

ORDINANCE NO. 21-C-07

AN ORDINANCE BY THE CITY COUNCIL OF THE CITY OF SCHERTZ, TEXAS AMENDING THE CODE OF ORDINANCES OF THE CITY OF SCHERTZ CHAPTER 18, BUILDINGS AND BUILDING REGULATIONS BY REPEALING EXISTING INTERNATIONAL CODES AND ADOPTING NEW INTERNATIONAL CODES; PROVIDING FOR A PENALTY.

WHEREAS, the Texas Local Governmental Code empowers the cities to enact building codes and regulations and provide for their administration, enforcement, and amendment; and

WHEREAS, the International Code Council (ICC) has developed a set of comprehensive and coordinated national model construction codes (known generally as the “International Codes”; and

WHEREAS, the City Council desires to protect the safety and welfare of the citizens of the City through regulation of construction activities in the City; and

WHEREAS, the City has adopted previous versions of the ICC International codes; and

WHEREAS, the City’s building and construction codes are intended to be updated periodically and City Staff has undertaken a review of the newly adopted international codes as compared to the City’s existing codes and recommend adoption the international codes provided for herein along with certain amendments; and

WHEREAS, City Staff presented the International Codes provided for herein along with their amendments to the Building and Standards Commission and they have voted to recommend approval of the provisions regulating construction activities set forth herein at the Building and Standards Commission meeting on March 1, 2021.

WHEREAS, the City Council has determined that it is in the best interest of residents of the City to adopt the International Codes with local amendments, as set forth herein, to regulate construction activities in the City.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF SCHERTZ, TEXAS: THAT:

Section 1. Repealer. Chapter 18, “Buildings and Building Regulations” of the Code of Ordinances, City of Schertz, Texas, Articles I – XIII are hereby repealed.

Section 2. Amendments. Chapter 18, “Buildings and Building Regulations” of the Code of Ordinances, City of Schertz, Texas, is hereby amended as described in Exhibit A & Exhibit B.

Section 3. The recitals contained in the preamble hereof are hereby found to be true, and such recitals are hereby made a part of this Ordinance for all purposes and are adopted as a part of the judgment and findings of the Council.

Section 4. All ordinances and codes, or parts thereof, which are in conflict or inconsistent with any provision of this Ordinance are hereby repealed to the extent of such conflict, and the provisions of this Ordinance shall be and remain controlling as to the matters resolved herein.

Section 5. This Ordinance shall be construed and enforced in accordance with the laws of the State of Texas and the United States of America.

Section 6. If any provision of this Ordinance or the application thereof to any person or circumstance shall be held to be invalid, the remainder of this Ordinance and the application of such provision to other persons and circumstances shall nevertheless be valid, and the City hereby declares that this Ordinance would have been enacted without such invalid provision.

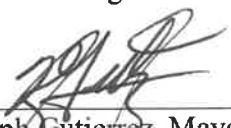
Section 7. It is officially found, determined, and declared that the meeting at which this Ordinance is adopted was open to the public and public notice of the time, place, and subject matter of the public business to be considered at such meeting, including this Ordinance, was given, all as required by Chapter 551, as amended, Texas Government Code.

Section 8. This Ordinance shall be effective upon the date of final adoption hereof and any publication required by law. Builders may choose to continue to use the provisions of the 2012 International Building Codes through June 30, 2021.

Section 9. This Ordinance shall be cumulative of all other ordinances of the City of Schertz, and this Ordinance shall not operate to repeal or affect any other ordinances of the City of Schertz except insofar as the provisions thereof might be inconsistent or in conflict with the provisions of this Ordinance, in which event such conflicting provisions, if any, are hereby repealed.

Approved on first reading the 23rd day of March, 2021.

PASSED, APPROVED AND ADOPTED on final reading the 6th day of April, 2021.



Ralph Gutierrez, Mayor

ATTEST:



Brenda Dennis, City Secretary
(SEAL OF THE CITY)



Exhibit "A"

Chapter 18 - BUILDINGS AND BUILDING REGULATIONS

ARTICLE I. - IN GENERAL

Sec. 18-1. - Scheduling inspections.

- (a) *Posting permit and plans.* Work requiring a permit shall not commence until the permit holder or his agent posts the permit in a conspicuous place on the premises. The permit holder shall maintain the approved plans on site and make them available to the Building Official or his or her designee until the certificate of occupancy or completion certificate is issued by the building official or his or her designee.

Sec. 18-2. – General building contractors registration.

It shall be the duty of every contractor who engages in the construction, erection, alteration, repair, moving, demolition, installation or replacements of any building, structure, swimming pool, or sign, whether permanent or temporary, obtain all the necessary permits. Such contractor shall be registered by the City of Schertz.

- (1) *Insurance required.* It shall be the duty of all contractors who practice their trade within the City of Schertz, Texas to show proof of general commercial liability insurance for claims for property damage, or bodily injury regardless of whether the claim arises from a negligence claim or on a contract claim. Coverage amount of liability insurance shall not be less than \$300,000.00.
- (2) *Application.* An application for a contractor's registration will be submitted to the building official or his or her designee on a form prescribed by the city along with the required initial fee.
- (3) *Renewal.* All renewals shall be due January 1, of each year.
- (4) *Revocation.* Any registration issued under this section may be revoked by the building official or his or her designee for failure to remedy unsatisfactory work, violations of the chapter, failure to obtain permits, or failure to obtain proper inspections in addition to any additional penalties provided by this chapter.
- (5) *Appeal.* An applicant, whose registration has been denied or revoked, may appeal to the Building and Standards Commission.

Sec. 18-3. - Electrical registration.

No person shall install, repair or remove electrical wiring or devices unless he is licensed as an electrical contractor issued by the State of Texas who employs any of the listed tradesmen as established by the Texas Department of Licensing and Regulation (TDLR). A licensed master, sign master, journeyman, sign journeyman, residential wireman, or journeyman lineman must directly supervise work done by an apprentice or sign apprentice.

Directly supervise is defined as follows:

- (1) Where a single family or duplex residential structure is under construction. The supervisor shall be on the property while any electrical work as defined by TDLR Rules and Law is underway.
- (2) Where a commercial or industrial project is under construction. The supervisor shall be not less than one supervisor per 50,000 square feet or each story above the first floor or sub-floor over 50,000 square feet and shall be on the property while any electrical work as defined by TDLR Rules and Law is underway.

Exception:

- (1) A registration is not required of a homeowner who is doing electrical work on his own home. The homeowner may receive help from others to do such work, provided that the principal occupation of the person giving help is not that of an electrical contractor or electrician.

- (2) A registration is not required of a person who is hired as a full-time employee to perform normal maintenance excluding alterations and additions of electrical systems in commercial establishments, provided that the person does not work as an electrician or electrical contractor for the general public.

Renewal. All renewals shall be due January 1, of each year.

Sec. 18-4. - Mechanical registration.

It shall be the duty of all mechanical contractors who practice their trade within the City of Schertz, Texas to show proof of state license as required by the Department of Licensing and Regulation (TDLR), as referenced in Texas State Law.

Sec. 18-5. - Plumbing registration.

It shall be the duty of all plumbing contractors who practice their trade within the City of Schertz, Texas to show proof of state license as required by the Texas State Board of Plumbing Examiners. A registered master plumber, master plumber, journeyman, residential utilities installer, drain cleaner or tradesman plumber are to directly supervise as defined below where compliant with the TSBPE rules and laws.

Directly supervise is defined as follows:

- (1) Where a single family or duplex residential structure is under construction. The supervisor shall be on the property while any plumbing work as defined by Texas State Board of Plumbing Examiners Rules and Law is underway.
- (2) Where a commercial or industrial project is under construction. The supervisor shall be not less than one supervisor per 50,000 square feet or each story above the first floor or sub-floor over 50,000 square feet and shall be on the property while any plumbing work as defined by TSBPE Rules and Law is underway.

Sec. 18-6. - Building and standards commission.

All appeals relative to the application and interpretation of the codes adopted in this chapter shall be to the Building and Standards Commission as established under the Unified Development Code, Article 3, Boards, Commissions and Committees.

Secs. 18-7—18-39. - Reserved.

ARTICLE II. - INTERNATIONAL BUILDING CODE

Sec. 18-40. - Adopted.

The International Building Code, 2018 Edition is hereby adopted with the amendments as provided for in this article.

Sec. 18-41. - Amendments.

The International Building Code, 2018 Edition is hereby amended as follows:

101.1 Title. These regulations shall be known as the Building Code of the City of Schertz, Texas, hereinafter referred to as "this code."

Permits.

105.2 Work exempt from permit. This section shall be amended to include additions and deletions as follows:

Building:

ADD TO EXEMPTIONS

14. Pergolas, Arbors and Trellis under 300 square feet in total size. All materials used shall be of approved fire-resistant materials where fire setbacks as defined in the IBC are required.

DELETE FROM EXEMPTIONS

2. Fences not over 7' high.
4. Retaining Walls
6. Sidewalks and Driveways

107.3.4 Design professional in responsible charge. The design professional shall be an architect or engineer legally registered under the laws of the State of Texas regulating the practice of architecture or engineering and shall affix his/her seal to said drawings, specifications and accompanying data.

113 Board of Appeals. The Board of Appeals is hereby repealed in its entirety and is replaced by the Building and Standards Commission.

202 Definitions. This section is amended to include the following non-referenced definitions:

Applicable governing body as referenced within any code adopted under this chapter shall mean the City Council of the City of Schertz

As Built Plans are plans submitted after the building is complete showing any alterations, additions or changes that have occurred after construction has begun. All alterations, additions or changes may require Building Division approval.

Service Systems are electrical, fire, mechanical, plumbing or other services not associated with structural elements.

Pergolas, Arbors, and Trellis are open un-roofed structure intended only to support vegetation or décor shadowing.

1008.3.3 Room and Spaces amended to include the following:

(5) Public restrooms equipped for handicap use shall have a minimum of one emergency fixture to provide one foot-candle of illumination throughout the restroom to the point of discharge into the exit pathway.

(6) School classrooms shall have one emergency light at or near the primary or secondary exit door(s) that shall illuminate the egress door from the classroom side of the exit.

1612.3 Insert: City of Schertz

1612.3 Insert: Guadalupe County November 2, 2007; Bexar County September 29, 2010 and Comal County September 9, 2009.

1801.2.1 Design basis. All foundations shall be designed by a Professional Engineer licensed in the State of Texas and all drawings and documentation must be signed and sealed per Texas Board of Professional Engineers rules. Design Engineers must be registered with the City of Schertz. Documentation shall include:

1. Design letter referencing soils report project numbers, date of report, and soils engineer name; specific location including lot, block and subdivision; specific design criteria including soil bearing capacity and design plasticity index or Post-Tensioning Institute parameters.
2. The engineer must provide to the City of Schertz a Letter of Final Acceptance stating that the foundation has been placed in compliance with the design prior to issuance of a Certificate of Occupancy.

1807.1(a) Foundation Walls, Retaining Walls and Embedded Posts and Poles.

Construction of a retaining wall in excess of four (4) feet in height, as measured from the bottom of the footing of the wall to the top of the wall, constructed on private property and that will not be dedicated to the City as a public improvement, as a part of the building permit application process, shall require submission to, and approval by, the building official of the City of detailed retaining wall design plans sealed by an engineer licensed to practice in the State of Texas, prior to commencing construction of such wall. Construction of such retaining wall shall also require submission to, and approval by, the building official of the City of a sealed engineering inspection report verifying the construction of the retaining wall in conformance with the retaining wall design plans in order to close out the building permit.

1207 Sound Transmission Standards for High Noise Areas. All habitable portions of structures located within the 65 dBA as shown on Exhibit A attached, shall be designed and constructed to achieve either:

1. an outside to inside noise level reduction (NLR) of at least twenty-five (25) a-weighted decibels (dBA), or
2. be built to the standards set forth in subsection 2. below.

Options for Compliance. Compliance may be demonstrated using one of the following methods:

1. Use simultaneous noise readings of instantaneous outside and inside noise levels in accordance with ASTM E 966 to ensure the structure achieves an outside to inside NLR of at least twenty-five (25) dBA; or
2. Utilize construction materials with a minimum tested or listed sound transmission class (STC) rating of forty (40), in accordance with ASTM E 90, for walls and ceilings, and with a minimum tested or listed STC rating for doors and windows as specified below, in accordance with the following construction methods:
 - a. Walls. The specific exterior wall assemblies listed below shall include the interior finishes set forth therein. Exception: Exterior wall assemblies or materials that have been tested or listed with a minimum STC rating of forty (40).
 - i. Brick veneer. When exterior walls are constructed using brick veneer, a minimum of one-half (1/2) inch gypsum drywall shall be applied as the interior finish, or a minimum of three and one-half (3- 1/2) inches of foam insulation shall be sprayed in as allowed by the building and fire code.
 - ii. Vinyl or cement sidings. When exterior walls are constructed using vinyl or cement sidings, a minimum of five-eighths (5/8) inch gypsum drywall shall be applied as the interior finish, or a minimum of three and one-half (3-1/2) inches of foam insulation shall be sprayed in as allowed by the building and fire code.
 - iii. Other assemblies and materials. All other exterior wall assemblies or materials shall have a tested or listed minimum STC rating of forty (40).
 - b. Roof/Ceiling Assemblies. Roof/ceiling assemblies shall be constructed in accordance with the requirements of subsections (i) or (ii) below.

Exception: Roof/ceiling assemblies or materials that have been tested or listed with a minimum STC rating of forty (40).

- i. Ceilings with unconditioned attic space shall be insulated with a minimum of one-half (1/2) inch gypsum drywall on the interior ceiling side covered with a minimum of twelve (12) inches of blown in fiberglass insulation, or a minimum of three and one-half (3-1/2) inches of spray foam insulation shall be applied to the underside of the roof deck as allowed by the building and fire code.
- ii. Ceilings without attic space above shall be insulated with a minimum of five-eighths (5/8) inch gypsum drywall on the interior side filled with a minimum of nine (9) inches of fiberglass batt insulation with a one (1) inch air space between the roof sheathing and the fiberglass, or a minimum of three and one-half (3-1/2) inches of spray foam insulation shall be applied to the underside of the roof deck as allowed by the building and fire code.
- c. Windows. The cavity between the wood framing and the window frame shall be insulated with fiberglass insulation or foam insulation to the depth of the window frame.
 - i. If the exterior windows and doors together comprise no more than thirty percent (30%) of the total exterior wall area, all windows shall have a minimum tested or listed STC rating of thirty (30).
 - ii. If the exterior windows and doors together comprise more than thirty percent (30%) but no more than forty percent (40%) of the total exterior wall area, all windows shall have a minimum tested or listed STC rating of thirty-two (32).
 - iii. If the exterior windows and doors together comprise more than forty percent (40%) of the total exterior wall area, all windows shall have a minimum tested or listed STC rating of forty (40).
- d. Doors.
 - i. If the exterior windows and doors together comprise no more than thirty percent (30%) of the total exterior wall area, all exterior doors shall have a minimum tested or listed STC rating of thirty (30).
 - ii. If the exterior windows and doors together comprise more than thirty percent (30%) but no more than forty percent (40%) of the total exterior wall area, all exterior doors shall have a minimum tested or listed STC rating of thirty-two (32).
 - iii. If the exterior windows and doors together comprise more than forty percent (40%) of the total exterior wall area, all exterior doors shall have a minimum tested or listed STC rating of forty (40).

Exception: An exterior door may have a tested or listed STC rating of less than forty (40) when installed with a storm door which when combined, achieve a minimum tested or listed STC rating of forty (40).

- e. Mechanical Systems. Mechanical ventilation systems (HVAC) shall provide minimum air circulation and fresh air requirements for various uses in occupied rooms without the need to open any windows, doors, or other openings to the exterior.
 - i. In-window, through-wall, or through-floor air conditioning, ventilating, or heating units may be used if:
 - 1) the above insulation requirements for walls, ceilings, windows and doors are implemented, or
 - 2) walls, ceilings, windows and doors have a minimum tested or listed STC rating of forty (40).

- ii. Evaporative coolers may be installed if the following is implemented to reduce sound entering through the unit:
 - 1) Insert a duct extension with at least two (2) ninety degree (90°) "elbows" between the structure and the unit.
 - 2) Add acoustically designed "up-ducts" in the ceiling of each room to allow proper circulation of air while windows are closed.

Certification.

1. Prior to approval of final inspection or issuance of a certificate of occupancy, all project applicants shall submit to the Building Inspection Division, a signed statement certifying compliance with this section.
2. A single certification statement for multiple structures in the same development may be used as long as the structures implement the same floor plans and construction methods.

A110.7 Inspection by Engineer of Record. The Engineer of Record may conduct required inspections in-lieu-of the *building official* unless precluded by State Law. Prior to issuance of a permit, the Engineer of Record must notify in writing the *building official* which inspections he will be conducted. The *building official* may require such documentation as he deems necessary, including assigned sealed letter by the Engineer of Record indicating the construction was per the approved plans and all applicable code requirements. The *building official* may require any additional documentation as he deems necessary and may also require notice at least 24 hours prior to the inspections.

Chapter 31 Special Construction, Section 3114. Shipping Container for Approved Permanent Construction Use {Reference Acceptance Criteria for Structural Building Materials from Shipping Containers (AC462) published by the International Code Council Evaluation Service (ICC-ES) as approved in October 2018}

In order to be an acceptable material used for construction of either a business, residential or accessory building the building permit would need the following:

1. Certification for compliance with Rules for Certification of Cargo Containers and the International Convention for Safe Containers (CSC) by the American Bureau of Shipping, Bureau Veritas, or Lloyd's Registry.
2. Copies of the Container specifications and detail drawings for each shipping container manufacturer in English.
3. A copy of the quality control program inspection for seaworthiness in accordance with the International Convention for Safe Containers after removal from service as a shipping container and prior to use as a source of building materials.
4. Any modifications to the original design of the container will require a Texas Engineer's approval, designs and details to be provided.
5. The permanent foundation shall be approved by a Texas Engineer as acceptable for use as a structural support for the anticipated building design and use will be provided for permitting.
6. If manufactured as a complete assembly with electrical, plumbing and mechanical systems, a Texas Department of Licensing and Regulation Industrialized Housing and Buildings Approval Certification will be provided with the building plans.

Specific standards:

- (a) Industrialized buildings must have all local permits and licenses that are applicable to other housing or buildings.

(b) For purposes of this section, industrialized housing is real property.

(c) The single-family or duplex industrialized housing structure to:

(1) have an appraised value equal to or greater than the median taxable value for each single-family dwelling located within 500 feet of the lot on which the industrialized housing is proposed to be located, as determined by the most recent certified tax appraisal roll for each county in which the properties are located; and

(2) have exterior siding, roofing, roofing pitch, foundation fascia, and fenestration compatible with the single-family dwellings located within 500 feet of the lot on which the industrialized housing is proposed to be located; and

(3) have exterior siding, roofing, roof pitch, foundation fascia, and fenestration compatible with the single-family dwellings located within 500 feet of the lot on which the industrialized housing is proposed to be located; and

(4) comply with municipal aesthetic standards, building setbacks, side and rear yard offsets, subdivision control, architectural landscaping, square footage, and other site requirements applicable to single-family dwellings; and

(5) be securely fixed to a permanent foundation.

(d) For purposes of Subsection (c), "value" means the taxable value of the industrialized housing and the lot after installation of the housing.

(e) Except as provided by Subsection (c), the City of Schertz may not adopt a regulation under this section that is more restrictive for industrialized housing than that required for a new single-family or duplex dwelling constructed on-site.

(f) This section does not:

(1) limit the authority of a municipality to adopt regulations to protect historic properties or historic districts; or

(2) affect deed restrictions.

(g) All non-residential buildings or structures shall comply with the City of Schertz Unified Development Code.

ARTICLE III. - INTERNATIONAL RESIDENTIAL CODE FOR ONE AND TWO FAMILY DWELLINGS

Sec. 18-60. - Adopted.

The International Residential Code for One and Two Family Dwellings Code, 2018 Edition is hereby adopted with the amendments as provided for in this Article.

Sec. 18-61. - Amendments.

The International Residential Code for One and Two Family Dwellings, 2018 Edition is hereby amended as follows:

R101.1 Title. Insert: City of Schertz, Texas

Permits.

R105.2 Work exempt from permit. This section shall be amended to include additions and deletions as follows:

Building:

Insert:

1. One story detached accessory structures used as tool and storage sheds, playhouses, and similar uses on the same lot as a one or two family dwelling; provided the floor area is 120 square feet or less and the structure can be moved if necessary, except where located in a flood hazard area.
 - a. The foundation for a detached accessory structure, storage sheds, playhouses and similar uses, if any, will require a flatwork permit; and the location and placement of the accessory structure shall comply with Article 8 of the Schertz Unified Development Code.
 - b. Areas located in floodplain hazard areas will require permits.
2. Replacement Fences on the property of a one or two family dwelling, provided they comply with the following criteria, except where located in a flood hazard area.
 - a. The fence complies with all of the applicable requirements of the City of Schertz Unified Development code including but not limited to height, location and materials.
 - b. The replacement fence is in the same location, the same height and of the same materials as the fence being replaced (e.g., a 6' wood privacy fence for a 6' wood privacy fence or a 4' chain link fence for a 4' chain link fence).
 - c. Pergolas, Arbors and Trellis under 300 square feet in total size. All materials used shall be of approved fire-resistant materials where fire setback as defined by the IRC are required. Foundations for arbors, if any, will require a flat work permit. The arbor shall not be located in any utility easement; and shall comply with the setback requirements of Article 8 of the Schertz Unified Development Code with the exception that an arbor may be attached to the main structure.
 - d. Areas located in floodplain hazard areas will require permits.

DELETED EXEMPTION:

3. Retaining Walls
5. Sidewalks and driveways
10. Decks not exceeding 200 square feet.

R106.1 Submittal Documents.

Design professional. The design professional shall be an architect or engineer legally registered under the laws of the State of Texas regulating the practice of architecture or engineering and shall affix his/her seal to said drawings.

R109.5 Inspection by Engineer of Record. The Engineer of Record may conduct required inspections in-lieu-of the *building official* unless precluded by State Law. Prior to issuance of a permit, the Engineer of Record must notify in writing the *building official* which inspections he will be conducted. The *building official* may require such documentation as he deems necessary, including assigned sealed letter by the Engineer of Record indicating the construction was per the approved plans and all applicable code requirements. The *building official* may require any additional documentation as he deems necessary and may also require notice at least 24 hours prior to the inspections.

Exception: During emergency situations where authorized by the Authority having Jurisdiction.

R112 Board of Appeals. The Board of Appeals is hereby repealed in its entirety and is replaced by the Building and Standards Commission.

R202 Definitions. This section is amended to include the following non-reference definitions.

Applicable governing body as referenced within any code adopted under this chapter shall mean the City Council of the City of Schertz

As Built Plans are plans submitted after the building is complete showing any alterations, additions or changes that have occurred after construction has begun. All alterations, additions or changes may require Building Division approval.

Residential Arbors are defined as trellises and not as a building when less than 300 square feet in size. Arbors shall be built without a solid roof covering; used only to support vegetation; or acting as a shadow box attached or unattached to the primary or secondary structure; or free standing anchored solidly into the soil or to a permanent foundation and capable of withstanding the environmental conditions as established in the International Residential Code.

Service Systems are electrical, fire, mechanical, plumbing or other services not associated with structural elements.

Pergolas, Arbors and Trellis are open un-roofed structure intended only to support vegetation or décor shadowing.

R106.1.4 Submittal documents. All foundations shall be designed by a Professional Engineer licensed in the State of Texas and all drawings and documentation must be signed and sealed per Texas Board of Professional Engineers rules. Design Engineers must be registered with the City of Schertz. Documentation shall include:

1. Design letter referencing soils report project number, date of report, and soils engineer name; specific location including lot, block and subdivision; specific design criteria including soil bearing capacity and plasticity index or Post-Tensioning Institute parameters. The engineer shall also approve a concrete mix design with performance criteria based on soils and seasonal conditions.
2. The engineer must provide to the City of Schertz a Letter of Final Acceptance stating that the foundation has been placed in compliance with the design specifications and requirements prior to issuance of a Certificate of Occupancy.
3. Prior to receiving a Certificate of Occupancy, a final survey indicating final grade elevations and verifying positive drainage away from the foundation must be submitted to the City.

Exemption: The Building Official or designee may waive these requirements where the addition is 300 square feet or smaller with a load bearing roof or single story structure directly connected to this foundation.

For free standing column supports the footings shall be 12 inches in diameter, not less than 24 inches in depth below soil grade or to a weight bearing strata with a minimum of a #6 by 6 by 6 steel reinforcement cage installed one inch below the surface of the poured concrete to the one inch above the base of the footing and "belled" two inches at the base.

All other pier and beam construction shall have a footing designed not less than as allowed for highly expansive soils per the IRC and in no case shall the width of the footing be less than twelve inches with four #4 bars with #4 stirrups on twelve-inch centers. The monolithic slab shall be three- and one-half inches in depth with #6 by 6 by 6 mesh or #3 bar on 12-inch centers located in the center of the monolithic slab. No single monolithic slab shall have an area greater than 300 square feet without interior twelve inch by twelve-inch beams with four # 4 bar reinforcement one inch from the sides and one inch from the bottom of the interior beam. Stirrups are required on 12 inch centers and not less than #4 bar. Corner bars shall be installed at all intersections and at both interior and exterior corner edges of the new foundation. An engineer's approval will be required if the new foundation addition is to be connected by dowels to a post tension designed primary foundation. A minimum of 4 inches of compacted base will be required under the new monolithic slab free of any contaminating debris.

Table R301.2 (1) Climatic and Geographic Design Criteria.

GROUND SNOW LOAD	WIND DESIGN				SEISMIC DESIGN CATEGORY	SUBJECT TO DAMAGE FROM			WINTER DESIGN TEMP	ICE BARRIER UNDERLAYMENT REQUIRED	FLOOD HAZARDS	AIR FREEZING INDEX	MEAN ANNUAL TEMP
	Speed (mph)	Topographic effects	Special wind region	Windborne debris zone		Weathering	Frost line depth	Termite					
5 lbs. per sq. ft.	115	NO	NO	NO	A	Negligible	12"	Very heavy	30 degrees F	NO	Yes	16 F	68.7
MANUAL J DESIGN CRITERIA													
Elevation		Latitude		Winter heating		Summer cooling		Altitude correction factor		Indoor design temperature		Design temperature cooling	
761		20 degrees 30 minutes		31 degrees F		96 degrees F		1 (under 1,000 ft. above sea level)		70 degrees F		75 degrees F	
Cooling temperature difference		Wind Velocity heating		Wind Velocity cooling		Coincident wet bulb		Daily range		Winter humidity		Summer humidity	
21 degrees F		15 MPH		7 ½ MPH		74		Medium – 16 to 25 degrees F		67%		67%	

R404.4.1 Retaining Walls.

Construction of a retaining wall in excess of four (4) feet in height, as measured from the bottom of the footing of the wall to the top of the wall, constructed on private property and that will not be dedicated to the City as a public improvement, as a part of the building permit application process, shall require submission to, and approval by, the building official of the City of detailed retaining wall design plans sealed by an engineer licensed to practice in the State of Texas, prior to commencing construction of such wall. Construction of such retaining wall shall also require submission to, and approval by, the building official of the City of a sealed engineering inspection report verifying the construction of the retaining wall in conformance with the retaining wall design plans in order to close out the building permit.

R703.7.2 Exterior veneer support, R703.7.2.1 Support by steel angle, 703.7.2.2 Support by roof construction and R703.7.3 Lintels. Lintels shall be attached to the wood framing above all openings wider than 2 feet by fasteners as required by the design professional prior to a framing inspection being requested.

R807.1 Attic Access. Where attic access is required for appliance maintenance the access shall be provided by a ceiling pull down ladder capable of supporting (250) two hundred and fifty pounds and

have an opening large enough to remove the largest single section or the entire unit. If the attic is designed for storage a pull down ladder is required to the same specifications as above. .

P2503.5.1 Rough plumbing (1) Water test. Each section shall be filled with water to a point not less than 10 feet above the highest fitting connection in that section, or to the highest point in the completed system, or to 1 foot above the highest finished interior wall per floor level. Water shall be held in the section under test for a period of 15 minutes. The system shall prove leak free by visual inspection.

P2603.5.1 Sewer Depth. Insert: 12 inches
Insert: 12 inches

The following Appendixes are adopted:

Appendix A - Sizing and Capacities of Gas Piping

Appendix B - Sizing of Venting Systems Serving appliances equipped with Draft hood, Category 1 Appliances, and Appliances listed for use with Type B Vents

Appendix C - Exit Terminals of Mechanical draft and Direct-Vent Venting Systems

Appendix E - Manufactured Homes used as Dwellings

Appendix H - Patio Covers

Appendix J - Existing Buildings and Structures

Appendix K Sound Transmission

AK 101 Sound Transmission Standards for High Noise Areas

All habitable portions of structures located within the 65 dBA as shown on Exhibit A attached shall be designed and constructed to achieve either:

1. an outside to inside noise level reduction (NLR) of at least twenty-five (25) a-weighted decibels (dBA), or
2. be built to the standards set forth in subsection 2. below.

Options for Compliance. Compliance may be demonstrated using one of the following methods:

1. Use simultaneous noise readings of instantaneous outside and inside noise levels in accordance with ASTM E 966 to ensure the structure achieves an outside to inside NLR of at least twenty-five (25) dBA; or
2. Utilize construction materials with a minimum tested or listed sound transmission class (STC) rating of forty (40), in accordance with ASTM E 90, for walls and ceilings, and with a minimum tested or listed STC rating for doors and windows as specified below, in accordance with the following construction methods:
 - a. Walls. The specific exterior wall assemblies listed below shall include the interior finishes set forth therein. Exception: Exterior wall assemblies or materials that have been tested or listed with a minimum STC rating of forty (40).
 - i. Brick veneer. When exterior walls are constructed using brick veneer, a minimum of one-half (1/2) inch gypsum drywall shall be applied as the interior finish, or a minimum of three and one-half (3- 1/2) inches of foam insulation shall be sprayed in as allowed by the building and fire code.

- ii. Vinyl or cement sidings. When exterior walls are constructed using vinyl or cement sidings, a minimum of five-eighths (5/8) inch gypsum drywall shall be applied as the interior finish, or a minimum of three and one-half (3-1/2) inches of foam insulation shall be sprayed in as allowed by the building and fire code.
- iii. Other assemblies and materials. All other exterior wall assemblies or materials shall have a tested or listed minimum STC rating of forty (40).
- b. Roof/Ceiling Assemblies. Roof/ceiling assemblies shall be constructed in accordance with the requirements of subsections (i) or (ii) below.

Exception: Roof/ceiling assemblies or materials that have been tested or listed with a minimum STC rating of forty (40).

- i. Ceilings with unconditioned attic space shall be insulated with a minimum of one-half (1/2) inch gypsum drywall on the interior ceiling side covered with a minimum of twelve (12) inches of blown in fiberglass insulation, or a minimum of three and one-half (3-1/2) inches of spray foam insulation shall be applied to the underside of the roof deck as allowed by the building and fire code.
- ii. Ceilings without attic space above shall be insulated with a minimum of five-eighths (5/8) inch gypsum drywall on the interior side filled with a minimum of nine (9) inches of fiberglass batt insulation with a one (1) inch air space between the roof sheathing and the fiberglass, or a minimum of three and one-half (3-1/2) inches of spray foam insulation shall be applied to the underside of the roof deck as allowed by the building and fire code.
- c. Windows. The cavity between the wood framing and the window frame shall be insulated with fiberglass insulation or foam insulation to the depth of the window frame.
 - i. If the exterior windows and doors together comprise no more than thirty percent (30%) of the total exterior wall area, all windows shall have a minimum tested or listed STC rating of thirty (30).
 - ii. If the exterior windows and doors together comprise more than thirty percent (30%) but no more than forty percent (40%) of the total exterior wall area, all windows shall have a minimum tested or listed STC rating of thirty-two (32).
 - iii. If the exterior windows and doors together comprise more than forty percent (40%) of the total exterior wall area, all windows shall have a minimum tested or listed STC rating of forty (40).
- d. Doors
 - i. If the exterior windows and doors together comprise no more than thirty percent (30%) of the total exterior wall area, all exterior doors shall have a minimum tested or listed STC rating of thirty (30).
 - ii. If the exterior windows and doors together comprise more than thirty percent (30%) but no more than forty percent (40%) of the total exterior wall area, all exterior doors shall have a minimum tested or listed STC rating of thirty-two (32).
 - iii. If the exterior windows and doors together comprise more than forty percent (40%) of the total exterior wall area, all exterior doors shall have a minimum tested or listed STC rating of forty (40).

Exception: An exterior door may have a tested or listed STC rating of less than forty (40) when installed with a storm door which when combined, achieve a minimum tested or listed STC rating of forty (40).

- e. **Mechanical Systems.** Mechanical ventilation systems (HVAC) shall provide minimum air circulation and fresh air requirements for various uses in occupied rooms without the need to open any windows, doors, or other openings to the exterior.
 - i. In-window, through-wall, or through-floor air conditioning, ventilating, or heating units may be used if:
 - 1) the above insulation requirements for walls, ceilings, windows and doors are implemented, or
 - 2) Walls, ceilings, windows and doors have a minimum tested or listed STC rating of forty (40).
 - ii. Evaporative coolers may be installed if the following is implemented to reduce sound entering through the unit:
 - 1) Insert a duct extension with at least two (2) ninety degree (90°) "elbows" between the structure and the unit.
 - 2) Add acoustically designed "up-ducts" in the ceiling of each room to allow proper circulation of air while windows are closed.

Certification.

1. Prior to approval of final inspection or issuance of a certificate of occupancy, all project applicants shall submit to the Building Inspection Division, a signed statement certifying compliance with this section.
2. A single certification statement for multiple structures in the same development may be used as long as the structures implement the same floor plans and construction methods.

Part VIII - Electrical. Is deleted.

The following Appendix is adopted:

Appendix M – Home Day Care – R 3 Occupancy

Appendix P - Sizing of Water Piping System

Appendix Q – Tiny Houses

Appendix R – Light Straw-Clay Construction

Appendix S – Straw bale Construction

Appendix U - **Shipping Container for Approved Permanent Construction Use** {Reference Acceptance Criteria for Structural Building Materials from Shipping Containers (AC462) published by the International Code Council Evaluation Service (ICC-ES) as approved in October 2018}

In order to be an acceptable material used for construction of either a business, residential or accessory building the building permit would need the following:

1. Certification for compliance with Rules for Certification of Cargo Containers and the International Convention for Safe Containers (CSC) by the American Bureau of Shipping, Bureau Veritas, or Lloyd's Registry.
2. Copies of the Container specifications and detail drawings for each shipping container manufacturer in English.
3. A copy of the quality control program inspection for seaworthiness in accordance with the International Convention for Safe Containers after removal from service as a shipping container and prior to use as a source of building materials.

4. Any modifications to the original design of the container will require a Texas Engineer's approval, designs and details to be provided.
5. The permanent foundation shall be approved by a Texas Engineer as acceptable for use as a structural support for the anticipated building design and use will be provided for permitting.
6. If manufactured as a complete assembly with electrical, plumbing and mechanical systems, a Texas Department of Licensing and Regulation Industrialized Housing and Buildings Approval Certification will be provided with the building plans.

Specific standards:

- (a) Industrialized buildings must have all local permits and licenses that are applicable to other housing or buildings.
- (b) For purposes of this section, industrialized housing is real property.
- (c) The single-family or duplex industrialized housing structure to:
 - (1) have an appraised value equal to or greater than the median taxable value for each single-family dwelling located within 500 feet of the lot on which the industrialized housing is proposed to be located, as determined by the most recent certified tax appraisal roll for each county in which the properties are located; and
 - (2) have exterior siding, roofing, roofing pitch, foundation fascia, and fenestration compatible with the single-family dwellings located within 500 feet of the lot on which the industrialized housing is proposed to be located; and
 - (3) have exterior siding, roofing, roof pitch, foundation fascia, and fenestration compatible with the single-family dwellings located within 500 feet of the lot on which the industrialized housing is proposed to be located; and
 - (4) comply with municipal aesthetic standards, building setbacks, side and rear yard offsets, subdivision control, architectural landscaping, square footage, and other site requirements applicable to single-family dwellings; and
 - (5) be securely fixed to a permanent foundation.
- (d) For purposes of Subsection (c), "value" means the taxable value of the industrialized housing and the lot after installation of the housing.
- (e) Except as provided by Subsection (c), the City of Schertz may not adopt a regulation under this section that is more restrictive for industrialized housing than that required for a new single-family or duplex dwelling constructed on-site.
- (f) This section does not:
 - (1) limit the authority of a municipality to adopt regulations to protect historic properties or historic districts; or
 - (2) affect deed restrictions.
- (g) All non-residential buildings or structures shall comply with the City of Schertz Unified Development Code.

ARTICLE IV. - NATIONAL ELECTRICAL CODE

Sec. 18-80. - Adopted.

The National Electrical Code, 2020 edition to include, revisions, amendments and corrections, published by the National Fire Protection Association (NFPA), is hereby adopted by reference as the electrical code of the City of Schertz, Texas, subject to and including such amendments as herein shall appear. The State of Texas will mandate all future code editions through the Texas Department of Licensing and Regulation (TDLR) as to the date of future adoptions.

Sec. 18-81. - Amendments.

The National Electrical Code, 2020 Edition is hereby amended as follows:

210.11 Branch Circuits Required. No more than (12) twelve duplex receptacle outlets shall be installed per circuit serving general lighting circuits.

210.52 Dwelling Unit Receptacle Outlets (B) (3) Kitchen Receptacle Requirements. No more than (4) four duplex receptacle outlets per kitchen countertop circuit.

Refrigerators, freezers, microwaves, dishwashers, garbage compactors, and washing machines shall be located on dedicated individual circuits. Such receptacle outlets shall comply with 210.8 Ground-Fault Circuit-Interrupter Protection for Personnel and 210.12 Arc-Fault Circuit-Interrupter Protection as needed. Garbage Disposals shall be permitted to be on the same circuit for a kitchen countertop circuit.

230.70 (A) (1) Readily Accessible Location – The service disconnecting means shall be installed at a readily accessible location outside of a building or structure nearest the point of entrance of or attachment to the service conductors.

230.71 Maximum Number of Disconnects. An exterior disconnecting means shall be provided at each building serviced where more than two circuits supply the structure. A shunt trip device designed to de-energize the service disconnect equipment at all load side connections, is acceptable on the exterior of the structure at a location approved by the City of Schertz as an alternative means of disconnection.

Secs. 18-82—18-99. - Reserved.

ARTICLE V. - INTERNATIONAL FUEL GAS CODE

Sec. 18-100. - Adopted.

The International Fuel Gas Code, 2018 Edition is hereby adopted with the amendments as provided for in this Article.

Sec. 18-101. - Amendments.

The International Fuel Gas Code, 2018 Edition is hereby amended as follows:

101.1 Title. These regulations shall be known as the Fuel Gas Code of the City of Schertz, Texas, hereinafter referred to as "this code."

109 Means of Appeal. The Board of Appeals is hereby repealed in its entirety and replaced by Building and Standards Commission

The following appendixes are adopted:

Appendix A (IFGS) - Sizing and Capacities of Gas Piping A.1 shall be altered as follows: for any gas piping system, or special appliance, or for conditions other than those covered by the tables provided in the code, such as longer runs, greater gas demands, or greater pressure drops, the size of each gas piping system shall be determined by standard engineering practices acceptable to the code official.

Appendix B (IFGS) Sizing of Venting Systems Servicing Appliances Equipped with Draft Hoods, Category 1 Appliance and Appliances Listed for Use with Type B Vents Appendix C (IFGS) Exit Terminals of Mechanical Draft and Direct-vent Venting Systems.

Secs. 18-102—18-119. - Reserved.

ARTICLE VI. - INTERNATIONAL MECHANICAL CODE

Sec. 18-120. - Adopted.

The International Mechanical Code, 2018 Edition is hereby adopted with the amendments as provided for in this article.

Sec. 18-121. - Amendments.

The International Mechanical Code, 2018 Edition is hereby amended as follows:

101.1 Title. These regulations shall be known as the Mechanical Code of the City of Schertz, Texas, hereinafter referred to as "this code."

109 Means of Appeal. The Board of Appeals is hereby repealed in its entirety and replaced by Building and Standards Commission.

Secs. 18-122—18-139. - Reserved.

ARTICLE VII. - INTERNATIONAL PLUMBING CODE

Sec. 18-140. - Adopted.

The International Plumbing Code, 2018 Edition is hereby adopted with the amendments as provided for in this article.

Sec. 18-141. - Amendments.

The International Plumbing Code, 2018 Edition is hereby amended as follows:

101.1 Title. These regulations shall be known as the International Plumbing Code of the city of Schertz, Texas hereinafter referred to as "this code."

109 Means of Appeal. The Board of Appeals is hereby repealed in its entirety and replaced by Building and Standards Commission.

305.4.1 Sewer Depth. Building sewers that connect to private disposal systems shall be not less than 12 inches below grade at the point of the septic tank connection. All building sewers shall be a minimum of 12 inches below finished grade.

311.1 Toilet Facilities for Workers. Portable toilets shall be provided for construction sites so that the path of travel to such facilities shall not exceed 500 feet. Exception: A single portable toilet may be used for small individual construction jobs when approved by the building official.

The following Appendixes are adopted:

Appendix B - Rates of Rainfall for Various Cities

Appendix D - Degree Day and Design Temperatures

Appendix E - Sizing of Water Piping System

Appendix C- Structural Safety

Secs. 18-142—18-159. - Reserved.

ARTICLE VIII. - INTERNATIONAL PROPERTY MAINTENANCE CODE

Sec. 18-160. - Adopted.

The International Property Maintenance Code, 2018 Edition is hereby adopted with the amendments as provided for in this article.

Sec. 18-161. - Amendments.

The International Property Maintenance Code, 2018 Edition is hereby amended as follows:

101.1 Title. These regulations shall be known as the International Property Maintenance Code of the City of Schertz, Texas, hereinafter referred to as "this code."

111 Means of Appeal. Means of Appeal is hereby repealed in its entirety.

302.4 Weeds. All premises and exterior property shall be maintained free from weeds or grass growth in excess of eight inches.

302.7 Accessory Structures. All Accessory structures, including detached garages, fences and walls, shall be maintained structurally sound and in good repair.

No accessory structure shall be more than twenty (20) degrees out of vertical (using an (8) eight foot level) along any 20 feet of wall surface to obtain an accurate determination of the degrees from vertical.

Fences and walls twenty (20) degrees or more in each directional run (vertical or horizontal) shall not have more than twenty-five (25) percent of any directional run (vertical or horizontal) to be of decayed or damaged material.

The following Appendix is adopted:

Appendix A - Boarding Standard

Secs. 18-162—18-179. - Reserved.

ARTICLE IX. - INTERNATIONAL ENERGY CONSERVATION CODE

Sec. 18-180. - Adopted.

The International Energy Conservation Code, 2015 Edition is hereby adopted with the amendments as provided for in this article. The State of Texas will mandate all future code editions through the *Texas Comptroller's State Energy Conservation Office (SECO)* as to the date of future adoptions.

Sec. 18-181. - Amendments.

The International Energy Conservation Code, 2015 Edition is hereby amended as follows:

C101.1 Title. This code shall be known as the International Energy Conservation Code of the City of Schertz, Texas, and shall be cited as such. It is referred to herein as "this code."

C109 Board of Appeals. The Board of Appeals is hereby repealed in its entirety and replaced by the Building and Standards Commission.

Secs. 18-182—18-199. - Reserved.

ARTICLE X. - MANUAL OF CROSS-CONNECTION CONTROL

Sec. 18-200. - Adopted.

The Manual of Cross-Connection Control by the University of Southern California, Tenth edition published October 2009, by the Foundation for Cross-Connection Control and Hydraulic Research, University of Southern California, is hereby adopted and incorporated as the Backflow and Cross-Connection Code of the City of Schertz, Texas, subject to and including by reference as herein shall appear.

Sec. 18-201. - Amendments.

The Manual of Cross-Connection Control, Tenth Edition, October 2009 is hereby amended as follows:

Irrigation Back Flow Device Location. The residential irrigation RP or PVB shall be located immediately adjacent to the residential structure and shall be located a minimum of twelve (12) inches above the highest lawn sprinkler head. A Ground Fault Circuit Interrupter receptacle that is weather proof while in operation is recommended to be located immediately adjacent to the back flow device for the installation of a heat tape to prevent freezing. A rain sensor(s) shall be installed on all systems.

The Commercial irrigation RP and PVB or other approved back flow devices shall be protected from traffic if not located immediately adjacent to the structure and shall be located a minimum of twelve (12) inches above the highest lawn sprinkler head. A Ground Fault Circuit Interrupter receptacle that is weather proof while in operation is recommended to be located immediately adjacent to the back flow device for the installation of a heat tape to prevent freezing. Freeze protection shall be considered in all designs. A rain sensor(s) shall be installed on all systems.

Any RP or PVB located in a flood plain shall be 1 foot above the Design Flood Elevation (DFE) or designed in such a way that will prevent floodwaters from entering or accumulating within system components and to additionally ensure that floodwater does not contaminate the potable water supply system. (Ref: FEMA 348 November 1999)

Adopting the backflow and cross-connection requirements in no way shall appeal or set aside any of the requirements of the International Plumbing Code.

Secs. 18-202—18-219. - Reserved.

ARTICLE XI. - INTERNATIONAL SWIMMING POOL AND SPA CODE

Sec. 18-220. - Adopted.

The International Swimming Pool and Spa Code, 2018 Edition is hereby adopted with the amendments as provided for in this article. The State of Texas will mandate all future code editions through the Texas Department of State Health Services as to the date of future adoptions.

Sec. 18-221. - Amendments.

The International Swimming Pool and Spa Code, 2018 Edition is hereby amended as follows:

101.1 Title. These regulations shall be known as the International Swimming Pool and Spa Code of the City of Schertz, Texas, hereinafter referred to as "this code."

108 Means of Appeal. The Board of Appeals is hereby repealed in its entirety and replaced by Building and Standards Commission.

Secs. 18-222—18-239. - Reserved.

ARTICLE XII. - INTERNATIONAL EXISTING BUILDING CODE

Sec. 18-240. - Adopted.

The International Existing Building Code, 2018 Edition is hereby adopted with the amendments as provided for in this article.

Sec. 18-241. - Amendments.

The International Existing Building Code, 2018 Edition is hereby amended as follows:

101.1 Title. These regulations shall be known as the International Existing Building Code of the City of Schertz, Texas, hereinafter referred to as "this code."

112 Board of Appeals. The Board of Appeals is hereby repealed in its entirety and replaced by Building and Standards Commission.

Secs. 18-242—18-254. - Reserved.

ARTICLE XIII

Sec. 18-255. - Violations and penalties.

Any person, firm, corporation or agent who shall violate a provision of this chapter, or fail to comply therewith, or with any of the requirements thereof, or who shall erect, construct, alter, install, demolish, or move any structure, electrical, gas, mechanical or plumbing system in violation of the detailed statement or drawings submitted and permitted thereunder, shall be guilty of a misdemeanor. Such persons shall be considered guilty of a separate offense for each and every day or portion thereof during which any violation of any of the provisions of this chapter is committed or continued, and upon conviction of any such violation such person shall be punished by a fine of not more than \$500.00 for each offense unless said violation is a violation of a regulation governing fire safety or public health and sanitation then by a fine of not more than \$2,000.00 for each offense. All such violations shall be prosecuted in accordance with section 1-8 General penalty for violations of Code; continuing violations of the Schertz Municipal Code of Ordinances.

EXHIBIT B Evaluation of Zoning within Airfield Noise Contours JBSA Randolph

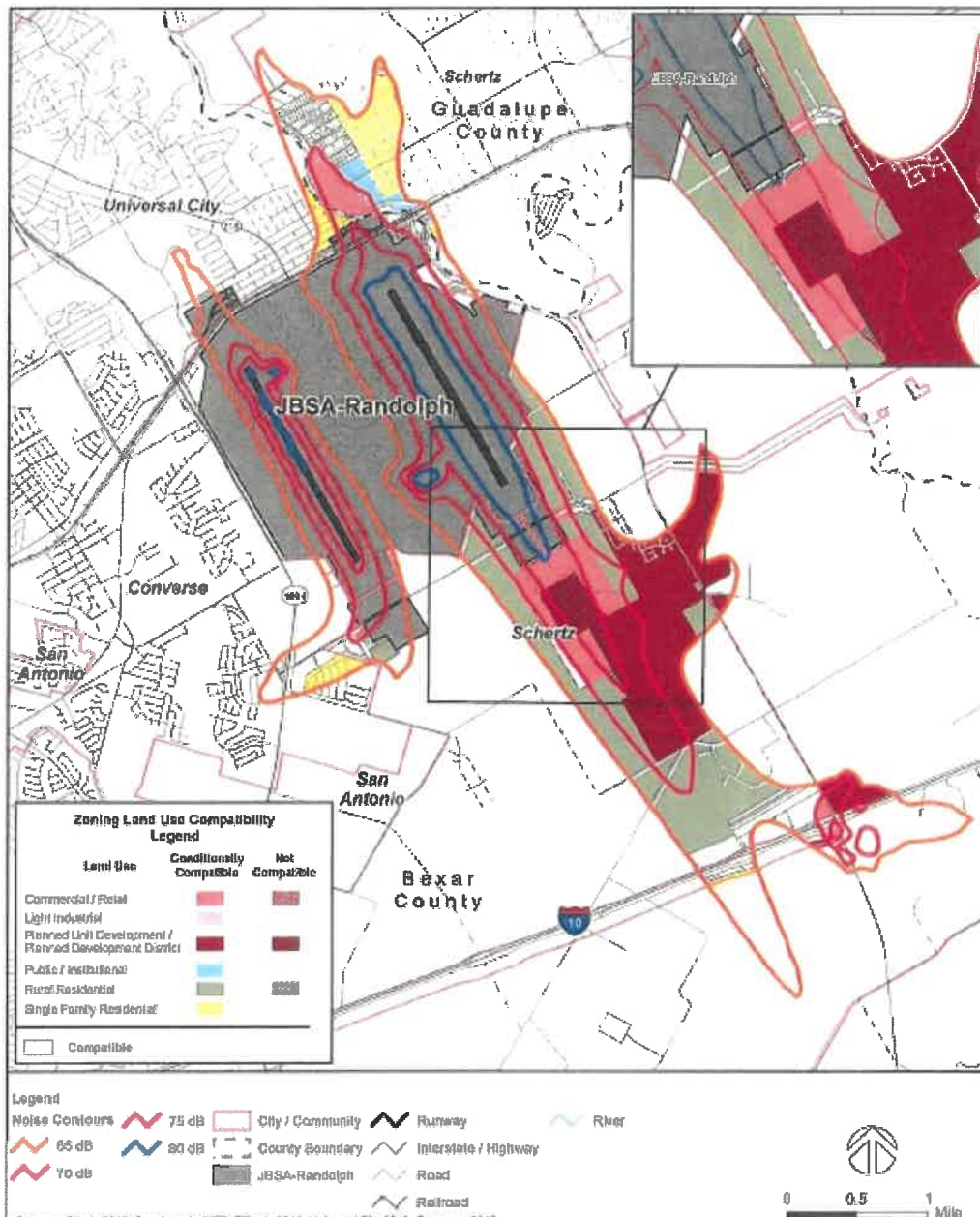


Figure 5-11.4
Evaluation of Zoning Within Airfield Noise Contours
JBSA - Randolph