction			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
3112 Addition		**Relocatable Buildings**	A process of acceptance for relocatable modular buildings has been established in order to provide clear and consistent direction in the relocation, reuse and/or repurposing of such buildings.

Chapter 33: Safeguards During Construction			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
3310.1 Modification	3310.1	**Stairways in Buildings under Construction**	At least one temporary or permanent stairway must now be provided in a building under construction once the building has reached a height of 40 feet as measured from the lowest level of fire department vehicle access.
3314 Addition		**Fire Watch During Construction**	In order to protect adjacent properties from fire in a building of considerable height when under construction, new provisions have been established to give authority to the fire code official to require a fire watch during those hours where no construction work is being done.

Appendix G: Flood-Resistant Construction			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
G103.6 Modification	G103.6	**Watercourse Alteration**	Notification of a watercourse alteration should be given to all adjacent building departments, not just those a building department believes will be affected.

Appendix N: Replicable Buildings			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Appendix N Addition		**Replicable Buildings**	Guidelines for replicable buildings have been added to the appendix in order to give jurisdictions a tool they can adopt to help streamline the plan review process in regard to code compliance.

2018 IPC Update

Based on the 2018 International Plumbing Code,® (IPC®)

The *International Plumbing Code*® (IPC®), establishes minimum regulations for plumbing systems.

This handout will identify important changes in the IPC from 2015 to 2018 edition. Participants will be presented with those changes that will most impact their use of the code when they adopt these I-Codes. The learner will receive an overview of the most important code changes.

Goal

Participants will be able to use this document to identify changes between the 2015 and 2018 IPC allowing them to apply theses code requirements to design, plan submittals and/or inspection.

The lecture and activity format allows participants to discuss the changes, reasons for the changes, and answer knowledge review questions. Information presented will allow participants to apply these new code requirements to design, plan review, and/or inspection.

Objectives

Upon completion, participants will be better able to:

- Identify the most significant differences between the 2015 and the 2018 IPC.
- Explain the differences between the current and previous edition.
- Identify changes in organization and code requirements.
- Identify the applicability of design, plan review and inspection requirements.

Content

Chapters of the IPC included in this handout:

- Chapter 2, Definitions
- Chapter 3, General Regulations
- Chapter 4, Fixtures Faucets and Fixture Fittings
- Chapter 5, Water Heaters
- Chapter 6, Water Supply and Distribution
- Chapter 7, Sanitary Drainage
- Chapter 8, Indirect/Special Waste
- Chapter 9, Vents
- Chapter 10, Traps Inceptors and Separators
- Chapter 11, Storm Drainage
- Chapter 13 Nonpotable Water Systems

2018 IPC Chapter 2: Definitions			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
202 Addition	202	**Definitions**	New definitions include Accessible, Full-Open Valve, Press-Connect Joint, Public Swimming Pool. **ACCESSIBLE.** Describes a site, building, facility or portion thereof that complies with Chapter 11 of the International Building Code. **FULL-OPEN VALVE.** A water control or shut off component in the water supply system piping that, where adjusted for maximum flow, the flow path through the component's closure member is not a restriction in the component's through-flow area. **PRESS-CONNECT JOINT.** A permanent mechanical joint incorporating an elastomeric seal or an elastomeric seal and corrosion-resistant grip ring. The joint is made with a pressing tool and jaw or ring approved by the fitting manufacturer. **PUBLIC SWIMMING POOL.** A pool, other than a residential pool, that is intended to be used for swimming or bathing and is operated by an owner, lessee, operator, licensee or concessionaire, regardless of whether a fee is charged for use.
			A definition has been modified: Swimming Pool. **SWIMMING POOL.** A permanent or temporary structure that is intended to be used for swimming, bathing or wading and that is designed and manufactured or built to be connected to a depth circulation system. A swimming pool can be open to the public regardless of whether a fee is charged for its use or can be accessory to a residential setting where the pool is available only to the household and guests of the household.
			Modification

2018 IPC Chapter 3: General Regulations			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
303.5 Addition		**Cast iron soil pipe, fittings and components**	The code language follows: Cast iron soil pipes and fittings, and the couplings used to join these products together, shall be third party listed and labeled. Third party certifiers or inspectors shall comply with the minimum inspection requirements of Annex A or Annex A1 of the ASTM and CISPI product standards indicated in the code for such products.
305.1 Clarification	305.1	**Protection against contact**	The code language follows: Metallic piping, except for cast iron, ductile iron and galvanized steel, shall not be placed in direct contact with steel framing members, concrete or cinder walls and floors or other masonry. Metallic piping shall not be placed in direct contact with corrosive soil. Where sheathing is used to prevent direct contact, the sheathing shall be thickness of not less than 0.008 inch (8 mil) (0.203 mm) and the sheathing shall be made of plastic. Where sheathing protects piping that penetrates concrete or masonry walls or floors, the sheathing shall be installed in a manner that allows movement of the piping within the sheathing.

2018 IPC Chapter 3: General Regulations, Continued			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
305.6 Modification	305.6	**Protection against physical damage**	In concealed locations where piping, other than cast-iron or galvanized steel, is installed through holes or notches in studs, joists, rafters or similar members less than 1 1/4 inches (32 mm) from the nearest edge of the member, the pipe shall be protected by steel shield plates. Such shield plates shall have a thickness of not less than 0.0575 inch (1.463 mm) (No. 16 gage). Such plates shall cover the area of the pipe where the member is notched or bored, and shall extend not less than 2 inches (51 mm) above sole plates and below top plates.
305.6 Clarification	305.6	**Sway Bracing**	Where horizontal pipes 4 inches (102 mm) and larger convey drainage or waste, and where a pipe fitting in that piping changes the flow direction greater than 45 degrees (0.79 rad), rigid bracing or other rigid support arrangements shall be installed to resist movement of the upstream pipe in the direction of pipe flow. A change of flow direction into a vertical pipe shall not require the upstream pipe to be braced.
305.10 Addition		**Thermal expansion tanks**	A thermal expansion tank shall be supported in accordance with the manufacturer's instructions. Thermal expansion tanks shall not be supported by the piping that connects to such tanks.

2018 IPC Chapter 4: Fixtures Faucets and Fixture Fittings			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Table 403.1 Modification Addition of Gaming Areas	Table 403.1	**MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES[a]**	Assembly areas used for gaming (gambling) now have specific ratios for plumbing fixture requirements See below.

MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES[a]

CLASSIFICATION	DESCRIPTION	WATER CLOSETS		LAVATORIES		BATHTUBS/ SHOWERS	DRINKING FOUNTAIN	OTHER
		MALE	FEMALE	MALE	FEMALE			
Assembly	Gaming areas	1 per 100 for the first 400 and 1 per 250 for the remainder exceeding 400	1 per 50 for the first 400 and 1 per 150 for the remainder exceeding 400	1 per 250 for the first 750 and 1 per 500 for the remainder exceeding 750		—	1 per 1,000	1 service sink

2018 IPC Chapter 4: Fixtures Faucets and Fixture Fittings, Continued			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Table 403.1 Modification	Table 403.1	**MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES[a]**	The Occupancy (Group) column of the table has been deleted for greater flexibility and accuracy for determining fixture requirements.

MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES[a]

CLASSIFICATION	DESCRIPTION	WATER CLOSETS		LAVATORIES		BATHTUBS/ SHOWERS	DRINKING FOUNTAIN	OTHER
		MALE	FEMALE	MALE	FEMALE			

Table 403.1 Addition	Table 403.1	**MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES[a]**	The code language follows: f. The required number and type of plumbing fixtures for outdoor public swimming pools shall be in accordance with Section 609 of the International Swimming Pool and Spa Code.
403.1.2 Modification	403.1.2	**Single-user toilet facility and bathing room fixtures**	Single user toilet facilities having required plumbing fixtures must now be labeled for use by either sex.
403.1.3 Addition		**Lavatory distribution**	The code language follows: Where two or more toilet rooms are provided for each sex, the required number of lavatories shall be distributed proportionately to the required number of water closets.
403.2 Modification	403.2	**Separate facilities**	The code language follows: Where plumbing fixtures are required, separate facilities shall be provided for each sex. **Exceptions:** 1. through 3. are unchanged. 4. Separate facilities shall not be required in business occupancies in which the maximum occupant load is 25 or fewer.
403.3 Clarification	403.3	**Employee and public toilet facilities**	The code language follows: ~~Customers~~ For structures and tenant spaces intended for public utilization, customers, patrons and visitors shall be provided with public toilet facilities ~~in~~. Employees associated with structures and tenant spaces ~~intended for public utilization~~ shall be provided with toilet facilities. The number of plumbing fixtures located within the required toilet facilities shall be provided in accordance with Section 403 for all users. ~~Employees shall be provided with toilet facilities in all occupancies.~~ Employee toilet facilities shall be either separate or combined employee and public toilet facilities.

2018 IPC Chapter 4: Fixtures Faucets and Fixture Fittings, Continued			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
405.3.1 Clarification	405.3.1	**Water closets, urinals, lavatories and bidets**	The code language follows: A water closet, urinal, lavatory or bidet hall not be set closer than 15 inches (381 mm) from its center to any side wall, partition, vanity or other obstruction. Where partitions or other obstructions do not separate adjacent fixtures, ~~or~~ fixtures shall not be set closer than 30 inches (762 mm) center to center between adjacent fixtures. There shall be not less than a 21-inch (533 mm) clearance in front of ~~the~~ a water closet, urinal, lavatory or bidet to any wall, fixture or door. Water closet compartments shall be not less than 30 inches (762 mm) in width and not less than 60 inches (1524 mm) in depth for floor mounted water closets and not less than 30 inches (762 mm) in width and 56 inches (1422 mm) in depth for wall-hung water closets. **Exception:** An accessible children's water closet shall be set not closer than 12 inches from its center to the required partition or to the wall on one side.
405.3.5 Clarification	405.3.5	**Urinal partitions**	The code language follows: Each urinal utilized by the public or employees shall occupy a separate area with walls or partitions to provide privacy. The width between walls or partitions at each urinal shall be not less than 30 inches (762 mm).The walls or partitions shall begin at a height not greater than 12 inches (305 mm) from and extend not less than 60 inches (1524 mm) above the finished floor surface. The walls or partitions shall extend from the wall surface at each side of the urinal not less than 18 inches (457 mm) or to a point not less than 6 inches (152 mm) beyond the outermost front lip of the urinal measured from the finished backwall surface, whichever is greater
405.5 Addition	405.5	**Plumbing fixtures with a pumped waste arrangement**	The code language follows: Plumbing fixtures with pumped waste shall comply with ASME A112.3.4/CSA B45.9. The plumbing fixture with a pumped waste shall be installed in accordance with the manufacturer's instructions.
409.1 Modification	409.1	**Approval**	The code language follows: Commercial dishwashing machines shall conform to ASSE 1004 and NSF 3. Residential dishwashers shall conform to NSF 184.
409.4 Modification	Deletes 802.1.6	**Residential dishwasher waste connection**	The code language follows: The waste connection of a residential dishwasher shall connect directly to a wye branch fitting on the tailpiece of the kitchen sink, directly to the dishwasher connection of a food waste disposer, or through an air break to a standpipe. The waste line of a residential dishwasher shall rise and be securely fastened to the underside of the sink rim or counter top.
411.3 Addition		**Water supply**	The code language follows: Where hot and cold water is supplied to an emergency shower or eyewash station, the temperature of the water supply shall only be controlled by a temperature actuated mixing valve complying with ASSE 1071.
412.7 Addition	424.7	**Temperature-actuated, flow reduction ~~valves~~ devices for individual fixture fittings.**	The code language follows: Temperature-actuated, flow reduction devices, where installed for individual fixture fittings, shall conform to ASSE 1062. A temperature-actuated, flow reduction device shall be an approved method for limiting the water temperature to not greater than 120º F (49º C) at the outlet of a faucet or fixture fitting. Such ~~valves~~ devices shall not be used alone as a substitute for the balanced-pressure, thermostatic or combination shower valves required in Section ~~424.3~~ 412.3 or as a substitute for bathtub or whirlpool tub water-temperature limiting valves required in Section 412.5.

2018 IPC Chapter 4: Fixtures Faucets and Fixture Fittings, Continued			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Section 422 Deleted	Section 422	**Health Care Fixtures and Equipment**	Section 422 concerning Health Care Fixtures and Equipment is deleted.

2018 IPC Chapter 5: Water Heaters			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
502.1 Modification	502.1	**General**	The code language follows: Water heaters shall be installed in accordance with the manufacturer's instructions. Oil-fired water heaters shall conform to the requirements of this code and the Inter- national Mechanical Code. Electric water heaters shall con- form to the requirements of this code and provisions of NFPA70. Gas-fired water heaters shall conform to the requirements of the International Fuel Gas Code. Solar thermal water heating systems shall conform to the requirements of the International Mechanical Code and ICC 900/SRCC 300.
504.6 Modification	504.6	**Requirements for discharge piping**	The code language follows: The discharge piping serving a pressure relief valve, temperature relief valve or combination thereof shall: Items 1. through 13. are unchanged. 14. Be one nominal size larger than the size of the relief valve outlet, where the relief valve discharge piping is installed with insert fittings. The outlet end of such tubing shall be fastened in place.
504.7 Modification	504.7	**Required pan**	The code language follows: Where a storage tank-type water heater or a hot water storage tank is installed in a location where water leakage from the tank will cause damage, the tank shall be installed in a ~~galvanized steel~~ pan constructed of one of the following: ~~having a material thickness of not less than 0.0236 inch (0.6010 mm) (No. 24 gage), or other pans approved for such use~~. 1. Galvanized steel or aluminum of not less than 0.0236 inch (0.6010 mm) in thickness. 2. Plastic not less than 0.036 inch (0.9 mm) in thickness. 3. Other approved materials. A plastic pan shall not be installed beneath a gas-fired water heater.

2018 IPC Chapter 6: Water Supply and Distribution			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
602.3.1 Modification	602.3.1	**Sources**	The code language follows: Dependent on geological and soil conditions and the amount of rainfall, individual water supplies are of the following types: drilled well, driven well, dug well, bored well, spring, stream or cistern. Surface bodies of water and land cisterns shall not be sources of individual water supply unless properly treated by approved means to prevent contamination. Individual water supplies shall be constructed and installed in accordance with the applicable state and local laws. Where such laws do not address all of the requirements set forth in NGWA-01, individual water supplies shall comply with NGWA-01 for those requirements not addressed by state and local laws.
605.13.7, 605.14.4 & 605.16.3 Clarification	605.13.7, 605.14.4 & 605.16.3	**Push-fit joints**	The code language follows: Push-fit joints shall conform to ASSE 1061 and shall be installed in accordance with the manufacturer's instructions.
607.3 Modification	607.3	**Thermal expansion control**	The code language follows: Where a storage water heater is supplied with cold water that passes through a check valve, pressure reducing valve or backflow preventer, a thermal expansion ~~tank~~ control device shall be connected to the water heater cold water supply pipe at a point that is downstream of all check valves, pressure reducing valves and backflow preventers. Thermal expansion tanks shall be sized in accordance with the tank manufacturer's instructions and shall be sized such that the pressure in the water distribution system shall not exceed that required by Section 604.8.
608.3 Modification	608.3	**Devices, appurtenances, appliances and apparatus**	The code language follows: Devices, appurtenances, appliances and apparatus intended to serve some special function, such as sterilization, distillation, processing, cooling, or storage of ice or foods, and that connect to the water supply system, shall be provided with protection against backflow and contamination of the water supply system. ~~Water pumps, filters, softeners, tanks and other appliances and devices that handle or treat potable water shall be protected against contamination.~~
608.4 Addition	608.4	**Potable water handling and treatment equipment**	The code language follows: Water pumps, filters, softeners, tanks and other appliances and devices that handle or treat potable water to be supplied to the potable water distribution system shall be located to prevent contamination from entering the appliances and devices. Overflow, relief valve and waste discharge pipes from such appliances and devices shall terminate through an air gap.
608.11 Addition	608.11	**~~Painting of~~ Potable Water Tanks**	The code language follows: Where in contact with potable water intended for drinking water, water tanks, coatings for the inside of tanks and liners for water tanks shall conform to NSF 61. The interior surface of a potable water tank shall not be lined, painted or repaired with any material that changes the taste, odor, color or potability of the water supply when the tank is placed in, or returned to, service.

2018 IPC Chapter 6: Water Supply and Distribution, Continued			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
608.16.1.1 Modification	608.16.1.1	**Carbonated beverage dispensers**	The code language follows: The water supply connection to carbonated beverage dispensers shall be protected against backflow by a backflow preventer conforming to ASSE 1022 or by an *air gap*. The portion of the backflow preventer device downstream from the second check valve of the device and the piping downstream therefrom shall not be affected by carbon dioxide gas.
608.16.1.2 Addition		**Coffee machines and noncarbonated drink dispensers**	The code language follows: **Coffee machines and noncarbonated drink dispensers.** The water supply connection to each coffee machine and each noncarbonated beverage dispenser shall be protected against backflow by a backflow preventer conforming to ASSE 1022 or ASSE 1024, or protected by an air gap.
608.16.10 Addition		**Humidifiers**	The water supply connection to humidifiers that do not have an internal backflow protection shall be protected against backflow by a backflow preventer conforming to ASSE 1012 or by an air gap.
609.1 Modification	609.1	**Scope**	The code language follows: This section shall govern those aspects of health care plumbing systems that differ from plumbing systems in other structures. Health care plumbing systems shall conform to the requirements of this section in addition to the other requirements of this code. The provisions of this section shall apply to the special devices and equipment installed and maintained in the following occupancies: ~~nursing homes~~ Group I-1, ~~homes for the aged~~ Group I-2, ~~orphanages, infirmaries, first aid stations, psychiatric~~ Group B ambulatory care facilities, ~~clinics, professional~~ medical offices ~~of dentists~~ and ~~doctors, mortuaries, educational facilities, surgery, dentistry,~~ research and testing laboratories, ~~establishments~~ and Group F facilities manufacturing pharmaceutical drugs and medicines ~~and other structures with similar apparatus and equipment classified as plumbing~~
611.1 Modification	611.1	**Design**	Point-of-use reverse osmosis drinking water treatment units shall comply with NSF 58 or CSA B483.1. Drinking water treatment units shall meet the requirements of NSF 42, NSF 44, NSF 53, NSF 62 or CSA B483.1.

<table>
<tr><th colspan="3">2018 IPC Chapter 7: Sanitary Drainage</th></tr>
<tr><th colspan="2">Code Section</th><th rowspan="2">Section Title</th><th rowspan="2">Description of Change</th></tr>
<tr><th>2018</th><th>2015</th></tr>
<tr><td>701.2
Modification</td><td>701.2</td><td><u>Connection to sewer</u> required</td><td>The code language follows:

~~Buildings in which~~ <u>Sanitary drainage piping from</u> plumbing fixtures ~~are installed~~ <u>in buildings</u> and ~~premises having~~ <u>sanitary</u> drainage piping <u>systems from premises</u> shall be connected to a public sewer<u>.</u>~~, where~~ <u>Where a public sewer is not</u> available, ~~or an approved~~ <u>the sanitary drainage piping and systems shall be connected to a</u> private sewage disposal system <u>in compliance with state or local requirements. Where state or local requirements do not exist for private sewage disposal systems, the sanitary drainage piping and systems shall be connected to an approved private sewage disposal system that is in</u> accordance with the International Private Sewage Disposal Code.

Exception: <u>Sanitary drainage piping and systems that convey only the discharge from bathtubs, showers, lavatories, clothes washers and laundry trays shall not be required to connect to a public sewer or to a private sewage disposal system provided that the piping or systems are connected to a system in accordance with Chapter 13 or 14.</u></td></tr>
<tr><td>701.8
Deletion</td><td>701.8</td><td>Drainage piping in food service areas</td><td>The installation of drainage piping above “food areas” is no longer prohibited.</td></tr>
<tr><td>Table 702.3
Addition</td><td>Table 702.3</td><td>Building sewer pipe</td><td>The code table follows:

TABLE 702.3 BUILDING SEWER PIPE
<table><tr><th>MATERIAL</th><th>STANDARD</th></tr><tr><td><u>Polypropylene (PP) Plastic Pipe</u></td><td><u>ASTM F2736; ASTM F2764; CSA B182.13</u></td></tr></table></td></tr>
<tr><td>703.4
Modification</td><td>703.4</td><td>Existing building sewers and building drains</td><td>The code language follows:

~~Existing~~ Where the entire sanitary drainage system of an existing building is replaced, existing building drains under concrete slabs and existing building sewers ~~and drains shall connect with new building sewer and drainage systems only where found by examination and test to conform to~~ that will serve the new system shall be internally examined to verify that the piping is sloping in ~~quality~~ the correct direction, is not broken, is not obstructed and is sized for the drainage load of ~~material. The code official shall notify~~ the ~~owner~~ new plumbing drainage system to ~~make the changes necessary to conform to this code.~~ be installed.</td></tr>
<tr><td>704.1
Modification</td><td></td><td>Slope of horizontal drainage piping</td><td>The code language follows:

Horizontal drainage piping shall be installed in uniform alignment at uniform slopes. The slope of a horizontal drainage pipe shall be not less than that indicated in Table 704.1 <u>except that where the drainage piping is upstream of a grease interceptor, the slope of the piping shall be not less than 1/4 inch per foot (2-percent slope)</u>.</td></tr>
</table>

2018 IPC Chapter 7: Sanitary Drainage			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
704.2 Modification	704.2	**Change No reduction in size in the direction of flow**	The code language follows: The size of the drainage piping shall not be reduced in ~~size in~~ the direction of the flow. ~~A 4-inch by 3-inch (102 mm by 76 mm) water closet connection~~ The following shall not be considered as a reduction in size~~.~~ in the direction of flow: 1. A 4-inch by 3-inch (102 mm by 76 mm) water closet flange. 2. A water closet bend fitting having a 4-inch (102 mm) inlet and a 3-inch (76 mm) outlet provided that the 4 inch leg of the fitting is upright and below, but not necessarily directly connected to, the water closet flange. 3. An offset closet flange.
705.16.4 Modification	705.16.4	**Plastic pipe or tubing to other piping material**	The code language follows: Joints between different types of plastic pipe shall be made with an approved adapter fitting, or by a solvent cement joint only where a single joint is made between ABS and PVC pipes at the end of a building drainage pipe and the beginning of a building sewer pipe using a solvent cement complying with ASTM D3138. Joints between plastic pipe and other piping material shall be made with an approved adapter fitting. Joints between plastic pipe and cast-iron hub pipe shall be made by a caulked joint or a mechanical compression joint.
709.3 Clarification	709.3	**Conversion of gpm flow to dfu values**	The code language follows: Where discharges to a waste receptor or to a drainage system are only known in gallons per minute (liters per second) values, the drainage fixture unit values for ~~continuous and semicontinuous flow into a drainage system~~ those flows shall be computed on the basis that 1 gpm (0.06 L/s) of flow is equivalent to two drainage fixture units.
712.3.2 Modification	712.3.2	**Sump pit**	The code language follows: The sump pit shall be not less than 18 inches (457 mm) in diameter and not less than 24 inches (610 mm) in depth, unless otherwise approved. The pit shall be ~~accessible~~ provided with access and shall be located such that all drainage flows into the pit by gravity. The sump pit shall be constructed of tile, concrete, steel, plastic or other approved materials. The pit bottom shall be solid and provide permanent support for the pump. The sump pit shall be fitted with a gastight removable cover that is installed ~~flush with grade or floor level, or above~~ not more than 2 inches (51 mm) below grade or floor level. The cover shall be adequate to support anticipated loads in the area of use. The sump pit shall be vented in accordance with Chapter 9.
712.4.2 Modification	712.4.2	**Capacity**	The code language follows: A sewage pump or sewage ejector shall have the capacity and head for the application requirements. Pumps or ejectors that receive the discharge of water closets shall be capable of handling spherical solids with a diameter of up to and including 2 inches (51 mm). Other pumps or ejectors shall be capable of handling spherical solids with a diameter of up to and including ~~1~~ 1/2 inch (~~25~~ 13 mm). The capacity of a pump or ejector based on the diameter of the discharge pipe shall be not less than that indicated in Table 712.4.2.
713 Deletion	713	**Health Care Plumbing**	Section 713 covering sanitary drainage systems in health care facilities is deleted in its entirety.

2018 IPC Chapter 7: Sanitary Drainage			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
716 Modification	717	**Replacement of Underground Building Sewers and Building Drains by Pipe Bursting Methods**	Section on replacement of building sewers by pipe-bursting methods has been expanded to include replacement of underground building drains. There could be some buildings where a building drain has to be replaced and the open-trench method is prohibitive in both cost and facility downtime. For example, a large factory building could have a long underground building drain passing under floor areas having machinery or conveyors in many locations on the floor. Dismantling and moving such equipment in order to cut a trench in the floor and excavate would be an excessive disruption. Pipe bursting is an alternative for these situations.

2018 IPC Chapter 8: Indirect/Special Waste			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
802.1 Modification	802.1	**Protection**	The code language follows: Devices, appurtenances, appliances and apparatus intended to serve some special function, such as sterilization, humidification, distillation, processing, cooling, or storage of ice or foods, and that discharge to the drainage system, shall be provided with protection against backflow, flooding, fouling, contamination and stoppage of the drain.
802.4.3.1 Addition		**Connection of laundry tray to standpipe**	The code language follows: As an alternative for a laundry tray fixture connecting directly to a drainage system, a laundry tray waste line without a fixture trap shall connect to a standpipe for an automatic clothes washer drain. The standpipe shall extend not less than 30 inches (732 mm) above the weir of the standpipe trap and shall extend above the flood level rim of the laundry tray. The outlet of the laundry tray shall not be greater than 30 inches (762 mm) horizontal distance from the side of the standpipe.

2018 IPC Chapter 9: Vents			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
918.8 Modification	918.8	**Prohibited installations**	The code language follows: Air admittance valves shall not be installed in nonneutralized special waste systems as described in Chapter 8 except where such valves are in compliance with ASSE 1049, are constructed of materials approved in accordance with Section 702.5 and are tested for chemical resistance in accordance with ASTM F 1412. Air admittance valves shall not be located in spaces utilized as supply or return air plenums. Air admittance valves ~~without an engineered design~~ shall not be ~~utilized~~ used to vent sumps or tanks ~~of any type~~ except where the vent system for the sump or tank has been designed by an engineer. Air admittance valves shall not be installed on outdoor vent terminals for the sole purpose of reducing clearances to gravity air intakes or mechanical air intakes.

2018 IPC Chapter 10: Traps Interceptors and Separators			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
1003.3.2 Modification	1003.3.2	**Food waste disposers restriction**	The code language follows: ~~Where~~ A food waste ~~disposers connect to grease interceptors, a solids interceptor shall separate the discharge before connecting to the grease interceptor. Solids interceptors and grease interceptors shall be sized and rated for the discharge of the food waste disposers. Emulsifiers, chemicals, enzymes and bacteria~~ disposer shall not discharge ~~into the food waste disposer~~ to a grease interceptor.
1003.3.2 Addition		**Additives to grease interceptors**	The code language follows: Dispensing systems that dispense interceptor performance additives to grease interceptors shall not be installed except where such systems dispense microbes for the enhancement of aerobic bioremediation of grease and other organic material, or for inhibiting growth of pathogenic organisms by anaerobic methods. Such microbial dispensing systems shall be installed only where the grease interceptor manufacturer's instructions allow such systems and the systems conform to ASME A112.14.6. Systems that discharge emulsifiers, chemicals or enzymes to grease interceptors shall be prohibited.

<table>
<tr><th colspan="3">2018 IPC Chapter 11: Storm Drainage</th></tr>
<tr><th colspan="2">Code Section</th><th rowspan="2">Section Title</th><th rowspan="2">Description of Change</th></tr>
<tr><th>2018</th><th>2015</th></tr>
<tr><td>TABLE 1102.4
Modification</td><td>TABLE 1102.4</td><td>Building Storm Sewer Pipe</td><td>The code table follows:

TABLE 1102.4
BUILDING STORM SEWER PIPE
<table><tr><th>MATERIAL</th><th>STANDARD</th></tr><tr><td>Acrylonitrile butadiene styrene (ABS) plastic pipe <u>in IPS diameters, including Schedule 40, DR 22 (PS 200) and DR 24 (PS 140); with a solid, cellular core or composite wall.</u></td><td>ASTM D2661; <s>ASTM D 2751;</s> ASTM F628; <u>ASTM F1488;</u> CSA B181.1; CSA B182.1</td></tr><tr><td>Polyethylene (PE) plastic pipe</td><td><u>ASTM F667;</u>
ASTM F2306/F2306M; ASTM F2648/F2648M</td></tr><tr><td><u>Polypropylene (PP) Pipe</u></td><td><u>ASTM F2881; CSA B182.13;</u></td></tr><tr><td>Polyvinyl chloride (PVC) plastic pipe (Type DWV, SDR26, SDR35, SDR41,
PS50 or PS100) <u>in IPS diameters, including Schedule 40, DR 22 (PS 200) and DR 24 (PS 140); with a solid, cellular core or composite wall.</u></td><td>ASTM D2665; ASTM D3034; ASTM F891; <u>ASTM F1488;</u>
CSA B182.4;
CSA B181.2;
CSA B182.2</td></tr></table></td></tr>
<tr><td>1106.5
Modification</td><td>1106.5</td><td><u>Parapet wall scuppers</u>.</td><td>The code language follows:

<s>Parapet wall</s> <u>Where scuppers are used for primary</u> roof drainage <s>scupper</s> <u>or for secondary (emergency overflow) roof drainage or both, the quantity, size, location</u> and <s>overflow scupper location shall comply with the requirements of Section 1503.4</s> <u>inlet elevation</u> of the <u>scuppers shall be chosen to prevent the depth of ponding water on the roof from exceeding the maximum water depth that the roof was designed for as determined by Section 1611.1 of the</u> International Building Code. <u>Scupper openings shall be not less than 4 inches (102 mm) in height and have a width that is equal to or greater than the circumference of a roof drain sized for the same roof area. The flow through the primary system shall not be considered when locating and sizing secondary scuppers.</u></td></tr>
</table>

2018 IPC Chapter 13: Nonpotable Water Systems			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
1301.1.1 Addition		**Fire Protection Systems**	The storage, treatment and distribution of nonpotable water to be used for fire protection systems shall be in accordance with the International Fire Code.
1302.7.2 Deleted	1302.7.2	**Design and Construction**	The consensus standards covering storage tanks for gray water are removed from the code.
1303.15.8 Modification	1303.15.8	**Rainwater Quality Test**	The quality of the water for the intended application shall be verified at the point of use in accordance with the requirements of the jurisdiction.
1303.15.9 Addition		**Collected Raw Rainwater Quality**	The code language follows: ASTM E2727 shall be used to determine what, if any, site conditions impact the quality of collected raw rainwater and whether those site conditions require treatment of the raw water for the intended end use or make the water unsuitable for specific end uses.

2018 IMC Update

Based on the 2018 International Mechanical Code,® (IMC®)

The *International Mechanical Code*® (IMC®) establishes minimum regulations for mechanical systems.

This course will identify important changes in the IMC from 2015 to 2018 edition. Participants will be presented with those changes that will most impact their use of the code when they adopt these I-Codes. The learner will receive an overview of the most important code changes.

Goal

Participants will be able to use this document to identify changes between the 2015 and 2018 allowing them to apply theses code requirements to design, plan submittals and/or inspection.

The lecture and activity format allows participants to discuss the changes, reasons for the changes, and answer knowledge review questions. Information presented will allow participants to apply these new code requirements to design, plan review, and/or inspection.

Objectives

Upon completion, participants will be better able to:

- Identify the most significant differences between the 2015 and the 2018 IMC.
- Explain the differences between the current and previous edition.
- Identify changes in organization and code requirements.
- Identify the applicability of design, plan review and inspection requirements.

Content

Chapters are divided for code development purposes as follows:

- Chapter 2, Definitions
- Chapter 4, Ventilation
- Chapter 5, Exhaust Systems
- Chapter 6, Duct Systems
- Chapter 9, Specific Appliances, Fire Places and Solid-Fuel-Burning Equipment
- Chapter 11, Refrigeration
- Chapter 14, Solar Thermal Systems

2018 IMC Chapter 2: Definitions			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
202 Modification	202	**202 Definitions**	**COMMERCIAL COOKING APPLIANCE** The definition was completely rewritten to capture the true intent, eliminate confusion and eliminate circular language and a laundry list of appliances. The code has attempted to define "commercial. **COMMERCIAL COOKING APPLIANCES.** Appliances used in a commercial food service establishment for heating or cooking food. For the purpose of this definition, a commercial food service establishment is where food is prepared for sale or is prepared on a scale that is by volume and frequency not representative of domestic household cooking.

2018 IMC Chapter 4: Ventilation			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
403.3.2.4 Addition	403.3.2.4	**System Controls**	There is new requirement for labeling of controls for whole-house (dwelling) ventilation systems.
403.3.2.5 Addition	403.3.2.5	**Ventilating Equipment**	A new requirement was added for the testing of exhaust fans for dwelling units.
404.1 Modification	404.1	**Enclosed Parking Garages**	The code text was rewritten to clarify the intent with regard to "intermittent" operation. **404.1 Enclosed parking garages.** Mechanical ventilation systems for enclosed parking garages shall operate continuously or shall be automatically operated by means of carbon monoxide detectors applied in conjunction with nitrogen dioxide detectors. Such detectors shall be listed in accordance with UL 2075 and installed in accordance with their listing and the manufacturers' instructions. Automatic operation shall cycle the ventilation system between the following two modes of operation: 1. Full-on at an airflow rate of not less than 0.75 cfm per square foot [0.0038 $m^3/(s \cdot m^2)$] of the floor area served. 2. Standby at an airflow rate of not less than 0.05 cfm per square foot [0.00025 $m^3/(s \cdot m^2)$] of the floor area served.

2018 IMC Chapter 5: Exhaust Systems			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
504.4 Modification	504.4	**Exhaust installation.**	The code now speaks to the sealing of clothes dryer exhaust ducts.
504.4.1 Addition		**Exhaust termination outlet and passageway size**	The code now addresses the required size of dryer exhaust ducts terminals.
504.8.2 Modification	504.8.2	**Duct installation**	The code now addresses the installation of clothes dryer exhaust ducts in wall and ceiling cavities. **504.8.2 Duct installation.** Exhaust ducts shall be supported at 4-foot (1219 mm) intervals and secured in place. The insert end of the duct shall extend into the adjoining duct or fitting in the direction of airflow. Ducts shall not be joined with screws or similar fasteners that protrude more than 1/8 inch (3.2 mm) into the inside of the duct. Where dryer exhaust ducts are enclosed in wall or ceiling cavities, such cavities shall allow the installation of the duct without deformation.
506.3.13.2 506.3.13.3 Modification	506.3.13.2 506.3.13.3	**Termination through an exterior wall, Termination location**	The intent was clarified regarding clearance to openings to prevent other requirements from being overlooked. **506.3.13.2 Termination through an exterior wall.** Exhaust outlets shall be permitted to terminate through exterior walls where the smoke, grease, gases, vapors and odors in the discharge from such terminations do not create a public nuisance or a fire hazard. Such terminations shall not be located where protected openings are required by the *International Building Code*. Such terminations shall be located in accordance with Section 506.3.13.3 and shall not be located within 3 feet (914 mm) of any opening in the exterior wall. **506.3.13.3 Termination location.** Exhaust outlets shall be located not less than 10 feet (3048 mm) horizontally from parts of the same or contiguous buildings, adjacent buildings and adjacent property lines and shall be located not less than 10 feet (3048 mm) above the adjoining grade level. Exhaust outlets shall be located not less than 10 feet (3048 mm) horizontally from or not less than 3 feet (914 mm) above air intake openings into any building. **Exception:** Exhaust outlets shall terminate not less than 5 feet (1524 mm) horizontally from parts of the same or contiguous building, an adjacent building, adjacent property line and air intake openings into a building where air from the exhaust outlet discharges **away from such locations.**

2018 IMC Chapter 5: Exhaust Systems			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
506.5.2 Addition		**Pollution-control units**	The code added coverage for pollution control units (PCUs) which are defined as "Manufactured equipment that is installed in a grease exhaust system for the purpose of extracting smoke, grease particles and odors from the exhaust flow by means of a series of filters." Definition of PCU from Section 202 **POLLUTION-CONTROL UNIT (PCU).** Manufactured equipment that is installed in a grease exhaust duct system for the purpose of extracting smoke, grease particles and odors from the exhaust flow by means of a series of filters.
507.2.6 Addition		**Clearances for Type I hood**	A new exception was added to recognize Type I hoods that are listed for clearances to combustibles of less than 18 inches.

2018 IMC Chapter 6: Duct Systems			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
603.5.2 Addition		**Phenolic ducts**	The code added coverage for a newer type of non-metallic duct, phenolic duct.
603.8.2 Modification	603.8.2	**Sealing**	The code now addresses the testing of underground ducts.
603.9 Modification	603.9	**Joints, seams and connections.**	The code is less restrictive for Snap- and Button-lock duct joints that are located within the thermal envelope. **Exception:** For ducts having a static pressure classification of less than 2 inches of water column (500 Pa), additional closure systems shall not be required for continuously welded joints and seams and locking-type joints and seams. This exception shall not apply to snap lock and button-lock type joints and seams located outside of conditioned spaces.
607.3.1 Modification	607.3.1	**Damper testing.**	The code mandates dynamic type ceiling damper where the subject to continuous air flow from HVAC fans.

2018 IMC Chapter 9: Specific Appliances, Fireplaces and Solid-Fuel-burning Equipment			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
929 Addition		High-Volume Large-Diameter Fans	Include code section and new definition of high volume large diameter fan **929.1 General.** Where provided, high-volume large-diameter fans shall be tested and labeled in accordance with AMCA 230, listed and labeled in accordance with UL 507, and installed in accordance with the manufacturer's instructions.

2018 IMC Chapter 11: Refrigeration			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
1105.6.3 Modification	1105.6.3	**Ventilation rate**	An important clarification was added regarding the ventilation rate required for ammonia systems, thereby resolving an interpretation issue.
1107.2 Modification		**Piping location**	This code section was rewritten to clearly state the intent regarding the prohibited locations for refrigerant piping. **1107.2 Piping location.** Refrigerant piping that crosses an open space that affords passageway in any building shall be not less than 7 feet 3 inches (2210 mm) above the floor unless the piping is located against the ceiling of such space. Refrigerant piping shall not be placed in any of the following: 1. A fire-resistance-rated exit access corridor. 2. An interior exit stairway. 3. An interior exit ramp. 4. An exit passageway. 5. An elevator, dumbwaiter or other shaft containing a moving object. 6. A shaft that has one or more openings into a fire-resistance-rated exit access corridor, interior exit stairway or ramp or exit passageway.

2018 IMC Chapter 14: Solar Thermal Systems			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Chapter 14 Revision and addition		**Solar Thermal Systems**	Chapter 14 was significantly increased in content and it was clarified that the chapter applies only to thermal solar (as opposed to solar-voltaic). The new text relies on three newly referenced solar product standards developed and maintained by the Solar Rating and Certification Corporation. The text addresses the various types of thermal solar system designs, including direct and indirect systems and drain-back systems. Much new text was added addressing: system design and installation, protection from freezing and excess pressure and temperature, protection of potable water and building structure, piping installation and insulation, heat exchanger application, heat transfer fluids, access for roof-mounted equipment and system labeling and signage.

2018 IFGC Update

Based on the 2018 International Fuel Gas Code,® (IFGC®)

The *International Fuel Gas Code*® (IFGC®) establishes minimum regulations for fuel gas systems.

This course will identify important changes in the IFGC from 2015 to 2018 edition. Participants will be presented with those changes that will most impact their use of the code when they adopt these I-Codes. The learner will receive an overview of the most important code changes.

Goal

Participants will be able to use this document to identify changes between the 2015 and 2018 IFGC, allowing them to apply theses code requirements to design, plan submittals and/or inspection.

The lecture and activity format allows participants to discuss the changes, reasons for the changes, and answer knowledge review questions. Information presented will allow participants to apply these new code requirements to design, plan review, and/or inspection.

Objectives

Upon completion, participants will be better able to:

- Identify the most significant differences between the 2015 and the 2018 IFGC.
- Explain the differences between the current and previous edition.
- Identify changes in organization and code requirements.
- Identify the applicability of design, plan review and inspection requirements.

Content

Chapters are divided for code development purposes as follows:

- Chapter 3, General Regulations
- Chapter 4, Gas Piping Installations
- Chapter 5, Chimney and Vents
- Chapter 6, Specific Appliances

2018 IFGC Chapter 3: General Regulations			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
303.3 Addition		**Prohibited Locations #6**	A new option was added to allow a gas-fired clothes dryer to be installed in a toilet room or bathroom. 6. A clothes dryer is installed in a residential bathroom or toilet room having a permanent opening with an area of not less than 100 square inches (0.06 m^2) that communicates with a space outside of a sleeping room, bathroom, toilet room or storage closet.
310.2 Modification	310.2	**CSST**	This section applied to all CSST products previously, but is now restricted to only the traditional yellow jacketed CSST product. 2018 Code.
310.2.3 Modification	310.2.3	**Bonding jumper length.**	Section 310.2.3 was clarified with the regard to the purpose of any "additional grounding electrodes."
310.3 Addition		**Arc-resistant CSST.**	A new Section 310.3 was added to address the arc-resistant CSST products

2018 IFGC Chapter 4: Gas Piping Installations			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
403.4.2 and 403.10 Modification	403.4.2 and 403.10	**Steel**	**The code now allows Schedule 10 steel pipe to be used for fuel gas service.** **403.4.2 Steel**. Steel, stainless steel and wrought-iron pipe shall be not lighter than Schedule 10 and shall comply with the dimensional standards of ASME B36.10, 10M and one of the following standards: 1. ASTM A53/A53M. 2. ASTM A106. 3. ASTM A312. **403.10.1 Pipe joints.** Schedule 40 and heavier pipe joints shall be threaded, flanged, brazed, welded or assembled with press-connect fittings listed in accordance with ANSI LC4/CSA 6.32. Pipe lighter than Schedule 40 shall be connected using press-connect fittings, flanges, brazing or welding. Where nonferrous pipe is brazed, the brazing materials shall have a melting point in excess of 1,000°F (538°C). Brazing alloys shall not contain more than 0.05-percent phosphorus.

2018 IFGC Chapter 4: Gas Piping Installations			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
404.11.1-4 Modification	404.11.1-4	**Protection against corrosion.**	This section was rewritten for clarity and to include three distinct prescriptive methods for protection from corrosion for steel pipe. **404.11 Protection against corrosion.** Steel pipe or tubing exposed to corrosive action, such as soil conditions or moisture, shall be protected in accordance Sections 404.11.1 through 404.11.5. **404.11.1 Galvanizing.** Zinc coating shall not be deemed adequate protection for underground gas piping. **404.11.2 Protection methods.** Underground piping shall comply with one or more of the following: 1. The piping shall be made of corrosion-resistant material that is suitable for the environment in which it will be installed. 2. Pipe shall have a factory-applied, electrically-insulating coating. Fittings and joints between sections of coated pipe shall be coated in accordance with the coating manufacturer's instructions. 3. The piping shall have a cathodic protection system installed and the system shall be monitored and maintained in accordance with an approved program. **404.11.3 Dissimilar metals.** Where dissimilar metals are joined underground, an insulating coupling or fitting shall be used. **404.11.4 Protection of risers.** Steel risers connected to plastic piping shall be cathodically protected by means of a welded anode, except where such risers are anodeless risers.
404.14 Modification	404.14	**Piping underground beneath buildings**	A listed encasement system instead of a conduit encasement is recognized where plastic piping is installed underground beneath buildings.
409.5.1 Modification	409.5.1	**Located within same room.**	**409.5.1 Located within same room.** The shutoff valve shall be located in the same room as the *appliance*. The shutoff valve shall be within 6 feet (1829 mm) of the *appliance*, and shall be installed upstream of the union, connector or quick disconnect device it serves. Such shutoff valves shall be provided with *access*. Shutoff valves serving movable appliances, such as cooking appliances and clothes dryers, shall be considered to be provided with access where installed behind such appliances. *Appliance* shutoff valves located in the firebox of a *fireplace* shall be installed in accordance with the *appliance* manufacturer's instructions.
409.7 Addition		**Shutoff valves in tubing systems**	New text addresses shutoff valve support for tubing systems. **409.7 Shutoff valves in tubing systems.** Shutoff valves installed in tubing systems shall be rigidly and securely supported independently of the tubing.

<table>
<tr><th colspan="4">2018 IFGC Chapter 5: Chimney and Vents</th></tr>
<tr><th colspan="2">Code Section</th><th rowspan="2">Section Title</th><th rowspan="2">Description of Change</th></tr>
<tr><th>2018</th><th>2015</th></tr>
<tr><td>503.4.1, 503.4.1.1 and 503.4.2 Modification</td><td>503.4.1, 503.4.1.1 and 503.4.2</td><td>Plastic Piping, Plastic Vent Joints and Special Gas Vent</td><td>The standards to which plastic pipe venting materials must listed are addressed.
503.4.1 Plastic piping. Where plastic piping is used to vent an appliance, the appliance shall be listed for use with such venting materials and the appliance manufacturer’s installation instructions shall identify the specific plastic piping material. The plastic venting materials shall be labeled in accordance with the product standards specified by the appliance manufacturer or shall be listed in accordance with UL 1738.
503.4.1.1 Plastic vent joints. Plastic pipe and fittings used to vent appliances shall be installed in accordance with the appliance manufacturer’s instructions. Plastic pipe venting materials listed and labeled in accordance with UL 1738 shall be installed in accordance with the vent manufacturer’s instructions. Where a primer is required, it shall be of a contrasting color.
503.4.2 Special gas vent. Special gas vent shall be listed and labeled in accordance with UL 1738 and installed in accordance with the special gas vent manufacturer’s instructions.</td></tr>
<tr><td>503.8 #2 and #3 and Table 503.8 Modification</td><td>503.8 #2 and #3 and Table 503.8</td><td>Venting system termination location.</td><td>Section 503.8, Item # 3 relative to direct-vent appliances was reformatted into table form and a new category was added for direct-vent appliances having higher Btu/hr inputs that are more consistent with non-residential appliances.
TABLE 503.8
THROUGH-THE-WALL,
DIRECT-VENT TERMINATION CLEARANCES
<table><tr><th>DIRECT-VENT APPLIANCE INPUT RATING (Btu/hr)</th><th>THROUGH-THE-WALL VENT TERMINAL CLEARANCE FROM ANY AIR OPENING INTO THE BUILDING (inches)</th></tr><tr><td>< 10,000</td><td>6</td></tr><tr><td>≥ 10,000 ≤ 50,000</td><td>9</td></tr><tr><td>> 50,000 ≤ 150,000</td><td>12</td></tr><tr><td>> 150,000</td><td>In accordance with the appliance manufacturer’s instructions and not less than the clearances specified in Section 503.8, Item 2</td></tr></table>For SI: 1 inch = 25.4 mm, 1 Btu/h = 0.2931 W.</td></tr>
</table>

2018 IRC Update

Based on the 2018 International Residential Code,® (IRC®)

ICC LEARNING CENTER

The *International Residential Code*® (IRC®) establishes minimum regulations for residential construction.

This handout will identify important changes in the IRC from 2015 to 2018 edition. Participants will be presented with those changes that will most impact their use of the code when they adopt these I-Codes. The learner will receive an overview of the most important code changes.

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Participants will be able to use this document to identify changes between the 2015 and 2018 IRC allowing them to apply theses code requirements to design, plan submittals and/or inspection.

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- Explain the differences between the current and previous edition.
- Identify changes in organization and code requirements.
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Content

Chapters of the IRC included in this handout:

- Chapter 1, Scope and Administration
- Chapter 3, Building Planning
- Chapter 4, Foundations
- Chapter 5, Floors
- Chapter 6, Wall Construction
- Chapter 7, Wall Covering
- Chapter 8, Roof-ceiling Construction
- Chapter 9, Roof Assemblies
- Chapter 10, Chimneys and Fireplaces
- Chapter N11, Energy Efficiency
- Chapter M13, General Mechanical System Requirements
- Chapter M16, Duct Systems
- Chapter M21, Hydronic Piping
- Chapter G24, Fuel Gas
- Chapter P 25, Plumbing Administration
- Chapter P27, Plumbing Fixtures
- Chapter P28, Water Heaters
- Chapter P29, Water Supply and Distribution
- Chapter P30, Sanitary Drainage
- Chapter P31, Vents
- Chapter E37, Branch Circuit and Feeder Requirements
- Chapter E39, Power and Lighting Distribution
- Chapter E41, Appliance Installation
- Appendix Q, Tiny Homes

Chapter 1: Scope and Administration			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Modification R101.2	R101.2	**Scope**	All instances where the International Building Code (IBC) permits construction under the IRC are now listed in the exception to the scope of the IRC.
Clarification R105.1, R110.1, R202	R105.1, R110.1, R202	**Change of Occupancy**	A definition for “Change of Occupancy” has been added and the requirement for a certificate of occupancy when there is a change of occupancy or use has been clarified.

Chapter 3: Building Planning			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Modification Table R301.2(1)	Table R301.2(1)	**Climatic and Geographic Design Criteria**	The requirement for a Manual J assessment or engineered equivalent has been in the International Residential Code for several editions. To assist the designer, jurisdictions will now include variables for Manual J assessments with other climatic and geographic design criteria available from the building department.
Modification R301.2.2.1	R301.2.2.1	**Seismic Design Category**	New seismic design category (SDC) maps are included in the 2018 IRC. One map contains the most conservative ‘good quality’ soil type, assuming Site Class C or D, and may increase the local SDC. The second map is allowed if the site is identified as being Site Class A, B or D by geotechnical report or known local soil conditions; this map may lower the design spectral response acceleration, S_{DS}, potentially lowering the seismic design category.
Modification R302.1	R302.1	**Exterior Walls**	References to the International Building Code (IBC) offer additional options and provide flexibility in determining the fire resistance rating of exterior wall assemblies. Table footnotes have been revised to clarify the correlation between gable end vents and the fire resistance requirements for projections.
Modification R302.2	R302.2	**Townhouse Separation**	Two paths for achieving the fire-resistant separation between townhouse dwelling units – two 1-hour walls or a common wall – are spelled out in the townhouse provisions.
Modification R302.13	R302.13	**Fire Protection of Floors above Crawl Spaces**	Fire-resistant membrane protection is now required for the applicable floor framing materials above crawl spaces containing fuel-fired or electric-powered heating appliances.

Chapter 3: Building Planning, Continued			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Modification R308.4.2	R308.4.2	**Glazing Adjacent to Doors**	Glazing within 24 inches of the hinge side of an in-swinging door now requires safety glazing where the glazing is at an angle less than 180 degrees from the plane of the door.
Modification R308.4.4	R308.4.4	**Glazing in Guards and Railings**	Unless laminated glass is used, structural glass baluster panels in guards now require an attached top rail or handrail.
Clarification R308.4.7	R308.4.7	**Glazing Adjacent to the Bottom Stair Landing**	Figure R308.4.7 has been replaced with a new figure and the caption modified to more accurately reflect when safety glazing is required near the bottom landing.
Modification R310.1	R310.1	**Emergency Escape and Rescue Openings**	Emergency escape and rescue openings are no longer required for bedrooms in basements when the dwelling unit is protected with an automatic fire sprinkler system and other conditions are met.
Modification R310.3	R310.3	**Area Wells for Emergency Escape and Rescue Doors**	For emergency escape and rescue doors in basements, a change in terminology replaces “bulkhead enclosures” with “area wells” and provisions for ladders and steps for area wells are added.
Modification R311.7.1, R311.7.8	R311.7.1, R311.7.8	**Handrail Projection**	A new exception to the handrail projection limitation provides for adequate clearance behind the handrail when it passes the projection of a floor, landing or tread return.
Modification R311.7.3	R311.7.3	**Maximum Stair Rise between Landings**	The maximum rise of a flight of stairs has increased by 4 inches, from 147 to 151 inches.
Modification R311.7.11, R311.7.12	R311.7.11, R311.7.12	**Alternating Tread Devices and Ships Ladders**	Alternating tread devices and ships ladders are now permitted as a means of egress for lofts with an area that does not exceed 200 square feet.
Clarification R312.1	R312.1	**Guards**	The guard requirements only apply to the specific portion of a walking surface that exceeds 30 inches above grade.
Modification R314	R314	**Smoke Alarms**	The exemption for interconnection of alarms during alterations based on feasibility has been removed from the code.
Modification R315	R315	**Carbon Monoxide Alarms**	Interconnection is now required where multiple carbon monoxide alarms are required in a dwelling unit.

Chapter 3: Building Planning, Continued			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Modification R322.3	R322.3	**Coastal High-Hazard Flood Zones**	In coastal high-hazard areas (V Zones) and Coastal A Zones, the IRC now provides specific guidance for the design and construction of concrete slabs, stairs, guards, decks and porches to reduce damage to the dwelling in a flood event.
Addition R324.6		**Roof Access for Photovoltaic Solar Energy Systems**	Requirements for roof access and pathways for firefighters have been introduced into the IRC provisions for rooftop mounted photovoltaic solar energy systems.
Addition R324.6.2.2		**Solar Panels near Emergency Escape and Rescue Openings**	Rooftop mounted photovoltaic solar energy panels and modules are not permitted to be installed below emergency escape and rescue openings.
Modification R325.3		**Mezzanine Area Limitation**	The area limitation for mezzanines has been increased from one-third to one-half of the area of the room containing the mezzanine under certain conditions.
Addition R325.6, R202		**Habitable Attics**	The definition of habitable attic has been revised and the technical requirements have been placed with mezzanines.

Chapter 4: Foundations			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Modification Table R403.3(1)	Table R403.3(1)	**Insulation requirements for frost protected footings**	Insulation thickness requirements for Type II and IX extruded polystyrene (EPS) have changed. The minimum R-value for specific types of EPS has been clarified while requirements for horizontal insulation were added.
Modification Table R403.4	Table R403.4	**Crushed stone footings**	Table R403.4 is updated to include both the minimum depth and width of a crushed stone footing for a precast concrete wall.
Modification R408.3	R408.3	**Unvented crawl space**	Ventilation of the under-floor space is not required when an adequately-sized dehumidifier is provided.

Chapter 5: Floors			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Modification R507	R507	**Decks**	Section R507 is reorganized for ease of use and additional provisions are added to simplify prescriptive construction of a deck.
Modification R507.2	R507.2, R507.3	**Deck materials**	Section R507.2 adds requirements for fasteners and fastener connections, flashing and alternative materials.
Addition R507.3		**Deck footings**	A new section on footing minimum size is added to help describe minimum prescriptive (non-engineered) requirements for an exterior deck footing based on snow load, soil quality, and footing shape and size.
Clarification R507.6	R507.5	**Deck joists**	Maximum joist spacing and total length have been clarified. In Table R507.6, maximum span length is listed followed by maximum cantilever length.
Clarification R507.7-R507.9	R507.2, R507.4	**Decking, Vertical and Lateral Support**	Decking material options and fastener systems are clarified. Vertical and horizontal support of an exterior deck is updated while support and attachment of ledgers is added to the decking section.

Chapter 6: Wall Construction			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Addition Table R602.3(6)		**Alternate Stud Height**	To help clarify when studs greater than 10 feet long may be used, an exception is added to Section R602.3.1 as well as a reference to new Table R602.3(6) which applies only to 11- and 12-foot tall walls in one- and two-story buildings.
Modification Tables R602.7(1), R602.7(2)	Tables R602.7(1), R602.7(2)	**Girder and Header Spans**	Girder and header spans are updated assuming No. 2 Southern Pine rather than No. 1 Southern Pine as used in the 2015 IRC. A footnote is added to clarify that headers and girders are assumed to be braced; for headers with pony walls above, a further reduction in span is taken for 2x8 and larger headers.
Modification Table R602.7.5	Table R602.7.5	**Support for headers**	The 2015 IRC full height stud table is significantly altered. The table increases the number of king studs in higher wind regions and requires only one or two king studs at each end of a header in regions with 115 mph wind speeds.
Modification Table R602.10.3 (4)	Table R602.10.3 (4)	**Seismic Adjustment Factors**	Attempts to clarify roof and ceiling dead loads in the top story of a multi-story dwelling and use of the BV-WSP bracing method have been added. Table R602.10.3(4) now allows use of Methods WSP and CS-WSP with brick veneer in the second story of a dwelling.

Chapter 6: Wall Construction, Continued			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Modification R602.10.4.1	R602.10.4.1	**Mixing bracing methods**	Mixing of continuous sheathing methods with an intermittent alternate bracing method is clarified. Braced wall line(s) containing an alternate method must have sufficient bracing length for an intermittent method, not just for the continuous sheathing method when the alternate method is Method PFH, PFG or ABW.
Modification R602.10.6.5	R602.10.6.5	**Method BV-WSP**	An attempt to clarify use of the BV-WSP method is made. New limits are added to Section R602.10.6.5.
Modification Tables R603.3.1, R603.3.1.1 (2)	Tables R603.3.1, R603.3.1.1 (2)	**Cold-Formed Steel Wall Construction**	Cold-formed steel connection tables are updated for wind speeds less than 140 miles per hour. Values in the IRC tables now match AISI S230, Standard for Cold-Formed Steel Framing - Prescriptive Method for One- and Two-Family Dwellings.

Chapter 7: Wall Covering			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Modification R703.2	R703.2	**Water-resistive barrier**	Water-resistive barrier materials other than No. 15 asphalt felt must be installed following the manufacturer's installation instructions. The exemption for detached accessory buildings is deleted.
Modification R703.3.1	R703.3.1, R703.11.1.4	**Soffit installation**	Requirements for wood structural panel soffits are added to Section R703.3.1 and vinyl soffit requirements are clarified.
Modification R703.8.4	R703.8.4	**Veneer anchorage through insulation**	Masonry veneer is explicitly allowed to attach to through insulation into the underlying wood structural panels. Attachment must follow Table R703.8.4(2).
Modification R703.11.2	R703.11.2	**Vinyl siding installation over foam plastic sheathing**	Testing has been done on vinyl siding over insulation in an attempt to determine fastener requirements for vinyl siding attachment in high wind regions. New Table R703.11.2 gives design wind pressures for vinyl siding resisting all wind loads without reliance on wood structural panel sheathing.

Chapter 8: Roof-Ceiling Construction			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Modification R802	R802	**Roof Framing**	Section R802, Design and construction of roofs, has been clarified by dividing the content into three separate sections on roof ridges, rafters and ceiling joists.
Modification R802.1.5.4	R802.1.5.4	**Labeling**	Each stick of fire-retardant-treated lumber and individual wood structural panel will be labeled with eight specific items of information
Modification R806.2	R806.2	**Minimum vent area**	The minimum vent area exception is clarified, stating that net free ventilation may be less than 1/150 only if two required conditions are met. Lower vents must be located in the bottom third of the attic space.

Chapter 9: Roof Assemblies			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Addition R905.17		**Building Integrated Photovoltaic Panels**	New Section R905.17 addresses installation and attachment of building-integrated photovoltaic (BIPV) roof panels.

Chapter 10: Chimneys and Fireplaces			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Addition R1005.8		**Chimney insulation shield**	Factory-built chimneys, which have been required to maintain a minimum clearance to insulation, are now required to have an insulation shield to provide the clearance to the insulation.

Chapter 11: Energy Efficiency			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Clarification N1101.6, Tables N1101.10.3 (1) and N1101.10.3 (2)	N1101.6, Tables N1101.10.3 (1) and N1101.10.3 (2)	**Fenestration Definitions and U-Factors**	The definitions for skylights and vertical fenestration have been moved under the definition for fenestration, and a definition for opaque door has been added.

Chapter 11: Energy Efficiency, Continued			
Code Section		**Section Title**	Description of Change
2018	**2015**		
Modification N1102.1	N1102.1	**Building Thermal Envelope for Log Homes**	Log homes are now exempt from the prescriptive building thermal envelope requirements when designed in accordance with ICC-400, *Standard on the Design and Construction of Log Structures*.
Modification N1102.1.2 and N1102.1.4	N1102.1.2 and N1102.1.4	**Insulation and Fenestration Requirements**	The prescriptive U-factors for fenestration have been lowered to improve the energy efficiency of dwellings and townhouses.
Modification N1102.2.2	N1102.2.2	**Reduction of Ceiling Insulation**	When applying the exception for insulation in ceilings without attics, the insulation must extend to the outside of the top plate.
Clarification N1102.2.5	N1102.2.5	**Mass Walls**	The mass wall provisions have been itemized in a numbered list to bring accuracy and clarity to the technical requirements.
Modification N1102.2.6	N1102.2.6	**Cold-Formed Steel Framing R-Values**	Conflicting entries have been removed from the table establishing cold-formed steel R-values equivalent to those for wood framing.
Modification N1102.4	N1102.4	**Testing for Air Leakage**	A new standard for air-leakage testing, RESNET/ICC 380, is now referenced in the IRC to provide flexibility for the testing industry.
Addition N1103.3.6 and N1103.3.7		**Ducts Buried within Ceiling Insulation**	New provisions address the methods, minimum coverage requirements and thermal benefits for ducts buried within ceiling insulation, and when those ducts are considered inside the building thermal envelope.
Modification N1104.1	N1104.1	**Lighting**	The required percentage of permanent lighting fixtures having high-efficacy lamps has increased from 75 to 90 percent.
Modification N1106.3, N1106.4	N1106.3, N1106.4	**Maximum Energy Rating Index**	The maximum rating index values based on climate zone have increased slightly to make the ERI provisions less restrictive and improve the flexibility of the energy provisions.

Chapter M13: General Mechanical System Requirements			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Deletion M1305.1.1	M1305.1.1	**Access to Furnaces within Compartments**	The appliance access requirements for furnaces in compartments have been removed from the code in favor of other code provisions and the manufacturer's instructions.
Modification M1305.1.3.2	M1305.1.4.2	**Appliances Installed in Pits**	The requirements for appliance installation in pits has been expanded to provide more detail and to be similar to language found in other ICC codes. The minimum bottom clearance has been reduced from 6 inches to 3 inches.

Chapter 15: Exhaust Systems			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Modification M1502.3.1	M1502.3.1	**Dryer Exhaust Duct Termination**	A minimum area of 12.5 square inches has been established for the terminal outlet of dryer duct exhaust.
Modification M1502.4.2	M1502.4.2	**Concealed Dryer Exhaust Ducts**	Wall and ceiling cavities enclosing dryer exhaust duct must provide sufficient space that the 4-inch duct is not squeezed out of its round shape.
Modification M1503.6	M1503.6	**Makeup Air for Kitchen Exhaust Systems**	Makeup air for domestic cooking exhaust systems is no longer required if all fuel-burning appliances in the dwelling unit have a direct vent or mechanical draft vent system.

Chapter M16: Duct Systems			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Modification M1601.1.2	M1601.1.2	**Underground Duct Systems**	Underground ducts, including both direct-burial ducts and those encased in concrete, require sealing and testing.

Chapter M21: Hydronic Piping			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Modification M2101.10	M2101.10	**Pressure Tests for Hydronic Piping**	Compressed air testing of PEX hydronic piping is now allowed when testing is in accordance with the manufacturer's instructions.
Modification M2103.2	M2103.2	**Thermal Barrier for Radiant Floor Heating Systems**	For hydronic floor heating systems, the minimum insulation R-values have been removed from Section M2103.2 and a reference to the energy provisions of Chapter 11 has been added.

Chapter G24: Fuel Gas			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Modification G2406.2	G2406.2	**Prohibited Locations for Appliances**	A gas-fired clothes dryer is now allowed to be installed in a bathroom and toilet room where a permanent opening communicates with other permitted spaces.
Modification G2411.2, G2411.3	G2411.2, G2411.3	**Electrical Bonding of CSST**	The existing provisions for electrical bonding apply to CSST without an arc-resistant jacket or coating and a new section addresses electrical continuity and bonding of arc-resistant CSST.
Modification G2414.4.2, G2414.10.1	G2414.4.2, G2414.10.1	**Schedule 10 Steel Gas Piping**	The code now allows Schedule 10 steel pipe to be used for fuel gas piping.
Modification G2415.11	G2415.11	**Protection against Corrosion**	Reorganization of this section includes new provisions to address corrosion protection of underground steel gas piping and protection for steel risers other than anodeless risers.
Clarification G2420.5.1	G2420.5.1	**Shutoff Valve Location**	Shutoff valves located behind movable appliances are considered as meeting the requirement for access.
Addition G2420.6		**Support for Shutoff Valves in Tubing Systems**	Shutoff valves in gas tubing systems require rigid support separate from the tubing to prevent damage at the valve connection.
Deletion G2442.2	G2442.2	**Forced Air Furnace Duct Size**	The prescriptive duct size requirements for forced air furnaces have been deleted in favor of other sizing methods specific to the appliance.
Modification G2447.2	G2447.2	**Commercial Cooking Appliances**	Commercial cooking appliances are now permitted in dwelling units when installed in accordance with an engineered design and the manufacturer's instructions.

Chapter P25: Plumbing Administration			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Modification P2503.7	P2503.7	**Air Testing of PEX Piping**	Compressed air testing of PEX water supply piping is now allowed when testing is in accordance with the manufacturer's instructions.

Chapter P26: General Plumbing Requirements			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Modification P2602.1	P2602.1	**Connections to Public Sewer or Private Sewage Disposal System**	The International Private Sewage Disposal Code (IPSDC) is referenced for installation of private sewage disposal systems where there are no state or local requirements for such systems.

Chapter P27: Plumbing Fixtures			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Modification P2704	P2704	**Slip Joint Connections**	Slip joint connections are permitted anywhere between the fixture outlet and the drainage piping, and are no longer limited to the trap inlet, outlet and trap seal locations.
Modification P2713.1	P2713.1	**Bathtub Overflow**	Bathtub overflow outlets are no longer required.

Chapter P28: Water Heaters			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Modification P2801.6	P2801.6	**Plastic Pan for Gas-Fired Water Heaters**	Plastic safety pans are now allowed under gas water heaters provided the material falls within the prescribed flame spread and smoke developed indices.

Chapter P29: Water Supply and Distribution			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Modification P2902.5.4, P2904.	P2902.5.4, P2904.	**Backflow Protection for Fire Sprinkler Systems**	Sections P2902.5.4 and P2904.1 are revised and coordinated to clarify that stand-alone and multipurpose fire sprinkler systems complying with Section P2904 or NFPA 13D do not require backflow protection under most circumstances.
Modification P2903.5	P2903.5	**Water Hammer Arrestors**	A water hammer arrestor is now required where quick-closing valves are used in the water distribution system.
Addition P2906.6.1	P2906.6.1	**Saddle Tap Fittings on Water Distribution Piping**	Saddle tap fittings are no longer permitted on water distribution system piping.
Modification P2906.18.2	P2906.18.2	**Joints between PVC and CPVC Piping**	A single solvent-cement transition joint is now an acceptable method for connecting a CPVC water distribution system to a PVC water service pipe.

Chapter P30: Sanitary Drainage			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Modification P3003.2	P3003.2	**Prohibited Joints for Sanitary Drainage**	A solvent cement joint is now permitted for joining ABS and PVC piping at the connection of the building drain to the building sewer.
Modification P3005.1.6	P3005.1.6	**Reduction in Pipe Size**	Water closet flanges, offset bend fittings and offset flanges are now specifically listed as exceptions to the provision that drainage piping must not be reduced in size in the direction of flow.

Chapter P31: Vents			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Modification P3103.1	P3103.1	**Vent Pipe Terminations**	The provisions for vent terminals have been reorganized and a new option has been added to allow a 2-inch vent extension through a sloped roof when the vent is covered.
Modification P3111	P3111	**Combination Waste and Vent System**	Food waste disposers and drinking fountains are now permitted to connect to a combination waste and vent system.
Modification P3114.8	P3114.8	**Prohibited Installations for Air Admittance Valves**	An air admittance valve cannot be used to resolve the problem of an open vent terminal that is too close to a building air intake.

Chapter E37: Branch Circuit and Feeder Requirements			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Addition E3703.5		**Garage Branch Circuits**	A separate 20-ampere branch circuit is now required to serve receptacle outlets of attached garages and detached garages with electric power.

Chapter E39: Power and Light Distribution			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Modification E3901.2	E3901.2	**Wall Space for Receptacle Distribution**	Cabinets with countertops are now considered wall space in determining required locations for general purpose receptacle outlets.
Modification E3901.3	E3901.3	**Appliances on 15 Amp Circuits**	An individual 15-ampere branch circuit is permitted to serve any specific kitchen appliance.
Addition E3902.4		**GFCI Protection for Crawl Space Lighting Outlets**	Ground-fault circuit-interrupter (GFCI) protection is now required for lighting outlets of crawl spaces.
Addition E3905.2.1		**Nonmetallic-Sheathed Cable and Metal Boxes**	Where entering a metal box, nonmetallic-sheathed cable must extend into the box at least 1/4 inch and extend past the cable clamp.

Chapter E41: Appliance Installation			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Modification E4101.3	E4101.3	**Cord- and-Plug-Connected Appliances**	The maximum cord lengths for range hoods and built-in dishwashers have increased and the code clarifies that the receptacle outlet for the dishwasher has to be in the space adjacent to the appliance.

Appendix Q: Tiny Houses			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Appendix Q Addition		**Tiny Houses**	A new Appendix Q covers provisions for tiny houses, defined as dwellings with a maximum floor area of 400 square feet.

AGENDA ITEM 7

CITY COUNCIL
AGENDA MEMO

Prepared By: Jeremy Tennant, Director of Development Services **April 25, 2019**

Proposed Amendments to Chapter 46 "FIRE PREVENTION AND PROTECTION"

DESCRIPTION:

Receive a report and hold a discussion regarding amending, in its entirety, Chapter 46 "FIRE PREVENTION AND PROTECTION," Article II "FIRE CODE" of the code of ordinances, by adopting the 2018 edition of the International Fire Code with local amendments.

BACKGROUND INFORMATION:

The City is currently operating under the approved 2015 edition of the International Fire Code with the North Central Texas Council of Governments (NCTCOG) amendments. The last update to Chapter 46, Article II "Fire Code," of the Code of Ordinances occurred in January of 2018. Staff is presenting the 2018 International Fire Code with NCTCOG and local amendments to the City Council for 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, and new practices to ensure the codes being enforced are consistent with those of surrounding cities within the north Texas region.

Insurance Service Office (ISO) - ISO collects information useful in many aspects of insurance underwriting. That information includes evaluations of public fire protection, flood risk, and the adoption and enforcement of building codes in individual communities. Information on municipal services helps the communities with their efforts to manage and mitigate their risk. ISO performs the evaluations as a service to the insurance industry as numerous insurance companies use the ISO ratings to calculate individual property insurance premiums. There are two key components to an ISO evaluation. The first is the Public Protection Classification (PPC). ISO uses the PPC to evaluate municipal fire-protection efforts in communities throughout the United States. Insurance companies use PPC information to help establish fair premiums for fire insurance generally offering lower premiums in communities with better protection. Many communities use the PPC as a benchmark for measuring the effectiveness of their fire-protection services which includes fire code adoption, fire inspections, and plan reviews. The PPC program is also a tool that helps communities plan for, budget, and justify improvements. Recently, the Lake Cities Fire Department PPC was upgraded to a 2 (on a scale of 1-10, 1 being the best – 10 being the worst) which for the region is an excellent score. The City of Lake Dallas recently received an audit from the ISO.

The second component is the Building Code Effectiveness Grading Schedule (BCEGS). The ISO assesses the building codes in effect in individual communities and how those communities enforce their building codes. The assessments place special emphasis on mitigation of losses from natural hazards. The concept is simple: municipalities with well-enforced, up-to-date codes should demonstrate better loss experience, and insurance rates can reflect that. The prospect of lessening catastrophe-related damage and ultimately lowering insurance costs provides an incentive for communities to enforce their building codes. Generally, the ISO performs these services on a five-year rotation. If the building codes are not current or over one cycle (three years) then the ISO will lower the rating of the community until a more current code is adopted. The BCEGS can affect the PPC rating and combined has the potential, if codes are not current, to raise insurance premiums for fire, catastrophic weather loss as well as flood insurance for constituents.

2018 International Fire Code (IFC)

- *Higher Education Laboratories with certain provisions can be classified as a Business use no longer Hazardous occupancies*
- *Requires Mobile Food Trucks Inspections, cooking equipment & propane*
- *New Provisions for high piled combustible storage*
- *Sprinkler retrofits for A-3 occupancies serving alcohol beverages – Occupancy 300 or more*
- *New chapter added on energy systems*
- *Gas detection systems revised throughout the Fire Code*
- *New stricter provisions on manual fire alarm systems*
- *New illumination of exit discharge paths to the public way*
- *New fire & life safety provisions for indoor and outdoor assembly events including trade shows and exhibitions*
- *New provisions on decorative material*

  APPENDICIES:
  - *Appendix B – Fire Flow Requirements for Buildings*
  - *Appendix D – Fire Apparatus Access Roads*
  - *Appendix E – Hazard Categories*
  - *Appendix F – Hazard Rankings*
  - *Appendix G – Cryogenic Fluids*

The Lake Cities Fire Department (LCFD), and City staff are requesting the update to the 2018 edition with NCTCOG and local amendments. NCTCOG representing 16 counties and 168 cities finalized their recommended local amendments in September 2018. Staff, in keeping with surrounding cities and NCTCOG's, proposed local amendments to the 2018 international fire code. By adopting the updated fire code, the City will be consistent with our neighboring Cities, Corinth and Hickory Creek, which utilizes the Lake Cities Fire Department as well.

FINANCIAL CONSIDERATION:

None

RECOMMENDED MOTION:

None, discussion only

ATTACHMENTS:

N/A

EXHIBIT "A"
City of Corinth Amendments
2018 International Fire Code

The following sections, paragraphs, and sentences of the *2018 International Fire Code* (IFC) are hereby amended as follows:

Section 101.1 Is amended to read as follows:

Title. These regulations shall be known as the Fire Code of the City of Corinth, herein referred to as "this code"

Section 101.1.1; add new Section 101.1.1 to read as follows:

101.1.1 Adoption of Appendices. The following Appendices contained in the International Fire Code, 2018 Edition, are adopted and made a part of this Fire Code:
Appendix B – Fire-flow Requirements for Buildings
Appendix E – Hazard Categories
Appendix D—Fire Apparatus Access Roads
Appendix F – Hazard Ranking
Appendix G – Cryogenic Fluids – Weight and Volume Equivalents

Section 102.1; change #3 to read as follows:

3**.** Existing structures, facilities, and conditions when required in Chapter 11 or in specific sections of this code.

Section 103 Fire Prevention Division

Section 103.1 is amended to read as follows:

General. The Fire Code shall be enforced by the Division of Fire Prevention. The Division of Fire Prevention is hereby established as a division of the Fire Department of the City of Corinth and shall be operated under the supervision of the Fire Chief.

Section 103.2 is amended to read as follows:

Appointment. The Fire Marshal (Fire Code Official) shall be appointed by the Fire Chief of the City of Corinth on the basis of proper qualifications.

Section 103.3 is amended to read as follows:

Deputies. The Fire Chief may assign such members of the Fire Department as inspectors, technical officers and other employees

Section 104.1 is amended by adding the following:

Under the Fire Chief's direction, the fire department is authorized to enforce all ordinances of the City pertaining to:

1. The prevention of fires;

2. The suppression or extinguishment of dangerous or hazardous fires;

3. The storage, use, and handling of hazardous materials;

4. The installation and maintenance of automatic, manual and other private fire alarm systems and fire-extinguishing equipment;

5. The elimination of fire hazards on land and in buildings, structures and other property, including those under construction;

6. The maintenance of means of ingress and egress;

7. The investigation of the cause, origin and circumstances of fires, unauthorized releases of hazardous materials and explosions.

Section 105.3.3; change to read as follows:

105.3.3 Occupancy Prohibited before Approval. The building or structure shall not be occupied prior to the fire code official issuing a permit when required and conducting associated inspections indicating the applicable provisions of this code have been met.

Section 105.7; add Section 105.7.26 to read as follows:

105.7.26 **Electronic access control systems.** Construction permits are required for the installation or modification of an electronic access control system, as specified in Chapter 10. A separate construction permit is required for the installation or modification of a fire alarm system that may be connected to the access control system. Maintenance performed in accordance with this code is not considered a modification and does not require a permit.

Section 106.2.1 is amended to add the following:

Inspection requests. If the inspection fails and a return inspection is necessary, the return inspection shall constitute a re-inspection. An additional fee may be assessed on a second re-inspection and each subsequent re-inspection in accordance with the Master fee Ordinance.

Section 109.4 is amended to read as follows:

109.4 Violation Penalties. Any person who:
1. violates or fails to comply with any of the provisions of this code or the standards adopted hereunder; or
2. fails to comply within the time fixed herein with any order made by the Fire Chief or authorized representative under any of the provisions of this code or the standards adopted hereunder; or
3. builds, installs, alters, repairs or does work in violation of any detailed statement, specifications or plans submitted and approved under the provisions of this code or the standards adopted hereunder; or
4. builds in violation of any certificate or permit issued under the provisions of this code or the standards adopted hereunder; or
5. permits any fire hazard to exist in or upon any occupancy, premises or vehicle under their control, operation, maintenance or possession; or
6. fails to comply with orders, notices, signs and/or tags; or
7. tampers with signs and/or tags;
shall be guilty of a misdemeanor punishable by a fine not to exceed $2,000.00 for each violation and act of noncompliance. The imposition of one (1) penalty for any violation shall not excuse the violation or permit it to continue, and all such persons shall be required to correct or remedy such violations of defects within a reasonable time specified by the Fire Chief or authorized representative. When not otherwise specified, each day that prohibited conditions are maintained shall constitute a separate offense.

Section 202; amend and add definitions to read as follows:

ADDRESSABLE FIRE DETECTION SYSTEM. Any system capable of providing identification of each individual alarm-initiating device. The identification shall be in plain English and as descriptive as possible to specifically identify the location of the device in alarm. The system shall have the capability of alarm verification.

[B] 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 persons who are rendered incapable of

self-preservation by the services provided or staff has accepted responsibility for care recipients already incapable. This group may include but not be limited to the following:

- Dialysis centers

- Procedures involving sedation

- Sedation dentistry

- Surgery centers

- Colonic centers

- Psychiatric centers

[B] ATRIUM. An opening connecting ~~two~~ three or more stories… *{remaining text unchanged}*

[B] DEFEND IN PLACE. A method of emergency response that engages building components and trained staff to provide occupant safety during an emergency. Emergency response involves remaining in place, relocating within the building, or both, without evacuating the building.

FIRE WATCH. A temporary measure intended to ensure continuous and systematic surveillance of a building or portion thereof by one or more qualified individuals or *standby personnel* when required by the *fire code official*, for the purposes of identifying and controlling fire hazards, detecting early signs of unwanted fire, raising an alarm of fire and notifying the fire department.

FIREWORKS. Any composition or device for the purpose of producing a visible or an audible effect for entertainment purposes by combustion, *deflagration*, *detonation*, and/or activated by ignition with a match or other heat producing device that meets the definition of 1.3G fireworks or 1.4G fireworks. … *{Remainder of text unchanged}…*

Option B

HIGH-PILED COMBUSTIBLE STORAGE: add a second paragraph to read as follows:

Any building classified as a group S Occupancy or Speculative Building exceeding 6,000 sq. ft. that has a clear height in excess of 14 feet, making it possible to be used for storage in excess of 12 feet, shall be considered to be high-piled storage. When a specific product cannot be identified, a fire protection system and life safety features shall be installed as for Class IV commodities, to the maximum pile height.

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

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.

SELF-SERVICE STORAGE FACILITY. Real property designed and used for the purpose of renting or leasing individual storage spaces to customers for the purpose of storing and removing personal property on a self-service basis.

STANDBY PERSONNEL. Qualified fire service personnel approved by the Fire Chief. When utilized, the number required shall be as directed by the Fire Chief. Charges for utilization shall be as normally calculated by the jurisdiction.

UPGRADED OR REPLACED FIRE ALARM SYSTEM. A fire alarm system that is upgraded or replaced includes, but is not limited to the following:

- Replacing one single board or fire alarm control unit component with a newer model
- Installing a new fire alarm control unit in addition to or in place of an existing one
- Conversion from a horn system to an emergency voice/alarm communication system
- Conversion from a conventional system to one that utilizes addressable or analog devices

The following are not considered an upgrade or replacement:

- Firmware updates
- Software updates
- Replacing boards of the same model with chips utilizing the same or newer firmware

lows:

307.1.1 Prohibited Open Burning. Open burning that is offensive or objectionable because of smoke emissions or when atmospheric conditions or local circumstances make such fires hazardous shall be prohibited.
Exception: {No change.}

Section 307.2; change to read as follows:

307.2 Permit Required. A permit shall be obtained from the *fire code official* in accordance with Section 105.6 prior to kindling a fire for recognized silvicultural or range or wildlife management practices, prevention or control of disease or pests, or open burning. Application for such approval shall only be presented by and permits issued to the owner of the land upon which the fire is to be kindled.

Examples of state or local law, or regulations referenced elsewhere in this section may include but not be limited to the following:

1. Texas Commission on Environmental Quality (TCEQ) guidelines and/or restrictions.
2. State, County, or Local temporary or permanent bans on open burning.
3. Local written policies as established by the *fire code official*.

Section 307.3; change to read as follows:

307.3 Extinguishment Authority The fire code official is authorized to order the extinguishment by the permit holder, another person responsible or the fire department of open burning that creates or adds to a hazardous or objectionable situation.

Section 307.4; change to read as follows:

307.4 Location. The location for open burning shall not be less than 300 feet (91 440 mm) from any structure, and provisions shall be made to prevent the fire from spreading to within 300 feet (91 440 mm) of any structure.
Exceptions: {No change.}

Section 307.4.3, Exceptions; add exception #2 to read as follows:

Exceptions:
2. Where buildings, balconies and decks are protected by an approved automatic sprinkler system.

Section 307.4.4 and 307.4.5; change to read as follows:

307.4.4 **Permanent Outdoor Firepit.** Permanently installed outdoor firepits for recreational fire purposes shall not be installed within 10 feet of a structure or combustible material.

Exception: Permanently installed outdoor fireplaces constructed in accordance with the International Building Code.

307.4.5 **Trench Burns.** Trench burns shall be conducted in air curtain trenches and in accordance with Section 307.2.

Section 307.5; change to read as follows:

307.5 Attendance. *Open burning*, trench burns, bonfires, *recreational fires*, and use of portable outdoor fireplaces shall be constantly attended until the… *{Remainder of section unchanged}*

Add Section 307.6 to read as follows:

Burn Bans. The City of Corinth shall follow the ruling of the Denton County Commissioner's Court regarding burn bans. The ban shall prohibit all outdoor activities and /or processes that may start a fire. These activities or processes shall include but are not limited to: open burning, recreational burning, outdoor welding, use of torches or other cutting devices that emit sparks, and fireworks.

Add section 307.7 to read as follows:

Posting a declaration of a burn ban: The burn ban issued by the Denton County Commissioner's court as specified in section 307.6 may be posted or published in the following locations:

1. City website
2. Fire Department social media accounts
3. Official City newspaper

Section 308.1.4; change to read as follows:

308.1.4 Open-flame Cooking Devices. Open-flame cooking devices, charcoal grills and other similar devices used for cooking shall not be located or used on combustible balconies, decks, or within 10 feet (3048 mm) of combustible construction.

Exceptions:

1. One- and two-family dwellings, except that LP-gas containers are limited to a water capacity not greater than 50 pounds (22.68 kg) [nominal 20-pound (9.08 kg) LP-gas capacity] with an aggregate LP-gas capacity not to exceed 100 pounds (5 containers).

2. Where buildings, balconies and decks are protected by an approved *automatic sprinkler system*, except that LP-gas containers are limited to a water capacity not greater than 50 pounds (22.68 kg) [nominal 20-pound (9.08 kg) LP-gas capacity], with an aggregate LP-gas capacity not to exceed 40 lbs. (2 containers).

3. {No change.}

Section 308.1.6.2, Exception #3; change to read as follows:

Exceptions:

3. Torches or flame-producing devices in accordance with Section 308.1.3.

Section 308.1.6.3; change to read as follows:

308.1.6.3 *Sky Lanterns*. A person shall not release or cause to be released an unmanned free-floating

device containing an open flame or other heat source, such as but not limited to a *sky lantern*.

Section 311.5; change to read as follows:

311.5 Placards. The *fire code official* is authorized to require marking of any vacant or abandoned buildings or structures determined to be unsafe pursuant to Section 110 of this code relating to structural or interior hazards, as required by Section 311.5.1 through 311.5.5.

Section 403.5; change Section 403.5 to read as follows:

403.5 Group E Occupancies. An approved fire safety and evacuation plan in accordance with Section 404 shall be prepared and maintained for Group E occupancies and for buildings containing both a Group E occupancy and an atrium. A diagram depicting two evacuation routes shall be posted in a conspicuous location in each classroom. Group E occupancies shall also comply with Sections 403.5.1 through 403.5.3.

Section 404.2.2; add Number 4.10 to read as follows:

4.10 Fire extinguishing system controls.

Section 405.4; change Section 405.4 to read as follows:

405.4 Time. The fire code official may require an evacuation drill at any time. Drills shall be held at unexpected times and under varying conditions to simulate the unusual conditions that occur in case of fire.

Section 501.4; change to read as follows:

501.4 Timing of Installation. When fire apparatus access roads or a water supply for fire protection is required to be installed for any structure or development, they shall be installed, tested, and approved prior to the time of which construction has progressed beyond completion of the foundation of any structure or in a manner that is determined accessible by the Fire Marshal.

Section 503.1.1; add sentence to read as follows:

Except for one- or two-family dwellings, the path of measurement shall be along a minimum of ten feet (10') wide unobstructed pathway around the external walls of the structure.

Section 503.2.1; change to read as follows:

503.2.1 Dimensions. Fire apparatus access roads shall have an unobstructed width of not less than 24 feet (7315 mm), exclusive of shoulders, except for approved security gates in accordance with Section 503.6, and an unobstructed vertical clearance of not less than 14 feet (4267 mm).

Exception: Vertical clearance may be reduced; provided such reduction does not impair access by fire apparatus and *approved* signs are installed and maintained indicating the established vertical clearance when approved.

Section 503.2.2; change to read as follows:

503.2.2 Authority. The *fire code official* shall have the authority to require an increase in the minimum access widths and vertical clearances where they are inadequate for fire or rescue operations.

Section 503.2.3; change Section 503.2.3 to read as follows:

503.2.3 Surface. Fire apparatus access roads shall be designed and maintained to support imposed

loads of 80,000 Lbs. for fire apparatus and shall be surfaced so as to provide all-weather driving capabilities.

Section 503.3; change to read as follows:

503.3 Marking. Striping, signs, or other markings, when approved by the *fire code official*, shall be provided for fire apparatus access roads to identify such roads or prohibit the obstruction thereof. Striping, signs and other markings shall always be maintained in a clean and legible condition and be replaced or repaired when necessary to provide adequate visibility.

(1) **Striping** – Fire apparatus access roads shall be continuously marked by painted lines of red traffic paint six inches (6") in width to show the boundaries of the lane. The words "NO PARKING FIRE LANE" or "FIRE LANE NO PARKING" shall appear in four inch (4") white letters at 25 feet intervals on the red border markings along both sides of the fire lanes. Where a curb is available, the striping shall be on the vertical face of the curb.

(2) **Signs** – Signs shall read "NO PARKING FIRE LANE" or "FIRE LANE NO PARKING" and shall be 12" wide and 18" high. Signs shall be painted on a white background with letters and borders in red, using not less than 2" lettering. Signs shall be permanently affixed to a stationary post and the bottom of the sign shall be six feet, six inches (6'6") above finished grade. Signs shall be spaced not more than fifty feet (50') apart along both sides of the fire lane. Signs may be installed on permanent buildings or walls or as approved by the Fire Chief.

Section 503.4; change to read as follows:

503.4 Obstruction of Fire Apparatus Access Roads. Fire apparatus access roads shall not be obstructed in any manner, including the parking of vehicles. The minimum widths and clearances established in Section 503.2.1 and any area marked as a fire lane as described in Section 503.3 shall always be maintained.

Section 503.6 is amended to read as follows:

Security gates. Where security fencing is necessary, the owner shall provide gates or openings which may be secured. Gates when provided must open fully in either direction or be of a sliding or raised arm type and be equipped with an approved automated entry system with a Knox lock or equivalent for manual service. The key box shall be of an approved type listed in accordance with UL 1037 and be approved by the Fire Chief.

Section 505.1; change to read as follows:

505.1 Address Identification. New and existing buildings shall be provided with approved address identification. The address identification shall be legible and placed in a position that is visible from the street or road fronting the property. Address identification characters shall contrast with their background. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall not be spelled out. Each character shall be not less than 6 inches (152.4 mm) high with a minimum stroke width of 1/2 inch (12.7 mm). Where required by the fire code official, address numbers shall be provided in additional approved locations to facilitate emergency response. Where access is by means of a private road, buildings do not immediately front a street, and/or the building cannot be viewed from the public way, a monument, pole or other sign with approved 6 inch (152.4 mm) height building numerals or addresses and 4 inch (101.6 mm) height suite/apartment numerals of a color contrasting with the background of the building or other approved means shall be used to identify the structure. Numerals or addresses shall be posted on a minimum 20-inch (508 mm) by 30-inch (762 mm) background on border. Address identification shall be maintained.

Exception: R-3 Single Family occupancies shall have approved numerals of a minimum 3 ½ inches (88.9 mm) in height and a color contrasting with the background clearly visible and legible from the street fronting

the property and rear alleyway where such alleyway exists.

Section 507.4; change to read as follows:

507.4 Water Supply Test Date and Information. The water supply test used for hydraulic calculation of fire protection systems shall be conducted in accordance with NFPA 291 "Recommended Practice for Fire Flow Testing and Marking of Hydrants" and within one year of sprinkler plan submittal. The *fire code official* shall be notified prior to the water supply test. Water supply tests shall be witnessed by the *fire code official*, as required. The exact location of the static/residual hydrant and the flow hydrant shall be indicated on the design drawings. All fire protection plan submittals shall be accompanied by a hard copy of the waterflow test report, or as approved by the *fire code official*. The report must indicate the dominant water tank level at the time of the test and the maximum and minimum operating levels of the tank, as well, or identify applicable water supply fluctuation. The licensed contractor must then design the fire protection system based on this fluctuation information, as per the applicable referenced NFPA standard. Reference Section 903.3.5 for additional design requirements.

Section 507.5.1 is amended to read as follows:

Where required. Where a portion of the facility or building hereafter constructed or moved in or within the jurisdiction is more than 300 feet from a fire hydrant on a fire apparatus access road, as measured in an approved route around the exterior of the facility or building, on-site fire hydrants and mains shall be provided where required by the Fire Marshal. A minimum of one fire hydrant shall be located within 100ft of the fire department connection and on the same side of the roadway as the facility or building. As properties develop, fire hydrants shall be located at all intersecting streets and at the minimum spacing indicated in table 507.5.1. There shall be a minimum of two (2) fire hydrants serving each property within the prescribed distances listed in Table 507.5.1

Maximum Distance Between Hydrants TABLE 507.5.1

OCCUPANCY	SPRINKLERED	NOT SPRINKLERED
Residential (1 & 2 Family)	500 feet	500 feet
Residential (Multi Family)	400 feet	300 feet
All Other	500 feet	300 feet

Table 507.5.1

Section 507.5.4; change to read as follows:

507.5.4 Obstruction. Unobstructed access to fire hydrants shall always be maintained. Posts, fences, vehicles, growth, trash, storage and other materials or objects shall not be placed or kept near fire hydrants, fire department inlet connections or fire protection system control valves in a manner that would prevent such equipment or fire hydrants from being immediately discernible. The fire department shall not be deterred or hindered from gaining immediate access to fire protection equipment or fire hydrants.

Section 509.1.2; add new Section 509.1.2 to read as follows:

509.1.2 Sign Requirements. Unless more stringent requirements apply, lettering for signs required by this section shall have a minimum height of 2 inches (50.8 mm) when located inside a building and 4 inches (101.6 mm) when located outside, or as approved by the *fire code official*. The letters shall be of a color that contrasts with the background.

Section 603.3.2 and 603.3.2.1; change to read as follows:

603.3.1 Fuel oil storage in outside, above-ground tanks. Where connected to a fuel-oil piping system, the maximum amount of fuel oil storage allowed outside above ground without additional protection shall be 660 gallons (2498 L). The storage of fuel oil above ground in quantities exceeding 660 gallons (2498 L) shall comply with NFPA 31 and Chapter 57.

603.3.2 Fuel oil storage inside buildings. Fuel oil storage inside buildings shall comply with Sections 603.3.2.1 through 603.3.2.5 and Chapter 57.

603.3.2.1 Quantity limits. One or more fuel oil storage tanks containing Class II or III *combustible liquid* shall be permitted in a building. The aggregate capacity of all tanks shall not exceed the following:

1. 660 gallons (2498 L) in unsprinklered buildings, where stored in a tank complying with UL 80, UL 142 or UL 2085 for Class III liquids, and also listed as a double-wall/secondary containment tank for Class II liquids.
2. 1,320 gallons (4996 L) in buildings equipped with an *automatic sprinkler* system in accordance with Section 903.3.1.1, where stored in a tank complying with UL 142 or UL 2085 as a double-wall/secondary containment tank.
3. 3,000 gallons (11 356 L) where stored in protected above-ground tanks complying with UL 2085 and Section 5704.2.9.7 and the room is protected by an *automatic sprinkler system* in accordance with Section 903.3.1.1.

Section 901.5 amended to add the following:

Installation acceptance testing. All required tests shall be conducted by and at the expense of the owner or his representative. The Fire Department shall not be held responsible for any damages incurred in such test. Where it is required that the Fire Department witness any such test, such test shall be scheduled with a minimum of 48-hour notice to the Fire Marshal or his representative.

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 back flushed or inspected by approved camera when foreign material is present or when caps are missing, 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*.

Section 901.6.4; add Section 901.6.4 to read as follows:

901.6.4 False Alarms and Nuisance Alarms. False alarms and nuisance alarms shall not be given, signaled or transmitted or caused or permitted to be given, signaled or transmitted in any manner.

Section 901.7; change to read as follows:

901.7 Systems Out of Service. Where a required *fire protection system* is out of service or in the event of an excessive number of activations, the fire department and the *fire code official* shall be notified immediately and, where required by the *fire code official*, the building shall either be evacuated or an *approved fire watch* shall be provided for all occupants left unprotected by the shut down until the *fire protection system* has been returned to service. *… {Remaining text unchanged}*

Section 903.1.1; change to read as follows:

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

Section 903.2; add paragraph to read as follows and delete the exception:

Automatic Sprinklers shall not be installed in elevator machine rooms, elevator machine spaces, and elevator hoist ways, 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."

Section 903.2.9; add Section 903.2.9.3 to read as follows:

903.2.9.3 Self-Service Storage Facility. An automatic sprinkler system shall be installed throughout all self-service storage facilities.

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

Exceptions:

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

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.

903.2.11.9 **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*.

Section 903.3.1.1.1; change to read as follows:

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. Elevator machine rooms, machinery spaces, and hoist ways, other than pits where such sprinklers would not necessitate shunt trip requirements under any circumstances.

5. {Delete.}

Section 903.3.1.2.3; delete section and replace as follows:

[F] Section 903.3.1.2.3 Attached Garages and Attics. Sprinkler protection is required in attached garages, and in the following attic spaces:

1. Attics that are used or intended for living purposes or storage shall be protected by an automatic sprinkler system.
2. Where fuel-fired equipment is installed in an unsprinklered attic, not fewer than one quick-response intermediate temperature sprinkler shall be installed above the equipment.
3. Attic spaces of buildings that are two or more stories in height above grade plane or above the lowest level of fire department vehicle access.
4. Group R-4, Condition 2 occupancy attics not required by Item 1 or 3 to have sprinklers shall comply with one of the following:
    4.1. Provide automatic sprinkler system protection.

4.2. Provide a heat detection system throughout the attic that is arranged to activate the building fire alarm system.
4.3. Construct the attic using noncombustible materials.
4.4. Construct the attic using fire-retardant-treated wood complying with Section 2303.2 of the International Building Code.
4.5. Fill the attic with noncombustible insulation.

Section 903.3.1.3; change to read as follows:

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.

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.

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

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 10psi safety factor. Reference Section 507.4 for additional design requirements.

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

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.

Section 903.4.2; add second paragraph to read as follows:

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.

Section 905.2; change to read as follows:

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.

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

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, semi-automatic dry, and manual dry standpipes are allowed as provided for in NFPA 14 where approved by the fire code official.
2. R-2 occupancies of four stories or less in height having no interior corridors.

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

1. In every required 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 exit stairway hose connection by a {remainder of text unchanged}

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 hose connection located to serve the roof or at the highest landing of an 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.

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

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.

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

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.

Section 907.1.5; add to read as follows:

907.1.5 Required Installations. Any commercial building over 5,999 sq. ft. shall be installed with a fire alarm notification system (In Compliance with 907.5.2.3.1) to compliment the sprinkler system. The system shall be monitored by an approved supervising station. Approved systems shall include full audio/visual notification services.

Buildings 5,999 sq. ft. and lower shall be installed with an approved manual and automatic fire alarm system (In Compliance with 907.5.2.3.1) if the building has multiple tenant spaces or suites. The system shall be monitored by an approved supervising station. Approved systems shall include full audio/visual notification

services and manual pull stations at rear emergency exits.

Section 907.2.1; change to read as follows:

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 having an occupant load of 300 or more persons, or where the occupant load is 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.

Section 907.2.3; change to read as follows:

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.}

Section 907.2.12, Exception 3; change to read as follows:

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.

Section 907.4.2; add Section 907.4.2.7 to read as follows:

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

Section 907.6.1; add Section 907.6.1.1 to read as follows:

- **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.

Section 907.6.3; delete all four Exceptions.

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

See 907.6.3 for the required information transmitted to the supervising station.

Section 909.22; add to read as follows:

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.

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, the mechanical equipment shall activate and operate at the required performance levels. Smoke detectors shall be installed in accordance with Section 907.3.

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 system with a fire-resistance rating of not less than 2 hours.

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.

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.

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

1. 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.
2. 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.

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

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 m^2) 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.

Section 910.3; add section 910.3.4 to read as follows:

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.

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 systems per Section 910.2.

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.

Section 910.4.3.1; change to read as follows:

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 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.

Section 912.2; add Section 912.2.3 to read as follows:

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.

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

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.

Section 914.3.1.2; change to read as follows:

914.3.1.2 Water Supply to required Fire Pumps. In buildings that are more than 120 feet (37 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.}

Section 1006.2.2.7; Add Section 1006.2.2.7 as follows:

1006.2.2.7 Electrical Rooms. For electrical rooms, special exiting requirements may apply. Reference the electrical code as adopted.

Section 1009.8; add the following Exception 7:

Exceptions:
7. Buildings regulated under State Law and built in accordance with State registered plans, including variances or waivers granted by the State, shall be deemed to be in compliance with the requirements of Section 1009 and chapter 11.

Section 1010.1.9.5 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)

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 must activate self-annunciating alarms audible in all areas within the

corridor. Smoke detectors must be connected to an approved automatic fire alarm system where such system is provided.

Section 1029.1.1.1 Spaces under grandstands and bleachers; delete this section.

Section 1031.2; change to read as follows:

1031.2 Reliability. Required *exit accesses, exits* and *exit discharges* shall be continuously maintained free from obstructions or impediments to full instant use in the case of fire or other emergency. An *exit* or *exit passageway* shall not be used for any purpose that interferes with a means of egress.

Section 1103.3; add sentence to end of paragraph as follows:

Provide emergency signage as required by Section 606.3.

Section 1103.5.1: add sentence to read as follows:

Fire sprinkler system installation shall be completed within 24 months from date of notification by the fire code official.

Section 1103.5; add Section 1103.5.5 to read as follows:

1103.5.5 Spray Booths and Rooms. Existing spray booths and spray rooms shall be protected by an approved automatic fire-extinguishing system in accordance with Section 2404.

Section 1103.7; add Section 1103.7.7 and 1103.7.7.1 to read as follows:

1103.7.7 Fire Alarm System Design Standards. Where an existing fire alarm system is upgraded or replaced, the devices shall be addressable. Fire alarm systems utilizing more than 20 smoke and/or heat detectors shall have analog initiating devices.

Exception: Existing systems need not comply unless the total building, or fire alarm system, remodel or expansion exceeds 30% of the building. When cumulative building, or fire alarm system, remodel or expansion initiated after the date of original fire alarm panel installation exceeds 50% of the building, or fire alarm system, the fire alarm system must comply within 18 months of permit application.

1103.7.7.1 Communication requirements. Refer to Section 907.6.6 for applicable requirements.

Section 1203; change and add to read as follows:

1203.1.1 No Change
1203.1.2 No Change

1203.1.3 Emergency power systems and standby power systems shall be installed in accordance with the *International Building Code*, NFPA 70, NFPA 110 and NFPA 111. Existing installations shall be maintained in accordance with the original approval, except as specified in Chapter 11.

1203.1.4 through 1203.1.9 {No changes to these sections.}

1203.1.10 Critical Operations Power Systems (COPS). For Critical Operations Power Systems necessary to maintain continuous power supply to facilities or parts of facilities that require continuous operation for the reasons of public safety, emergency management, national security, or business continuity, see NFPA 70.

1203.2 Where Required. Emergency and standby power systems shall be provided where required by

Sections 1203.2.1 through 1203.2.~~18~~26 or elsewhere identified in this code or any other referenced code.

1203.2.1 through 1203.2.3 {No change.}

1203.2.4 Emergency Voice/alarm Communications Systems. Emergency power shall be provided for emergency voice/alarm communications systems in the following occupancies, or as specified elsewhere in this code, as required in Section 907.5.2.2.5. The system shall be capable of powering the required load for a duration of not less than 24 hours, as required in NFPA 72.
Covered and Open Malls, Section 907.2.19 and 914.2.3 Group A
Occupancies, Sections 907.2.1 and 907.5.2.2.4. Special Amusement
Buildings, Section 907.2.11
High-rise Buildings, Section 907.2.12 Atriums,
Section 907.2.13
Deep Underground Buildings, Section 907.2.18

1203.2.5 through 1203.2.13 {No change.}

1203.2.14 Means of Egress Illumination. Emergency power shall be provided for *means of egress* illumination in accordance with Sections 1008.3 and 1104.5.1. (90 minutes)

1203.2.15 Membrane Structures. Emergency power shall be provided for *exit* signs in temporary tents and membrane structures in accordance with Section 3103.12.6. (90 minutes) Standby power shall be provided for auxiliary inflation systems in permanent membrane structures in accordance with Section 2702 of the *International Building Code*. (4 hours) Auxiliary inflation systems shall be provided in temporary air-supported and air-inflated membrane structures in accordance with section 3103.10.4.

1203.2.16 {No change.}

1203.2.17 Smoke Control Systems. Standby power shall be provided for smoke control systems in the following occupancies, or as specified elsewhere in this code, as required in Section 909.11:
Covered Mall Building, *International Building Code*, Section 402.7 Atriums,
International Building Code, Section 404.7
Underground Buildings, *International Building Code*, Section 405.8 Group I-3,
International Building Code, Section 408.4.2
Stages, *International Building Code*, Section 410.2.5
Special Amusement Buildings (as applicable to Group A's), *International Building Code*, Section 411.1
Smoke Protected Seating, Section 1029.6.2.

1203.2.18 {No change.}

1203.2.19 Covered and Open Mall Buildings. Emergency power shall be provided in accordance with Section 907.2.19 and 914.2.3.

1203.2.20 Airport Traffic Control Towers. A standby power system shall be provided in airport traffic control towers more than 65 ft. in height. Power shall be provided to the following equipment:

1. Pressurization equipment, mechanical equipment and Lighting.
2. Elevator operating equipment.
3. Fire alarm and smoke detection systems.

1203.2.21 Smokeproof Enclosures and Stair Pressurization Alternative. Standby power shall be provided for smokeproof enclosures, stair pressurization alternative and associated automatic fire detection systems as required by the *International Building Code*, Section 909.20.6.2.

1203.2.22 Elevator Pressurization. Standby power shall be provided for elevator pressurization system as required by the *International Building Code*, Section 909.21.5.

1203.2.23 Elimination of Smoke Dampers in Shaft Penetrations. Standby power shall be provided when eliminating the smoke dampers in ducts penetrating shafts in accordance with the *International Building Code*, Section 717.5.3, exception 2.3.

1203.2.24 Common Exhaust Systems for Clothes Dryers. Standby power shall be provided for common exhaust systems for clothes dryers located in multistory structures in accordance with the *International Mechanical Code,* Section 504.10, Item 7.

1203.2.25 Hydrogen Cutoff Rooms. Standby power shall be provided for mechanical ventilation and gas detection systems of Hydrogen Cutoff Rooms in accordance with the *International Building Code*, Section 421.

1203.2.26 Means of Egress Illumination in Existing Buildings. Emergency power shall be provided for *means of egress* illumination in accordance with Section 1104.5 when required by the fire code official. (90 minutes in I-2, 60 minutes elsewhere.)

1203.3 1203.3 through 1203.6 {No change.}

1203.7 Energy Time Duration. Unless a time limit is specified by the fire code official, in this chapter or elsewhere in this code, or in any other referenced code or standard, the emergency and standby power system shall be supplied with enough fuel or energy storage capacity for not less than 2-hour full-demand operation of the system.

Exception: Where the system is supplied with natural gas from a utility provider and is approved.

Section 2304.1; change to read as follows:

Supervision of Dispensing. The dispensing of fuel at motor fuel-dispensing facilities shall in accordance with the following:

1. Conducted by a qualified attendant; and/or,
2. Shall be under the supervision of a qualified attendant; and/or
3. Shall be an unattended self-service facility in accordance with Section 2304.3.

At any time, the qualified attendant of item Number 1 or 2 above is not present, such operations shall be considered as an unattended self-service facility and shall also comply with Section 2304.3.

Section 2401.2; delete this section.

Section 3103.3.1; delete this section.

Table 3206.2, footnote h; change text to read as follows:

h. Where storage areas are protected by either early suppression fast response (ESFR) sprinkler systems or 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 the stored commodities with 12 or fewer sprinklers, installed in accordance with NFPA 13, manual smoke and heat vents or manually activated engineered mechanical smoke exhaust systems shall be required within these areas.

Table 3206.2, footnote j; add footnote j to row titled 'High Hazard' and 'Greater than 300,000' to read as follows:

j. High hazard high-piled storage areas shall not exceed 500,000 square feet. A 2-hour fire wall constructed in accordance with Section 706 of the *International Building Code* shall be used to divide high-piled storage exceeding 500,000 square feet in area.

Section 3310.1; add sentence to end of paragraph to read as follows:

When fire apparatus access roads are required to be installed for any structure or development, they shall be approved prior to the time at which construction has progressed beyond completion of the foundation of any structure.

Section 5601.1.3; change to read as follows:

1. **Fireworks.** The possession, manufacture, storage, sale, handling, and use of fireworks are prohibited.

Exceptions:

2. Only when approved for fireworks displays, storage, and handling of fireworks as allowed in Section 5604 and 5608.

3. The use of fireworks for approved fireworks displays as allowed in Section 5608.

Section 5703.6; add a sentence to read as follows:

5703.6 Piping Systems. Piping systems, and their component parts, for flammable and combustible liquids shall be in accordance with Sections 5703.6.1 through 5703.6.11. An *approved* method of secondary containment shall be provided for underground tank and piping systems.

Section 5704.2.11.4; add a sentence to read as follows:

Leak Prevention. Leak prevention for underground tanks shall comply with Sections 5704.2.11.4.1 through 5704.2.11.4.3. An *approved* method of secondary containment shall be provided for underground tank and piping systems.

Section 5704.2.11.4.2; change to read as follows:

Leak Detection. Underground storage tank systems shall be provided with an *approved* method of leak detection from any component of the system that is designed and installed in accordance with NFPA 30 and as specified in Section 5704.2.11.4.3.

Section 5704.2.11.4.3; add Section 5704.2.11.4.3 to read as follows:

Observation Wells. Approved sampling tubes of a minimum 4 inches in diameter shall be installed in the backfill material of each underground flammable or combustible liquid storage tank. The tubes shall extend from a point 12 inches below the average grade of the excavation to ground level and shall be provided with suitable surface access caps. Each tank site shall provide a sampling tube at the corners of the excavation with a minimum of 4 tubes. Sampling tubes shall be placed in the product line excavation within 10 feet of the tank excavation and one every 50 feet routed along product lines towards the dispensers, a minimum of two are required.

Section 5707.4; add paragraph to read as follows:

Mobile fueling sites shall be restricted to commercial, industrial, governmental, or manufacturing, where the parking area having such operations is primarily intended for employee vehicles. Mobile fueling shall be conducted for fleet fueling or employee vehicles only, not the general public. Commercial sites shall be restricted to office-type or similar occupancies that are not primarily intended for use by the public.

Section 6103.2.1; add Section 6103.2.1.8 to read as follows:

6103.2.1.8 Jewelry Repair, Dental Labs and Similar Occupancies. Where natural gas service is not available, portable LP-Gas containers are allowed to be used to supply approved torch assemblies or similar appliances. Such containers shall not exceed 20-pound (9.0 kg) water capacity. Aggregate capacity shall not exceed 60-pound (27.2 kg) water capacity. Each device shall be separated from other containers by a distance of not less than 20 feet.

Section 6104.2, Exception; add an exception 2 to read as follows:

Exceptions:

1. *{existing text unchanged}*

2. Except as permitted in Sections 308 and 6104.3.2, LP-gas containers are not permitted in residential areas.

Section 6104.3; add Section 6104.3.3 to read as follows:

6104.3.3 Spas, Pool Heaters, and Other Listed Devices. Where natural gas service is not available, an LP-gas container is allowed to be used to supply spa and pool heaters or other listed devices. Such container shall not exceed 250-gallon water capacity per lot. See Table 6104.3 for location of containers.

Exception: Lots where LP-gas can be off-loaded wholly on the property where the tank is located may install up to 500 gallon above ground or 1,000 gallon underground approved containers.

Section 6107.4 and 6109.13; change to read as follows:

6107.4 Protecting Containers from Vehicles. Where exposed to vehicular damage due to proximity to alleys, driveways or parking areas, LP-gas containers, regulators and piping shall be protected in accordance with Section 312.

6109.13 Protection of Containers. LP-gas containers shall be stored within a suitable enclosure or otherwise protected against tampering. Vehicle impact protection shall be provided as required by Section 6107.4.

{Applicable to those jurisdictions adopting Appendix B} Table B105.2; change footnote a. to read as follows:

a. The reduced fire-flow shall be not less than 1,500 gallons per minute.

END

2018 IFC Update

Based on the 2018 International Fire Code,® (IFC®)

ICC LEARNING CENTER

The *International Fire Code*® (IFC®), establishes minimum regulations for fire safety.

This handout will identify important changes in the IFC from 2015 to 2018 edition. Participants will be presented with those changes that will most impact their use of the code when they adopt these I-Codes. The learner will receive an overview of the most important code changes.

Goal

Participants will be able to use this document to identify changes between the 2015 and 2018 IFC allowing them to apply theses code requirements to design, plan submittals and/or inspection.

The lecture and activity format allows participants to discuss the changes, reasons for the changes, and answer knowledge review questions. Information presented will allow participants to apply these new code requirements to design, plan review, and/or inspection.

Objectives

Upon completion, participants will be better able to:

- Identify the most significant differences between the 2015 and the 2018 IFC.
- Explain the differences between the current and previous edition.
- Identify changes in organization and code requirements.
- Identify the applicability of design, plan review and inspection requirements.

Content

Chapters of the IFC included in this handout:

- Chapter 3, General Requirements
- Chapter 4, Emergency Planning and Preparedness
- Chapter 5, Fire Service Features
- Chapter 6, Building Services and Systems
- Chapter 7, Fire and Smoke Protection Features
- Chapter 8, Interior Finish, Decorative Materials and Furnishings
- Chapter 9, Fire Protection and Life Safety Systems
- Chapter 10, Means of Egress
- Chapter 11, Construction Requirements for Existing Buildings
- Chapter 12 Energy Systems
- Chapter 22, Combustible Dust-Producing Operations
- Chapter 23, Motor Fuel-Dispensing Facilities and Repair Garages
- Chapter 24, Flammable Finishes
- Chapter 28, Motor Fuel-Dispensing Facilities and Repair Garages
- Chapter 31, Tents, Temporary Special Event Structures and Other Membrane Structures
- Chapter 32, High-Piled Combustible Storage
- Chapter 33, Fire Safety During Construction and Demolition
- Chapter 38, Higher Education Laboratories
- Chapter 39, Processing and Extraction Facilities
- Chapter 50, Hazardous Materials—General Provisions
- Chapter 51, Aerosols
- Chapter 53, Compressed Gases
- Chapter 57, Flammable and Combustible Liquids
- Chapter 61, Liquefied Petroleum Gases
- Appendix E, Hazard Categories

2018 IFC Chapter 3: General Requirements			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Section 314 Modification	Section 314	**Indoor Displays**	This section is revised to clarify it applies to both liquid-fueled vehicles and gaseous-fueled vehicles. Additionally, it has been modified to allow the Fire Code Official the ability to determine the best method of safeguarding the vehicle regarding the battery and electrical system.
Section 315.3.1 Modification	Section 315.3.1	**Ceiling Clearance for Indoor Storages**	Exceptions have been added which allow an increase in the height of storage along walls in sprinklered and nonsprinklered buildings.
315.7 Addition		**Outdoor Pallet Storage**	Requirements are added to the code to height limitation and separation to buildings and property lines for the outdoor storage of idle pallets constructed of wood or plastic. See also Significant Change to Section 2810 for pallet storage at pallet recycling and manufacturing facilities.

2018 IFC Chapter 4: Emergency Planning and Preparedness			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
403.12.3 Modification		**Crowd Managers**	The threshold for crowd managers dropped from 1,000 to 500 people for certain events.
404.2.3 Addition		**Lockdown Plans**	Updates and prescribes details for facility lockdown plans.

2018 IFC Chapter 5: Fire Service Features			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
510 Modification		**Emergency Responder Radio Coverage**	Requirements for emergency responder radio coverage have been revised to address industry and equipment enhancements with a new reference to NFPA 1221.

2018 IFC Chapter 6: Building Services and Systems			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
603.3 Modification	603.3	**Fuel-fired Appliances**	Fuel oil storage allowances in Section 603 have been revised to clarify applicability to internal combustion engines, such as generators and fire pumps. Fuel oil storage is increased to 1,320 gallons if the building is sprinklered and the tank is listed to UL 142. **TABLE 603-1 Maximum Capacity of Fuel Oil Based on Type of Tank and Automatic Sprinkler System Design** TANK DESIGN / NONSPRINKLERED BUILDING / FIRE SPRINKLERS PROVIDED IN THE ROOM / FIRE SPRINKLERS PROVIDED IN THE BUILDING UL 80 / 660 gallons / 660 gallons / 660 gallons UL 142 / 660 gallons / 660 gallons / 1,320 gallons UL 2085 / 660 gallons / 3,000 gallons / 3,000 gallons
605.13 Addition		**Refrigerants with Lower Flammability Hazards**	Adds requirements regarding safety concerns for lower flammability refrigerant gases.
608.3 Modification	608.3	**Non-metallic Cooking Oil Storage Tanks**	Provide listing and capacity requirements for cooking oil storage.

2018 IFC Chapter 8: Interior Finish, Decorative Materials and Furnishings			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
807.1 Modification	807.1	**Combustible Decorative Materials**	The limitations on decorative combustible materials are clarified as to where they apply.
807.4 Modification	807.4	**Combustible Decorative Materials**	The limitations on decorative combustible materials are clarified as to where they apply.

2018 IFC Chapter 9: Fire Protection and Live Safety Systems			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
901.4.6 Addition		**Fire Pump and Fire Sprinkler Riser Rooms**	Additional requirements have been added for automatic sprinkler system riser rooms and fire pump rooms.
901.6.2 Addition		**Integrated Fire Protection System Testing**	Test criteria has been added to the code with a reference to NFPA 4 to ensure that where multiple fire protection systems or life safety systems are integrated, that the acceptance process and subsequent testing must evaluate the all of the integrated systems as a whole.
901.8.2 Modification	901.8.2	**Removal of Occupant Use Hoselines**	Authorizes code official to allow the removal occupant use hoselines.
903.2.1 Clarification	903.2.1	**Sprinklers in Group A Occupancies**	Clarifies the requirements for fire sprinkler protection in Group A occupancies.
903.2.3 Modification	903.2.3	**Sprinklers in Group E Occupancies**	Provides occupant load threshold for automatic sprinkler system requirements in Group E occupancies.
903.3.1.1.2 Modification	903.3.1.1.2	**Sprinklers in Bathrooms in Group R-4 Occupancies**	Removes fire sprinklers requirements from small bathrooms in Group R-4 occupancies.
903.3.1.2.1 Modification	903.3.1.2.1	**Sprinklers Beneath Balconies**	Correlates automatic sprinkler system requirements in Chapter 9 with Chapter 7 for exterior balconies of Group R occupancies.
903.3.1.2.3 Modification	903.3.1.2.3	**Attics**	Provides fire protection options for attics in multi-family occupancies
903.3.3 Modification	903.3.3	**Sprinkler Obstructions**	The code now directs the user to the sprinkler design standard to address sprinkler obstructions.
904.12 Modification	904.12	**Commercial Cooking Operations**	Directs users to NFPA standards to address sprinkler obstructions.
904.13 Modification	904.13	**Domestic Cooking in Institutional Occupancies**	Requires automatic fire-extinguishing system to protect domestic cooking appliances in care facilities.

2018 IFC Chapter 9: Fire Protection and Live Safety Systems, Continued			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
904.14 Modification	904.14	**Aerosol Fire-extinguishing System Maintenance**	Requires automatic fire suppression in domestic cooking systems in care facilities.
905.3.1 Modification	905.3.1	**Class III Standpipes**	Establishes standpipe requirements based on stories and addresses standpipes in Groups B and E occupancies.
905.4 Modification	905.4	**Class I Standpipe Hose Connections**	Allows a modification of hose connection locations for Class I standpipes serving open stairways.
905.11 Modification	905.11	**Locking Caps on Standpipe Outlets**	This revision authorizes the code official to require locking caps on dry standpipe hose connection outlets.
906.1 Modification	906.1	**Portable Fire Extinguishers**	Provides schools options for fire extinguisher placement.
907.1.2 Modification	907.1.2	**Fire Alarm Construction Documents**	Aligns requirements for fire alarm plans and documentation requirements with NFPA 72.
907.2.1 Modification	907.2.1	**Fire Alarms in Group A Occupancies**	A new fire alarm threshold has been added for Group A occupancies where an occupant load of 100 or more is located on a level other than the level of exit discharge.
907.2.10 Deletion	907.2.10	**Group R-4 Fire Alarm System**	Fire alarm systems are no longer required in Group R-4 occupancies.
907.5.2.2.4 Modification	907.5.2.2.4	**Emergency Voice/Alarm Communication System Captions**	Requires automatic fire suppression in domestic cooking systems in care facilities.
910.5 Modification	910.5	**Maintenance of Smoke and Heat Removal Equipment**	Maintenance and testing frequencies for smoke and heat vents and mechanical smoke removal are specified in the code.
916 Modification	916	**Gas Detection Systems**	Requirements for gas detection systems are clarified and consolidated in a new Section 916.

2018 IFC Chapter 10: Means of Egress			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
1004.8 Modification	1004.8	**Occupant Load Calculation in Concentrated Business Use Area**	The method of calculating occupant load in business areas is revised, which allows for larger occupant loads.
1006.2.1, Table 1006.2.1 Modification	1006.2.1, Table 1006.2.1	**1006.2.1, Table 1006.2.1 Spaces with One Exit or Exit Access Doorway**	Determination of cumulative occupant loads is clarified and correlated with other code requirements
1006.2.2.6, Table 1006.2.1, Table 1017.2 Addition		**Groups R-3 and R-4 Protected with NFPA 13D Sprinkler System**	Exit access travel distances are provided for Groups R-3 and R-4 when sprinklered with NFPA 13D sprinkler systems.
1006.3, 1006.3.1 Modification	1006.3, 1006.3.1	**Exits on Adjacent Stories**	Determining egress requirements has been clarified when the occupants travel to an adjacent story to reach the exit.
1008.2.3 Addition		**Illumination of the Exit Discharge**	Illumination of exit discharge can now terminate at a safe dispersal area.
1008.3.5, 1008.2.2 Modification	1008.3.5, 1008.2.2	**Emergency Illumination in Group I-2**	Emergency lighting must meet minimum illumination levels even when one lamp fails in a single luminaire.
1009.7.2 Modification	1009.7.2	**Protection of Exterior Areas of Assisted Rescue**	The 1-hour fire-resistance-rated separation between an exterior of assisted rescue and the building is not required if the building is protected with an automatic sprinkler system designed to NFPA 13 or 13R.
1010.1.1 Clarification	1010.1.1	**Size of Doors**	The requirements for the door size are revised to correlate with ICC A117.1.
1010.1.4.4, 1010.1.4.4.1 Modification	1010.1.4.4, 1010.1.4.4.1	**Locking Arrangements in Educational Occupancies**	Guidance is provided to allow enhanced security measures yet still meet egress requirements on classroom doors.
1010.1.9.8, 1010.1.9.8.1 Modification	1010.1.9.8, 1010.1.9.8.1	**Delayed Egress**	Guidance is provided to allow enhanced security measures yet still meet egress requirements on classroom doors.
1010.1.9.9, 1010.1.9.10 Clarification	1010.1.9.9, 1010.1.9.10	**Electrically Locked Egress Doors**	Criteria for electrically locked egress doors have been clarified and correlated.
1010.1.9.12 Modification	1010.1.9.12	**Locks on Stairway Doors**	The limitation is removed which prohibited locking doors on the stairway side when the stairway was more than four stories, but less than a high-rise.

2018 IFC Chapter 10: Means of Egress, Continued			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
1010.1.10 Modification	1010.1.10	**Panic Hardware and Fire Exit Hardware**	Sensor release of electrically locked doors is now allowed on egress doors in Groups A and E. Also, the section is clarified to state that panic hardware or fire exit hardware are only required on swinging doors.
1010.3, 1010.3.1, 1010.3.1.1, 1010.3.2, 1010.3.3, 1010.3.4 Modification	1010.3, 1010.3.1, 1010.3.1.1, 1010.3.2, 1010.3.3, 1010.3.4	**Turnstiles**	This new section allows security turnstiles, or similar barriers, in the means of egress path.
1011.6 Clarification	1011.6	**Stairway Landings**	The method of determining the required width and depth of a stairway landing is clarified.
1013.2 Modification	1013.2	**Floor Level Exit Signs in Group R-1**	The location of low-level exit signs can now be 18 inches above the floor.
1015.6, 1015.7 Modification	1015.6, 1015.7	**Fall Arrest for Rooftop Equipment**	The specific criteria in the code on fall arrest systems are removed and the ANSI/ASSE Z395.1 standard now governs the installation.
1017.3, 202 Clarification	1017.3, 202	**Common Path of Egress Travel**	Common path of egress travel must be applied to each room or space on every story.
1023.3.1 Modification	1023.3.1	**Stairway Extension**	Fire-resistance-rated separation is not required between an interior exit stairway and exit passageways if stairway pressurization is provided.
1023.5, 1024.6 Modification	1023.5, 1024.6	**Exit Stairway and Exit Passageway Penetrations**	Security system and two-way communication system components are allowed to penetrate the fire-resistant rated enclosure of exit passageways and interior exit stairways and ramps.
1025.1 Modification	1025.1	**Luminous Egress Path Marking in Group I Occupancies**	Luminous egress path marking is no longer required in high-rise buildings classified as Groups I-2, I-3, and I-4.
1026.4, 1026.4.1 Modification	1026.4, 1026.4.1	**Refuge Areas for Horizontal Exits**	Guidance is provided to allow enhanced security measures yet still meet egress requirements on classroom doors.
1029.6, 1029.6.3, 1029.7, 202 Modification	1029.6, 1029.6.3, 1029.7, 202	**Open-air Assembly Seating**	A new term and definition is added for open-air assembly seating.
1029.9.1 Modification	1029.9.1	**Minimum Aisle Width**	Minimum aisle widths are clarified with a reference added for minimum widths for accessible routes.

2018 IFC Chapter 10: Means of Egress, Continued			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
1030.1 Modification	1030.1	**Emergency Escape and Rescue Openings**	Emergency escape and rescue openings are required in Groups R-3 and R 4, and Group R-2 provided with only one means of egress from a story. Also, it is possible to eliminate some, or all, emergency escape and rescue openings from a sprinklered basement.
1030.1.1 Addition		**Operation of Emergency Escape and Rescue Openings**	Fall prevention devices are allowed on emergency escape and rescue openings provided they comply with ASTM F2090.
1031.1, 1031.10.1, 1031.10.2 Modification	1031.1, 1031.10.1, 1031.10.2	**Inspection and Testing of Emergency Egress Lighting**	Inspection and testing requirements for emergency egress lighting are relocated into the Chapter 10 Means of Egress and revised to allow self-diagnostics.
1031.2.2 Addition		**Locking Arrangements in Existing Educational Occupancies**	Guidance is provided to allow enhanced security measures yet still meet egress requirements on classroom doors.
1031.4 Modification	1031.4	**Exit Signs in Existing Buildings**	The application of exit sign requirements in existing buildings has been clarified for both installation and maintenance.

2018 IFC Chapter 11: Construction Requirements for Existing Buildings			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
1103.5.1 Addition		**Fire Sprinklers in Existing Group A-2 Occupancies**	A section has been added to Chapter 11 which requires the retrofit installation of a fire sprinkler system in existing Group A-2 occupancies where alcoholic beverages are consumed if the occupant load is 300 or more.
1103.9 Modification	1103.9	**Carbon Monoxide Alarms in Existing Buildings**	Carbon monoxide alarms are no longer required to be retroactively installed in existing Groups I-1, I-2, I-4, and R based on occupancy classification. The retroactive installation of carbon monoxide alarms is only required in existing sleeping rooms and dwelling units.
1104.16.2 Modification	1104.16.2	**Wall Openings Adjacent to Fire Escapes**	Door and window openings within 10 feet of a fire escape must be protected with ¾-hour opening protectives unless the building is sprinklered.
1105.5.4 Addition		**Fire-protection-rated Doors in Existing Group I-2**	Fire protection rated doors in existing Group I-2 occupancies have three options for automatic closing operations.

2018 IFC Chapter 12: Energy Systems			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Chapter 12 Addition		**Energy Systems**	This chapter is new.
Section 1204.5 Addition		**Rapid Shutdown for Solar Photovoltaic Power Systems**	Rapid shutdown is required on solar photovoltaic systems to reduce the shock hazard to emergency responders.
1206.2 Modification	1206.2	**Stationary Storage Battery Systems**	This revision moves the stationary battery storage system requirements from Section 608 to Section 1206.2 and includes new battery technologies and required safety features.

2018 IFC Chapter 22: Combustible Dust-Producing Operations			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Chapter 22 Modification		**Combustible Dust**	Reference to the new NFPA 652, “Standard on the Fundamentals of Combustible Dust”, is added to provide guidance and criteria when evaluating combustible dust hazards.

2018 IFC Chapter 23: Motor Fuel-Dispensing Facilities and Repair Garages			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
2303.2.1 Addition		**Height of Emergency Disconnect Switch**	This new section provides specific height limitations for emergency disconnect switches for fuel dispensing operations.
2306.7.3.1 Addition		**Protection from Vehicle Impact**	The fire code official has the authority to require additional vehicle impact protection at fuel dispensing facilities.
2309.6, 2309.6.1 Modification	2309.6, 2309.6.1	**Defueling of Hydrogen Fueled Vehicles**	The requirements for repairing vehicles fueled by compressed or liquefied compressed gas have been updated to address current technologies and processes.
2311.6 Addition	2311.6	**Repair of Vehicles Fueled by CNG and LNG**	The requirements for repairing vehicles fueled by compressed or liquefied compressed gas have been updated to address current technologies and processes.
2311.8 Modification	2311.8	**Repair of Vehicles Fueled by Lighter-than-air Fuels**	The requirements for repairing vehicles fueled by compressed or liquefied compressed gas have been updated to address current technologies and processes.

2018 IFC Chapter 24: Flammable Finishes			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
2403.2.1.3 Modification	2403.2.1.3	**Classified Electrical Areas AroundSpray Booths**	The size of the classified area around spray booth openings is reduced to 3 feet.
2404.2, 2404.3.1, 2404.3.1.1, 202, 914.9 Modification	2404.2, 2404.3.1, 2404.3.1.1, 202, 914.9	**Spray Rooms and Spray Booths**	Requirements for spray booths and spray operations are correlated between the IFC and IBC.

2018 IFC Chapter 28: Motor Fuel-Dispensing Facilities and Repair Garages			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
2810 Addition		**Outdoor Storage of Pallets at Pallet Manufacturing and Recycling Facilities**	This new section adds criteria for outdoor pallet storage at pallet manufacturing facilities and pallet recycling facilities. It provides specific height limits and separation to property lines and buildings, but also allows for the distances to be modified based on providing additional fire protection features.

2018 IFC Chapter 31: Tents, Temporary Special Event Structures and Other Membrane Structures			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Chapter 31 Clarification		**Umbrella Structures**	A new definition is added for umbrella structures which results in regulation of umbrella structures when they exceed 400 square feet.
3103.3.1 Addition		**Tents and Membrane Structures Used as Special Amusement Buildings**	Special amusement buildings located in temporary tents are required to be equipped with an automatic sprinkler system.
3103.6, 3103.9, 3103.9.1, 3103.9.2, 3103.9.3 Modification	3103.6, 3103.9, 3103.9.1, 3103.9.2, 3103.9.3	**Structural Stability of Tents**	Temporary tents and membrane structures are required to provide construction documents which address their structural stability and load carrying capacity. Larger tents and membrane structures have been added to the list of temporary facilities which must comply.
3104.2 Addition		**Fabrics for Tents and Membrane Structures**	The application of testing criteria for flame spread of tent and membrane structures has been clarified.
3105, 202, 105.6.47, 105.7.22 Addition		**Temporary Special Event Structures**	The requirements for temporary stage structures are expanded to include all temporary structures greater than 400 square feet when used at special events.
Section 3106 Addition		**Outdoor Assembly Events**	This section adds requirements specific to outdoor public gatherings and improves the correlation of requirements in the IBC and IFC.
3107.3, 3107.13.1, 3107.13.2, 3107.13.3 Modification		**LP-gas Containers and Tanks Adjacent to Tents and Membrane Structures**	Requirements for the use and separation of LPgas containers in and around tents and membrane structures have been revised.

2018 IFC Chapter 32: High-Piled Combustible Storage			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Modification		**Chapter 32 High-piled Combustible Storage**	The requirements in the chapter have been updated to correlate with current NFPA 13 requirements and recent FM Global fire tests.

2018 IFC Chapter 33: Fire Safety During Construction and Demolition			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
3304.5, 3308, 3309.1 Modification	3304.5, 3308, 3309.1	**Fire Watch During Construction and Demolition**	Criteria for requiring fire watch has been added to the code along with clarification to the functions and duties of the fire watch personnel.

2018 IFC Chapter 38: Higher Education Laboratories			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Chapter 38 Addition		**Outdoor Assembly Events**	A new chapter has been added to the IFC to specifically regulate college and university laboratories. Correlating sections have been added to a new Section 427 in the IBC.

2018 IFC Chapter 39: Processing and Extraction Facilities			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Chapter 39 Addition		**Plant Processing and Oil Extraction Facilities**	A new chapter has been added to the IFC to specifically regulate the process of extracting oils from plant material.

2018 IFC Chapter 50: Hazardous Materials—General Provisions			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Table 5003.1.1, Section 202 Modification	Table 5003.1.1, Section 202	**Consumer Fireworks**	Addresses the explosive nature of Division 1.4G explosives and removes the 100% increase credit for sprinklers where these items are stored.
Table 5003.1.1(1), Table 5003.11.1, Section 6303.1.1.2 Modification	Table 5003.1.1(1), Table 5003.11.1, Section 6303.1.1.2	**Maximum Allowable Quantity for Class 3 Oxidizers**	The maximum allowable quantity for Class 3 oxidizers is increased by about 10 percent in control areas and Groups M and S occupancies.
5003.8.3.4 Modification	5003.8.3.4	**Control Area Construction**	Includes Type IV construction in control area fire resistance rating requirements.
5005.1.12 Modification	5005.1.12	**Protection of Hazardous Materials Piping Systems**	Requirements for leak detection and emergency shutoff for high hazard gases and liquids only applies when the maximum allowable quantity per control area is exceeded.

2018 IFC Chapter 51: Aerosols			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
5103.2, 5103.2.1, 5103.2.3, 5104.1.2, 5104.2.2 Modification	5103.2, 5103.2.1, 5103.2.3, 5104.1.2, 5104.2.2	**Aerosol Products in Plastic Containers**	Limitations on aerosol products in plastic containers is revised and the use of Plastic Aerosol X products is prohibited in higher life hazard occupancies.
5104.8, 5140.8.1, 5104.8.2, 5103.2.2, 5104.3.3, 5106.2.2 Addition		**Aerosol Cooking Spray Products**	Specific fire protection requirements are added to address aerosol cooking spray products.

2018 IFC Chapter 53: Compressed Gases			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
5306.1, 5306.2, 5306.2.1, 5306.2.2, 5306.2 Modification	5306.1, 5306.2, 5306.2.1, 5306.2.2, 5306.2	**Medical Gas Storage**	Requirements for construction and ventilation of interior medical gas rooms and gas cabinets are revised.
5307.1, 5307.3, 5307.3.1, 5307.3.2 Modification	5307.1, 5307.3, 5307.3.1, 5307.3.2	**Liquid Carbon Dioxide Systems for Beverage Dispensing**	Requirements for liquefied CO2 in beverage dispensing applications have been correlated with requirements for gas detection systems.
5307.4, 5307.4.1, 5307.4.2, 5307.4.3, 5307.4.4, 5307.4.5, 5307.4.6, 5307.4.7 Addition		**Carbon Dioxide Enrichment Systems**	Carbon dioxide enrichment systems area regulated by the Fire Code when the system contains more than 100 pounds of CO2, or when the refill connection is remote from the tank or vessel.

2018 IFC Chapter 57: Mobile Fueling Operations			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
5707 Addition		**Mobile Fueling Operations**	On-demand mobile fueling is allowed to occur at approved locations and under the control of a permit issued by the fire code official.

2018 IFC Chapter 61: Liquefied Petroleum Gases			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
Table 6104.3 Modification	Table 6104.3	**Location of LP-gas Containers**	New Footnote g specifies separations between above-ground LP-gas containers and public ways.

2018 IFC Appendix E Hazard Categories			
Code Section		**Section Title**	**Description of Change**
2018	**2015**		
E102.7.1 Modification	E102.7.1	**Hazard Classification of Oxidizers**	This change revised the oxidizer classification of sodium dichloro-s-triazinetrione anhydrous (sodium dichloroisocyanurate anhydrous).

AGENDA ITEM 8

CITY COUNCIL
AGENDA MEMO

Prepared By: John Cabrales, Jr. City Manager **April 25, 2019**

Children's Advocacy Center for Denton County

DESCRIPTION:

Receive a report and hold a discussion regarding the Children's Advocacy Center for Denton County.

BACKGROUND INFORMATION:

April is Child Abuse Prevention Month. During April, Children's Advocacy Center for Denton County (CACDC) representatives attend city council meetings to bring awareness to child abuse and thank the city council, police department, and staff for their time, attention and support for CACDC throughout the year.

FINANCIAL CONSIDERATION:

None discussion only

RECOMMENDED MOTIONS:

None, discussion only

ATTACHMENTS:

None

AGENDA ITEM 9

CITY COUNCIL
AGENDA MEMO

Prepared By: John Cabrales, Jr. City Manager **April 25, 2019**

Children's Advocacy Center for Denton County "Fair Share"

DESCRIPTION:

Consider and Act on a Resolution authorizing the City Manager to pay the Children's Advocacy Center for Denton County $17,605.12 for the FY 2018-19 "fair share" request.

BACKGROUND INFORMATION:

In May 2018, the City received a request from the Children's Advocacy Center for Denton County (CACDC) for a "fair share" support of the agency. Each year the CACDC asks cities in Denton County to provide funding for service that they provide, many of which are mandated by the Texas Family Code and would need to be provided by the City if the CACDC did not exist.

During the 2017 calendar year, the Children's Advocacy Center served 45 Lake Dallas residents living within the City limits. Last year they provided 460 services to Lake Dallas residents and the City of Lake Dallas Police Department representing 2.24% of total services provided by the Center. Examples of services include forensic interviews, case reviews, court preparation, free counseling to child victims and non-offending family members, and other vital services.

In 2017, the cost to operate the CACDC was $1,795,561. After subtracting federal, state and county funding, this left the Center with $787,561 in expenses to seek from other sources of funding. Based on percentage of services, they requested the City of Lake Dallas to pay the "fair share" of $17,605.12 for FY 2018-19. This cost was anticipated by the City and $17,605.12 was budgeted into the Operating budget to cover these expenses.

FINANCIAL CONSIDERATION:

$17,605.12 can be paid to the Child Advocacy Center for Denton County from the Police Department Operating Budget and the Child Safety Special Revenue Fund.

RECOMMENDED MOTIONS:

I move to approve/deny a Resolution authorizing the City Manager to pay the Children's Advocacy Center for Denton County $17,605.12 for the FY 2018-19 "fair share" request.

ATTACHMENTS:

1. February 22, 2019, Children's Advocacy Center for Denton County letter
2. Grant Contract
3. Resolution

CITY OF LAKE DALLAS, TEXAS
RESOLUTION 04252019-_____

A RESOLUTION OF THE CITY COUNCIL OF LAKE DALLAS, TEXAS, AUTHORIZING NEGOTIATION AND EXECUTION OF CHILDREN'S SERVICES FUNDING AGREEMENT WITH CHILDREN'S ADVOCACY CENTER FOR DENTON COUNTY FOR FY 18-19; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the City of Lake Dallas ("the City"), by and through its Police Department (the "Department"), frequently deals with children who have been severely abused, mentally, physically, emotionally and/or sexually; and

WHEREAS, while the City has the expertise to enforce the law as it relates to crimes against children, neither the Department nor the City has the expertise to provide the children who have suffered such abuse with continued treatment and assistance; and

WHEREAS, in an attempt to reduce crimes against children, the City desires to educate all children and its residents on crimes against children, abuse and predators; and

WHEREAS, the Children's Advocacy Center of Denton County ("CACDC") has the expertise and has agreed to provide the City with the assistance it needs to educate and assist the children and residents of the City, as well as to conduct forensic interviews, train members of the Department, and coordinate investigations between the Department and other investigating agencies; and

WHEREAS, the City desires to utilize the expertise of the CACDC to work with the Department and to provide the specialized services required when working with children who are victims of crime; and

WHEREAS, the City further desires and finds it to be in the public interest to assist the CACDC in providing such services by granting funds for the purposes provided herein in an amount not to exceed SEVENTEEN THOUSAND SIX HUNDRED FIVE AND 12/100 DOLLARS ($17,605.12) from funds available for such purposes collected from the Child's Safety Special Revenue Fund in accordance with Texas Code of Criminal Procedure art. 102.014(g).

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

SECTION 1. The City Manager is hereby authorized to negotiate and sign an agreement with Children's Advocacy Center of Denton County to provide children's advocacy and other related services to the City and the Department and providing funds in the amount of $17,605.12 from the City's Child Safety Special Revenue Fund.

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

PASSED AND APPROVED this the 25th day of April 2019.

City of Lake Dallas, Texas

_____
Michael Barnhart, Mayor

ATTEST:

_____
Codi Delcambre, TRMC, City Secretary

APPROVED AS TO FORM:

_____
Kevin B. Laughlin, City Attorney
(kbl:4/18/19:107469)

STATE OF TEXAS §
§ **CHILDREN'S SERVICES GRANT AGREEMENT**
COUNTY OF DENTON §

This **Children's Services Grant Agreement** ("Agreement") is made by and between the **City of Lake Dallas, Texas** ("City") and **Children's Advocacy Center for Denton County** ("CACDC"), acting by and through their respective authorized officers (City and CACDC collectively referred to herein as "the Parties" and separately as "Party").

W I T N E S S E T H

WHEREAS, City, by and through its Police Department (the "Department"), frequently deals with children who have been severely abused, mentally, physically, emotionally and/or sexually; and

WHEREAS, while City has the expertise to enforce the law as it relates to crimes against children, neither the Department nor City has the expertise to provide the children who have suffered such abuse with continued treatment and assistance; and

WHEREAS, in an attempt to reduce crimes against children, City desires to educate all children and its residents on crimes against children, abuse and predators; and

WHEREAS, CACDC has the expertise and has agreed to provide City with the assistance it needs to educate and assist the children and residents of City, as well as to conduct forensic interviews, train members of the Department, and coordinate investigations between the Department and other investigating agencies; and

WHEREAS, City desires to utilize the expertise of CACDC to work with the Department and to provide the specialized services required when working with children who are victims of crime; and

WHEREAS, City further desires to assist CACDC in providing such services by granting funds for the purposes provided herein in an amount not to exceed Seventeen Thousand Six Hundred Five and 12/100 Dollars ($17,605.12).

NOW THEREFORE, in consideration of the foregoing, and other valuable consideration the receipt and sufficiency of which are hereby acknowledged on the terms and conditions hereinafter set forth, the Parties agree as follows:

ARTICLE I
Term

This Agreement shall be effective on the date of it is signed by City and CACDC ("Effective Date") and end on September 30, 2019.

ARTICLE II
Agreement

2.1 CACDC shall, has and will provide City and the Department with the following services:

2.1.1 Conducting forensic interviews with children who have been severely abused;

2.1.2 Coordinating severe child abuse investigations between the Department and other investigating agencies;

2.1.3 Provide a sexual assault nurse examiners program for the Department;

2.1.4 Provide ongoing training to detectives from the Department including Crimes Against Children Conference in Dallas and other in-house training opportunities;

2.1.5 Provide a facility at which the Department can jointly work severe child abuse cases; and

2.1.6 Conducting extended forensic assessments of child victims when referred by the Department.

2.2 CACDC shall provide for City's residents the following:

2.2.1 Provide fee play therapy, individual counseling, group counseling, psychological testing and other related therapy services;

2.2.2 Assist residents with Crime Victim's Compensation applications and paperwork;

2.2.3 Provide child abuse prevention education to residents in group settings;

2.2.4 Prepare children for court testimony;

2.2.5 Provide information on the criminal justice system to families and assist the families through the process; and

2.2.6 Provide a child and family friendly environment to interview children and provide services.

2.3 City agrees to provide a grant to CACDC to assist in the operation costs for the purposes set forth herein in the amount of SEVENTEEN THOUSAND SIX HUNDRED FIVE AND 12/100 DOLLARS ($17,605.12) (the "Grant") payable in a single payment no later than ten (10) days after the Effective Date

2.4 CACDC agrees, as a condition of receipt of the Grant, to continue the services for the Department, City, and City's residents.

2.5 Nothing contained herein shall be construed to create a legal partnership, association, or joint venture or other legal entity between the Parties.

2.6 CACDC acknowledges that the funds constituting the Grant were collected by City pursuant to the authority granted to City by Tex. Code Crim. Pro. Art. 102.014. CACDC warrants, represents, and agrees that funds from the Grant shall be used solely to pay for expenses for one or more programs designed to enhance child safety, health, or nutrition, including child abuse prevention and intervention and drug and alcohol abuse prevention in accordance with Tex. Code Crim. Pro. Art. 102.014(g).

ARTICLE III
Evaluation

3.1 CACDC agrees to participate in an implementation and maintenance system whereby its services can be regularly monitored. CACDC agrees to provide City the following documents, data and reports, or copies thereof:

(a) A written explanation of any major changes in program services.

(b) Copies of CACDC's current Certificate of Organization/Articles of Incorporation and By-Laws; provided, however, such documents shall not be required if CACDC has previously submitted such documents to City pursuant to a prior agreement with City and there have been no amendments to such documents.

(c) A copy of CACDC's most recent annual independent financial audit, if requested in writing by the City Manager.

3.2 CACDC agrees to maintain records at its main offices that will provide accurate, current, separate, and complete disclosure of the status of the Grant funds and the services performed under this Agreement. CACDC's records system shall contain sufficient documentation to provide in detail full support and justification for each expenditure using the Grant funds.

3.3 CACDC agrees to retain all books, records, documents, reports, and written accounting procedures pertaining to the services provided and expenditure of the Grant funds pursuant to this Agreement for five years after the termination of this Agreement and shall make such documents available for inspection and copying to an authorized representative of City at CACDC's offices during regular business hours upon written request of City.

ARTICLE IV
Indemnification

To the extent authorized by law, CACDC agrees to indemnify, hold harmless, and defend City, its officers, agents, and employees ("the City Parties") from and against any and all claims or suits for injuries, damage, loss, or liability of whatever kind or character, arising out of or in connection with the performance by the CACDC of the services contemplated by this Agreement, including all such claims or causes of action based upon common, constitutional or statutory law, or based, in whole or in part, upon allegations of negligent or intentional acts of CACDC, its officers, employees, agents, subcontractors, licensees and invitees; provided; however, CACDC shall not be obligated to indemnify the City Parties to the extent any liability is attributed to the negligence or intentional wrongful acts of one or more of the City Parties.

ARTICLE V
Independent Contractor

With respect to any services provided to the Department, City, or City's residents pursuant to this Agreement, CACDC is and shall perform this Agreement as an independent contractor and, as such, shall have and maintain complete control over all of its employees and operations. Neither CACDC nor anyone employed by CACDC shall be, represent, act, purport to act, or be deemed to be the agent, employee or servant of City, and shall obtain no rights to any benefits which accrue to City's employees. Nothing herein shall create, or be construed as creating, a partnership or joint venture between City and CACDC.

ARTICLE VI
Termination and Recapture

This Agreement shall terminate upon any one of the following:

(a) by written agreement of the Parties;

(b) by either Party in the event the other Party breaches any of the terms or conditions of this Agreement and such breach is not cured within thirty (30) days after written notice thereof;

(c) by City, if any subsequent Federal or State legislation or any decision of a court of competent jurisdiction declares or renders this Agreement invalid, illegal or unenforceable;

(d) by City if CACDC fails to use all of the funds for the purposes recited herein; and

(e) In the event the Grant funds are not used in accordance with the terms and conditions of this Agreement or CACDC breaches the Agreement and/or such breach is not cured and this Agreement is terminated, then CACDC shall return and reimburse City an amount equal to those portions of the Grant funds not

properly spent not later than ninety (90) days after demand is made for return of the Grant funds.

ARTICLE VII
Miscellaneous

7.1 Notice. Any notice or other written instrument required or permitted to be delivered under the terms of this Agreement shall be deemed to have been delivered, whether actually received or not, when deposited in the United States mail, postage prepaid, registered or certified, return receipt requested, or via hand-delivery or facsimile, addressed to Non-Profit or City, as the case may be, at the following addresses:

If to CACDC:

Children's Advocacy Center
for Denton County
Attn: Kristen Howell, Chief Executive Officer
1854 Cain Drive
Lewisville, Texas 75077

If to CITY:

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

With copy to:

Kevin B. Laughlin
Nichols, Jackson, Dillard, Hager & Smith, LLP
500 N. Akard, Suite 1800
Dallas, Texas 75201

7.2 Binding Agreement; Assignment. The terms and conditions of this Agreement are binding upon the successors and permitted assigns of the parties hereto. This Agreement may not be assigned without the express written consent of the City Manager and City Council.

7.3 Entire Agreement. This Agreement is the entire Agreement between the Parties with respect to the subject matter covered in this Agreement. There is no other collateral oral or written Agreement between the Parties that in any manner relates to the subject matter of this Agreement.

7.4 Governing Law. The Agreement shall be governed by the laws of the State of Texas; and venue for any action concerning this Agreement shall be in the State District Court of Denton County, Texas. The Parties agree to submit to the personal and subject matter jurisdiction of said court.

7.5 Amendment. This Agreement may only be amended by the mutual written agreement of the parties.

7.6 Legal Construction. In the event any one or more of the provisions contained in this Agreement shall for any reason be held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect other provisions, and it is the

intention of the parties to this Agreement that in lieu of each provision that is found to be illegal, invalid, or unenforceable, a provision shall be added to this Agreement which is legal, valid and enforceable and is as similar in terms as possible to the provision found to be illegal, invalid or unenforceable.

SIGNED AND AGREED this ___ day of _____, 2019.

CITY OF LAKE DALLAS, TEXAS

BY: _____
John Cabrales, Jr., City Manager

ATTEST:

_____
Codi Delcambre, TRMC, City Secretary

APPROVED AS TO FORM:

_____
Kevin B. Laughlin, City Attorney

SIGNED AND AGREED this ___ day of _____, 2019.

CHILDREN'S ADVOCACY CENTER FOR DENTON COUNTY

By: _____
Kristen Howell, Chief Executive Officer

children's advocacy center
FOR DENTON COUNTY

February 22, 2019

City of Lake Dallas
City Manager John Cabrales
212 Main St
Lake Dallas, TX 75065

Dear Mr. Cabrales,

Children's Advocacy Center for Denton County (CACDC) is most appreciative of Lake Dallas's support over the years, and we are proud to have this partnership with you and the police department.

We are respectfully requesting disbursement of our FY 2018-2019 funding from the City of Lake Dallas in the amount of $17,605.12 or whatever amount was approved by the Lake Dallas City Council. This original request was sent in May 2018.

We will be sending you the FY 2019-2020 request in May 2019, so that you can make plans for your upcoming budget year. We are happy to further explain this process and/or provide insight into how your contribution ensures children in your jurisdiction have the necessary investigative and healing services when they experience the crime of child abuse.

Thank you for your assistance and for expediting our funding request. Should you have any questions, please do not hesitate to call me at (972) 538-9605 or kristen@cacdc.org.

Sincerely,

Kristen

Kristen Howell
CEO

we are so proud to partner w/ Chief Carolla + his crew!

Cc: Chief Daniel Carolla
Lake Dallas Chief of Police

1854 Cain Drive
Lewisville, Texas 75077
972-317-2818
www.cacdc.org

National Children's Alliance · United Way · cactx

Children's Advocacy Center for Denton County

FY 2018-19 Fair Share Municipal Chart

	Services by City	Number of Clients Served	% of Total Services	FY 2018-19 Fair Share Request	FY 2017-18 Request	FY 2017-18 Contribution	FY 2016-17 Contribution	FY 2015-16 Contribution
Argyle	14	3	0.07%	$535.81	$547.37	$2,500.00	$2,409.53	
Aubrey	77	10	0.37%	$2,946.94	$1,094.74	$3,000.00	$3,000.00	$2,000.00
Bartonville	54	3	0.26%	$2,066.69	$255.23			
Carrollton	2237	180	10.87%	$85,614.44	$58,959.61	$33,500.00	$32,500.00	$25,000.00
Coppell	174	27	0.85%	$6,659.33	$6,568.44	$6,569.00	$4,653.00	$10,000.00
Corinth	363	40	1.76%	$13,892.73	$22,051.21	$13,543.00	$13,543.20	$11,016.00
Decatur	305	25	1.48%	$11,672.96	$1,642.11	$1,642.11		
Denton	4010	337	19.49%	$153,470.68	$148,728.35	$114,897.00	$102,861.85	$105,891.00
Flower Mound	932	88	4.53%	$35,669.49	$28,776.04	$28,776.00	$29,000.00	$27,500.00
Frisco	912	88	4.43%	$34,904.05	$16,577.50	$15,000.00	$15,000.00	$12,000.00
Hickory Creek	45	5	0.22%	$1,722.24	$36.46	$500.00	$4,153.00	$4,957.00
Highland Village	124	18	0.60%	$4,745.73	$3,206.03	$4,000.00	$4,000.00	$4,000.00
Justin	82	9	0.40%	$3,138.30	$9,461.69			
Krugerville	25	7	0.12%	$956.80	$938.35	$938.35	$2,492.61	$1,239.29
Krum	337	36	1.64%	$12,897.66	$10,791.02	$4,664.49	$5,063.48	$1,308.00
Lake Dallas	460	36	2.24%	$17,605.12	$26,508.37	$15,000.00	$15,000.00	$18,800.00
Lewisville	4074	277	19.80%	$155,920.09	$175,158.52	$17,639.00	$26,000.00	$26,000.00
Little Elm	1098	95	5.34%	$42,022.64	$35,579.08	$35,579.08	$22,848.96	$43,513.00
Northlake	7	2	0.03%	$267.90	N/A	N/A		
Oak Point	188	9	0.91%	$7,195.13	$1,563.92			
Pilot Point	6	1	0.03%	$229.63	$3,909.79			
Ponder	112	7	0.54%	$4,286.46	$1,329.33	$1,329.33	$1,661.74	
Providence Village	186	22	0.90%	$7,118.59	N/A	N/A		
Roanoke	127	18	0.62%	$4,860.54	$8,132.36	$8,132.36	$18,113.00	$8,675.00
Sanger	487	54	2.37%	$18,638.46	$31,043.72	$15,000.00	$15,000.00	$15,000.00
Shady Shores	25	4	0.12%	$956.80	N/A	N/A		
Southlake	23	2	0.11%	$880.26	$2,345.87	N/A		
The Colony	939	93	4.56%	$35,937.40	$33,858.77	$33,993.77	$44,700.87	$30,913.00
Trophy Club	106	10	0.52%	$4,056.83	$860.15	$1,109.41	$249.26	$481.95
Denton County	2613	253	12.70%	$100,004.71	$70,845.37	$70,000.00	$60,000.00	$50,000
Wise County	436	68	2.12%	$16,686.59	$11,494.78	$3,754.40	$3,719.94	$12,400
Total	**20,578**	**1,827**	**100.00%**	**$787,561.00**	**$781,957.70**	**$431,067.30**	**$422,250.50**	**$398,294.24**

* The city's fair share was calculated by multiplying the municipality's percentage of services by the expenses remaining after federal and state funding provided to the Children's Advocacy Center for Denton County in FY 2017. Agency expense for FY 2017 minus fundraising expenses was $1,795,561. Income from state and federal funding was $1,008,000. This left $787,561 in needed support.

AGENDA ITEM 10

CITY COUNCIL
AGENDA MEMO

Prepared By: Natalie McAdams, Director of Library Services **April 25, 2019**

Lake Dallas Library Department Accomplishments and Goals

DESCRIPTION:

Receive a report and hold a discussion regarding the Lake Dallas Library Department's accomplishments for the current fiscal year and goals for the upcoming fiscal year.

BACKGROUND INFORMATION:

The Lake Dallas Library Department will be giving a presentation about accomplishments for fiscal year 2018-19. Additionally, there will be a discussion about both current challenges and goals for fiscal year 2019-20.

FINANCIAL CONSIDERATION:

None, discussion only.

RECOMMENDED MOTIONS:

No action, discussion only.

ATTACHMENT(S):

Library Department PowerPoint

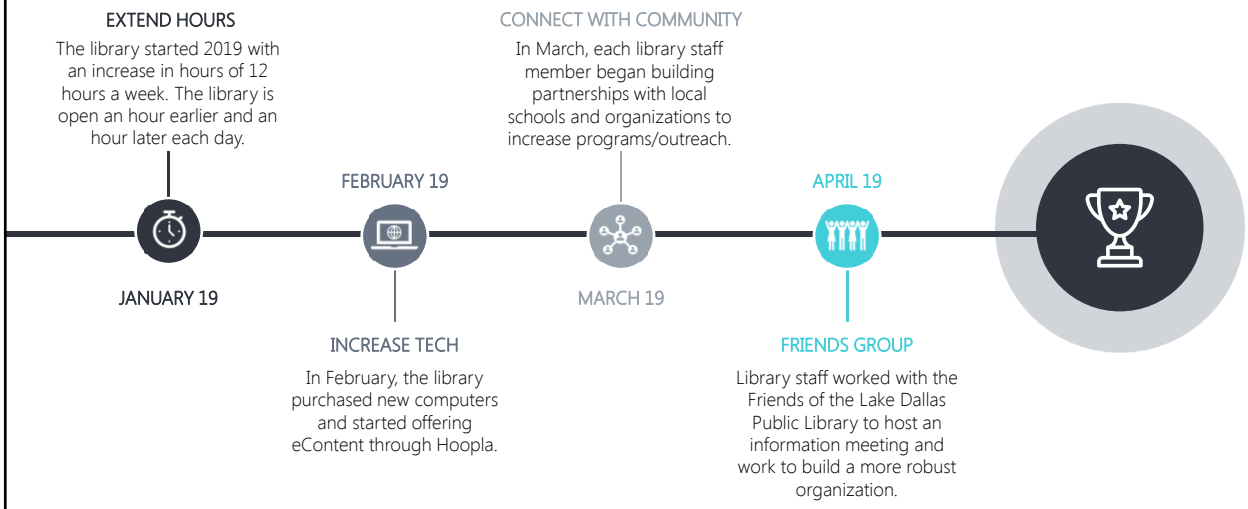
LAKE DALLAS PUBLIC LIBRARY

Measuring Success

Index

- Review FY 2018-19 Goals
- Review of FY 18 and FY 19 Accomplishments
- Discuss Current Library Operations and Challenges
- Discuss Goals for FY 2019-20
- Discuss Resource Needs
- Input and Questions

FY 19 Goals Timeline



3

What we Do

4

What we Offer

Printing
Copying
Faxing
Scanning
Computers

Digital Resources
Interlibrary Loan
TexShare

Notary Services
Exam Proctoring
Study Room

ESL Classes
Career Classes
Literacy Programs
STEM Activities
Coding Programs

5

How We Do It

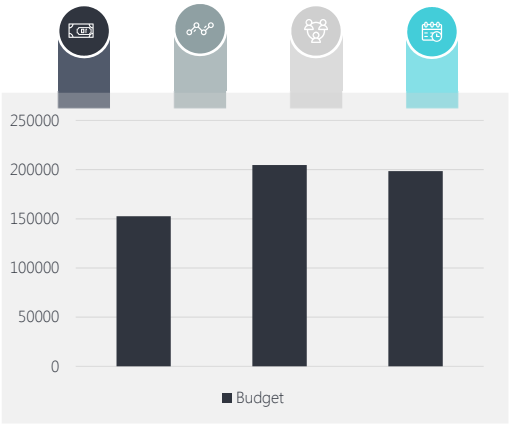
Budget
FINANCING

FY 17: $156,583
FY 18: $204,163
FY 19: $198,401

Staff
Hours Worked

Volunteers
TEAMWORK

Hours
Open



This information does not reflect what was appropriated for the library to use, but instead shows the amount spent on the library using local funds.

6

How We Do It

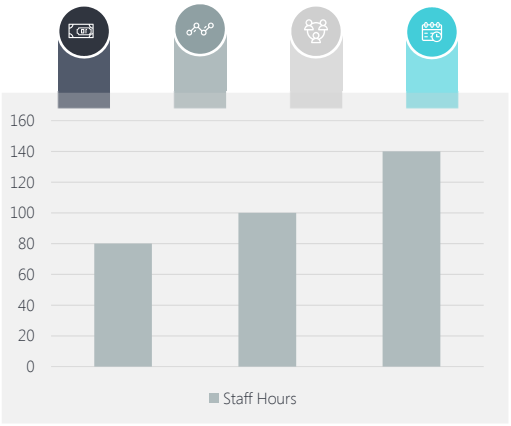
Budget
FINANCING

Staff
Hours Worked

FY 17: 80
FY 18: 100
FY 19: 140

Volunteers
TEAMWORK

Hours
Open



These amounts reflect the total number of hours staff worked per week in regular operation of the library.

7

How We Do It

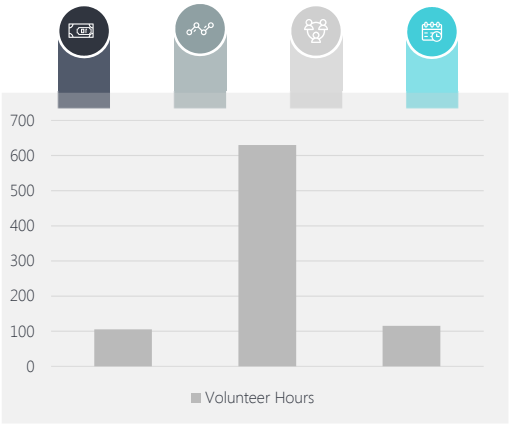
Budget
FINANCING

Staff
Hours Worked

Volunteers
TEAMWORK

FY 17: 105
FY 18: 630
FY 19: 115

Hours
Open



The data from FY 16 is taken from the Texas State Library and Archives Commission Annual Report.

8

How We Do It

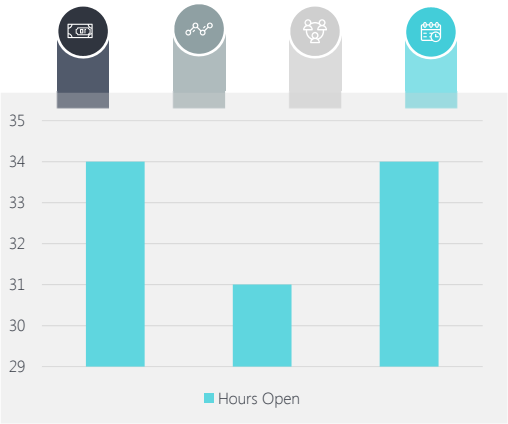
Budget
FINANCING

Staff
Hours Worked

Volunteers
TEAMWORK

Hours
Open

FY 17: 34
FY 18: 31
FY 19: 34



There was a decrease in hours for FY 18, presumably because there were only two staff members prior to December 2017. In Fiscal Year 19, the library is open 39 hours a week – an increase of 8 hours a week.

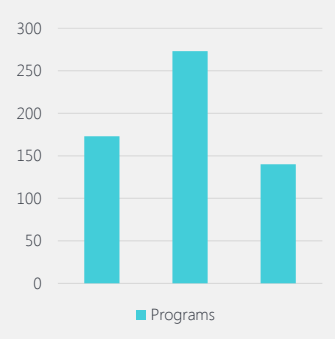
9

PEOPLE IN THE LIBRARY

Increase from FY 17 to FY 18 **135%**

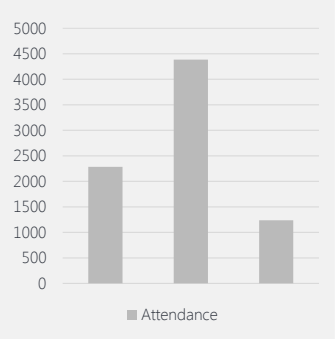
In FY 2018, the library had 20,704 visitors. This FY, the library is on track to have close to 22,000 visitors.

Increase from FY 17 to FY 18 **157%**



With an increase in staff, the library was able to increase the number of programs they offered by 157% from FY 17 to FY 18.

Increase from FY 17 to FY 18 **192%**



In FY 18, the library increased program attendance 192% over FY 17, with a total program attendance of 4,383.

10

SUMMER READING 2018

117
Programs for children, adults, and teens.

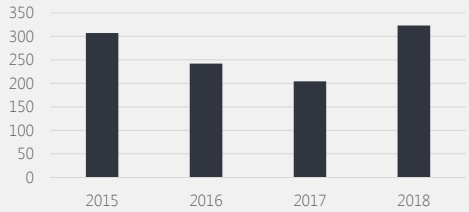
2,397
Attendees to programs.

4,918
Individuals who came to the library.

Summer Reading

The Library saw a 158% increase in Summer Reading Club Participation between FY 17 and FY 18.

158%



11

Interlibrary Loans

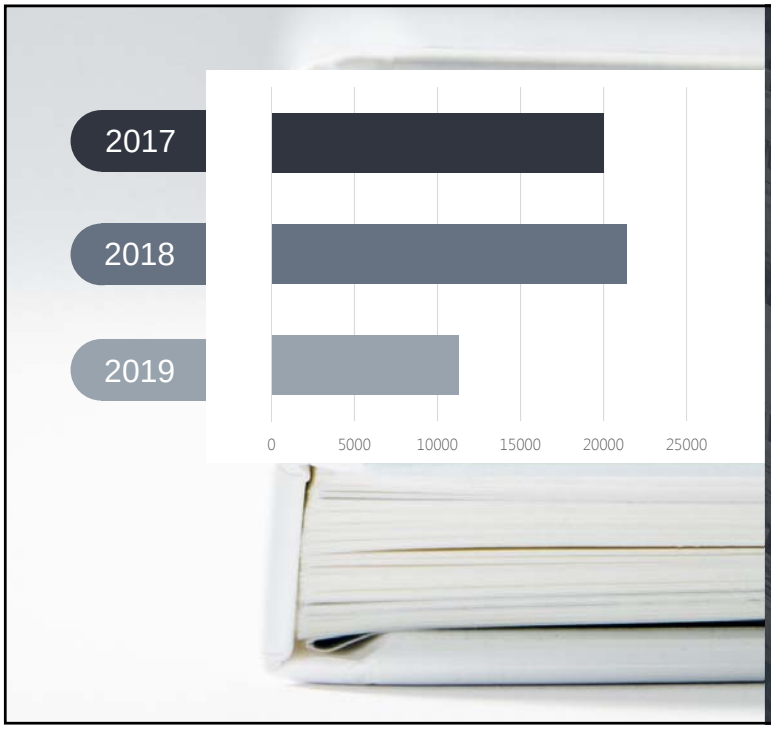
Interlibrary Loans are a benefit of accreditation. Through the Interlibrary Loan program, the entire State of Texas becomes a browsable library that our library users can borrow from, and in turn, we can provide our materials to other libraries.

17
Shipped: 567
Received: 287

18
Shipped: 1857
Received: 1740

19
Shipped: 1201
Received: 1267

12



Circulation numbers are based off the number of times individual items are checked out or renewed.

In Fiscal Year **2017**, the library circulated **19,995** items.

In Fiscal Year **2018**, the library circulated **21,390** items.

Thus far in Fiscal Year **2019**, the library has circulated **11,297** items and is on route to circulate roughly 22,000 items.

TECH IN USE

The Lake Dallas Public Library has increased its spending on technology, and as a result has increased the number of computer users and WIFI uses.

WIFI uses from FY 17 to FY 19 are 674, 1114, and 1175 respectively.

Computer uses from FY 17 to FY 19 are 7838*, 3583, and 4741 respectively.

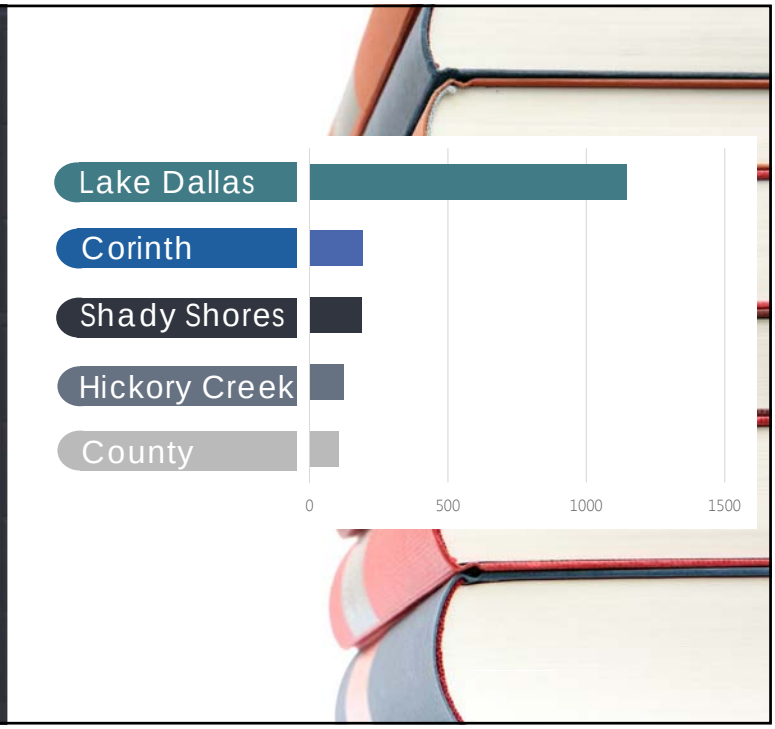
In FY 19, the library received a grant for $10,200 for children's computers, therefore increasing FY 19's technology expenditure thus far to $18,188.00.

*This amount is found on the Annual Report for FY 17, but there is no accompanying data to substantiate it.

14

The library is serving more than just Lake Dallas Residents.

We currently provide lending services to 193 residents of Corinth, 191 residents of Shady Shores, 125 residents of Hickory Creek, and 105 residents from the rest of the county.



Current Challenges

- Cataloging
- Space
- Staffing

16

Future Goals

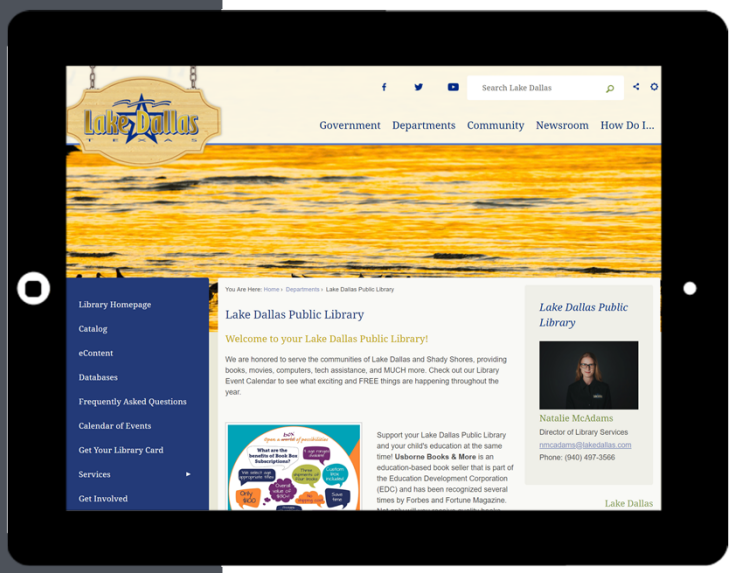
- Expand patronage & increase revenues
- Meet new accreditation standards
- Develop training for staff & public
- Reconfigure the building & update exterior
- Address community connectivity needs

17

Resource Needs

If the library is going to continue on this trajectory and provide services to more constituents, the library will require an increase in the following:

- Increased Staff Hours
- Increased Business Hours
- Staff Training, esp. Technical Training
- Wi-Fi Hotspots / TV Whitespace Technology
- Building Reconfiguration or Expansion
- Mobile Services
- Maker Technology



18

THANK YOU

AGENDA ITEM 11

CITY COUNCIL
AGENDA MEMO

Prepared By: Jeremy Tennant, Director of Development Services **April 25, 2019**

City of Lake Dallas Rental Registration Program Committee

DESCRIPTION:

Receive a report and hold a discussion regarding the formation of a Rental Registration Program Committee of stakeholders to help staff in the determination of language for a Property Maintenance Code, and the development of a Rental Registration Program.

BACKGROUND INFORMATION:

Staff had discussion with the City Council on the feasibility of a Rental Registration Program on October 26, 2017, and October 25, 2018. Staff was directed to work on a proposed program and to seek public input. Staff researched multiple existing, successful programs in drafting a proposed Rental Registration Program, and held two public meetings, on January 19, and 21, 2019, to share the proposed program with stakeholders and to gather input. Both meetings were well attended by property managers, landlords, and a couple of tenants. During the meetings staff presented the reason for the request for the proposed rental registration program, the components of the program, proposed fees for registration and inspection, and the benefits for the rental registration program. After staff's presentation, the participants of the meeting provided feedback, concerns and questions.

Staff shared the proposed Rental Registration Program, and the feedback and concerns from the public meetings, with the City Council at the February 14, 2019 meeting. At this meeting, staff was directed to work with a stakeholders committee to review the proposed Rental Registration Program and make appropriate revisions, and develop draft language for a Property Maintenance Code.

Staff recommends that the City Council give the Rental Registration Program Committee a purpose, determine the makeup, and be given a timeline to complete its work. Staff recommends the following for consideration by the council.

Purpose
The purpose of the Rental Registration Program Committee shall be to review current city ordinances regarding property maintenance, and draft language for a Property Maintenance Code; and to work with city staff on drafting a rental registration program that makes sense for the citizens of Lake Dallas.

Make Up
The Rental Registration Program Committee will need input for various stakeholders in order to consider all impacts of a Property Maintenance Code and a Rental Registration Program. However, the committee should consist of a reasonable number of members so as not to impede its ability to get work done. Staff has developed an application that can be used and will begin making it available to the public if council is agreeable. Staff will then compile the applications and bring them to the City Council for the appoint of the members to this committee. All applicants must be landlords, tenants or otherwise connected to residential properties in Lake Dallas. They must also be willing to invest the time to attend meetings, give input and do any needed research. The committee will consist of any needed city staff members and the following stakeholder slots.

- Landlords of Residential Properties– 4
- Tenants of Residential Properties– 2
- Property Managers of Residential Properties– 1
- Licensed Texas Realtor – 1
- HOA Representative – 1

Timeline
The Rental Registration Program Committee will start meeting shortly after appointed and will not take longer than one year to present their findings and recommendations to the City Council.

FINANCIAL CONSIDERATION:

None, discussion only

RECOMMENDED MOTIONS:

None, discussion only

ATTACHMENT(S):

1. Proposed Application