

Sec. 13-501. Definitions.

All technical industry words or phrases related to the drilling and production of gas wells not specifically defined in this article shall have the meanings customarily attributable thereto by prudent and reasonable gas industry operators. The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Abandonment means "abandonment" as defined by the commission and includes the plugging of the well and the restoration of any well site as required by this article.

Ambient noise level means the all encompassing noise level associated with a given environment, being a composite of sounds from all sources at the location, constituting the normal or existing level of environmental noise at a given location.

Blowout preventer means a mechanical, hydraulic, pneumatic or other device or combination of such devices secured to the top of a well casing, including valves, fittings, and control mechanisms connected therewith, which can be closed around the drill pipe, or other tubular goods which completely close the top of the casing and are designed for preventing blowouts.

Building means any structure used or intended for supporting or sheltering humans for any use or occupancy. The term "building" shall be construed as if followed by the words "or portions thereof."

Contaminant means any substance capable of causing pollution, including but not limited to, smoke, vapors, fumes, acids, alkalis, toxic chemicals, liquids, or gases, drilling fluids including muds, or other irritants.

City means the City of Grand Prairie.

City attorney means the City Attorney of the City of Grand Prairie.

City Code means the Code of Ordinances of the City of Grand Prairie.

Class 1 gas permit means a permit required if the edge of the pad site boundary for the proposed well is to be located within seven hundred (700) feet of a protected use, but no closer than five hundred (500) feet of a protected use. A class 1 gas permit may require city council approval.

Class 2 gas permit means a permit required if the edge of the pad site boundary for the proposed well is to be located greater than seven hundred (700) feet of a protected use.

Commission means the state agency that regulates the oil and gas industry.

Completion of drilling, redrilling and reworking means the date the work is completed for the drilling, redrilling or reworking and the crew is released by completing their work or contract or by their employer.

Data Campus means a contiguous area consisting of fifty (50) or more acres which contains or has an approved and unexpired site plan for two or more data centers that share common amenities.

Data Center means a centralized physical facility where computing and networking equipment is used to collect, process, and store data.

Daytime means the period between 7:00 a.m. and 7:00 p.m.

Decibel (dB) means a unit for measuring the intensity of a sound/noise and is equal to ten (10) times the logarithm to the base 10 of the ratio of the measured sound pressure squared to a reference pressure which is twenty (20) micropascals.

Drill site means the premises used during the drilling or reworking of a well or wells located there and subsequent life of a well or wells or any associated operation.

Drilling means digging or boring a new well for the purpose of exploring for, developing or producing gas or other hydrocarbons, or for the purpose of injecting gas, water or any other fluid or substance into the earth.

Drilling equipment means the derrick, together with all parts of and appurtenances to such structure, every piece of apparatus, machinery, or equipment used or erected or maintained for use in connection with drilling.

Environmental services director or city's environmental services director means the city manager or designee.

Exploration means geologic or geophysical activities, including seismic surveys, related to the search for gas or other subsurface hydrocarbons.

Extraterritorial jurisdiction (ETJ) means the land area outside the city limit boundary as defined by the Local Government Code of the State of Texas that the city has a right to annex at its option.

Fire department means the Fire Department of the City of Grand Prairie.

Floodway means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height as established in article 15 of the City's Unified Development Code.

Forced pooling shall mean that a hearing under the Mineral Interest Pooling Act is required to pool minerals that could not be done voluntarily as defined in V.T.C.A., Natural Resources Code ch. 102.

Fracturing means the use of water and additives as stimulants injected into a gas well to split or fracture the formation to improve the productivity of the gas well.

Gas means any fluid, either combustible or noncombustible, which is produced in a natural state from the earth and which maintains a gaseous or rarefied state at standard temperature and pressure conditions and/or the gaseous components or vapors occurring in or derived from petroleum or natural gas.

Gas well means any well drilled, to be drilled, or used for the intended or actual production of natural gas.

Hazardous materials management plan means the hazardous materials management plan and hazardous materials inventory statements required by the fire code.

Inspector means the gas inspector, third party agency, or city staff designated by the City Manager of Grand Prairie.

Landfarm means the depositing, spreading or mixing of drill cuttings, drilling fluids, drilling mud, produced water or other drilling waste generated by natural gas drilling process onto the ground.

Lift compressor means a device that raises the pressure of a compressible fluid (gas) in order to lift gas from the well.

Line compressor means a device that raises the pressure of a compressible fluid (gas) in order for the gas to be transported through a pipeline.

Nighttime means the period between 7:00 p.m. and 7:00 a.m.

Operation site means the area used for development and production and all operational activities associated with gas after drilling activities are complete.

Operator means, for each well, the person listed on the commission Form W-1 or Form P-4 for a gas well that is, or will be, actually in charge and in control of drilling, maintaining, operating, pumping, or controlling any well, including, without limitation, a unit operator. If the operator, as herein defined, is not the lessee under a gas lease of any premises affected by the provisions of this article, then such lessee shall also be deemed to be an operator. In the event that there is no gas lease relating to any premises affected by this article, the owner of the fee mineral estate in the premises shall be deemed an operator.

Pad site means the area that is fenced and constructed to contain all drilling related activities, including, but not limited to, the drilling rig, pipe rack, generators, pumps, compressors, frac tanks, camper/office trailers, tank batteries, separators, dehydrators, metering stations, equipment storage, and living quarters.

Pad site boundary means the perimeter boundary of the pad site as defined in this article. Pad site boundaries shall be described by a metes and bounds survey included in the gas well permit application. A

screening fence is required to be construction along the pad site boundaries in accordance with the requirements of section 13-516 of this article.

Person means both the singular and the plural and means a natural person, a corporation, association, guardian, partnership, receiver, trustee, administrator, executor, and fiduciary or representative of any kind.

Protected use means a residence, religious institution, public building, hospital/medical building, nursing home, school or public park.

Public building means all buildings used or designed to and intended to be used for the purpose of assembly of persons for such purposes as deliberation, entertainment, amusement, or health care. Public buildings include, but shall not be limited to, theaters, assembly halls, auditoriums, armories, mortuary chapels, dance halls, exhibition halls, museums, gymnasiums, bowling lanes, libraries, skating rinks, courtrooms, restaurants, and hospitals. The determination as to whether a building is classified as a public building shall be at the sole discretion of the environmental services director.

Public park means any land area dedicated to and/or maintained by the city for traditional park-like recreational purposes, but shall not include privately-owned amusement parks or privately-owned or privately-managed golf courses.

Redrill means recompletion of an existing well by deepening or sidetrack operations extending more than one hundred fifty (150) feet from the existing well bore.

Reduced emission completion means the techniques or methods that minimize the release of natural gas and vapors to the environment when a well is being flowed during the completion or recompletion phase of a Barnett Shale well.

Religious institution means any building in which persons regularly assemble for religious worship and activities intended primarily for purposes connected with such worship or for propagating a particular form of religious belief.

Residence means a house, duplex, apartment, townhouse, condominium, mobile home or other building designed for dwelling purposes, including those for which a building permit has been issued on the date the application for a gas well permit is filed.

Reworking means recompletion or re-entry of existing well within the existing bore hole or by deepening or sidetrack operations which do not extend more than one hundred fifty (150) feet from the existing well bore or replacement of well liners or casings.

Right-of-way means public rights-of-way including streets, easements, and other property which is dedicated to the use and benefit of the public.

Rule 37 means the State-wide Spacing Rule found in the Texas Admin. Code, Title 16, Part 1, Chapter 3, Rule § 3.37, and to the specific field rules for the Barnett Shale regarding setbacks from lease lines.

School means any public and private, primary and secondary educational facilities providing education up through and including the twelfth grade level and any licensed childcare centers.

Street means any street, highway, sidewalk, alley, avenue, recessed parking area, or other public right-of-way, including the entire right-of-way.

Tank means a container, covered or uncovered, used in conjunction with the drilling or production of gas or other hydrocarbons for holding or storing fluids.

Technical advisor means such person(s) familiar with and educated in the gas industry or the law as it relates to gas matters who may be retained from time to time by the city.

Well means a hole or holes, bore or bores, to any horizon, formation, or strata for the purpose of producing gas, liquid hydrocarbon, brine water or sulphur water, or for use as an injection well for secondary recovery, disposal or production of gas, or other hydrocarbons from the earth.

Sec. 13-507. Class 1 gas well permit.

- (a) Class 1 gas well permit shall be required if the boundary line of the pad site for the proposed well is to be located within seven hundred (700) feet of a protected use for which a building permit has been issued on or prior to the date the application for a permit is filed.

For the purpose of a class 1 gas well permit, the measurement of the seven hundred-foot distance shall be made from the proposed pad site boundary line, in a straight line, without regard to intervening structures or objects, to the closest exterior point of the building. City council approval may be required as described in subsection (c) of this section.

- (b) *Application requirements.* An application for a class 1 gas well permit shall include the following information:

- (1) All the requirements of section 13-505 of this article;
- (2) A detailed site plan that includes all the information required in section 13-505, but also includes specific details to the projected location of the major components of the drilling site, impacted vegetation, creeks and other topographic features, adjacent building and other structures and the measured distance from the well site to these buildings and structures, temporary, and permanent fencing and landscaping.

- (c) *Wells setbacks for class 1 gas well permit.*

- (1) *Nonpark protected uses.* It shall be unlawful to drill any well, the proposed pad site boundary line of which is located within seven hundred (700) feet from any existing protected use or where a building permit for a protected use has been issued prior to the drilling permit application filing date. **It shall be unlawful to drill any well, the proposed pad site boundary line of which is located within one thousand five hundred (1,500) feet from any existing Data Campus or where a grading or building permit for a Data Campus has been issued prior to the drilling permit application filing date.** The distance shall be calculated from the proposed pad site boundary line, in a straight line, without regard to intervening structures or objects, to the closest exterior point of the building. **For the purposes of calculating distance for a Data Campus, the closest building shall include an electric substation and data center buildings contained on an approved site plan in addition to data center buildings for which a permit has been issued.** This setback may be reduced to no less than five hundred (500) feet, **or in the instance of a Data Campus no less than one thousand (1,000) feet,** if seventy (70) per cent of the affected owners of protected uses within **the setback area (seven hundred (700) feet or one thousand five hundred (1,500) feet, as applicable,** of the proposed pad site boundary line) sign an approved waiver and with approval of the environmental services director. Alternatively, a variance may be obtained from the city council in accordance with subsection 13-510(f).
- (2) *Public parks.* It shall be unlawful to drill any well, the proposed pad site boundary line of which is located within one thousand (1,000) feet from any public park unless prior consent is obtained from the parks and recreation director or the city council in accordance with the following procedures:
 - a. The parks and recreation director or his designee shall review any applications for pad sites of wells that are proposed to be within one thousand (1,000) feet from any public park. The parks and recreation director or his designee may approve the location of pad sites of wells closer than one thousand (1,000) feet from any public park. This setback may be reduced to no less than three hundred (300) feet. If the parks and recreation director or his designee disapproves an application reviewed under this section, then the application shall be processed for city council review in accordance with subsection 13-510(f).
 - b. The parks and recreation director may stipulate conditions and mitigation measures that must be met by the operator. These conditions shall be designed to limit the impact of well development and operations upon park operations and/or compensate the city for any negative financial impacts. The conditions may include, but are not limited to, limits on the timing of drilling/fracturing operations and additional requirements to limit the impact of noise, dust or

other environmental factors. These conditions and mitigation measures shall become permit conditions and are enforceable under this article. The failure of the operator to comply with these permit requirements is subject to criminal prosecution, civil action and/or permit revocation.

(d) *Notice for class 1 well permits.*

(1) At least ten (10) days prior to the date of filing of an application for a class 1 gas well permit, the operator shall notify, at the expense of the operator, each surface owner of property, as shown by the current tax roll, within one thousand (1,000) feet of the proposed pad site boundary line not owned by or under lease to the operator. Such notice, as outlined below, shall be by depositing the same, properly addressed and postage paid, in the United States Mail. The operator shall file with the application an affidavit showing the name and last known address, as identified by the current tax roll, of each owner of property to whom notice was mailed and the names of each owner of property to whom notice is required to be given, but whose address is unknown. Notice shall be sent to all registered neighborhood associations and registered public improvement districts within one mile of the proposed pad site boundary line.

(2) At least ten (10) days prior to the date of filing of an application for a class 1 gas well permit, the operator shall publish a copy of the notice as outlined below, at the expense of the operator, in one (1) issue of a daily newspaper approved by the environmental services director for ten (10) consecutive days. An affidavit by the printer or publisher of the newspaper indicating publication of the notice shall be filed with the application and will be prima facie evidence of such publication. The notice shall read as follows:

"Notice is hereby given that, acting under and pursuant to the Ordinances of the City of Grand Prairie, Texas, on the ____ day of _____, 20____, _____ will file with the City of Grand Prairie, an application to drill, complete and operate a well for gas upon property located at _____, _____ County, Grand Prairie, Texas, more particularly shown on the map of record in Volume _____, Page _____, Plat records of _____ County, Texas or per Tax Tract Number _____, _____ County, Texas.

(3) At least ten (10) days prior to the date of filing of an application for a class 1 gas well permit, the operator, at operator's expense, shall erect at least one (1) sign, no less than three (3) feet by three (3) feet, upon the premises upon which a class 1 gas well permit has been requested. Where possible, the sign or signs shall be located in a conspicuous place or places upon the property at a point or points nearest any right-of-way, street, roadway or public thoroughfare adjacent to such property.

- a. The sign(s) shall substantially indicate that a class 1 gas well permit to drill for gas has been requested and shall further set forth that additional information can be acquired by telephoning the operator at the number indicated on the sign.
- b. The continued maintenance of any such sign(s) shall not be deemed a condition precedent to the holding of any public hearing or to any other official action concerning this article.
- c. Any sign(s) shall be removed subsequent to final action by the inspector or the city council.

(4) All notice provisions contained herein shall be deemed sufficient upon substantial compliance with this section.

(e) Enclosure requirements for class 1 gas well permit shall be required in accordance with section 13-516 of this article.

(f) *Tank specifications for class 1 gas well permit.* All tanks and permanent structures shall conform to the American Petroleum Institute (A.P.I.) specifications unless other specifications are approved by the fire chief. The top of the tanks shall be no higher than eight (8) feet above the terrain surrounding the tanks. All tanks shall be set back pursuant to the standards of the commission and the National Fire Protection Association, but in all cases, shall be at least twenty-five (25) feet from any public right-of-way or property line.

- (g) All other provisions outlined in this article shall be required.

Sec. 13-509. Class 2 gas well permit.

- (a) A class 2 gas well permit shall be required if the boundary line of the pad site for the proposed well is located greater than seven hundred (700) feet of a protected use.

(b) *Well setbacks for class 2 gas well permit.*

- (1) *Nonpark protected uses.* It shall be unlawful to drill any well, the proposed pad site boundary line of which is located within one thousand five hundred (1,500) feet from any existing Data Campus or where a grading building permit for a Data Campus has been issued prior to the drilling permit application filing date. The distance shall be calculated from the proposed pad site boundary line, in a straight line, without regard to intervening structures or objects, to the closest exterior point of the building. For the purposes of calculating distance, the closest building shall include an electric substation and data center buildings contained on an approved site plan in addition to data center buildings for which a permit has been issued. This setback may be reduced to no less than one thousand (1,000) feet, if seventy (70) per cent of the affected owners of protected uses within one thousand five hundred (1,500) feet of the proposed pad site boundary line sign an approved waiver and with approval of the environmental services director. Alternatively, a variance may be obtained from the city council in accordance with subsection 13-510(f).
- (2) *Public parks.* It shall be unlawful to drill any well, the proposed pad site boundary line of which is located within one thousand (1,000) feet from any public park unless prior consent is obtained from the parks and recreation director or the city council in accordance with the following procedures:
- a. The parks and recreation director or his designee shall review any applications for pad sites of wells that are proposed to be within one thousand (1,000) feet from any public park. The parks and recreation director or his designee may approve the location of pad sites of wells closer than one thousand (1,000) feet from any public park. This setback may be reduced to no less than three hundred (300) feet. If the parks and recreation director or his designee disapproves an application reviewed under this section, then the application shall be processed for city council review in accordance with subsection 13-510(f).
- b. The parks and recreation director may stipulate conditions and mitigation measures that must be met by the operator. These conditions shall be designed to limit the impact of well development and operations upon park operations and/or compensate the city for any negative financial impacts. The conditions may include, but are not limited to, limits on the timing of drilling/fracturing operations and additional requirements to limit the impact of noise, dust or other environmental factors. These conditions and mitigation measures shall become permit conditions and are enforceable under this article. The failure of the operator to comply with these permit requirements is subject to criminal prosecution, civil action and/or permit revocation.

~~(b)~~(c) *Notice for class 2 gas well permit.*

- (1) At least ten (10) days prior to the date of filing of an application for a class 2 gas well permit, the operator shall publish a copy of the notice as outlined below, at the expense of the operator, in one (1) issue of a daily newspaper approved by the environmental services director for ten (10) consecutive days. An affidavit by the printer or publisher of the newspaper indicating publication of the notice shall be filed with the application and will be prima facie evidence of such publication. The notice shall read as follows:

"Notice is hereby given that, acting under and pursuant to the Ordinances of the City of Grand Prairie, Texas, on the _____ day of _____, 20_____, _____ will file with the City of grand Prairie, an

application to drill, complete and operate a well for gas upon property located at _____, _____ County, Grand Prairie, Texas, Lot No. _____, Block No. _____, City of Grand Prairie, Texas, more particularly shown on the map of record in Volume _____, Page _____, Plat records of _____ County, Texas or per Tax Tract Number _____, _____ County, Texas."

- (2) At least ten (10) days prior to the date of filing an application for a class 2 gas well permit, the operator shall erect at least one (1) sign, no less than three (3) feet by three (3) feet, upon the premises upon which a class 2 gas well permit has been requested. Where possible, the sign or signs shall be located in a conspicuous place or places upon the property at a point or points nearest any right-of-way, street, roadway or public thoroughfare adjacent to such property.
 - a. The sign(s) shall substantially indicate that a class 2 gas well permit to drill for gas has been requested and shall further set forth that additional information can be acquired by telephoning the operator at the number indicated on the sign.
 - b. The continued maintenance of any such sign(s) shall not be deemed a condition precedent to the holding of any public hearing or to any other official action concerning this article.
 - c. Any sign(s) shall be removed subsequent to final action by the inspector or the city council.
- (3) All notice provisions contained herein shall be deemed sufficient upon substantial compliance with this section.

~~(c)~~(d) Enclosure requirements for class 2 gas well permit shall be required in accordance with section 13-516 of this article.

~~(d)~~(e) *Tank specifications for class 2 gas well permit.* All tanks and permanent structures shall conform to the American Petroleum Institute (A.P.I.) specifications unless other specifications are approved by the fire chief. The top of the tanks shall be no higher than fifteen (15) feet above the terrain surrounding the tanks. All tanks shall be set back pursuant to the standards of the commission and the National Fire Protection Association, but in all cases, shall be at least twenty-five (25) feet from any public right-of-way or property line.

~~(e)~~(f) All other provisions outlined in this article shall be required.

Sec. 13-510. Issuance of gas well permits.

- (a) It is the responsibility of the inspector to review and approve or disapprove all applications for gas well drilling permits based on the criteria established by this article. The inspector, after the filing of a completed application and remittance of all fees, insurance and security per the requirements of this article for a gas well permit, shall determine whether or not the application complies in all respects with the provisions of this article and determine if the proposed well to be drilled or the facility to be installed is in compliance with the distance requirements for the requested gas well permit on the date of the completed application.
- (b) The provisions of this article shall apply to any dwellings or buildings for which an application for a building permit has been submitted on the date the application for a gas well permit is filed with the city.
- (c) If all the requirements of this article are met, the inspector shall issue a gas well permit for the drilling of the well or the installation of the facilities applied for.
- (d) If the inspector denies a gas well permit application for reasons other than lack of required distance or permit expiration as set out in this article for the requested gas well permit, the city shall notify the operator in writing of such denial stating the reasons for the denial. Within thirty (30) days of the date of the written decision of the inspector to deny the gas well permit, the operator may: 1) cure those conditions that caused the denial and resubmit the application to the inspector for approval and issuance of the gas well permit; or 2) file a written appeal of such action or decision to the city manager. The city manager may prescribe conditions and/or procedures for perfecting an appeal.

(e) If the inspector determines that all of the provisions of this article have been complied with by the operator, but that the proposed drill site does not comply with the distance requirements of this article under the requested gas well permit, the inspector shall notify the operator. The operator may revise the permit to comply with the distance requirements or request a variance from the distance requirements.

(f) City council hearing.

(1) Within forty-five (45) days of the completion of the review process for an application requiring city council approval under this article, the inspector shall request the city secretary to place the matter on the city council agenda for a public hearing and give notice by mail of the time, place and purpose thereof to the applicant and any other party who has requested in writing to be so notified.

(2) At least twenty (20) days, and no more than thirty (30) days prior to the date of the public hearing before the city council for a gas well permit requiring city council approval under this article, operator shall notify, at operator's expense, each surface owner of property, as shown by the current tax roll, within one thousand (1,000) feet of the proposed well not owned by or under lease to the operator and the hearing date and time. Such notice, as outlined below, shall be by depositing the same, properly addressed and postage paid, in the United States Mail. The operator shall file an affidavit showing the name and last known address, as identified by the current tax roll, of each owner of property to whom notice was mailed and the names of each owner of property to whom notice is required to be given, but whose address is unknown. Notice shall be sent to all registered neighborhood associations and registered public improvement districts within one mile of the proposed pad site boundary.

(3) At least fifteen (15) days, and no more than twenty (20) days prior to the date of the public hearing before city council, the operator shall publish a copy of the notice as outlined below, at operator's expense, in one (1) issue of a daily newspaper approved by the environmental services director for ten (10) consecutive days. An affidavit by the printer or publisher of the newspaper indicating publication of the notice shall be filed with the application and will be prima facie evidence of such publication. The notice shall read as follows:

"Notice is hereby given that, acting under and pursuant to the Ordinances of the City of Grand Prairie, Texas, on the _____ day of _____, 20____, _____ filed with the City of Grand Prairie, an application for a gas well permit requiring a distance variance to Article XIX. Gas Drilling and Production, of the Code of Ordinances of the City of Grand Prairie to drill, complete and operate a well for gas upon property located at _____, _____ County, Grand Prairie, Texas, more particularly shown on the map of record in Volume Page _____, Plat records of _____ County, Texas or per Tax Tract Number _____, _____ County, Texas. The City Council will conduct a public hearing on the request for said permit on the _____ day of _____, 20____ at _____ o'clock _____m. in the City Council Chambers located at City Hall Plaza, 300 West Main Street, Grand Prairie, Texas."

(4) At least twenty (20) days prior to the date of the public hearing before city council, the operator shall, at operator's expense, erect at least one (1) sign, no less than three (3) feet by three (3) feet, upon the premises upon which a gas well permit has been requested. Where possible, the sign or signs shall be located in a conspicuous place or places upon the property at a point or points nearest any right-of-way, street, roadway, or public thoroughfare adjacent to such property.

- a. The sign(s) shall substantially indicate that a gas well permit to drill for gas has been requested and state the date, time and place of the public hearing, and shall further set forth that additional information can be acquired by telephoning the applicant/operator at the number indicated on the sign.
- b. The continued maintenance of any such sign(s) shall not be deemed a condition precedent to the holding of any public hearing or to any other official action concerning this article.
- c. Any sign(s) shall be removed subsequent to final action by the city council.

- (5) All notice provisions contained herein shall be deemed sufficient upon substantial compliance with this section.
- (6) After a permit application requiring city council approval under this article is submitted, the inspector shall evaluate the public impact of the proposed activity. The inspector shall consider the proposed site and the proposed operations or drilling program and shall draft recommended additional restrictions or conditions, including minimum separation distance for drilling or other operations, special safety equipment and procedures, recommended noise reduction levels, screening and any other requirements the inspector deems appropriate. The recommendation shall be submitted to the city council for consideration prior to the public hearing.
- (7) At the public hearing and before the city council considers the merits of the application and the recommendations of the inspector, the applicant/operator shall provide evidence of a certificate of publication establishing timely publication of the notice of the hearing, that timely actual notice of the hearing was given to all persons as required by this article and that the applicant/operator has otherwise complied with or satisfied all other requirements of this article, including full and complete compliance with the insurance and security requirements.
- (8) The burden of proof on all matters considered in the hearing shall be upon the applicant/operator.
- (9) The city council shall review the application and any other related information. The city council shall consider the following in deciding whether to grant, reject, or modify a gas well permit requiring city council approval under this article:
 - a. Whether the operations proposed are reasonable under the circumstances and conditions prevailing in the area considering the particular location and the character of the improvements located there;
 - b. Whether the drilling of such wells would conflict with the orderly growth and development of the city and its ETJ;
 - c. Whether there are other alternative well site locations;
 - d. Whether the operations proposed are consistent with the health, safety and welfare of the public when and if conducted in accordance with the gas well permit conditions to be imposed;
 - e. Whether there is accessible access for the city fire personnel and fire fighting equipment; and
 - f. Whether the impact upon the adjacent property and the general public by operations conducted in compliance with the gas well permit conditions are reasonable and justified, balancing the following factors:
 1. The right of the owners(s) of the mineral estate to explore, develop, and produce the minerals; and
 2. The availability of alternative drill sites.
 - g. The recommendations of the inspector.
 - h. Whether any request for the extension of a gas drilling permit or for the continued use of a fracture pond is reasonable and will not have a negative impact upon surrounding properties.
- (10) The setback distance may be varied by the city council after a public hearing. A reduction of the setback distance to less than seven hundred (700) feet, but to no less than five hundred (500) feet from a protected use may only be approved by the affirmative vote of not less than two-thirds of all the members of the city council. **A reduction of the setback distances to less than one thousand five hundred (1,500) feet, but no less than one thousand (1,000) feet from a Data Campus may only be approved by an affirmative vote of not less than two-thirds of all the members of the city council.** If the only protected use within one thousand (1,000) feet of the pad site boundary is a city park, **and no Data Campus is within such distance**, the city council may approve a reduction of the setback distance

to no less than three hundred (300) feet with an affirmative vote two-thirds of all the members of the council. Other setback requirements contained in section 13-515 shall be enforced unless altered by the city council. For protection of the public health, safety and welfare, the city council may impose additional requirements for a reduction of such distance.

- (11) The term of a gas drilling permit may be extended or the continued use of a fracture pond may be approved with a vote of the city council.
- (g) In making its decision, the city council shall have the power and authority to refuse any gas well permit to drill any well at any particular location within the city or its ETJ, when by reason of such particular location and other characteristics, the drilling of such wells at such particular location would be injurious to the health, safety or welfare of the inhabitants in the immediate area of the drill site.
- (h) If the operator elects not to accept the gas well permit under the terms and conditions imposed by the city council and wishes to withdraw his application, the operator must notify the inspector in writing of his decision.

Sec. 13-515. Technical regulations.

(a) On-site requirements.

- (1) *Blowout prevention.* In all cases, blowout prevention equipment shall be used on all wells being drilled, worked over or in which tubing is being changed. Protection shall be provided to prevent blowout during gas operations as required by and in conformance with the requirements of the commission and the recommendations of the American Petroleum Institute. The operator must equip all drilling wells with adequate blowout preventers, flow lines and valves commensurate with the working pressures involved as required by the commission.
- (2) *Bradenhead gauge.* A bradenhead gauge must be installed at the wellhead prior to first sales.
- (3) *Cathodic protection.* Within one hundred eighty (180) days of its completion date, each gas well shall be equipped with a cathodic protection system to protect the production casing from external corrosion. The inspector may approve an alternative method of protecting the production casing from external corrosion.
- (4) *Chemical and materials storage.* All chemicals and/or regulated materials shall be stored in such a manner as to prevent, contain, and facilitate rapid remediation and cleanup of any accidental spill, leak, or discharge of a hazardous material. Operator shall have all material safety data sheets (MSDSs) for all hazardous materials on-site. All applicable federal and state regulatory requirements for the proper labeling of containers shall be followed. Appropriate pollution prevention actions shall be required and include, but are not limited to, chemical and materials elevated and raised from the ground (e.g., wooden pallets), bulk storage, installation and maintenance of secondary containment systems, and protection from stormwater and weather elements.
- (5) *Closed-loop drilling fluid systems.* Closed-loop drilling fluid systems shall be used instead of lined reserve pits.
- (6) *Compliance.* Operator shall comply at all times with all applicable federal, state and city requirements.
- (7) *Discharge.* No person shall place, deposit, discharge, or cause or permit to be placed, deposited or discharged, any oil, naphtha, petroleum, asphalt, tar, hydrocarbon substances, hazardous waste, hazardous materials, regulated materials, or any refuse including wastewater or brine from any gas operation or the contents of any container used in connection with any gas operation in, into, or upon any public right-of-way, alleys, streets, lots, storm drain, ditch or sewer, sanitary drain or any body of water or any private property in the city. In the event of a suspected release of any chemicals to the environment, the operator must provide at the request of the inspector, a detailed description of the chemical, including, but not limited to, a list of the source chemicals and their specific material safety data sheets, the composition of the chemical by percentage, the composition of any chemicals listed as

proprietary on material safety data sheets and copies of any laboratory data that identifies the composition of the chemical. The inspector shall be sole determining individual as to whether a suspected release of chemicals to the environment has occurred. An operator or an operator's subcontractors who fail to provide this information shall be considered to be in violation of this article.

- (8) *Drilling fluids.* Low toxicity glycols, synthetic hydrocarbons, polymers, and esters shall be substituted for conventional oil-based drilling fluids.
- (9) *Drill stem testing.* All open hole formation or drill stem testing shall be done during daylight hours. Drill stem tests may be conducted only if the well effluent during the test is produced through an adequate gas separator to storage tanks and the effluent remaining in the drill pipe at the time the tool is closed is flushed to the surface by circulating drilling fluid down the annulus and up the drill pipe.
- (10) *Drilling fluid storage pit.* No drilling fluid storage pits shall be located within the city or its ETJ.
- (11) *Dust, vibration, odors.* All drilling and production operations, and vehicular traffic related thereto, shall be conducted in such a manner as to minimize, so far as practicable, dust, vibration, or noxious/nuisance odors, and shall be in accordance with the best accepted practices incident to drilling for the production of gas and other hydrocarbon substances in urban areas, as well as all pertinent codes and ordinances of the City of Grand Prairie regulating dust, vibration and odors. All equipment used shall be so constructed and operated so that, vibrations, dust, odor or other harmful or annoying substances or effect will be minimized by the operations carried on at any drilling or production site or from anything incident thereto, to the injury or annoyance of persons living or working in the vicinity; nor shall the site or structures thereon be permitted to become dilapidated, unsightly or unsafe. Proven technological improvements in industry standards of drilling and production in this area shall be adopted as they become available if capable of reducing factors of dust, vibration and odor. A written dust abatement plan shall be submitted with the drilling application. This plan shall detail the best management practices the operator will utilize to prevent the creation of any dust nuisances, including the frequency and information on any planned soil amendments. The dust control plan for wells with pad site boundaries less than one thousand (1,000) feet from protected uses or Data Campuses shall contain dust mitigation measures that at a minimum provide for the use of a dust control/soil stabilization agent on all nonpaved surfaces. This agent shall be reapplied according to manufacturer recommendations, but no less frequently than annually. Daily watering or equivalent best management practices approved by the city's environmental services director shall be used as necessary. After review of the plan, the city's environmental services director may mandate additional practices the operator shall take to prevent the creation of any dust nuisances.
- (12) *Electric lines.* All electric lines to production facilities shall be located in a manner compatible to those already installed in the surrounding area or subdivision.
- (13) *Electric motors.* Only electric prime movers or motors shall be permitted for the purpose of pumping wells. No electric power shall be generated on location. All electrical installations and equipment shall conform to the city ordinances and the appropriate national codes.
- (14) *Emergency response plan.* Prior to the commencement of any gas or other hydrocarbons production activities, operator shall submit to the inspector an emergency response plan establishing written procedures to minimize any hazard resulting from drilling, completion or producing of gas wells. Said plan shall use existing guidelines established by the commission, the state environmental regulatory agency, department of transportation and/or the U.S. Environmental Protection Agency. If a gas well is determined by the commission to be producing hydrogen sulfide gas (H_2S), the operator shall immediately cease operation of that well or facility and immediately contact the city's environmental services department.
- (15) *Equipment painted.* All production equipment on the site shall be painted and maintained at all times, including pumping units, storage tanks, buildings and structures.

- (16) *Fire prevention; sources of ignition.* Firefighting apparatus and supplies as approved by the fire department and required by any applicable federal, state, or local law shall be provided by the operator, at the operator's cost, and shall be maintained on the drilling site at all times during drilling and production operations. The operator shall be responsible for the maintenance and upkeep of such equipment. Each well shall be equipped with an automated valve that closes the well in the event of an abnormal change in operating pressure. All well heads shall contain an emergency shut off valve to the well distribution line.
- (17) *Flowback operations.*
- a. Flowback operations to recover fluids used during fracture stimulation shall be performed during daytime hours only unless the city and the gas well inspector approves such operations during non-daytime hours.
 - b. At no time shall the well be allowed to flow or vent directly to the atmosphere without first directing the flow through separation equipment or into a portable tank.
- (18) *Fracture operations.*
- a. All formation fracture stimulation operations shall be conducted during daytime hours.
 - b. At no time shall the well be allowed to flow or vent directly to the atmosphere without first directing the flow through separation equipment or into a portable tank.
 - c. All fracturing operations shall comply with the noise abatement study.
 - d. If fracture tanks are utilized for the fracturing operation, such tanks may not be stacked on-site.
- (19) *Fracture ponds.*
- a. An operator may request to construct a fracture pond if the distance to the nearest protected use is greater than five hundred (500) feet. A fracture pond design plan shall be submitted with the drilling application. This plan shall include an engineering design component and a landscape/fencing design component. Approval may be granted if the following criteria are met:
 1. Ponds are encouraged to be incorporated, installed and fenced within the perimeter of the gas well pad site. Above ground surface ponds shall only be allowed if immediately adjacent to the pad site and if landscaped and fenced in compliance with the standards for pad sites. Ponds not immediately adjacent to the gas well site shall only be constructed below the existing ground surface and must be greater than five hundred (500) feet from a protected use.
 2. The pond shall be designed to permanently hold sufficient water to prevent the creation of any nuisance/vector problems. A vector control plan shall be submitted with the gas drilling permit application. The operator shall be responsible for implementing all tasks within the approved vector control plan. The presence of mosquito larvae within the fracture pond shall be a violation of this article. As permitted by state law, the pond design shall be in compliance with the City of Grand Prairie's Uniform Development Code article 14 "Drainage". The application shall include a detail grading plan prepared by a civil engineer licensed in the State of Texas. The pond design shall include measures, such as shallow safety ledges, to prevent drowning accidents. The pond's size shall be designed based on the water supply to minimize the pond's footprint.
 3. No artificial liners shall be permitted.
 4. A chain link fence, a minimum of six (6) feet in height with a nine (9) gauge, two-inch mesh, with all exposed components of said fence and mesh being coated with polypropylene or vinyl in a black color, shall enclose all completed fracture ponds that are located outside of the gas well pad site boundary. The location of said fence shall be depicted on the site plan drawing included with the gas well permit submittal documents. Ponds that are located

within the city limits shall be totally enclosed by an irrigated forty-foot landscape buffer. Said fence gate shall remain locked unless operator personnel are present.

5. The pond will not conflict with the aesthetics of any surrounding developments.
 6. Ponds shall be maintained in a manner utilizing best management practices to ensure the integrity of the pond. "Best management practices" shall mean structural, nonstructural and managerial techniques that are recognized to be the most effective and practical means to control water storage in open pits in an urban or rural setting.
 7. All existing ponds within the city limits shall be brought into compliance with the fencing and landscaping requirements as contained herein by January 1, 2012.
- b. Upon annexation, any existing fracture ponds in violation of this article shall be either be brought into compliance with this article or removed and the sites restored to the previous conditions. Compliance or removal shall be completed within one (1) year of annexation. An operator may apply for a one-time, six-month administrative extension from the city's environmental services director. The pad site operator shall be responsible for any costs associated with the restoration project.
 - c. No oil and gas waste byproducts or salt water shall be allowed into any fracture pond.
 - d. For gas drilling permit applications received after January 18, 2011 all fracture ponds shall be required to be removed five (5) years from the date of permit issuance. An operator may apply for a one-time, two-year administrative extension from the city's environmental services director. The environmental services director shall be authorized to require such measures as necessary to minimize the impact of the fracture pond upon neighboring properties as a condition of the approval of the administrative extension. Any additional extension requests or the appeal of a denial of an administrative extension shall require city council approval in accordance with section 13-510. Extension requests, whether administrative or requiring city council approval, shall be requested in writing at least six (6) months prior to any expiration date. The pad site operator shall be responsible for the cost to remove the fracture pond and restore the site to match surrounding ground surface to establish a minimum of eighty (80) per cent vegetation.
- (20) *Freshwater wells.*
- a. It shall be unlawful to drill any well, the center of which, at the surface of the ground, is located within the wellhead protection zone surrounding any City of Grand Prairie municipal well.
 - b. The operator of a gas well shall provide the city's environmental services director with a "pre-drilling" and "post-drilling" water analysis from any freshwater well within seven hundred and fifty (750) feet of the gas well pad site boundary line. This sampling shall meet the following requirements:
 1. Water sampling must be collected and analyzed in accordance with established federal sampling and laboratory protocol. All laboratories must be Texas Commission on Environmental Quality or U.S. Environmental Protection Agency certified laboratories. Pre-approval by the city's environmental services director of all sampling methods, preservation techniques, analytical methods and contract laboratories is required. This information is required to be submitted at the time of permit application for review.
 2. At a minimum, the following parameters shall be tested for: Methane, chloride, sodium, barium, strontium, total dissolved solids, total suspended solids, pH, volatiles and semi-volatiles. Other parameters may be required at the discretion of the environmental services director.
 3. Post-drilling sampling shall be required no less than sixty (60) days following the completion of fracturing operations and no longer than ninety (90) days following completion of fracturing operations.

4. This freshwater well sampling requirement may be waived if a well is determined by the city's environmental services director to be abandoned or the freshwater well owner waives the right to have the well sampled.
 5. If at a later date, the city's environmental services director believes that evidence exists that indicates a freshwater well may have been negatively impacted by any drilling operations, the city's environmental services director may require the operator to conduct such sampling and analysis as necessary to determine the source of any problems or contamination. If the city's environmental services director determines that there is reasonable suspicion that drilling operations have negatively impacted the quality or quantity of water from a freshwater well, the operator shall provide an approved temporary source of water to the freshwater well owner while an investigation is conducted. If the investigation reveals that drilling operations are responsible for a negative impact on the quality or quantity of water from a freshwater well, the operator shall be required to provide a permanent approved source of water to the freshwater well owner. A negative impact shall include, but shall not be limited to, a reduction in flow from the well, changes to water quality that result in exceedances of any standards established for drinking water by the federal or state environmental agencies, changes in color, smell or other aesthetic items that renders the water unpalatable for human consumption or contact, and any changes that render the water unsuitable for irrigation or livestock purposes.
 6. All sampling and analysis costs shall be responsibility of the operator. If the city incurs any costs associated with the investigation of a freshwater well complaint, the operator shall be required to reimburse the city within thirty (30) days of receiving an invoice.
- c. It shall be unlawful for any drilling activities to have a negative impact as defined in subsection (a)(20)b.5 of this section.
- (21) *Freshwater usage.* Any connection to a freshwater source, including but not limited to, the city public drinking water system, private wells, other surface and/or groundwater sources, shall comply with all applicable cross connection control requirements.
 - (22) *Grass, weeds, trash.* All drill and operation sites shall be kept clear of high grass, weeds, and combustible trash.
 - (23) *Hazardous plan.* Hazardous materials management plan shall be on file with the fire marshal and the inspector. The hazardous materials plan shall be kept current with any additions, modifications, and/or amendments concerning all construction related activities, oil and natural gas operations, and oil and gas production. Updated plans shall be submitted within two (2) business days of any modifications.
 - (24) *Lights.* No person shall permit any lights located on any drill or operation site to be directed in such a manner so that they shine directly on public roads, adjacent property or property in the general vicinity of the operation site. To the extent practicable, and taking into account safety considerations, site lighting shall be directed downward and internally so as to avoid glare on public roads and adjacent dwellings and buildings within three hundred (300) feet.
 - (25) *Landfarming.* Landfarming shall be prohibited within the city limits of Grand Prairie. Additionally, landfarming shall be prohibited within any area of the ETJ that is within the watershed of Joe Pool Lake. This prohibition shall supersede any permit or authorization from the commission or any other state or federal agency.
 - (26) *Muffling exhaust.* Exhaust from any internal combustion engine, stationary or mounted on wheels, used in connection with the drilling of any well or for use on any production equipment shall not be discharged into the open air unless it is equipped with an exhaust muffler or mufflers, or an exhaust muffler box constructed of noncombustible materials sufficient to suppress noise and prevent the escape of obnoxious gases, fumes, or ignited carbon or soot.

- (27) *Private roads for gas well drill sites.* Prior to the commencement of any drilling operations, all private roads used for access to the drill site boundary to include fracture ponds and the operation site itself shall be a minimum of ten (10) feet wide, have an overhead clearance of fourteen (14) feet and shall be surfaced and maintained to prevent dust and mud and as required below.

The point of connection of a private road to a city, county, or state street/highway shall be required to be processed through city's building inspection as a gas well approach and driveway permit. The city's transportation planner may assist the applicant with securing access agreements with other required governmental entities. The gas well approach and driveway shall be located, designed, and surfaced with reinforced concrete. The gas well approach and driveway, including the mud shaker, shall be constructed prior to the initiation of any other on-site construction activities.

All private roads shall be designed to prevent the creation of a dust or mud nuisance. The city engineer or his designee will review the plans for general compliance as designed and sealed by a civil engineer registered in the State of Texas. The gas well approach and driveway shall be designed and constructed as per the "Typical Gas Well Approach and Driveway Detail and Specifications" and are to be constructed of reinforced concrete as specified.

All private roads are required to be constructed of reinforced concrete within one thousand (1,000) feet of the public road providing access to the limits of the pad site. In those instances where one thousand (1,000) feet of private road will not reach the pad site other dustless road options, such as four-inch minimum (Type B or D) H.M.A.C. placed over six-inch minimum TxDOT Flexbase (NCTCOG Spec. Item #301.5) or eight-inch thick minimum TxDOT Flexbase with dust control agent may be considered for the portion of the road greater than one thousand (1,000) feet from the public road with this consideration to be reviewed on a case by case basis. Any consideration for alternative dustless road material for options only over the said one thousand-foot limit, will be considered as part of the permit review and decisions may be appealed to the city manager who has the final decision making authority.

- (28) *Reduced emission completion.* After fracturing or refracturing, operators shall employ appropriate equipment and processes as soon as practicable to minimize natural gas and associated vapor releases to the environment. All salable gas shall be directed to the sales line as soon as practicable or shut in and conserved. All wells that have a sales pipeline shall be required to employ reduced emission completion techniques and methods. If authorized by the city, flaring may be used in some instances as a temporary alternative to venting. In such a case, open flames shall not be located closer than three hundred (300) feet from any building not used in operations on the drill site and such open flame shall be screened in such a way as to minimize nuisance and detrimental effects to surrounding properties.

- (29) *Salt water wells.* No salt water disposal wells shall be located within the City of Grand Prairie or its ETJ. Produced water or other wastewater collection/transportation pipelines are prohibited without city council approval. Individual or centralized wastewater treatment facilities are prohibited without city council approval.

- (30) *Security.*

- a. The operator must keep a watchman or security personnel on-site during the drilling, fracturing, or reworking of a well when other workmen are not on the premises.
- b. An operator shall be required to employ an off-duty certified peace officer to direct traffic at the entrance to the pad site during all times of high truck traffic accessing the site, including, but not limited to pad site construction, fracture pond construction, drilling, fracturing, flowback, and any rework activity that requires a rig. The off-duty certified peace officer shall be directed to ensure that all traffic entering and exiting the pad site are utilizing the approved transportation route. A written record shall be maintained of any violators and shall be available on-site for inspection by city staff.

- (31) *Signs.*

- a. A sign shall be immediately and prominently displayed at the gate on the temporary and permanent site fencing erected pursuant to section 13-516 of this article. Such sign shall be durable material, maintained in good condition and, unless otherwise required by the commission, shall have a surface area of not less than two (2) square feet, nor more than four (4) square feet and shall be lettered with the following:
 1. Well name and number;
 2. Name of operator;
 3. The emergency 911 number;
 4. Telephone numbers of two (2) persons responsible for the well who may be contacted in case of emergency; and
 5. The address of the well.
 - b. Permanent weatherproof signs reading "DANGER NO SMOKING ALLOWED" shall be posted immediately upon completion of the well site fencing at the entrance of each well site and tank battery or in any other location approved or designated by the fire chief of the city. Sign lettering shall be four (4) inches in height and shall be red on a white background or white on a red background. Each sign shall include the emergency notification numbers of the fire department and the operator, well and lease designations required by the commission.
 - c. All wellheads and tank batteries must have signs as required by the commission.
 - d. A sign shall be placed at the exit to the site that reads "ALL TRUCK TRAFFIC IS REQUIRED TO FOLLOW THE APPROVED TRANSPORTATION ROUTE. VIOLATORS SUBJECT TO \$2,000 FINE. TODOS LOS CAMIONES ESTAN OBLIGADOS A SEGUIR LAS RUTAS DE TRANSPORTE APROBADAS. LOS INFRACTORES ESTAN SUJETOS A MULTAS DE \$2,000." The sign lettering, size, and background shall meet city specifications. A directional arrow shall be placed immediately below the above sign and shall indicate the proper direction of travel for exiting truck traffic. The sign shall be placed in a position viewable by exiting truck traffic and shall not be placed on city right-of-way. The sign and the proposed sign location shall be reviewed and approved by the city during the application review process.
- (32) *Storage of equipment.* On-site storage is prohibited on the operation site. No equipment shall be stored on the drilling or production operation site, unless it is necessary to the everyday operation of the well. Lumber, pipes, tubing and casing shall not be left on the operation site except when drilling or well servicing operations are being conducted on the site.

No vehicle or item of machinery shall be parked or stored on any street, right-of-way or in any driveway, alley or upon any operation site which constitutes a fire hazard or an obstruction to or interference with fighting or controlling fires except that equipment which is necessary for drilling or production operations on the site. The fire department shall be the entity that determines whether equipment on the site shall constitute a fire hazard. No refinery, processing, treating, dehydrating or absorption plant of any kind shall be constructed, established or maintained on the premises. This shall not be deemed to exclude a conventional gas separator or dehydrator.

- (33) *Storage tanks.* All tanks and permanent structures shall conform to the American Petroleum Institute (A.P.I.) specifications unless other specifications are approved by the fire chief. All storage tanks shall be equipped with a secondary containment system including lining with an impervious material. The secondary containment system shall be a minimum of three (3) feet in height and one and one-half (1½) times the contents of the largest tank in accordance with the fire code, and buried at least one (1) foot below the surface. Drip pots shall be provided at the pump out connection to contain the liquids from the storage tank.

All tanks shall be set back pursuant to the standards of the commission and the National Fire Protection Association, but in all cases, shall be at least twenty-five (25) feet from any public right-of-

way or property line. Each storage tank shall be equipped with a level control device that will automatically activate a valve to close the well in the event of excess liquid accumulation in the tank.

No meters, storage tanks, separation facilities, other above ground facilities, well heads, or flow lines, shall be placed in the 100-year floodplain, without the prior consent of the engineering division pursuant to subsection 13-504(i), "Gas well permit required" of this article. No such structures are permitted in the floodway.

Tanks must be at least three hundred (300) feet from any other combustible structure.

- (34) *Stormwater regulations.* The operator shall comply with all federal, state, and local stormwater quality regulations, including any notice of intent (NOI) and notice of termination (NOT) requirements.
- (35) *Surface casing.* Surface casing shall be run and set in full compliance with the applicable rules and regulations of the commission.
- (36) *Tank battery facilities.* Tank battery facilities shall be equipped with a remote foam line and a lightning arrestor system.
- (37) *Transportation route.* All vehicle truck routes must be approved by the city prior to permit issuance. The transportation director shall have the authority to require an alternate route to minimize the impact to surrounding uses. All truck traffic shall be required to follow the approved transportation route.
- (38) *Valves.* Each well must have a shutoff valve to terminate the well's production. The fire department shall have access to the well site to enable it to close the shut-off the valve in an emergency.
- (39) *Waste disposal.* Unless otherwise directed by the commission, all tanks used for storage shall conform to the following:
 - a. Operator must use portable closed steel storage tanks for storing liquid hydrocarbons. Tanks must meet the American Petroleum Institute standards. All tanks must have a vent line, flame arrester and pressure relief valve. All tanks must be enclosed by a fence applicable to the issued permit classification. No tank battery shall be within one hundred (100) feet from any building used, or designed and intended to be used, for human occupancy, or from other combustible structures.
 - b. Drilling mud, cuttings, liquid hydrocarbons, and all other field waste derived or resulting from or connected with the drilling, reworking or deepening of any well shall be discharged into an aboveground self-contained tank system. All disposals must be in accordance with the rules of the commission and any other appropriate local, state, or federal agency.
 - c. Unless otherwise directed by the commission, waste materials shall be removed from the site and transported to an off-site disposal facility not less often than every thirty (30) days. Water stored in on-site tanks shall be removed as necessary.
 - d. All waste shall be disposed of in such a manner as to comply with the air and water pollution control regulations of the state, this article and any other applicable ordinance of the city.
- (40) *Work hours.* For all permits, work hours for site development (other than drilling and flowback operations), truck deliveries of equipment and materials associated with drilling and/or production, well servicing, site preparation and other related work conducted on the well site shall be limited to daytime except in cases of fires, blowouts, explosions and any other emergencies.
- (41) *Air quality.*
 - a. No person shall cause or allow a discharge and/or emission to the atmosphere.
 - b. Failure to maintain all equipment as to prevent excessive emissions is a violation of this article.

- c. The operator must comply with the approved leak detection and compliance plan, report to the environmental services department within fifteen (15) minutes of identification of a leak, and repair leaks in the time specified by the inspector.
 - d. The environmental services director shall be authorized to require the utilization of a third party expert as chosen by the city to conduct testing of airborne emissions resulting from any pad site activities in order to ensure compliance with state and federal regulations and/or in response to health concerns. Based on the recommendation of the expert, emission control equipment may be required.
- (42) *Cellars*. All cellars must be completely filled in prior to first sales.
- (b) *Well setbacks*. It shall be unlawful to drill any well, the center of which, at the surface of the ground, is located:
 - (1) Within twenty-five (25) feet from any outer boundary line;
 - (2) Within twenty-five (25) feet from any storage tank, or source of ignition;
 - (3) Within seventy-five (75) feet of any public street, road, highway or future street, right-of-way line;
 - (4) Within three hundred (300) feet from any building used, or designed and intended to be used, for human occupancy unless a larger setback is required by the gas well permit;
 - (5) Within one hundred (100) feet of any building accessory to, but not necessary to the operation of the well;
 - (6) Within two hundred (200) feet to any freshwater well owned by an individual who has signed a mineral lease for the property containing the freshwater well. The measurement shall be in a direct line from the closest well bore to the freshwater well bore;
 - (7) Within five hundred (500) feet to any freshwater well owned by an individual who has not signed a mineral lease for the property containing the freshwater well. The measurement shall be in a direct line from the closest well bore to the freshwater well bore;
 - (8) Within seventy-five (75) feet of the pad site boundary line; or
 - (9) Within one hundred (100) feet of any type of surface water conveyance, including, but not limited to creeks, streams, lakes, ponds, drainage ditches, or other constructed stormwater conveyance systems.

The distance shall be calculated from the well bore, in a straight line, without regard to intervening structures or objects, to the closest exterior point of any object listed in subsections (b)(1) through (b)(9) above.
- (c) *Well head easement*. For all drilling operations, a well head easement shall be submitted by the operator for approval by the city with the permit application. The easement shall be filed and recorded with the appropriate agency of the county government in which the well is located prior to the commencement of drilling operations subject to the following provisions:
 - (1) Such easement shall have a radius of three hundred (300) feet as calculated from the well bore, in a straight line, without regard to intervening structures or objects.
 - (2) Such easement may be filed as a separate instrument dedication, or be dedicated on a land subdivision plat approved by the city.
 - (3) No future residential lots shall be platted within the well head easement until the well is abandoned pursuant to the provisions of this article, and the drill site easement has been vacated by the city.
 - (4) No vertical residential or nonresidential structures of any type, except those required for the gas drilling and production operation may be constructed within such easement. Only hard surface paving (flat-work) and site landscaping shall be permitted. City staff may approve amended easement language that permits certain accessory uses and structures, such as communication, recreational,

athletic and agricultural facilities with use restrictions, to be placed inside the well head easement. Such amendments and use restrictions shall be approved as a part of the permit application review process.

- (5) Where a public street or highway right-of-way is located within and adjoins the perimeter boundary of the well head easement, such right-of-way shall be credited toward the area and distance required for the establishment of such easement, so that said right-of-way area shall be excluded from the easement. For the purpose of enforcing this provision, nonresidential land uses shall be defined by article 4 of the Grand Prairie Unified Development Code for well sites situated inside the city limits; or by the Comprehensive Plan Future Land Use Map of the City of Grand Prairie, as amended, for well sites situated within the city's extraterritorial jurisdiction.
 - (6) The written authorization(s) from all affected property owners shall be recorded on the easement instrument for easements that traverse more than one (1) property ownership boundary. Or, absent the necessary and required authorizations from adjoining property owners, such easement shall encompass the land area located inside the fenced boundary of the gas well drilling pad site as established by the permit application.
 - (7) When considering amendments to the three hundred-foot well head easement requirement, city staff shall review concept plans, plats, long-range land use plans and similar documents addressing future development proposed around the well head site to ensure that the safety and welfare of future residents is not compromised. The amended easement area shall be depicted on the site plan drawing, or on an attaching sheet, included with the gas well permit application. Alternative easement configurations denied by staff may be appeal to the city council.
 - (8) Within fifteen (15) days of the filing and recordation of the well head easement, the operator, at operator's expense, shall erect at least four (4) warning signs, measuring no less than ten (10) inches by fourteen (14) inches in size, mounted a minimum of five (5) feet above ground surface on a two and three-eighths-inch galvanized steel post or equal. Said warning signs shall be placed upon the perimeter boundary of the well head easement at conspicuous locations nearest any right-of-way, street, roadway, public thoroughfare, or residential zoning district or subdivision. Said signs shall contain the following information:
 - a. With a minimum one-inch high letters contain: "GAS WELL HEAD EASEMENT BOUNDARY"
 - b. With a minimum one-half-inch high letters contain operator's emergency phone number: "IN CASE OF EMERGENCY CALL (###) ###-####."
 - (9) A "landscape and no-build easement," as permitted by subsection 13-516(a)(2)d. of this article, may be dedicated and recorded in lieu of the "well head easement" described herein. Such substitution of easements shall only be permitted for those pads sites developed under the "vegetative concealment" (Option 2) screening requirements specified in section 13-516 of this article.
- (d) *Noise restrictions.*
- (1) a. No well shall be drilled, redrilled, or any equipment operated at any location in such a manner so as to create any noise which causes the exterior noise level when measured at the nearest protected use receiver's/receptor's property line or one hundred (100) feet from the nearest protected use structure (as measured to the closest exterior point of the building), whichever is closer to the receiver/receptor, that exceeds the ambient noise level by more than five (5) decibels during daytime hours and more than three (3) decibels during nighttime hours. Fracing operations may not exceed the ambient noise level by more than ten (10) decibels. Flowback operations may not exceed the ambient noise level by more than five (5) decibels during daytime hours or more than three (3) decibels during nighttime hours.
 - b. An operator shall not drill or redrill a well or operate any equipment in such a manner so as to create pure tones where one-third octave band sound pressure level in the band with the tone exceeds the arithmetic average of the sound pressure levels of two (2) contiguous one-third

octave bands by five (5) dB for center frequencies of five hundred (500) hertz and above, and by eight (8) dB for center frequencies between one hundred sixty (160) and four hundred (400) hertz, and by fifteen (15) dB for center frequencies less than or equal to one hundred twenty-five (125) hertz.

- c. An operator shall not drill or redrill a well or operate any equipment in such a manner so as to create low-frequency outdoor noise levels that exceed the following decibel levels:

16 hertz octave band	65 dB
32 hertz octave band	65 dB
64 hertz octave band	65 dB

- (2) The operator shall be responsible for establishing and reporting to the city the predrilling ambient noise level prior to the issuance of a gas well permit. A seventy-two-hour noise study shall be utilized to establish ambient noise levels. The seventy-two-hour time span shall include at least one (1), twenty-four-hour reading during either a Saturday or Sunday. The timeframe for this study shall be designed to avoid the influence of wind interference on the study. The determination as to whether subsequent studies are needed to reevaluate ambient noise conditions shall be at the sole discretion of the city's environmental services director. The applicant shall submit a proposed ambient noise level study plan to the city's environmental services director for approval prior to conducting the study. The proposed plan shall contain a proposed testing schedule and other details as required by the city's environmental services director.
- (3) At any time in a measurement period, no noise may exceed the maximum sound level standard plus twenty (20) dB(A). The time period of monitoring will be continuous over a minimum of fifteen (15) minutes and will use the A-weighting network reported in decibel units. Data shall be recorded and reported as Leq which shall mean an average measure of continuous noise that has the equivalent acoustic energy of the fluctuating signal over the same period.
- (4) All noise readings recorded shall be collected in accordance with the requirements contained in the City's Code of Ordinances chapter 13, article XIII, Noise Restrictions.
- (5) All workover operations shall be restricted to daytime hours. "Workover operations" shall mean work performed in a well after its completion in an effort to secure production where there has been none, restore production that has ceased or increase production.
- (6) All gas drilling permit applications must include a detailed noise abatement study, conducted by a qualified noise consultant/engineer approved in advance by the city's environmental services director. This study shall include:
- A description of the proposed facility/operation.
 - A determination of the ambient noise level utilizing a noise survey of a minimum of seventy-two (72) hours and shall include at least one (1), twenty-four-hour reading during either a Saturday or Sunday.
 - An analysis of any significant sources of noise, including noise that will be generated during the drilling, fracturing, flowback, and operational phases of the drill site. This analysis must include a comparison of the potential noise generation with the applicable noise standards.
 - An analysis of any abatement measures necessary to bring the proposed facility into compliance with the city's noise standards. If the analysis indicates that abatement measures are required to meet the standards, then the applicant must submit a detailed plan that describes the specific measures that will be utilized. This shall include product information and a location diagram. All

soundproofing shall comply with accepted industry standards. The abatement measures shall be installed prior to the commencement of any drilling activities.

- e. A description of any continuous noise monitoring program if required by subsection (d)(7) of this section.
 - f. A description of any noise abatement measures if required by subsection (d)(7) of this section. This shall include product information and a location diagram.
- (7) If the proposed gas well is within one thousand (1,000) feet of any protected use, the operator must comply with these additional noise abatement measures:
- a. Exterior noise levels, including pure tone and low frequency data, shall be continuously monitored to ensure compliance. This data shall also include an audio recording to help identify the source of sound level "spikes" throughout the logging period. The continuous noise monitoring equipment shall be capable of wireless transmission of real-time noise and audio data. Access to this real-time data shall be made available to the city's environmental services director and the inspector. The cost of all such monitoring shall be borne by the operator. The noise readings shall also be submitted to the inspector on a weekly basis in an electronic format or other format specified by the inspector. The weekly report shall contain all noise data including pure tone and low frequency readings. The report shall state whether the pad site is in compliance with the noise requirements. If the report states that the pad site is not in compliance with the noise standards, then the report shall state the measures that are being taken to return the pad site to compliance and the timeframes for implementing these remedial measures.
 - b. At a minimum, the operator shall install noise reduction blankets on the pad site boundaries facing any protected uses within one thousand (1,000) feet. The height of boundary blankets shall at a minimum be thirty (30) feet. The height may be increased at the discretion of the environmental services director in response to topographic necessity. In addition to the boundary barriers, the operator must, at a minimum, install additional noise reduction blankets to mitigate noise generated from the rig substructure, the rig floor area, brake drum housings, mud pumps, diesel motors, and generators. The blankets shall be constructed of a fire-retardant material approved by the fire department. The boundary noise reduction blankets for class 1 well sites shall be required to meet a standard of STC 30 or greater. Blankets that meet an equivalent national standard will be considered on a case-by-case basis by the environmental services director.

Additionally, any exhaust from an internal combustion engine or compressor, stationary or mounted on wheels, must be controlled through the utilization of a "hospital" grade muffler or equivalent control device.

The noise abatement study required in subsection (d)(6) above shall include a site plan showing the location of the boundary noise reduction blankets and a rig layout diagram detailing the location of all other noise reduction blankets, "hospital" grade mufflers, and any other noise reduction equipment.

All noise abatement measures including, but not limited to, noise walls and blankets, must be maintained in good repair at all times.
 - c. During nighttime operations, the operation of vehicle audible back-up alarms shall be prohibited or replaced with approved nonauditory signaling systems, such as spotters or flagmen. Deliveries of pipe, casing and heavy loads shall be limited to daytime hours, except for emergency situations. The Derrick Man and driller shall communicate by walkie-talkie or other nondisruptive means only when the Derrick Man is in the derrick. Horns may not be used to signal for connection or to summon crew (except that a horn may be used for emergency purposes only).

The operator shall conduct on-site meetings to inform all personnel of nighttime operations noise control requirements.

- (8) The noise requirements contained within this article are hereby declared to be necessary to protect the public health of the community, and are applicable to all current gas drilling permits and any new gas drilling permits.
- (9) Timeframe for boundary noise reduction blankets.
 - a. If at any time, drilling, well completion, or fracturing operations cease for a period of greater than ninety (90) days, the applicant shall be required to immediately remove any noise walls and any supporting structures. The environmental services director may grant a one-time, thirty-day extension per well. Additionally, the environmental services director may waive this requirement for pad sites that have sufficient natural/vegetative/ topographical screening that prevent the view of the boundary noise reduction blankets from city streets or from protected uses.
 - b. To facilitate enforcement of this provision, all applicants with pad sites that have boundary noise reduction blankets shall be required to provide written notice by letter or email. This notice, required within forty-eighty (48) hours of the termination of drilling, well completion, or fracturing operations, shall be directed to the environmental services director or his/her designee.
- (e) *Lift compressors.* Lift compressors are restricted to gas drilling pad sites and must be at least seven hundred (700) feet from the nearest protected use, unless a lesser distance is authorized by the city council (subsection 13-510(f)(10)), and shall have secondary containment as required by subsection 13-515(a)(33). Additional requirements for lift compressors are as follows:
 - (1) A lift compressor shall be considered temporary if the installation is for less than ninety (90) days and shall be allowed five (5) dBA over ambient during the day and three (3) dBA over ambient at night. Temporary sound walls shall be required for noise abatement on temporary lift compressors.
 - (2) Permanent lift compressors shall be enclosed within an acoustical structure composed of permanent material constructed of metal, masonry or other structurally sound material as approved by the environmental services director that significantly screens the equipment, is painted in a noncontrasting soft earth-tone color to match the nearby surroundings as nearly as possible and meets applicable building and fire codes. The structure shall be architecturally compatible with surrounds building structures and the structure's facade shall be approved by the city's chief planner.
 - (3) Any exhaust from an internal combustion engine or compressor, stationary or mounted on wheels, must be controlled through the utilization of a "hospital" grade muffler or equivalent control device. This device must be sufficient to suppress noise and vibration and prevent the escape of noxious gases, fumes, or ignited carbon or soot.
 - (4) The operation of permanent lift compression equipment shall not create any noise that causes the exterior noise level to exceed the predevelopment ambient noise levels as measured at the nearest protected use receiver's/receptor's property line or one hundred (100) feet from the nearest protected use structure (as measured to the closest exterior point of the building), whichever is closer to the receiver/receptor. The operator shall be responsible for establishing and reporting to the city the predevelopment ambient noise level prior to the issuance of the building permit for the compression structure. The ambient noise level shall be determined as required by subsection (d)(2) of this section.
- (f) *Line compressors.* This subsection shall apply to line compressors restricted to gas drilling pad sites. All other types of line compressors shall be required to comply with the City's Unified Development Code. Line compressors on gas drilling pad sites must be at least seven hundred (700) feet from the nearest protected use, unless a lesser distance is authorized by the city council (subsection 13-510(f)(10)), and shall have secondary containment as required by subsection 13-515(a)(33). Additional requirements for line compressors are as follows:

- (1) Line compressors shall be enclosed within an acoustical structure composed of permanent material constructed of metal, masonry or other structurally sound material as approved by the environmental services director that significantly screens the equipment, is painted in a noncontrasting soft earth-tone color to match the nearby surroundings as nearly as possible and meets applicable building and fire codes. The structure shall be architecturally compatible with surrounds building structures and the structure's facade shall be approved by the city's chief planner.
- (2) Any exhaust from an internal combustion engine or compressor, stationary or mounted on wheels, must be controlled through the utilization of a "hospital" grade muffler or equivalent control device. This device must be sufficient to suppress noise and vibration and prevent the escape of noxious gases, fumes, or ignited carbon or soot.
- (3) The operation of line compression equipment shall not create any noise that causes the exterior noise level to exceed the predevelopment ambient noise levels as measured at the nearest protected use receiver's/receptor's property line or one hundred (100) feet from the nearest protected use structure (as measured to the closest exterior point of the building), whichever is closer to the receiver/receptor. The operator shall be responsible for establishing and reporting to the city the predevelopment ambient noise level prior to the issuance of the building permit for the compression structure. The ambient noise level shall be determined as required by subsection (d)(2) of this section.