TTITLE VIII- HEALTH AND SAFETY

CHAPTER 15 -

BUILDING CODE OF THE THREE AFFILIATED TRIBES

SECTION 1: GENERAL PROVISIONS OF THE BUILDING CODE

1.1 Purposes of Title. The purposes of this chapter are to:

1.1.1 Adopt building code requirements for the Three Affiliated Tribes ("Three Affiliated Tribes") that are consistent with the building code requirements for the State of North Dakota. To the extent North Dakota revises or updates its building codes, the Three Affiliated Tribes shall diligently amend its codes to align with the building code of North Dakota. This code was drafted to be consistent with North Dakota's building code.

1.1.2 Provide the Three Affiliated Tribes with nationally recognized standards and requirements for construction and construction materials.

1.1.3 Eliminate restrictive, obsolete, conflicting, and unnecessary construction regulations that tend to increase construction costs unnecessarily or restrict the use of new materials, products, or methods of construction or provide preferential treatment to types or classes of materials or products or methods of construction.

1.1.4 Ensure adequate construction of buildings throughout the Fort Berthold Reservation and to adequately protect the health, safety, and welfare of the people living on the Fort Berthold Reservation.

1.2 Definitions. As used in this chapter, unless the context requires otherwise:

1.2.1 "Agricultural purposes" includes purposes related to agriculture, farming, ranching, dairying, pasturage, horticulture, floriculture, viticulture, and animal and poultry husbandry.

1.2.2 "Building" means a combination of any materials fixed to form a structure and the related facilities for the use or occupancy by persons, or property. The word "building" shall be construed as though followed by the words "or part or parts thereof".

1.2.3 "Construction" means the construction, erection, reconstruction, alteration, conversion, or repair of buildings.

1.2.4 "Jurisdictional area" means the area within the exterior boundaries of the Fort Berthold Reservation.

1.2.5 "State building code" means the North Dakota state building code.

1.2.6 "Temporary work camp housing" includes a modular residential structure used to house workers on a temporary basis for a maximum period of five years.

1.2.7 "Code enforcement agency" means the Construction Management Office with authority to inspect buildings and enforce the law, ordinances, and regulations which establish standards and requirements applicable to the construction, installation, alteration, repair, or relocation of buildings.

1.3 Building Code of the Three Affiliated Tribes.

1.3.1 The Three Affiliated Tribes Construction Management Office, in coordination the North Dakota department of commerce and the North Dakota state building code advisory committee, and with the authorization and approval of the Tribal Business Council, shall adopt rules to implement, amend, and periodically update the Building Code of the Three Affiliated Tribes, which must consist of the International Building, Residential, Mechanical, and Fuel Gas Codes.

1.3.2 The Three Affiliated Tribes Construction Management Office, in coordination the North Dakota department of commerce and the North Dakota state building code advisory committee, and with the authorization and approval of the Tribal Business Council, shall adopt rules to implement, amend, and periodically update the Building Code of the Three Affiliated Tribes, which must consist of the International Building, Residential, Mechanical, and Fuel Gas Codes.

1.3.3 The Construction Management Office staff shall meet with the North Dakota building code advisory committee and the North Dakota the department of commerce or a designee of the North Dakota commissioner of commerce to address proposed amendments to the Three Affiliated Tribes Building Code.

1.3.4 The Building Code of the Three Affiliated Tribes may not include a requirement that fire sprinklers be installed in a single-family dwelling or a residential building that contains no more than two dwelling units.

1.3.5 The Building Code, Electrical Code, and the Plumbing Code of the Three Affiliated Tribes must provide that a building designed for and used as a school portable classroom may be constructed and inspected as a temporary structure as defined by the Building Code of the Three Affiliated Tribes or may be permitted as a permanent school portable classroom. The foundation system of such a structure must comply with the recommendations of the manufacturer's engineering report for a pre-engineered unit or a structural engineer's report. Frost - free footings may not be required for a temporary structure that meets the requirements of the Three Affiliated Tribes building code unless required by an engineering report. The Construction Management Office may permit temporary electrical and plumbing installations for any structure.

1.3.6 For the purposes of manufactured homes, the Three Affiliated Tribes Building Code consists of the manufactured homes construction and safety standards under 24 CFR 3280 adopted pursuant to the Manufactured Housing Construction and Safety Standards Act [42 U.S.C. 5401 et seq.].

1.3.7 The Building Code of the Three Affiliated Tribes shall be periodically revised and updated to be consistent with the North Dakota building code, except that it may be amended to conform to the Three Affiliated Tribes' needs.

1.3.8 A modular residential structure or a prebuilt home placed on the Fort Berthold Reservation must be constructed in compliance with the Three Affiliated Tribes building code and the amendments adopted by the Construction Management Office.

1.4. Exemptions.

1.4.1 Except as specifically provided in this chapter, the following codes are exempt from this title:

a. The Standards for Electrical Wiring and Equipment;
b. The Three Affiliated Tribes Plumbing Code;
c. The Three Affiliated Tribes Fire Code.

1.4.2 The following buildings are exempt from this title:

a. Buildings which are neither heated nor cooled.
b. Buildings used whose peak design rate of energy usage is less than one watt per square foot [929.0304 square centimeters] or three and four-tenths British thermal units an hour per square foot [929.0304 square centimeters] of floor area.
c. Restored or reconstructed buildings deliberately preserved beyond their normal term of use because of historical associations, architectural interests, or public policy, or buildings otherwise qualified as a pioneer building, historical site, state monument, or other similar designation pursuant to Three Affiliated Tribes law.

1.4.3 Any building used for agricultural purposes, unless a place of human habitation or for use by the public, is exempt from this chapter.

1.5 Accessibility Standards – Automatic Doors

1.5.1 Notwithstanding 1.4, every building or facility subject to the federal Americans with Disabilities Act of 1990 [Pub. L. 101-336; 104 Stat. 327] must conform to the 2010 Americans with Disabilities Act standards for accessible design as contained in title 28, Code of Federal Regulations, parts 35 and 36 [28 CFR 35 and 36].

1.5.2 The Construction Management Office shall require from any individual preparing plans and specifications for a building or facility subject to the Americans with Disabilities Act of 1990 [Pub. L. 101-336; 104 Stat. 327], a statement that the plans and specifications are, in the professional judgment of that individual, in conformance with the Americans with Disabilities Act standards for accessible design . A statement of conformance must be submitted to the department of commerce division of community services and the Construction Management Office for recording.

1.5.3 After July 31, 2013, a newly designed and constructed building in excess of seven thousand five hundred square feet [696.77 square meters] which is classified within the Three Affiliated Tribes building code as assembly, business, educational, institutional, or mercantile occupancy and required by the Three Affiliated Tribes building code to be accessible must include at the primary exterior public entrance an automatic door or power-assisted manual door that complies with the requirements of the Americans with Disabilities Act of 1990, revised 2010. If a multiple unit building does not have a primary exterior public entrance, an individual unit within that building is not required to include an automatic door or power-assisted manual door unless that individual unit is in excess of seven thousand five hundred square feet [696.77 square meters].

1.6 Used Temporary Work Camp Housing - Exemption.

The Construction Management Office may allow exemptions or accept alternate methods for construction and placement of temporary work camp housing that has been previously used as housing or temporary work camp housing in a different location, provided that the waiver does not substantially compromise the health or safety of workers. This authority is granted to the

Construction Management Office enforcing the Building Code, Electrical Code, and Plumbing Code of the Three Affiliated Tribes. This section does not apply to newly constructed temporary work camp housing.

1.6.1 The Construction Management Office, may conduct a nondestructive walkthrough inspection of previously used temporary work camp housing to ensure compliance with applicable codes, including the Building Code, Electrical Code, and Plumbing Code of the Three Affiliated Tribes. If the housing is found to be compliant with these codes, or to not substantially compromise the health or safety of workers pursuant to a waiver under this section, the Construction Management Office may issue a limited certificate of inspection, which is effective for a period of five years. Residents may not be permitted to move into or live in temporary work camp housing unless the housing has a current limited certificate of inspection or has been found to meet all applicable codes and requirements by the Construction Management Office.

1.6.2 The applicable codes, including the Building Code, Electrical Code, and Plumbing Code of the Three Affiliated Tribes, are applicable as a standard for liability in legal actions against owners or operators of temporary work camp housing if exemptions are granted.

1.6.3 An owner of temporary work camp housing has the duty to remove that housing and all related above-grade and below-grade infrastructure within one hundred twenty days after the temporary work camp housing is vacated. The Construction Management Office may take action to abate any public nuisance caused by vacated temporary work camp housing on the Fort Berthold Reservation. An owner of temporary work camp housing located on the Fort Berthold Reservation shall provide the Construction Management Office with a surety bond, letter of credit, or other Construction Management Office. These funds must be used to cover actual expenses that may be incurred by the Construction Management Office in removal of the temporary work camp housing, including any above - grade or below grade infrastructure. The owner is liable for any expenses that are reasonably incurred by the Construction Management Office which exceed the amount of the security.

1.7 Enforcement of Code

The Construction Management Office may administer and enforce the Three Affiliated Tribes Building Code within the Fort Berthold Reservation. The Construction Management Office may enter into Memorandums of Understanding ("MOU") with the appropriate state and local agencies for support and resources to facilitate enforcement of the requirements under this Chapter. Construction Management Office may also contract for private enforcement of the Three Affiliated Tribes Building Code.

1.8 Modular Residential and Commercial Structures - Third-party Inspections - Rules.

The manufacturer of a modular residential or commercial structure that is built in a factory shall contract with a third party for the inspection of the structure for compliance with all applicable building, electrical, fire, and plumbing codes and standards during the manufacturing process in the factory. A third-party that conducts inspections and certifies compliance with all applicable codes and standards must be approved as a certified third-party inspector by the Construction Management Office. The Construction Management Office, with the authorization and approval of the Tribal Business Council, shall adopt rules for the certification of inspectors and for the procedures to be followed in conducting inspections of modular residential and commercial structures. When a manufacturer of modular residential or commercial structures contracts with a certified third-party inspector to monitor compliance with all applicable building, electrical, fire, and plumbing codes and standards for a modular residential or commercial structure, no further inspection by the Three Affiliated Tribes building, electrical, fire, or plumbing inspectors may be required for that structure during the manufacturing process in the factory. This section does not apply to a factory manufacturing fewer than two residential or commercial structures per year inspectors may be required for that structure during the manufacturing process in the factory. This section does not apply to a factory manufacturing fewer than two residential or commercial structures per year.

1.9 Adoption of an Installation Program - Penalty.

The Construction Management Office shall, with authorization and approval of the Tribal Business Council, adopt rules establishing a manufactured home installation program for all manufactured homes built in accordance with the manufactured homes construction and safety standards under 24 CFR 3280 adopted pursuant to the Manufactured Housing Construction and Safety Standards Act [42 U.S.C. 5401 et seq.]. The rules must establish minimum installation standards. The rules may include standards, fees, and requirements for certification and training of installers, inspections of installations, dispute resolution, penalties for noncompliance, and costs of processing complaints. The standards do not apply to manufactured homes installed before the original effective date of the rules. Manufactured homes may be installed in accordance with either standards adopted in the rules or the manufacturer's instructions. The rules must include provisions for the enforcement of these standards. Any person who violates this section or any rule adopted under this section is guilty of a class A misdemeanor.

1.10 Scope of the Three Affiliated Tribes Building Code

1.10.1 It supplements all laws defined within the Three Affiliated Tribes Tribal Law and Order Code relating to construction, alterations, improvements, and siting of buildings unless specifically exempted.

1.10.2 It applies to all tribal government buildings.

1.10.3 It applies to all schools located on the Fort Berthold Reservation.

1.11 Use of International Codes and Standards

FIRST: You must obtain the 2018 editions of the IBC, IRC, IMC, IFGC, IECC, and the IEBC.

SECOND: Wherever the International Plumbing Code and International Electrical Code are referenced, you must substitute the reference with the Three Affiliated Tribes Plumbing Code and Wiring Standards. Also note that the Three Affiliated Tribes Building Code does not include the International Property Maintenance Code or the International Fire Code.

THIRD: When using the IBC, IRC, IMC, IFGC, IECC, and IEBC you should first identify if a section or chapter is amended by the Three Affiliated Tribes Building Code. The Three Affiliated Tribes Building Code shall be consistent with and not more restrictive than the North Dakota State Building Code.

FOURTH: In chapter 11 of the IRC you have the choice of meeting the 2018 IRC requirements as amended or meeting the 2018 International Energy Conservation Code (IECC) requirements as amended.

1.12 Chapter 1 of Each International Code and Fee Schedule

Chapter 1 of each of the four International Codes that make up the Three Affiliated Tribes Building Code is entitled to Administration. The provisions in the Chapter provide for the administration and enforcement of each code by the enforcing jurisdiction. One area no longer included in the International Codes is the suggested permit fee schedule. For reference, included on the next two pages is a sample fee schedule.

COMMERCIAL BUILDING PERMIT AND PLAN REVIEW FEES

TOTAL VALUATION	FEE
Up to and including $1,000.00	$40.00
$1,001.00 to $25,000.00	$40.00 for the first $1,000.00 plus $11.00 for each additional $1,000.00, or fraction thereof, to and including $25,000.00
$25,001.00 to $50,000.00	$304.00 for the first $25,000.00 plus $7.50 for each additional $1,000.00, or fraction thereof, to and including $50,000.00
$50,001.00 to $100,000.00	$491.50 for the first $50,000.00 plus $5.30 for each additional $1,000.00, or fraction thereof, to and including $100,000.00
$100,001.00 to $500,000.00	$756.50 for the first $100,000.00 plus $4.30 for each additional $1,000.00 or fraction thereof, to and including $500,000.00
$500,001.00 to $1,000,000.00	$2476.50 for the first $500,000.00 plus $4.20 for each additional $1,000.00 or fraction thereof to and including $1,000,000.00
$1,000,001.00 and up	$4576.50 for the first $1,000,000.00 plus $4.00 for each additional $1,000.00 or fraction thereof

Demolition Permit:	$100.00 / $40.00 for buildings under 400 SF and buildings without utility services.
House Moving Permit:	$300.00 / $40.00 for buildings under 400 SF and buildings without utility services. $150.00 / $40.00 for moves within extraterritorial area.
Board of Appeals:	$150.00 filing fee
Plan Review: All projects when a plan review is required.	Twenty (20) percent of the attributable building permit fee. Minimum fee $40.

Other Inspections and Fees:	
1. Inspections outside of normal business hours (minimum charge -- two hours)	$70.00 per hour*
2. Reinspection fees assessed under provisions of Section 108 and 109 of the International Building Code	$70.00 per hour*
3. Inspections for which no fee is specifically indicated (minimum charge -- one-half hour)	$70.00 per hour*
4. Additional plan review required by changes, additions or revision to plans (minimum charge -- one-half hour)	$70.00 per hour*
5. For use of outside consultants for plan checking and inspections, or both.	Actual Cost **

* Or the total hourly cost to the jurisdiction, whichever is the greater. This cost shall include supervision, overhead, equipment, hourly wages and fringe benefits of the employees involved.

** Actual costs include administrative and overhead cost.

Should work begin prior the issuance of necessary permits, the following fees will apply:

VALUATION OF WORK	FEE
$0-$50,000	Permit fee is doubled Second offence within 180 days - $200 minimum $100 for each additional violation subsequent
$50,001-$500,000	50% of permit fee (Minimum fee of $980)
Over $500,000	25% of the permit fee (Minimum fee of $2,500)

RESIDENTIAL BUILDING PERMIT FEES

(one- and two-family dwellings)

TOTAL VALUATION	FEE
Up to and including $1,000.00	$35.00
$1,001.00 to $100,000.00	$35.00 for the first $1,000.00 plus $4.80 for each additional $1,000.00, or fraction thereof, to and including $100,000.00
$100,001.00 and up	$510.20 for the first $100,000.00 plus $2.65 for each additional $1,000.00 or fraction thereof.

Demolition Permit:	$100.00 / $35.00 for buildings under 400 SF and buildings without utility services.
House Moving Permit:	$300.00 / $35.00 for buildings under 400 SF and buildings without utility services. $150.00 / $35.00 for moves within extraterritorial area.
Board of Appeals	$150.00

Other Inspections and Fees:	**2018**
1. Inspections outside of normal business hours (minimum charge -- two hours)	$70.00 per hour*
2. Re-inspection fees assessed under provisions of Section 108 of the International Residential Code	$70.00 per hour*
3. Inspections for which no fee is specifically indicated (minimum charge -- one-half hour)	$70.00 per hour*
4. Additional plan review required by changes, additions or revision to plans (minimum charge -- one-half hour)	$70.00 per hour*
5. For use of outside consultants for plan checking and inspections, or both.	Actual Cost **

* *Or the total hourly cost to the jurisdiction, whichever is the greater. This cost shall include supervision, overhead, equipment, hourly wages and fringe benefits of the employees involved.*

** *Actual costs include administrative and overhead cost.*

Should work begin prior the issuance of necessary permits, the following fees will apply:

VALUATION OF WORK	FEE
$0-$50,000	Permit fee is doubled Second offence within 180 days - $200 minimum $100 for each additional violation subsequent
$50,001-$500,000	50% of permit fee (Minimum fee of $550)
Over $500,000	25% of the permit fee (Minimum fee of $2,000)

1.13 Adoption of Related Codes

The Three Affiliated Tribes shall routinely amend and update its building code to maintain consistency with the building codes of North Dakota. This includes adopting and updating its codes to maintain consistency with the North Dakota State Electrical Code, the North Dakota State Plumbing Code, the North Dakota Fire Code, including Fire Marshal Regulations, and the North Dakota Boiler Inspection Program. The Construction Management Office shall work with the Tribal Business Council and the appropriate North Dakota state agencies to periodically

revise the Three Affiliated Tribes Building Code rules and regulations to conform with the most current version adopted by the state of North Dakota.

SECTION 2: AMENDMENTS FOR INTERNATIONAL CODES

2.1 AMENDMENTS FOR THE 2018 INTERNATIONAL RESIDENTIAL CODE

NOTE: Wherever the International Plumbing Code and International Electrical Code referenced, substitute the reference with the Three Affiliated Tribes Plumbing Code and Three Affiliated Tribes Wiring Standards.

CHAPTER 1

SCOPE AND ADMINISTRATION

Section R101.1 Title

Revise as follows:

R l 0 l .1 Title. These provisions shall be known as the Residential Code for One- and Two-family Dwellings of the Three Affiliated Tribes and shall be cited as such and will be referred to herein as "this code."

Section R104.8 Liability

Revise as follows:

Section R104.8 Liability. The Construction Management Office building official or employee charged with the enforcement of this code, while acting for the Three Affiliated Tribes in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be rendered civilly or criminally liable personally and is hereby relieved from personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission in the discharge of official duties. This code shall not be construed to relieve from or lessen the responsibility of any person owning, operating, or controlling any building or structure for any damages to persons or property caused by defects, nor shall the Construction Management Office or the Three Affiliated Tribes be held as assuming any such liability by reason of the inspection authorized by this code or any permits or certificates issued under this code.

Section R104.8.1 Legal Defense

Revise as follows:

Section R104.8.1 Legal defense. Any suit or criminal complaint instituted against an officer or employee because of an act or omission performed by that officer or employee in the lawful discharge of duties and under the provisions of this code shall be afforded all the immunities and defenses provided by other applicable tribal, state or federal laws. The Construction Management Office building official or any subordinate shall not be liable for cost in any action, suit or proceeding that is instituted in pursuance of the provisions of this code.

Section R105.2 Work exempt from permit

Revise as follows:

Section RI05.2 Work exempt from permit. Exemption from permit requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction. Permits shall not be required for the following:

Building:

1. One-story detached accessory structures provided the floor area does not exceed 120 square feet.

2. Fences not over 8.5 feet high.

7. Swimming pools.

9. Window awnings supported by an exterior wall that do not require additional

support.

10. Decks not exceeding 120 square feet in area, that are not more than 7 inches above grade

at any point, are not attached to a dwelling and do not serve the exit door required by

Section R311.4.

CHAPTER 2

DEFINITIONS

Section R201.3 Terms defined in other codes.

Revise as follows:

Section R201.3 Where terms are not defined in this code such terms shall have meanings ascribed to them as in other code publications of the International Code Council. Whenever electrical codes are referenced by the International Code Council (ICC) in the International Building Code, International Residential Code, International Mechanical Code, International Fuel Gas Code, International Energy Conservation Code, International Existing Building Code, it shall mean the most recent versions of the National Electrical Code and the Three Affiliated Tribes Wiring Standards, which shall be consistent with the North Dakota State Wiring Standards adopted by the North Dakota State Electrical Board and the most recent versions of the Uniform Plumbing Code and the Laws, Rules and Plumbing Installation Standards of the Three Affiliated Tribes, which shall be consistent with those of the state of North Dakota adopted by the North Dakota State Plumbing Board. Wherever reference is made to flood plain requirements, it shall mean the flood plain management ordinance applicable to the Fort Berthold Reservation.

CHAPTER 3

BUILDING PLANNING

Table R302.1(1) Exterior walls

Revise as follows:

The fourth column is hereby amended as follows:

0 feet

3 feet

<2 feet

2 feet to <3 feet

> 3feet

<3 feet

3 feet

5 feet

< 3 feet

3 feet

** Add the following foot note for the first column in walls – A common 2-hour fire- resistance-rated wall is permitted for two or more family dwellings where the common wall is on a property line provided such walls do not contain plumbing or mechanical equipment, ducts or vents in the cavity of the common wall. Electrical installations shall be installed in accordance with chapters 34 through 43. Penetrations of electrical outlet boxes shall be in accordance with section 302.4.

Section R302.5.1 Opening protection

Revise as follows:

Section R302.5.1 Opening Protection. Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage and residence shall be equipped with solid wood doors not less than 1⅜ inches (35 mm) in thickness, solid or honeycomb-core steel doors not less than 1⅜ inches (35 mm) thick, or 20- minute fire-rated doors.

Section R303.4 Mechanical ventilation

Section R303.4 is hereby deleted in its entirety.

Section R307.1 Space required.

Revise as follows:

Section R307.1 Space required. Fixtures shall be spaced in accordance with the requirements of Three Affiliated Tribes Plumbing Code and per Figure R307.1, with the exception of the clearance in front of water closets and bidets which shall be at least 24 inches.

Section R310.2.2 Window Sill Height

Revise as follows:

Section R310.2.2 Window sill height. Where a window is provided as the emergency escape and rescue opening, it shall have a sill height of not more than 44 inches (1118 mm) above the floor; where the sill height is below grade it shall be provided with a window well in accordance with Section R310.2.3. Sill height shall be measured from the finished floor to the bottom of the clear opening.

Exception: Below grade emergency escape and rescue windows may have a maximum sill height of 48 inches.

Section R310.2.3.1 Ladder and Steps.

Revise as follows:

Section R310.2.3.1 Ladder and steps. Window wells with a vertical depth greater than 44 inches (1118 mm) shall be equipped with a permanently affixed ladder or steps usable with the window in the fully open position or shall be equipped with a permanently-attached platform at least 30 inches by 16 inches. The maximum distance between the top of the window well and a platform shall be 42 inches and shall not impede the operation of the window. Ladders or steps required by this section shall not be required to comply with Sections R31l.7 and R31l.8. Ladders or rungs shall have an inside width of at least 12 inches (305 mm), shall project at least 3 inches (76 mm) from the wall and shall be spaced not more than 18 inches (457 mm) on center vertically for the full height of the window well.

Exception: Terraced window wells with a maximum of 24 inches per vertical rise and minimum of 12 inches per horizontal projection on each level shall also be allowed.

Section R311.3 Floors and landings at exterior doors. ***

Revise as follows: Section

R311.3 Exceptions:

1. Exterior balconies less than 60 square feet (5.6 m^2) and only accessible from a door are permitted to have a landing less than 36 inches (914 mm) measured in the direction of travel.

2. A landing is not required on the outside of exterior doors other than the required egress door, where a stairway with a total rise of less than 30 inches (762 mm) is located on the exterior side of the door, provided the door does not swing over the stairway.

Section R311.3.1 Floor elevations at the required egress door.

Revise as follows:

Section R311.3.1 Floor elevations at the required egress door. Landings or finished floors at the required egress door shall not be more than 1½ inches (38 mm) lower than the top of the threshold.

Exception: The landing or floor on the exterior side shall not be more than 8 inches below the top of the threshold provided the door does not swing over the landing or floor.

Where exterior landings or floors serving the required egress door are not at grade, they shall be provided with access to grade by means of a ramp in accordance with Section R3 l l.8 or a stairway in accordance with Section R3 l 1.7.

Section R311.3.2 Floor elevations for other exterior doors.

Revise as follows:

Section R311.3.2 Floor elevations for other exterior doors. Doors other than the required egress door shall be provided with landings or floors not more than 8 inches below the top of the threshold.

Exception: A landing is not required where a stairway with a total rise of less than 30 inches (762 mm) is located on the exterior side of the door, provided the door does not swing over the stairway.

Section R311.7.5.1 Riser height.

Revise as follows:

Section R311.7.5.1 Riser height. The riser height shall not be more than 8 inches.

Section R311.7.5.2 Tread depth.

Revise as follows:

Section R311.7.5.2 Tread depth. The minimum tread depth shall be 9 inches. The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge. The greatest tread depth within any flight of stairs shall not exceed the smallest by more than 3/8 inch (9.5 mm).

Exception: Where a landing is not provided or required by section R311.3, R311.3.2 or R311.7.6, the top tread of a stair serving exterior doors other than the required exit door, and in-swinging doors opening into an attached garage, shall be permitted to exceed the smallest tread by more than 3/8 inch (9.5mm). Such a tread shall be at least 18 inches (457mm) measured in the direction of travel.

Section R311.7.5.2.1 Winder treads

Revise as follows:

Section R311.7.5.2.1 Winder treads. Winder treads shall have a minimum tread depth of 9 inches measured between the vertical planes of the foremost projection of adjacent treads at the intersections with the walkline.***

Section R311.7.6 Landings for stairways.

Revise as follows:

Section R311.7.6 Landings for stairways. There shall be a floor or landing at the top and bottom of each stairway.***

Exceptions:

1. A floor or landing is not required at the top of an interior flight of stairs, including stairs in an enclosed garage, provided a door does not swing over the stairs.

2. A landing is not required at the top of an interior flight of stairs with a total rise of less than 30 inches, provided the door does not swing over the stairway.

Section R312.1.1 Where Required.

Revise as follows:

Section R312.1.1 Where Required: Guards shall be provided for those portions of open-sided walking surfaces, stairs, ramps and landings that are located more than 30 inches (762 mm) measured vertically to the floor or grade below. Insect screening shall not be considered as a guard.

Section R313.1.1 Design and Installation

R3l3.1.1 Design and installation. Automatic residential fire sprinkler systems for townhouses shall be designed and installed in accordance with NFPA 13D, NFPA l3R or NFPA 13.

Section R314.3 Location.

Revise as follows:

Section R314.3 Location. Smoke alarms shall be installed in the following locations:

* * *

5. In dwelling units where the ceiling height of a room open to the hallway serving the bedrooms exceeds that of the hallway by 24 inches (610 mm) or more, smoke detectors shall be installed in the hallway and in the adjacent room.

Section 326 Swimming Pools, Spas, and Hot Tubs

Section 326 Swimming Pools, Spas, and Hot Tubs is hereby deleted in its entirety.

CHAPTER 4

FOUNDATIONS

R401.3 Drainage.

Revise as follows:

R401.3 Drainage. Surface drainage shall be diverted to a storm sewer conveyance or other approved point of collection. Lots shall be graded to drain surface water away from foundation walls.

Section R403.1

Section R403.1 General. All exterior walls shall be supported on continuous solid or fully grouted masonry or concrete footings, crushed stone footings, wood foundations, or other approved structural systems that shall be of sufficient design to accommodate all loads according to Section R301 and to transmit the resulting loads to the soil within the limitations as determined from the character of the soil. Footings shall be supported on undisturbed natural soils or engineered fill and shall include a concrete encased contiguous rebar stubbed out near the electrical service for grounding of the electrical system as per the requirements of the most recently adopted version of the Three Affiliated Tribes Electrical Laws, Rules and Wiring Standards. Coordinate with the electrical contractor.

Section R403.1.4.1 Frost Protection

Revise as follows:

Section R403.1.4.1

***

Exceptions:

1. Protection of freestanding accessory structures of light framed construction shall not be required.

2. Protection of freestanding accessory structures with an area of 400 square feet or less, of other than light-framed construction shall not be required.

3. Decks need not be provided with footings that extend below the frost line.

Section R404.1 Concrete and masonry foundation walls.

Section R404.1 Concrete and masonry foundation walls. Concrete foundation walls shall be selected and constructed in accordance with the provisions of Section R404.l .3. Masonry foundation walls shall be selected and constructed in accordance with the provisions of Section R404. l .2. There shall be a concrete encased contiguous rebar stubbed out near the electrical service for grounding of the electrical system as per the requirements of the most recently

adopted version of Three Affiliated Tribes Electrical Laws, Rules and Wiring Standards. Coordinate with the electrical contractor.

Figure R404.1.2 (1)

Add as follows:

FIGURE R404.1.2 (1) referred to in Section 404.1.2

Figure R404.1.2
(1)

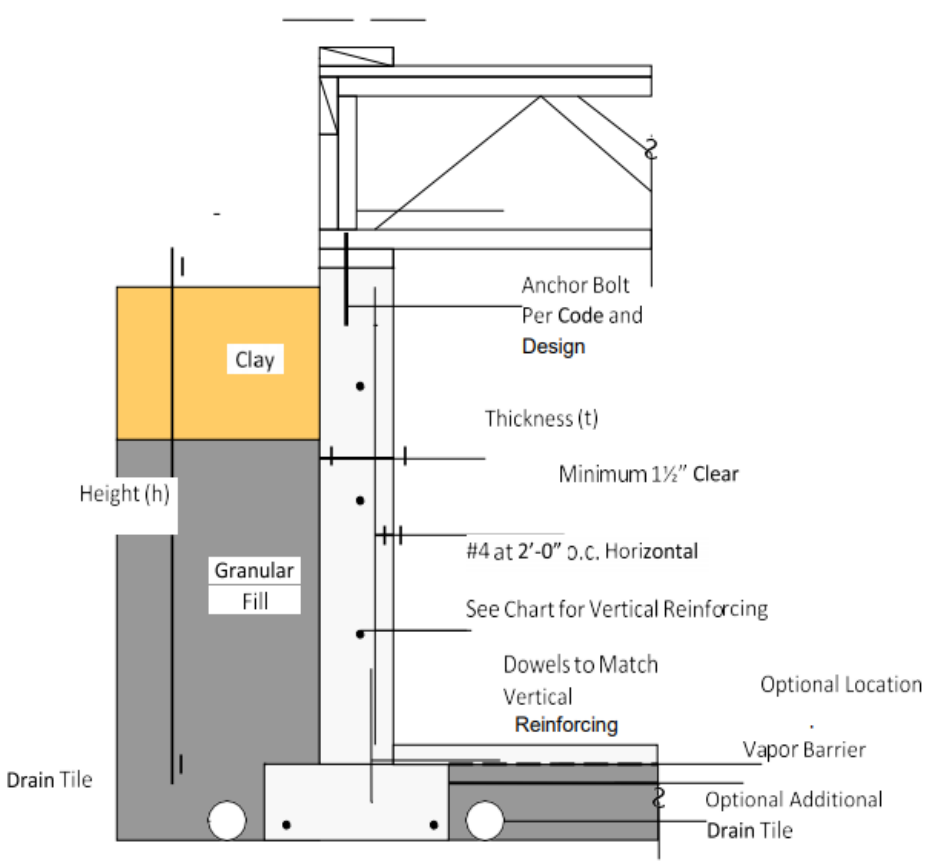


FIGURE R404.1.2(2), referred to in Section 404.1.2

Add as follows:

FIGURE R404.1.2(2)

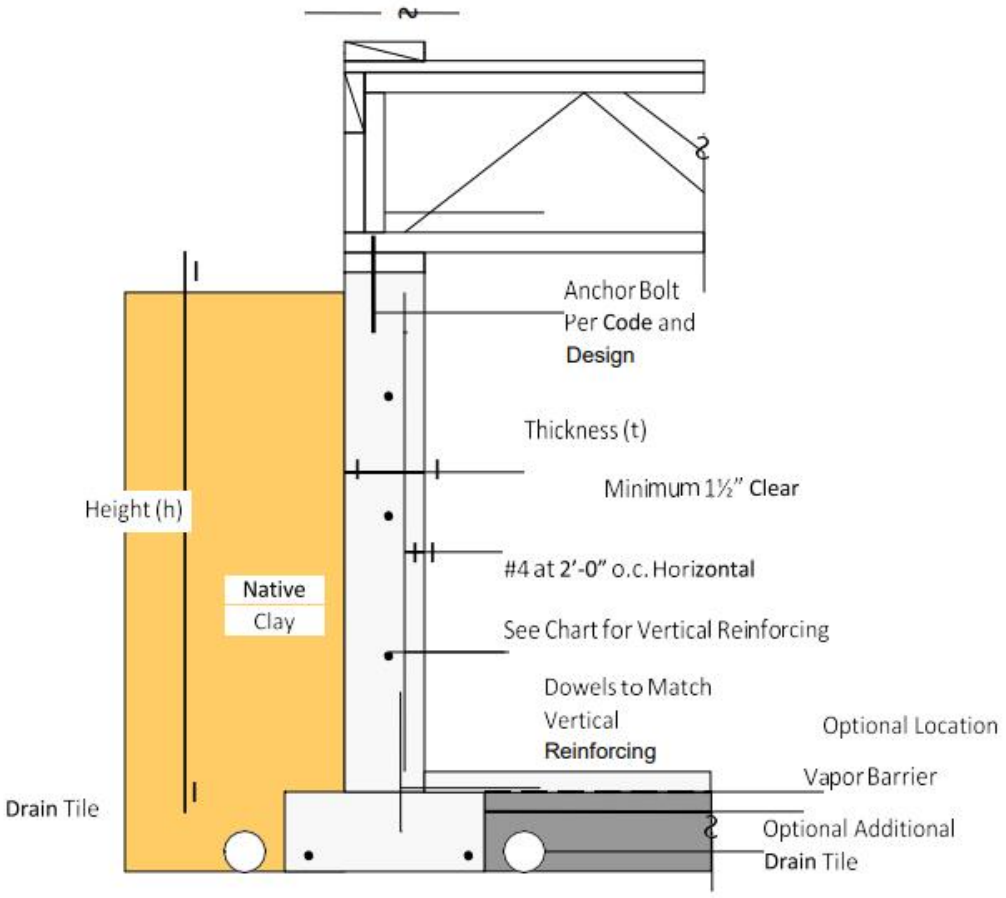


Table R404.1.2 (10)

Add as follows:

Table R404.1.2(10)
Foundation Wall Reinforcing

Active Pressure = 45pcf

Minimum Reinforcement for Concrete Foundation Walls		
Wall Height (h) feet	Wall Thickness (t) inches	Vertical Reinforcing
8	8	#4 @ 24" o.c. #5 @ 40" o.c.
	10	#4 @ 30" o.c. #5 @ 50" o.c.
9	8	#4 @ 18" o.c. #5 @ 28" o.c.
	10	#4 @ 24" o.c. #5 @ 36" o.c.
10	10	#4 @ 16" o.c. #5 @ 26" o.c.

Notes:

1. Chart is based on an active soil pressure of 45 pounds per cubic foot (pcf).
2. Reinforcing steel shall be ASTM A615 Fy – 60,000 pounds per square inch (psi).
3. The vertical reinforcing bars are to be located on the inside face.
4. Minimum concrete strength Fc^1 = 3,000 pounds per square inch (psi).
5. Backfill shall not be placed until first floor framing and sheathing is installed and fastened or adequately braced and the concrete floor slab is in place or the wall is adequately braced.

Table R404.1.2(11)

Add as follows:

Table R404.1.2(11)
Foundation Wall Reinforcing

Active Pressure = 65 pcf

Minimum Reinforcement for Concrete Foundation Walls		
Wall Height (h) Feet	Wall Thickness (t) inches	Vertical Reinforcing
8	8	#4 @ 18" o.c. #5 @ 26" o.c. #6 @ 40" o.c.
	10	#4 @ 24" o.c. #5 @ 36" o.c. #6 @ 52" o.c.
9	8	#4 @ 12" o.c. #5 @ 18" o.c. #6 @ 26" o.c.
	10	#4 @ 16" o.c. #5 @ 24" o.c. #6 @ 36" o.c.
10	10	#4 @ 12" o.c. #5 @ 18" o.c. #6 @ 24" o.c.

Notes:

1. Chart is based on an active soil pressure of 65 pounds per cubic foot (pcf).
2. Reinforcing steel shall be ASTM A615 Fy – 60,000 pounds per square inch (psi).
3. The vertical reinforcing bars are to be located on the inside face.
4. Minimum concrete strength Fc^1 = 3,000 pounds per square inch (psi).
5. Backfill shall not be placed until first floor framing and sheathing is installed and fastened or adequately braced and the concrete floor slab is in place or the wall is adequately braced.

Section R404.1.3.2 Reinforcement for foundation walls.

Revise as follows:

Section R404.1.3.2 Reinforcement for foundation walls. Concrete foundation walls shall be laterally supported at the top and bottom. Horizontal reinforcement shall be provided in accordance with Table R404.1.2(1). Vertical reinforcement shall be provided in accordance with Table R404.1.2(2), R404.1.2(3), R404.1.2(4), R404.1.2(5), R404.1.2(6), R404.1.2(7), or R404.1.2(8), or Table R404.1.2(10) and Figure R404.1.2(1) or Table R404.1.2(11) and Figure R404.1.2(2). Vertical reinforcement for flat basement walls retaining 4 feet (1219 mm) or more of unbalanced backfill is permitted to be determined in accordance with Table R404.1.2(9). For basement walls supporting above-grade concrete walls, vertical reinforcement shall be the greater of that required by Tables R404.1.2(2) through R404.1.2(8) or by SectionR611.6 for the above-grade wall. In Buildings assigned to Seismic Design Category D0, D1, or D2, concrete foundation walls shall also comply with Section R404.1.4.2.

CHAPTER 5

FLOORS

Section R507.3 Footings

Section R507.3 is hereby deleted in its entirety.

Table R507.3.1 Minimum Footing Size For Decks

Table R507.3.1 is hereby deleted in its entirety.

Section 507.5 Deck Beams

Add as follows:

Section R507.5 Maximum allowable spans for wood deck beams, as shown in Figure R507.5, shall be in accordance with Table R507.5. Beam plies shall be fastened with two rows of 10d (3-inch x 0.128-inch) nails minimum at 16 inches (406 mm) on center along each edge. Beams shall be permitted to cantilever at each end up to one-fourth of the actual beam span ....

CHAPTER 6

WALL CONSTRUCTION

Section R602.7.2 Rim board headers.

Revise as follows:

Section R602.7.2 Rim board headers. Rim board header size, material and span shall be in accordance with Table R602.7(1). Rim board headers shall be constructed in accordance with

Figure R602.7.2 and shall be supported at each end by full-height studs. Rim board headers supporting concentrated loads shall be designed in accordance with accepted engineering practice.

Section R404.1.3.2 Reinforcement for foundation walls.

Revise as follows:

Section R404.1.3.2 Reinforcement for foundation walls. Concrete foundation walls shall be laterally supported at the top and bottom. Horizontal reinforcement shall be provided in accordance with Table R404.1.2(1). Vertical reinforcement shall be provided in accordance with Table R404.1.2(2), R404.1.2(3), R404.1.2(4), R404.1.2(5), R404.1.2(6), R404.1.2(7), or R404.1.2(8), or Table R404.1.2(10) and Figure R404.1.2(1) or Table R404.1.2(11) and Figure R404.1.2(2). Vertical reinforcement for flat basement walls retaining 4 feet (1219 mm) or more of unbalanced backfill is permitted to be determined in accordance with Table R404.1.2(9). For basement walls supporting above-grade concrete walls, vertical reinforcement shall be the greater of that required by Tables R404.1.2(2) through R404.1.2(8) or by SectionR611.6 for the above-grade wall. In Buildings assigned to Seismic Design Category D0, D1, or D2, concrete foundation walls shall also comply with Section R404.1.4.2.

CHAPTER 11

ENERGY EFFICIENCY

Table N1102.1.2 (R402.1.2) Insulation and Fenestration Requirements By Component

Revise as follows:

Climate Zone	###	Wood Frame Wall R-Value	###	Basement Wall R-Value
6	###	21 or 13 +5h,i	###	10/13
7 and 8	###	21 or 13 +5h,i	###	10/13
(Balance of table remains the same)				

Table N1102.1.4 (R402.1.4) Equivalent U-Factors

Revise as follows:

Climate Zone	###	Frame Wall U-Factor	###	Basement Wall U-Factor
6	###	0.057	###	0.059
7 and 8	###	0.057	###	0.059
(Balance of table remains the same)				

Section N1102.4 (R402.4) Air leakage (Mandatory).

Revise as follows:

Section N1102.4 (R402.4) Air leakage (Mandatory). The building thermal envelope shall be constructed to limit air leakage in accordance with the requirements of Section R402.4.1 through R402.4.4.

Exception: Dwelling units of R-2 Occupancies and multiple single-family dwellings shall be permitted to comply with IECC Section C402.5.

Section N1102.4.1.3 (R402.4.1.3) Visual Inspection Option.

Add ad follows: Section N1102.4.1.3 (R402.4.1.3) Visual Inspection Option. Building envelope tightness and insulation shall be considered acceptable when installed in accordance with Table N1102.4.1.1 (R402.4.1.1) – "Air Barrier and Insulation" and has been field verified.

Section N1103.3.5 (R403.3.5) Building Cavities (Mandatory).

Revise as follows:

Section N1103.3.5 (R403.3.5) Building Cavities (Mandatory). Building framing cavities shall not be used as supply ducts.

Section N1103.6 (R403.6) Mechanical Ventilation (Mandatory)

Revise as follows:

Section N1103.6 (R403.6) Mechanical Ventilation (Mandatory) Change the title of the section to Section N1103.6 (R403.6) Ventilation (Mandatory)

Table N1105.5.2(1) [R405.5.2(1)] Specifications for the Standard Reference and Proposed Design

Revise as follows:

Specifications for the Standard Reference and Proposed Design

Building Component	Standard Reference Design	Proposed Design
Air exchange rate	Air leakage rate of 5 air changes per hour in Climate Zones 1 through 8 at a pressure of 0.2 inches w.g (50 Pa). (Balance is unchanged.)	For residences that are not tested, the same air leakage rate as the standard reference design. For tested residences, the measured air exchange rate. The mechanical ventilation rated shall be in addition to the air leakage rate and shall be as proposed.

CHAPTER 15

EXHAUST

SYSTEMS

Section M1502.4.2 Duct Installation

Revise as follows:

Section M1502.4.2 Duct Installation. Exhaust ducts shall be supported at intervals not to exceed 4 feet (1219.2 mm) and shall be secured in place. The insert end of the duct shall extend into the adjoining duct or fitting in the direction of airflow. Exhaust duct joints may be mechanically fastened. Ducts shall not be joined with screws. Where dryer exhaust ducts are enclosed in wall or ceiling cavities, such cavities shall allow the installation of the duct without deformation.

Section 1503.6 Makeup Air Required

Revise as follows:

Section Ml503.6 Makeup air required. Where one or more gas, liquid or solid fuel-burning appliance that is neither direct-vent nor uses a mechanical draft venting system is located within a dwelling unit's air barrier, each exhaust-hood systems capable of exhausting in excess of 400 cubic feet per minute (0.19m_ -3/S) shall be mechanically or passively provided with makeup air at a rate approximately equal to the exhaust air rate in excess of 400 cfm. Such makeup air systems shall be equipped with not fewer than one damper complying with Section Ml503.6.2.

CHAPTER 16

DUCT SYSTEMS

Section M1601.4.1 Joints, Seams and Connections.

Revise as follows:

Section M1601.4.1 Joints, Seams and Connections.

Exception 3. For ducts having a static pressure classification of less than 2 inches of water column (500 Pa), additional closure systems shall not be required for continuously welded joints and seams and locking-type joints and seams.

CHAPTER 20

BOILERS AND WATER HEATERS

Section M2005.1 General

Revise as follows:

Section M2005.1 General. Water heaters shall be installed in accordance with the Three Affiliated Tribes Plumbing Code, the manufacturer's instructions and the requirements of this code.

CHAPTER 21

HYDRONIC PIPING

Section M2101.3 Protection of potable water.

Revise as follows:

Section M2101.3 Protection of potable water. The potable water system shall be protected from backflow in accordance with the provisions listed in the Three Affiliated Tribes Plumbing Code.

Section M2101.10 Tests.

Revise as follows:

Section M2101.10 Tests. New hydronic piping shall be isolated and tested hydrostatically at a pressure of not less than 100-pounds per square inch (psi) (689 kPa). The duration of each test shall be not less than 15 minutes and not more than 20 minutes.

Section M2103.3 Piping Joints

Revise as follows:

Section M2103.3 Piping Joints. Item 2: Copper tubing shall be joined by brazing complying with the Three Affiliated Tribes Plumbing Code.

CHAPTER 24

FUEL GAS

Section G2404.7 Flood Hazard

Section G2404.7 Flood Hazard is hereby deleted in its entirety.

Section G2407.6.1 (304.6.1)

Two permanent openings, one commencing within 12 inches (305 mm) of the top and one commencing within 12 inches (305 mm) of the bottom of the enclosure, shall be provided. The

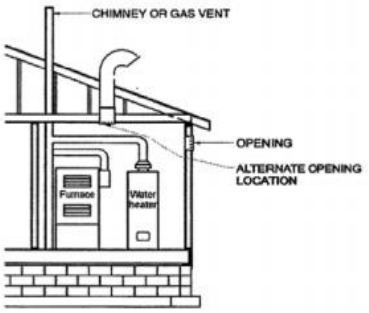
openings shall communicate directly or by ducts with the outdoors or spaces that freely communicate with the outdoors. Where directly communicating with the outdoors, or where communicating with the outdoors through vertical ducts, each opening shall have a minimum free area of 1 square inch per 4,000 Btu/h (550 mm2/kW) of total input rating of all appliances in the enclosure.

Figures G2407.6.1 (1) and G2407.6.1 (2)

Figures G2407.6.1 (1) and G2407.6.1 (2) are hereby deleted in its entirety.

Figure G2407.6.2

Revise as follows:



Section G2407.11 (304.11) Combustion air ducts

Revise as follows:

Section G2407.11 (304.11) Combustion air ducts

5. Ducts shall not terminate in an attic space.

Section G2417.4.1 (406.4.3) Test pressure.

Revise as follows:

Section G2417.4.1 (406.4.3) Test pressure. The test pressure to be used shall not be less than one and one-half times the proposed maximum working pressure, but not less than 25 psig, irrespective of design pressure. Where the test pressure exceeds 125 psig the test pressure shall not exceed a value that produces a hoop stress in the piping greater than 50 percent of the specified minimum yield strength of the pipe.

Section G2425.12 (501.12) Residential and low-heat appliances flue lining systems.

Revise as follows:

Section G2425.12 (501.12) Flue lining systems for use with residential-type and low-heat appliances shall be limited to the following:

1. Clay flue lining complying with the requirements of ASTM C 315 or equivalent when each appliance connected into the masonry chimney has a minimum input rating greater than 400,000 Btu/h. Clay flue lining shall be installed in accordance with Chapter 10.

2. Listed chimney liner systems complying with UL 1777.

3. Other approved materials that will resist, without cracking, softening, or corrosion, flue gases and condensate at temperatures up to 1800 F (982 C).

a. Aluminum (1100 or 3003 alloy or equivalent) not less than 0.032 inches thick up to 8 inches in diameter.

b. Stainless steel (304 or 430 alloy or equivalent) not less than 26 gauge (0.018 inches thick) to 8 inches in diameter or not less than 24 gauge (0.024 inches thick) 8 inches in diameter and larger.

When a metal liner is used other than a listed chimney liner a condensation drip tee shall be installed and supported in an approved manner.

Section G2427.5.2 (503.5.3) Masonry chimneys.

Revise as follows:

Section G2427.5.2 (503.5.3) Masonry chimneys shall be built and installed in accordance with NFPA211 and shall be lined as per G2425.12.

Section G2442.5 (618.4) Screen.

Revise as follows:

Section G2442.5 (618.4) Required outdoor air inlets shall be covered with a screen having ¼ inch (6.4 mm) openings. Required outdoor air inlets serving a nonresidential portion of a building shall be covered with screen having openings larger than ¼ inch (6.4 mm) and not larger than ½ inch.

2.2 AMENDMENTS FOR THE 2018 INTERNATIONAL BUILDING CODE

CHAPTER 1

SCOPE AND ADMINISTRATION

Section 101.4.3 Plumbing.

Revise as follows:

Section 101.4.3 The provisions of the Three Affiliated Tribes Plumbing Code shall apply to the installation, alteration, repair and replacement of plumbing systems, including equipment, appliances, fixtures, fittings and appurtenances, and where connected to a water or sewage system. The provisions of the Three Affiliated Tribes Plumbing Code shall apply to private sewage disposal systems.

Section 104.8 Liability.

Revise as follows:

Section 104.8 The Construction Management Office, while acting for the Three Affiliated Tribes in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be rendered liable personally and is here by relieved from personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission in the discharge of official duties. Any suit instituted against an officer or employee of the Construction Management Office because of an act or omission performed by that officer or employee in the lawful discharge of duties and under the provisions of this code shall be afforded all the protection provided by the jurisdiction's insurance pool and immunities and defenses provided by other applicable state and federal laws and shall be defended by legal representative of the jurisdiction until the final termination of the proceedings. The building official or any subordinate shall not be liable for cost in any action, suit or proceeding that is instituted in pursuance of the provisions of this code.

Section 105.2 Work exempt from permit

Revise as follows:

Section 105.2 Work exempt from permit…….

Building…

***

2. Fences not over 8.5 feet high.

***

6. Sidewalks and driveways

***

11. Swings and other playground equipment

12. Window awnings

14. Reroofing

Section 107.2.6.1 Design flood elevations.

Section 107.2.6.1 is hereby deleted.

Section 107.3.1 Approval of construction documents.

Revise as follows:

Section 107.3.1 When the building official …One set of construction documents so reviewed shall be retained by the Building Official. Section 109.2 Schedule of permit fees.

Revise as follows:

Section 109.2 On buildings, structures, electrical, gas, mechanical, and plumbing systems or alterations requiring a permit, a fee for each permit and plan review shall be paid as required, in accordance with the schedule as established by the Three Affiliated Tribes. The plan review fees specified in this subsection are separate from, and in addition to, permit fees.

CHAPTER 2

DEFINITIONS

Section 201.3 Terms defined in other codes.

Revise as follows:

Section 201.3 Terms defined in other codes. Where terms are not defined in this code such terms shall have meanings ascribed to them as in other code publications of the International Code Council. Whenever electrical codes are referenced by the International Code Council (ICC) in the International Building Code, International Residential Code, International Mechanical Code, International Fuel Gas Code, International Energy Conservation Code, International Existing Building Code, it shall mean the most recent versions of the National Electrical Code and the Three Affiliated Tribes Wiring Standards and the most recent versions of the Three Affiliated Tribes Plumbing Code and the Laws, Rules and Plumbing Installation Standards adopted by the Construction Management Office. Wherever reference is made to flood plain requirements, it shall mean the flood plain management ordinance applicable to the Fort Berthold Reservation.

CHAPTER 3

USE AND OCCUPANCY CLASSIFICATION

Section 305.2 Group E, day care facilities.

Revise as follows:

305.2. Group E, day care facilities. This group includes buildings and structures or portions thereof occupied by more than twelve children older than 2 ½ years of age who receive educational supervision or personal care services for fewer than 24 hours per day.

Section 305.2.2 Twelve or fewer children.

Revise as follows:

305.2.2 Twelve or fewer children. A facility having twelve or fewer receiving such day care shall be classified as part of the primary occupancy.

Section 305.2.3 Twelve or fewer children in a dwelling unit.

Revise as follows:

305.2.3 Twelve or fewer children in a dwelling unit. A facility such as the above within a dwelling unit and having twelve or fewer children receiving such day care shall be classified as a Group R-3 occupancy or shall comply with the International Residential Code.

Section 308.5 Institutional Group I-4, day care facilities.

308.5 Institutional Group I-4, day care facilities. " ... occupied by more than twelve persons of any age ..... "

Section 308.5.1 Classification as Group E.

308.5.1 Classification as Group E. " ..... provides care for more than twelve but not more than 100 children ... "

Section 308.5.3. Twelve or fewer persons receiving care.

308.5.3 Twelve or fewer persons receiving care. A facility having twelve or fewer persons receiving custodial care shall be classified as part of the primary occupancy.

Section 308.5.4 Twelve or fewer persons receiving care in a dwelling unit.

308.5.4 Twelve or fewer persons receiving care in a dwelling unit. A facility such as the above within a dwelling unit having twelve or fewer persons receiving custodial care shall be classified as a Group R-3 occupancy or shall comply with the International Residential Code.

CHAPTER 4

SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY

Section 406.3.2.1 Dwelling unit separation.

Revise as follows:

Section 406.3.2.1 Dwelling unit separation. The private garage shall be separated from the dwelling unit and its attic area by means of gypsum board, not less than ½ inch (12.7 mm) in thickness, applied to the garage side. Garages beneath habitable rooms shall be separated from all habitable rooms above by not less than a 5/8-inch (15.9 mm) Type X gypsum board or equivalent and 5/8 inch (15.875 mm) gypsum board applied to structures supporting the separation from habitable rooms above the garage. Door openings between a private garage and the dwelling unit shall be equipped with either solid wood doors or solid or honeycomb core steel doors not less than 1 3/8 inches (34.9 mm) in thickness, or doors in compliance with Section 716.2.2.1 with a fire protection rating of not less than 20 minutes.

CHAPTER 7

FIRE AND SMOKE PROTECTION FEATURES

Section 706.6 Vertical continuity.

Revise as follows:

Section 706.6 is hereby amended to add #7 to read:

7. Fire walls installed within detached structures of Group U or Group S-2 occupancies may terminate at the underside of the roof sheathing provided such walls are not required to be fire-resistive construction due to proximity to property lines.

CHAPTER 9

FIRE PROTECTION SYSTEMS

This chapter should also contain language that is consistent with North Dakota Century Code §54-21.3-03:

4. The building code adopted by the Three Affiliated Tribes may not include a requirement that fire sprinklers be installed in a single family dwelling or a residential building that contains no more than two dwelling units.

Section 903.3.1.1 NFPA 13 sprinkler systems.

Add as follows:

Section 903.3.1.1 is hereby amended by adding a second paragraph to read as follows: Sprinkler heads in unoccupied mall tenant spaces may be installed at ceiling height if allowed by the code official. Permission will be granted on an individual basis. Combustible storage shall not be allowed in these unoccupied tenant spaces if sprinkler heads are installed at ceiling height.

Signage shall be provided outlining the storage restrictions. Section 905.1 Standpipe Systems

Add as follows: Section 905.1 Exception: The installation of fire hose on standpipes may be omitted when approved by the fire code official. Approved standpipe hose valves and connection shall be provided where required.

Section 907.2.3 Group E.

Revise as follows:

Section 907.2.3 Group E. A manual fire alarm system that initiates the occupant notification signal utilizing an emergency voice/alarm communication system meeting the requirements of Section 907.5.2.2 and installed in accordance with Section 907.6 shall be installed in Group E occupancies. When automatic sprinkler systems or smoke detectors are installed, such systems or detectors shall be connected to the building fire alarm system. Where approved by the fire code official, a building's emergency communication system interfaced with the fire alarm system in accordance with NFPA 72 is acceptable.

Section 907.2.10.2 Groups R-2, R-3, R-4 and I-1.

Section 907.2.10.2 is hereby amended to add paragraph number 4 to read as follows:

4. In dwelling units where the ceiling height of a room open to the hallway serving the sleeping rooms exceeds that of the hallway by 24 inches (610 mm) or more, smoke detectors shall be installed in the hallway and the in the adjacent room.

CHAPTER

MEANS OF EGRESS

1010.1.9.4 Locks and latches.

Section 1010.1.9 .4 is hereby amended to add paragraph number 7 to read as follows:

7. Egress doors from occupied roofs, or doors that are used to gain access to the interior of the building may be locked from the outside if all of the following are provided.

7.1 Compliance with all aspects of Section 1010.1.9.4 item #2

7.2 Compliance with 1009.8

7.3 The door locks shall unlock on actuation of the automatic sprinkler system and automatic fire detection system and the door locking system shall be installed to have the capability of being unlocked by a switch located at the Fire Command center.

Section 1011.1 General

Revise as follows:

Section 1011.1:

Exception 1. Within rooms or spaces used for assembly purposes, stepped aisles shall comply with Section 1029.

Exception 2. Stairways used only to attend equipment or private stairways serving an occupant load of 10 or fewer persons and which are not accessible to the public need not comply with sections 1011.2 through 1011.13.

Section 1011.2 Width and Capacity

Add as follows:

Section 1011.2: Exception 4. Stairways used only to attend equipment or private stairways serving an occupant load of 10 or fewer persons and which are not accessible to the public.

Section 1011.5.2 Riser Height and Tread Depth

Revise Exceptions 3 and 4 and add Exception 6 as follows:

Section 1011.5.2: 3. In Group R-3 occupancies; within *dwelling units* in Group R-2 occupancies; and in Group U occupancies that are accessory to a Group R-3 occupancy or accessory to individual dwelling units in Group R-2 occupancies; the maximum riser height shall be 8 inches; the minimum tread depth shall be 9 inches; the minimum tread depth at the walkline shall be 10 inches (254 mm); …

6. Stairways used only to attend equipment or private stairways serving an occupant load of 10 or fewer persons and which are not accessible to the public are permitted to have a maximum 8 inch riser height and minimum 9 inch tread depth.

Section 1011.11 Handrails

Add as follows:

Section 1011.11 Exceptions:

5. Stairways used only to attend equipment or private stairways serving an occupant load of 10 or fewer persons and which are not accessible to the public. Handrail will be required on one side.

6. Vehicle service pit stairways are exempt from the rules for stairway railings and guards if they would prevent a vehicle from moving into a position over the pit.

Section 1015.2 Where required

Revise as follows: Section 1013.2. Guards shall be located along open-sided walking surfaces, including mezzanines, equipment platforms, stairs, ramps and landings, that are located more than 30 inches (762mm) above the floor or grade below or if within 36 inches (914mm) horizontally to the edge of the open side the vertical measurement to the floor or grade below is greater than 48 inches. Guards shall be adequate in strength and attachment in accordance with section 1607.8.

CHAPTER 11

ACCESSABILITY

This chapter should also contain the following language: After July 31, 2013, a newly designed and constructed building in excess of seven thousand five hundred square feet [696.77 square meters] which is classified within the Three Affiliated Tribes building code as assembly, business, educational, institutional, or mercantile occupancy and required by the Three Affiliated Tribes building code to be accessible must include at the primary exterior public entrance an automatic door or power-assisted manual door that complies with the requirements of the Americans with Disabilities Act of1990, revised 2010. If a multiple unit building does not have a primary exterior public entrance, an individual unit within that building is not required to include an automatic door or power-assisted manual door unless that individual unit is in excess of seven thousand five hundred square feet [696.77 square meters].

Section 1104.4 Multistory buildings and facilities.

Revise as follows:

Section 1104.4 exception 1 is hereby amended to read as follows:

At least one accessible route shall connect each accessible story, mezzanines, and occupied roof in multilevel buildings and facilities.

Exceptions:

1. An accessible route is not required to stories, basements, mezzanines, and

occupied roofs that have an area of not more than 3,000 square feet (278.7 m2),

are located above or below accessible levels and are below the third story…"

CHAPTER 12

INTERIOR ENVIRONMENT

Section 1202.1 General

Revise paragraph 2 as follows:

Section 1202.1 General. Ambulatory care facilities and Group I-2 occupancies shall be ventilated by mechanical means in accordance with Section 407 of the International Mechanical Code.

Section 1206 Sound Transmission

Section 1206 is hereby deleted in its entirety.

CHAPTER 14

EXTERIOR WALLS

Section 1402.6 Flood Resistance.

Section 1402.6 is hereby deleted in its entirety.

Section 1402.7 Flood Resistance for coastal high-hazard areas and coastal A zones.

Section 1402.7 is hereby deleted in its entirety.

CHAPTER 16

STRUCTURAL DESIGN

Section 1601.1 Scope

Revise as follows:

Section 1601.1 is hereby amended to add the following as a new second paragraph. It shall not be the responsibility of the building official to determine engineering requirements of this code. Exclusive of the conventional light-frame wood construction provisions referenced in Section 2308, the method to resist loads as referenced in this chapter is the responsibility of a structural engineer or other qualified design professional.

Section 1610.1 General

Revise as follows:

Section 1610.1 Exception: Foundation walls extending not more than 9 feet below grade and laterally supported at the top by flexible diaphragms shall be permitted to be designed for active pressure.

Section 1612 Flood Loads

Section 1612 is hereby deleted in its entirety.

CHAPTER 18

SOILS AND FOUNDATIONS

Section 1804.4 Site grading.

Section 1804.4 is hereby deleted and the following section enacted:

Section 1804.4 Surface drainage shall be diverted to a storm sewer conveyance or other approved point of collection. Lots shall be graded to drain surface water away from foundation walls.

The procedure used to establish the final ground level adjacent to the foundation shall account for additional settlement of the backfill.

Section 1804.5 Grading and fill in flood hazard areas.

Section 1804.5 is hereby deleted in its entirety.

Section 1805.1.2.1 Flood hazard areas.

Section 1805.1.2.1 is hereby deleted in its entirety.

Section 1809.5 Frost protection

Revise as follows:

Section 1809.5 is hereby amended to add a new exception 4 as follows:

4. Free-standing buildings used as Group U occupancies for the storage of private or pleasure-type motor vehicles constructed in accordance with Sections 406.3.1.

CHAPTER 29

PLUMBING SYSTEMS

Section 2901.1 General

Revise as follows:

Section 2901.1 is hereby amended to read follows:

The provisions of this chapter and the Three Affiliated Tribes Plumbing Code shall govern the erection, installation, alteration, repairs, relocations, replacement, addition to, use or maintenance of plumbing equipment and systems. Toilet and bathing rooms shall be constructed in accordance with Section 1210. Plumbing systems and equipment shall be constructed, installed and maintained in accordance with the Three Affiliated Tribes Plumbing Code. Private sewage disposal systems shall conform to the Three Affiliated Tribes Plumbing Code. The International Fire Code, the International Property Maintenance Code and the Three Affiliated Tribes Plumbing Code shall govern the use and maintenance of plumbing components, appliances, equipment and systems. The International Existing Building Code and the Three Affiliated Tribes Plumbing Code shall govern the alteration, repair, relocation, replacement and addition of plumbing components, appliances, equipment and systems.

Section 2902.2 Separate Facilities

Revise as follows:

2902.2 Separate Facilities. Where plumbing fixtures are required, separate facilities shall be provided for each sex. Exceptions:

1. Separate facilities shall not be required for dwelling units and sleeping units.

2. Separate facilities shall not be required in structures or tenant spaces with a total occupant load, including both employees and customers, of 25 or fewer.

3. Separate facilities shall not be required in mercantile occupancies in which the maximum occupant load is 100 of fewer.

4. Separate facilities shall not be required in business occupancies in which the maximum occupant load is 25 or fewer.

Section 2902.6 Small Occupancies

Revise as follows:

Section 2902.6 Small Occupancies. Drinking fountains shall not be required for an occupant load of 30 or fewer.

CHAPTER 33

SAFEGUARDS DURING CONSTRUCTION

Section 3313 Water Supply For Fire Protection

Section 3313 is hereby deleted in its entirety.

2.3 AMENDMENTS FOR THE 2015 INTERNATIONAL MECHANICAL CODE

CHAPTER 1

SCOPE AND APPLICATION

Section 101.1 Title

Revise as follows:

Section 101.1 Title. These regulations shall be known as the Mechanical Code of the Three Affiliated Tribes herein after referred to as "this code."

Section 103.1 General

Revise as follows:

Section 103.1 General. The department of inspections is hereby created and the executive official in charge thereof shall be known as the code official.

Section 103.4 Liability

Add as follows: Section 103.4 The Construction Management Office charged with the enforcement of this code, while acting for the Three Affiliated Tribes in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be rendered civilly or criminally liable personally, and is hereby relieved from personal liability for any damage accruing to persons or property as a result of an act or by reason of an act or omission in the discharge of official duties.

Any suit or criminal complaint instituted against any officer or employee of the Construction Management Office because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this code shall be defended by the legal representative of the jurisdiction until the final termination of the proceedings. The code official or any subordinate shall not be liable for costs in an action, suit or proceeding that is instituted in pursuance of the provisions of this code.

This code shall not be construed to relieve from or lessen the responsibility of any person owning, operating, or controlling any building or structure for any damages to persons or property caused by defects, nor shall the Construction Management Agency or the Three Affiliated Tribes be held as assuming any such liability by reason of the inspection authorized by this code or any permits or certificates issued under this code.

Section 106.4.8 Posting of a permit

Section 106.4.8 is hereby deleted in its entirety.

Section 106.5.2 Fee Schedule

Revise as follows:

106.5.2 Fee schedule. The fees for mechanical work shall be as indicated in the schedule as established by the Construction Management Office.

CHAPTER 2

DEFINITIONS

Section 201.3 Terms defined in other codes.

Revise as follows:

Section 201.3 Terms defined in other codes. Where terms are not defined in this code such terms shall have meanings ascribed to them as in other code publications of the International Code Council. Whenever electrical codes are referenced by the International Code Council (ICC) in the International Building Code, International Residential Code, International Mechanical Code, International Fuel Gas Code, International Energy Conservation Code, International Existing Building Code, it shall mean the most recent versions of the National Electrical Code and the Three Affiliated Tribes Wiring Standards and the most recent versions of the Three Affiliated Tribes Uniform Plumbing Code and the Laws, Rules and Plumbing Installation Standards adopted by the Construction Management Office. Wherever reference is made to flood plain requirements, it shall mean the flood plain management ordinance applicable to the Fort Berthold Reservation.

CHAPTER 3

GENERAL REGULATIONS

Section 305.4 Interval of support

Revise as follows:

Section 305.4 Interval of support. Piping shall be supported at distances not exceeding the spacing specified in Table 305.4, or in accordance with ANSI/MSS SP-58. In addition to the requirements of Table 305.4, piping and tubing shall be supported within 2 feet (610 mm) of every bend or angle.

Section 307.2.2 Drainpipe materials and sizes

Revise as follows: Section 307.2.2 Drainpipe materials and sizes. Components of the condensate disposal system shall be cast iron, galvanized steel, copper, copper alloy, cross-linked polyethylene, polyethylene, ABS, CPVC, PVC, or polypropylene pipe or tubing. Components shall be selected for the pressure and temperature rating of the installation. Joints and connections shall be made in accordance with the applicable provisions of the Three Affiliated Tribes Plumbing Code relative to the material type. Condensate waste and drain line size shall be not less than 3/4- inch (19 mm) internal diameter and shall not decrease in size from the drain pan connection to the place of condensate disposal. Where the drain pipes from more than one unit are manifolded together for condensate drainage, the pipe or tubing shall be sized in accordance with Table 307.2.2.

CHAPTER 4

VENTILATION

Section 401.2 Ventilation Required

Revise as follows:

Section 401.2 Ventilation required. Every occupied space shall be ventilated by natural means in accordance with Section 402 or by mechanical means in accordance with Section 403.

Section 403.1 Ventilation system

Revise as follows:

Section 403.1 Ventilation system. Mechanical ventilation shall be provided by a method of supply air and return or exhaust air. The amount of supply air shall be approximately equal to the amount of return and exhaust air. The system shall not be prohibited from producing negative or positive pressure. The system to convey ventilation air shall be designed and installed in accordance with Chapter 6.

CHAPTER 5

EXHAUST SYSTEMS

Section 504.8.2 Duct Installation

Revise as follows:

504.8.2 Duct installation. Exhaust ducts shall be supported at 4-foot (1219 mm) intervals and secured in place. The insert end of the duct shall extend into the adjoining duct or fitting in the direction of airflow. Ducts shall not be joined with screws. Where dryer exhaust ducts are enclosed in wall or ceiling cavities, such cavities shall allow the installation of the duct without deformation.

Section 505.4 Makeup air required

Revise as follows:

Section 505.4 Makeup air required. Exhaust hood systems capable off exhausting in excess of 400 cfm (0.19m3/s) shall be provided with makeup air at a rate in excess of 400 cfm. Such makeup air systems shall be equipped with a means of closure and shall be automatically controlled to start and operate simultaneously with the exhaust system.

Section 508.2 Compensating hoods

Revise as follows:

Section 508.2 Compensating hoods. Manufacturers of compensating hoods shall provide a label indicating minimum exhaust flow and/or maximum makeup airflow that provides capture and containment of the exhaust effluent. Short circuit compensating hoods are prohibited.

Section 508.2.1 Compensating Hood Make-up Air.

Add as follows:

Section 508.2.1 Compensating hoods shall extract at least 40% of the required exhaust air flow from the kitchen area.

CHAPTER 9

SPECIFIC APPLIANCES, FIREPLACES AND SOLID FUEL-BURNING EQUIPMENT

Section 908.5 Water supply

Revise as follows:

Section 908.5 Water supply. Cooling towers, evaporative coolers and fluid coolers shall be provided with an approved water supply, sized for peak demand. The quality of water shall be provided in accordance with the equipment manufacturer's recommendations. The piping system and protection of the potable water supply system shall be installed as required by the Three Affiliated Tribes Plumbing Code.

CHAPTER 10

BOILERS, WATER HEATERS AND PRESSURE VESSELS

Section 1008.2 Discharge Revise as follows:

Section 1008.2 Discharge. Blowoff valves shall discharge to a safe place of disposal. Where discharging to the drainage system, the installation shall conform to the Three Affiliated Tribes Plumbing Code.

CHAPTER 11

REFRIGERATION

Section 1104.2 Machinery rooms

Add as follows:

Section 1104.2 Machinery rooms is hereby amended to add the following new third exception:

3. If an existing refrigerating system is replaced or if an existing refrigeration plant is increased by not more than 50% of its original capacity, but not more than 100 tons per system using a non-flammable class A1 or B1 refrigerant and the refrigeration machinery room was not

provided in the original installation prior to 1994, a refrigeration machinery room shall not be required. If the existing refrigeration is not located in general machinery room separated from occupied spaces, a refrigeration machinery room shall be provided. The space containing the refrigeration machinery shall meet the requirement of Section 1104.3.4, protection room refrigerant decomposition, and Section 1105.3 requiring refrigerant detection. If the requirements of 1104.3.4 and 1105.3 cannot be met, a refrigeration machinery room shall be provided.

CHAPTER 12

HYDRONIC PIPING

Section 1208.1 General

Revise as follows:

Section 1208.1 General. New hydronic piping shall be isolated and tested hydrostatically at not less than 100 psi (689 kPa). The duration of the test shall be not less than 15 minutes.

2.4 AMENDMENTS FOR 2018 INTERNATIONAL FUEL GAS CODE

CHAPTER 1

SCOPE AND ADMINISTRATION

Section 101.1 Title

Revise as follows:

Section 101.1 Title. 101.1 These regulations shall be known as the Fuel Gas Code of the Three Affiliated Tribes hereinafter referred to as "this code."

Section 103.4 Liability

Revise as follows: Section 103.4 Liability. The Construction Management Office employees charged with the enforcement of this code, while acting for the Three Affiliated Tribes in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be rendered civilly or criminally liable personally, and is hereby relieved from all personal liability for any damage accruing to persons or property as a result of an act or by reason of an act or omission in the discharge of official duties. Any suit instituted against any officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this code shall be defended by the legal representative of the jurisdiction until the final termination of the proceedings. The code official or any subordinate shall not be liable for costs in an action, suit or proceeding that is instituted in pursuance of the provisions of this code. This code shall not be construed to relieve from or lessen the responsibility of any person owning, operating, or controlling any building or structure for any damages to persons or property caused by defects, nor shall the Construction Management Office or the Three Affiliated Tribes be held as assuming

any such liability by reason of the inspection authorized by this code or any permits or certificates issued under this code.

Section 106.6.2 Fee Schedule

Revise as follows:

Section 106.6.2 Fee Schedule. The fees for work shall be as indicated in the schedule as established by the Three Affiliated Tribes .

CHAPTER 2

DEFINITIONS

Section 201.3 Terms defined in other codes.

Revise as follows:

Section 201.3 Terms defined in other codes. Where terms are not defined in this code such terms shall have meanings ascribed to them as in other code publications of the International Code Council. Whenever electrical codes are referenced by the International Code Council (ICC) in the International Building Code, International Residential Code, International Mechanical Code, International Fuel Gas Code, International Energy Conservation Code, International Existing Building Code, it shall mean the most recent versions of the National Electrical Code and the Three Affiliated Tribes Wiring Standards and the most recent versions of the Three Affiliated Tribes Uniform Plumbing Code and the Laws, Rules and Plumbing Installation Standards of the Three Affiliated Tribes adopted by the Construction Management Office. Wherever reference is made to flood plain requirements, it shall mean the flood plain management ordinance applicable to the Fort Berthold Reservation.

CHAPTER 3

GENERAL REGULATIONS

Section 304.6.1 Two permanent openings method

Revise as follows:

Section 304.6.1 Two permanent openings method.

***

Where directly communicating with the outdoors, or where communicating with the outdoors through vertical ducts, each opening shall have a minimum free area of 1square inch per 4,000 Btu/h (550 mm2/ kW) of total input rating of all appliances in the enclosure.

***

Figures 304.6.1(1) and 304.6.1(2).

Figure 304.6.1 (1) is hereby deleted in its entirety.

Figure 304.6.1 (2) is hereby deleted in its entirety.

Section 304.6.2 One permanent opening method

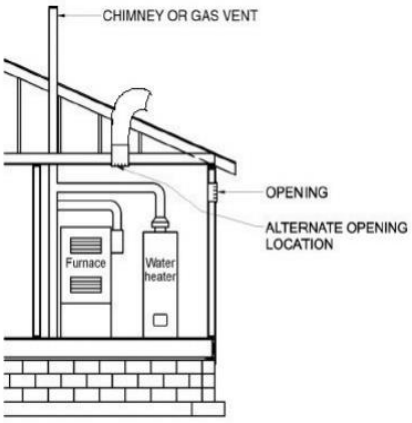
Revise as follows:

Section 304.6.2 One permanent opening method. One permanent opening, commencing within 12 inches (305 mm) of the top of the enclosure, shall be provided. The *appliance* shall have clearances of at least 1 inch (25 mm) from the sides and back and 6 inches (152 mm) from the front of the appliance. The opening shall directly communicate with the outdoors or through a vertical or horizontal duct to the outdoors and shall have a minimum free area of 1 square inch per 3,000 Btu/h (734mm2/kW) of the total input rating of all appliances located in the enclosure and not less than the sum of the areas of all vent connectors in the space.

Figure 304.6.2

Revise as follows:

Figure 304.6.2 is hereby amended as shown below:



Section 304.11 Combustion air ducts

Revise as follows and add the exception:

Section 304.11 Combustion air ducts. Ducts shall not terminate in an attic space.

CHAPTER 4

GAS PIPING INSTALLATIONS

Section 403.3 Other materials

Revise as follows:

Section 403.3 Other materials. Material not covered by the standards specifications listed herein shall be investigated and tested to determine that it is safe and suitable for the proposed service,

and, in addition, shall be recommended for that service by the manufacturer and shall be approved by the code official. Listed LPG hose may be used with natural gas when used for temporary heating at a maximum length of 50 feet.

Section 403.10.1.1 Pipe joints

Add as follows:

Section 403.10.1.1 Pipe joints. Gas supply systems with pressures 5 psig or greater and gas pipe joints 2 ½ inches or larger, regardless of pressure, shall be welded.

Section 403.10.5 Metallic fittings

Revise as follows:

Section 403.10.5 Metallic fittings.

1. Threaded fittings in sizes 2 ½ inches or larger shall not be used except where approved.

Section 406.4 Test pressure measurement

Revise as follows:

Section 406.4 Test pressure shall be measured with a manometer or with a pressure-measuring device designed and calibrated to read, record, or indicate a pressure loss caused by leakage during the pressure test period. The source of pressure shall be isolated before the pressure tests are made. Dial gauges used to measure test pressures shall be performed with gauges of 2 psi increments or less and have a range not exceeding 100 psi unless otherwise approved.

Section 406.4.1 Test pressure

Revise as follows:

Section 406.4.1 Test pressure. The test pressure to be used shall be no less than 11/2 times the proposed maximum working pressure, but not less than 25 psig irrespective of design pressure. Where the test pressure exceeds 125 psig (862 kPa gauge), the test pressure shall not exceed a value that produces a hoop stress in the piping greater than 50 percent of the specified minimum yield strength of the pipe.

Section 408.2 Drips

Revise as follows:

Section 408.2 Drips. Where wet gas exists, a drip shall be provided at any point in the line of pipe where condensate could collect.

Section 411.2 Manufactured home connections

Revise as follows:

Section 411.2 Manufactured home connections. Manufactured homes shall be connected to the distribution piping system by listed and labeled connectors in compliance with ANSI Z21.75/CSA 6.27 and installed in accordance with the manufacturer's installation instructions.

Section 415.1 Interval of support.

Add as follows:

Section 415.1 Interval of support. Piping shall be supported at intervals not exceeding the spacing specified in Table 415.1. Spacing of supports for CSST shall be in accordance with the CSST manufacturer's instructions. In addition to the requirements of Table 415.1, piping and tubing shall be supported within 2 feet of every bend or angle.

CHAPTER 5

CHIMNEYS AND VENTS

Section 501.12 Residential and low-heat appliances flue lining systems

Revise as follows:

Section 501.12 Residential and low-heat appliances flue lining systems. Flue lining systems for use with residential-type and low-heat appliances shall be limited to the following:

1. Clay flue lining complying with the requirements of ASTM C 315 or equivalent when each appliance connected into the masonry chimney has a minimum input rating greater than 400,000 Btu/h. Clay flue lining shall be installed in accordance with the International Building Code.

2. Listed chimney lining systems complying with UL1777.

3. Other approved materials that will resist, without cracking, softening or corrosion, fluegases and condensate at temperatures up to 1,800°F (982°C).

    a. Aluminum (1100 or 3003 alloy or equivalent) not less than 0.032 inches thick to 8 inches diameter.

    b. Stainless steel (304 or 430 alloy or equivalent) not less than 26 gauge (0.018 inches thick) to 8 inches diameter or not less than 24 gauge (0.024 inches thick) 8 inches diameter and larger.

When a metal liner is used other than a listed chimney liner a condensation drip tee shall be installed and supported in an approved manner.

Section 503.5.3 Masonry chimneys

Revise as follows:

Section 503.5.3 Masonry chimneys shall be built and installed in accordance with NFPA 211 and shall be lined as per Section 501.12.

Section 503.5.6.1 Chimney lining

Revise as follows:

Section 503.5.6.1 Chimneys shall be lined in accordance with NFPA 211 and Section 501.12.

Exception: Where an existing chimney complies with Sections 503.5.6 through 503.5.6.3 and its sizing is in accordance with Section 503.5.5, its continued use shall be allowed when, in more than one appliance venting system the secondary appliance, such as a water heater, is replaced and the primary heating appliance remains.

CHAPTER 6

SPECIFIC APPLIANCES

Section 614.8.2 Duct installation

Revise as follows:

Section 614.8.2 Duct installation. Exhaust ducts shall be supported at 4-foot (1219 mm) intervals and secured in place. The insert end of the duct shall extend into the adjoining duct or fitting in the direction of airflow. Ducts shall not be joined with screws.

2.5 AMENDMENTS FOR THE 2018 INTERNATIONAL ENERGY CONSERVATION CODE

CHAPTER 2

DEFINITIONS

Section 201.3 Terms defined in other codes.

Revise as follows: Section 201.3 Terms defined in other codes. Where terms are not defined in this code such terms shall have meanings ascribed to them as in other code publications of the International Code Council. Whenever electrical codes are referenced by the International Code Council (ICC) in the International Building Code, International Residential Code, International Mechanical Code, International Fuel Gas Code, International Energy Conservation Code, International Existing Building Code, it shall mean the most recent versions of the National Electrical Code and the Three Affiliated Tribes Wiring Standards adopted and the most recent versions of the Three Affiliated Tribes Uniform Plumbing Code and the Laws, Rules and Plumbing Installation Standards adopted by the Construction Management Office. Wherever reference is made to flood plain requirements, it shall mean the flood plain management ordinance applicable to the Fort Berthold Reservation.

CHAPTER 4

RESIDENTIAL ENERGY EFFICIENCY

Table R402.1.2 Insulation and Fenestration Requirements by Component

Revise as follows:

Climate Zone	###	Wood Frame Wall R-Value	###	Basement Wall R-Value
6	###	21 or 13 +5h,i	###	10/13
7 and 8	###	21 or 13 +5h,i	###	10/13
(Balance of table remains the same)				

Table R402.1.4 Equivalent U-Factors

Revise as follows:

Climate Zone	###	Frame Wall U-Factor	###	Basement Wall U-Factor
6	###	0.057	###	0.059
7 and 8	###	0.057	###	0.059
(Balance of table remains the same)				

Section R402.4 Air leakage (Mandatory)

Add the following exception:

Section R402.4 Air leakage (Mandatory)Exception: Dwelling units of R-2 occupancies and multiple single-family dwellings shall be permitted to comply with IECC Section C402.5.

Section R402.4.1.2 Testing

Revise as follows:

Section R402.4.1.2 Testing. The building or dwelling unit shall be tested and verified as having an air leakage rate not exceeding five air changes per hour in Climate Zones 1 through 8.

Section R402.4.1.3 Visual Inspection Option

Add as follows:

Section R402.4.1.3 Visual Inspection Option. Building envelope tightness and insulation shall be considered acceptable when installed in accordance with Table R402.4.1.1 - "Air Barrier and Insulation" and has been field verified.

Section R403.3.5 Building Cavities (Mandatory)

Revise as follows:

Section R403.3.5 Building Cavities (Mandatory). Building framing cavities shall not be used as supply ducts.

Section R403.6 Mechanical Ventilation (Mandatory)

Revise as follows:

Section R403.6 Ventilation (Mandatory)

Table R405.5.2(1)

Revise as follows:

Building Component	Standard Reference Design	Proposed Design
Air exchange rate	Air leakage rate of 5 air changes per hour in Climate Zones 1 through 8 at a pressure of 0.2 inches w.g (50 Pa). (Balance is unchanged.)	For residences that are not tested, the same air leakage rate as the standard reference design. For tested residences, the measured air exchange rate. The mechanical ventilation rated shall be in addition to the air leakage rate and shall be as proposed.

2.6 AMENDMENTS FOR THE 2018 INTERNATIONAL EXISTING BUILDING CODE

CHAPTER ONE

SCOPE AND ADMINISTRATION

Section 101.1 Title

Revise as follows:

Section 101.1 Title. These regulations shall be known as the Existing Building Code of the Three Affiliated Tribes hereinafter referred to as "this code."

Section 104.2.2.1 Building evaluation

Revise as follows:

Section 104.2.2. l Building evaluation. The code official is authorized to require an existing building to be investigated and evaluated at the owner's expense by a registered design professional based on the circumstances agreed upon at the preliminary meeting. The design professional shall notify the code official if any potential noncompliance with the provisions of this code is identified.

Section 104.8 Liability

Revise as follows:

Section 104.8 Liability. The Construction Management Office charged with the enforcement of this code, while acting for the Three Affiliated Tribes in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be rendered liable personally and is hereby relieved from personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission in the discharge of official duties. Any suit instituted against an officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this code shall be defended by legal representative of the jurisdiction until the final termination of the proceedings. The code official or any subordinate shall not be liable for cost in any action, suit, or proceeding that is instituted in pursuance of the provisions of this code.

This code shall not be construed to relieve from or lessen the responsibility of any person owning, operating, or controlling any building or structure for any damages to persons or property caused by defects, nor shall the Construction Management Office or the Three Affiliated Tribes be held as assuming any such liability by reason of the inspection authorized by this code or any permits or certificates issued under this code.

Section 105.2 Work exempt from permit

Revise as follows:

Section 105 .2 Work exempt from permit. Exemptions from permit requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of the Three Affiliated Tribes. Permits shall not be required for the following:

Building:

***

7. Reroofing

8. Window Replacement

CHAPTER 2

DEFINITIONS

Section 201.3 Terms defined in other codes.

Revise as follows:

Section 201.3 Terms defined in other codes. Where terms are not defined in this code such terms shall have meanings ascribed to them as in other code publications of the International Code Council. Whenever electrical codes are referenced by the International Code Council (ICC) in the International Building Code, International Residential Code, International Mechanical Code, International Fuel Gas Code, International Energy Conservation Code, International Existing Building Code, it shall mean the most recent versions of the National Electrical Code and the Three Affiliated Tribes Wiring Standards and the most recent versions of the Three Affiliated Tribes Uniform Plumbing Code and the Laws, Rules and Plumbing Installation Standards adopted by the Construction Management Office. Wherever reference is made to flood plain requirements, it shall mean the flood plain management ordinance applicable to the Fort Berthold Reservation.

Section 1401.2 Conformance

Revise as follows:

Section 1401.2 Conformance. Buildings to be moved within this jurisdiction shall comply with provisions of this chapter. Buildings to be moved into this jurisdiction shall comply with the provisions of the Three Affiliated Tribes Building Code for new buildings and shall be certified as to that compliance by the Construction Management Office.

AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG)

Section 1.4.1 of the Three Affiliated Tribes Building Code requires that every building or facility subject to the federal Americans with Disabilities Act must conform to the accessibility standards of the Americans with Disabilities Act Accessibility Guidelines ADAAG). The law also requires the Construction Management Office to obtain from any person preparing plans and specifications for a building or facility subject to the Americans with Disabilities Act, a statement that the plans and specifications are, in the professional judgment of that person, in conformance with the ADAAG.

CODE ENFORCING JURISDICTION AS OF 2020		
COUNTIES	**CONTACT PERSON**	**PHONE NUMBER**
Adams	Kim Frank	567-2990
Billings	Stacey Swanson	623-4810
Burleigh	Mitch Flanagan	221-3728
Dunn	Reinhard Hauck	573-4448
Grand Forks	Carole McMahon	780-8421
McKenzie	Curt Huus	444-7167
Morton	Tom Liebel	667-3325
Mountrail	Liz Hollowell	628-2909
Stark	Ken Good	842-2120
Williams	Doug Lalim	577-4567
Ward	Leo Schmidt	857-6429
CITIES	**CONTACT PERSON**	**PHONE NUMBER**
Abercrombie	Todd Johnson	640-3724
Alexander	Anne Mrachek	828-3461
Amenia	Linda Sell	347-5554
Argusville	Cheri Wetzel	212-3369
Barney	Kevin Youngquist	640-1217
Beach	Kimberly Nunberg	872-4103
Belfield	Mel Zent	264-7748
Beulah	Russell Duppong	873-4637
Bismarck	Brady Blaskowski	355-1465
Brinsmade	Michele Ferrell	466-2069
Buchanan	Kim Lees	252-9584
Bucyrus	Dean Larson	853-2490
Burlington	Rod Schwandt	852-5233
Cando	Derrick Childs	351-8476
Carrington	Daniel Trosen	652-2911
Carson	Sharon Ruscheinsky	622-3395
Casselton	Jay Sandvig	347-4861
Cavalier	Katie Werner	265-8800
Center	Danielle Butler	794-3650
Christine	Todd Johnson	640-3724
Coleharbor	Jerome Eman	442-3454
DesLacs	Tony Tudahl	725-4998
Devils Lake	Mark Lange	662-7600
Dickinson	Leonard Schwindt	456-7803
Drake	Sharon Toy	465-3794
Dunn Center	Linda Kittilson	548-8130
Elgin	Quentin Pfutzenreuter	584-3001
Ellendale	James Eberle	349-3252
Enderlin	Cyndee Chesley	437-3476
Fargo	Bruce Taralson	476-4147
Fordville	Wendell Pfannsmith	229-3279
Forman	Jean Bopp	724-3673
Gackle/Logan	Linda Zenker	485-3331
Garrison	Diane Affeldt	463-2600
Gladstone	Mel Zent	483-2618

SECTION 3: THREE AFFILIATED TRIBES BUILDING CODE -REGULATIONS

3.1 Background. These regulations were adapted from, and are intended to be consistent with, North Dakota Administrative Rule (Article 108, Chapter 108-01).

3.2 Definitions.

3.2.1 "DCS" means the North Dakota Division of Community Services.
3.2.2 "CMO" means the Construction Management Office of the Three Affiliated Tribes
3.2.3 "IBC" means the International Building Code.
3.2.4 "ICC" means the International Code Council.
3.2.5 "IFGC" means the International Fuel Gas Code.
3.2.6 "IMC" means the International Mechanical Code.
3.2.7 "IRC" means the International Residential Code.

3.2.8 "Qualified appointed representative" means a code-knowledgeable individual designated by the Construction Management Office to vote on the proposed published versions of the IBC, IRC, IMC, and IFGC and recommendations on proposed amendments from the building code advisory committee.

3.3 Intent.

It is the intent of this chapter to prescribe the rules for implementing, updating, and amending the nationally recognized standards for construction, alteration, movement, demolition, repair, and use of buildings on the Fort Berthold Reservation.

3.4 Scope.

3.4.1 This chapter supplements all laws defined within the Three Affiliated Tribes Building Code relating to construction, alterations, improvements, and siting of buildings, unless specifically exempted.

3.4.2 This chapter applies to all tribal government buildings.

3.4.3 This chapter applies to all schools located on the Fort Berthold Reservation.

3.5 Implementation.

The Construction Management Office is responsible for implementing the administrative rules for implementing, updating, and amending the Three Affiliated Tribes Building Code so that it remains consistent with the North Dakota State Building Code. The CMO is responsible for assuring that plans and specifications for alterations and new construction of their buildings comply with the Three Affiliated Tribes Building Code, and that all work is inspected for compliance with the Three Affiliated Tribes Building Code.

3.6 Inquiries.

Inquiries regarding the Three Affiliated Tribes building code may be addressed to:

Construction Management Office
404 Frontage Road

New Town, ND 58763

3.7 North Dakota building code advisory committee.

North Dakota's building code advisory committee consists of nine members from organizations as described in N.D. Admin Code 108-01-01-08.

3.8 Updating and amending the Three Affiliated Tribes building code.

The CMO shall periodically meet with the DCS and the North Dakota building code advisory committee to review any proposed changes to the State's building code.

3.9 Voting.

Voting on the State's recommendations for amendments to the codes is governed by N.D. Admin Code 108-01-01-10 and N.D. Admin Code 108-01-01-11. A qualified appointed representative from the Three Affiliated Tribes shall be entitled to vote on recommendations for amendments.

3.10 Publication of amendments.

The DCS will publish, distribute, and make available a state building code book that identifies the published versions of the IBC, IRC, IMC, and IFGC and amendments adopted that are the current state building code. Upon DCS publishing its updated code book, the CMO shall work in coordination with DCS to update the Three Affiliated Tribes Building Code to ensure it remains consistent with the North Dakota State Building Code.

3.11 Limitations.

Certain requirements relating to the construction of manufactured homes (section 1.3) and accessibility standards (section 1.5) may not be amended.

3.12 Appendix chapters. The appendix chapters of the IBC, IRC, IMC, and IFGC are not part of the Three Affiliated Tribes building code and shall not be adopted by the Three Affiliated Tribes unless doing so would maintain consistency with those standards specifically adopted by the state of North Dakota.

SECTION 4: THREE AFFILIATED TRIBES ELECTRICAL LAWS

4.1: Definitions. In this chapter, unless the context or subject matter otherwise requires:

4.1.1 "Apprentice electrician" means an individual who is learning the trade under the personal supervision of a state or Three Affiliated Tribes-licensed electrician.
"Board" means the North Dakota electrical board.

4.1.2 "Class B electrician" means an individual who has the necessary qualifications, training, and technical knowledge to wire, install, and repair electrical apparatus and equipment in accordance with the standard rules and regulations governing such work, who has eighteen months' experience in farmstead or residential wiring, and passed an examination before the Construction Management Office based upon the national electrical code as it applies to farmstead or residential wiring.

4.1.3 "Construction Management Office" means the Construction Management Office of the Three Affiliated Tribes.

4.1.4 "Journeyman electrician" means an individual who has the necessary qualifications, training, and technical knowledge to wire, install, and repair electrical apparatus and equipment and power limited systems in accordance with the standard rules and regulations governing such work.

4.1.5 "Licensee" means an individual who holds a valid license issued by the Construction Management Office.

4.1.6 "Master electrician" means an individual who has the necessary qualifications, training, experience, and technical knowledge to plan, lay out, and supervise the installation and repair of electrical wiring apparatus, and equipment for electric light, heat, power, and power limited systems, in accordance with the standard rules and regulations governing such work.

4.1.7 "Nonelectrical system" means a system as defined by the articles contained in chapter 8 and other articles which contains class II or class III circuits and systems as defined by the national electrical code, as adopted by the Construction Management Office. Although the Construction Management Office may expand this definition, the Construction Management Office may not narrow this definition. The term does not include a circuit or system that is installed:

a. Within an area of special occupancies, as defined under articles 500 through 517 of the national electrical code.
b. For heat, light, or power.
c. For the control of heat, light, or power, unless the circuit or system employs digital communication.

4.1.8 "Power limited electrician" means an individual who has the necessary qualifications, training, experience, and technical knowledge to plan, layout, and supervise the installation and repair of a power limited system.

4.1.9 "Power limited system" means a system as defined by the articles contained in chapter 8 and other articles which contains class II or class III circuits and systems as defined by the national electrical code, as adopted by the Construction Management Office.

Although the Construction Management Office may expand this definition, the term does not include a nonelectrical system.

4.2 State electrical board - Members - Terms of office -Vacancies.

The state electrical board is comprised of the members identified under N.D.C.C. § 43-09-02. Meetings of the state board are governed by N.D.C.C. § 43-09-06.

4.3 Powers and duties of the Construction Management Office.

The Construction Management Office is authorized to enter into a Memorandum of Understanding ("MOU") with the state electrical board for the Construction Management Office to license electricians for the purpose of working on the Fort Berthold Reservation. The MOU shall provide for the Construction Management Office to examine applicants and approve licensure in alignment with the state board's process and procedures. It shall also provide for the Construction Management Office to administer and oversee continuing education requirements. The Construction Management Office shall be primarily responsible for overseeing the requirements of this section, but may enter into an MOU with the state board for resources and technical assistance to support enforcement.

The Construction Management Office shall also work in coordination with the state board to appoint qualified inspectors. Upon receipt of notice of completion of any electrical wiring or power limited system installation involving a value of five hundred dollars or more, the inspector shall inspect the electrical or power limited system installation and approve or condemn that installation. The inspector shall make a report of the inspection on forms prescribed by the Construction Management Office. Any forms prescribed by the Construction Management Office shall be consistent with those prescribed by the state board.

4.4 License required - Examination – Construction Management Office to issue license.

4.4.1 A person may not undertake or plan to undertake with another person to plan, lay out, supervise, install, make additions, make alterations, or make repairs, in the installation of wiring, apparatus, or equipment for electric light, heat, or power or for a power limited system on the Fort Berthold Reservation unless licensed by the Construction Management Office.

4.4.2 The Construction Management Office shall examine an applicant for licensure to work as an electrician on the Fort Berthold Reservation and if, upon a technical and practical examination, the applicant is found to possess the required knowledge and skill and to be versed in the laws of electricity, the applicant shall be issued a license in the class for which the applicant was examined. The license must be signed by an authorized representative of the Construction Management Office.

4.4.3 Each licensee or permit holder shall report that individual's licensing or renewals to Construction Management Office if operating on the Fort Berthold Reservation.

4.5 Conviction not bar to licensure - Exceptions.

Conviction of an offense does not disqualify a person from licensure unless the Construction Management Office determines that the offense has a direct bearing upon a person's ability to

serve the public as an electrician or that, following conviction of any offense, the person is not sufficiently rehabilitated.

4.6 Advertising prohibited - Exceptions - Liability - Penalty.

4.6.1 Except as provided in this section, if a license is required under section 4 of this chapter, a person may not advertise to contract for electrical services without being licensed as or being associated with a class B electrician, master electrician, or power limited electrician, unless that person intends to contract the electrical services with a licensed electrical contractor.

4.6.2 If a person associates with an electrician under 4.6.1 and that association ends, that person is jointly and severally liable for any contracts entered under that association.

4.6.3

a. A person violating this section is guilty of a class B misdemeanor for a first conviction, but no fine in excess of one hundred dollars and no term of imprisonment may be imposed.
b. A person violating this section is guilty of a class A misdemeanor for a second or subsequent conviction, but the penalties are as follows:

(1) For a second conviction, no fine in excess of one thousand dollars and no term of imprisonment may be imposed.

(2) For a third or subsequent conviction, a fine not to exceed one thousand dollars, or imprisonment not to exceed thirty days in tribal jail, or both, may be imposed.

4.7 Types of licenses.

The classes of electricians who may be licensed under section 4 are:

a. Master electrician.
b. Journeyman electrician.
c. Class B electrician.
d. Power limited electrician.

4.8 Qualifications. An applicant for an electrician's license must have the following experience and training:

4.8.1 For licensure as a master electrician, an applicant must have completed one year's experience as a licensed journeyman electrician.

4.8.2 For licensure as a journeyman electrician, an applicant must have:

a. Completed eight thousand hours experience in installing and repairing electrical wiring, apparatus, and equipment, which experience may not be obtained in less than three years.
b. Effective for an applicant who registered with the board or Construction Management Office as an apprentice after January 31, 2008, completed at least one of the following:

(1) Successfully completed apprenticeship training approved by the Construction Management Office or state board and completed eight thousand hours' experience in installing and repairing electrical wiring, apparatus, and equipment.

(2) Successfully completed an appropriate course of study, which may not be less than two years or the equivalent of two years, at a Construction Management Office-approved institution of higher education and completed eight thousand hours' experience in installing and repairing electrical wiring, apparatus, and equipment. The Construction Management Office may determine equivalent hours of education that may be applied as a credit against the eight thousand hours' experience requirement under this paragraph.

4.8.3 For licensure as a class B electrician, eighteen months' experience in farmstead or residential wiring.

4.8.4 For licensure as a power limited electrician:

a. Hold a valid Construction Management Office-recognized tradesman certification; or

b. Possess the necessary work experience and training, as approved by the Construction Management Office.

4.9 Examination - Requirements.

Each applicant for an electrician's license shall pay an examination fee determined by the Construction Management Office and shall take an oath and submit written evidence that the applicant has had the required experience.

4.10 License fees.

Examination and annual license fees required to be paid for an electrician's license as established by the Construction Management Office.

4.11 Apprentice electrician registration.

An apprentice electrician shall register with Construction Management Office within the first six months of employment and shall pay an annual registration fee in an amount set by the Construction Management Office . An apprentice electrician may work on installations only under the personal supervision of a licensed electrician as provided in section 4.17.

4.12. Inspectors - License required - Exception.

An individual employed by the Construction Management Office to inspect electrical or power limited system installations on the Fort Berthold Reservation must be licensed as a journeyman electrician or master electrician.

4.13 Renewal of license - Denial, suspension, or revocation of licenses.

4.13.1 An electrician's license may be issued for a term of only one year, but may be renewed without examination upon the payment of the proper fee. If the licensee fails to renew the license for a period of three consecutive years or more, the licensee is required to appear for re-examination. The Construction Management Office may deny, suspend, revoke, or refuse to renew any license issued or applied for under this chapter for any of the following reasons:

a. Failure or refusal to maintain or adhere to the minimum standards set forth in the electrical code referred to in section 4.20.
b. Any cause for which the issuance of the license could have been refused had that information then existed and been known to the Construction Management Office or the board.
c. Commitment of any act of gross negligence, incompetency, or misconduct in the practice of the profession regulated under this chapter.
d. Material misstatement, misrepresentation, or fraud in obtaining the license.
e. After due notice, failed or refused to correct, within the specified time, any installation not in compliance with these laws.
f. Failure or refusal to make deposit or acquire public liability insurance as required by section 4.19.
g. Failure to pay or enter a written contract for repayment, under a payment schedule acceptable to the Construction Management Office, any financial obligation to the Construction Management Office.
h. Failure to furnish certification of completion of continuing education as required under section 4.19.

4.13.2 If the Construction Management Office does not approve an individual's license for the purposes of working as an electrician on the Fort Berthold Reservation that individual may appeal to Fort Berthold District Court.

4.14 Education

An applicant for renewal of an electrician's license pursuant to section 4.13 must have successfully completed at least eight hours each biennium, of education relating to the standards set forth in section 4.20 or as otherwise prescribed by the Construction Management Office. The Construction Management Office may not require more than sixteen hours of continuing education in each biennium. The state board conducts education sessions each year at not fewer than six locations throughout the state. Attendance at such sessions, or attendance at other education sessions certified by the state board as approved, fulfills the educational requirements of this section.

4.15 When license not required.

The following persons are not required to be licensed by and are not subject to regulation by the Construction Management Office under this chapter:

4.15.1 Employees of public utilities engaged in the manufacture and distribution of electrical energy while engaged in work directly pertaining to the manufacture and distribution of electrical energy. This exemption terminates at the first point of service attachment, except for the installing or testing of electric meters and measuring devices and the maintenance of electric meters and measuring devices.

4.15.2 Employees, independent contractors, or subcontractors of a company that is a telecommunication carrier or that is a satellite or cable systems provider, while acting in the scope of employment or the terms of the contract.

4.15.3 Employees, independent contractors, or subcontractors of dealers in household appliances, such as room air conditioners, clothes dryers, dishwashers, freezers, garbage disposals, refrigerators, stoves, washing machines, water heaters, and similar appliances while installing and connecting such appliances to an existing electrical receptacle.

4.15.4 A representative of a manufacturing firm that is installing or modifying controls of wiring solely on industrial machinery that is for use by the firm itself, and performed by or under the direction of a registered professional engineer who issues a Construction Management Office-accepted evaluation, which is to be maintained with the equipment.

4.15.5 An individual who is installing a nonelectrical system.

4.15.6 An individual who is installing a power limited system that is installed within a residential dwelling or is installed with a factory connector or cord powered by an existing electrical receptacle.

4.16 Journeyman electrician's permit.

The Construction Management Office, upon the recommendation of one master electrician and two journeyman electricians, may issue a permit for a journeyman electrician to engage in the journeyman electrician's trade until the next scheduled examination of applicants. Such permit is not renewable.

4.17 Apprentice.

An individual may serve as an apprentice under a licensed master electrician or power limited electrician, but a master electrician or power limited electrician may not allow an apprentice to work on any installation without personal supervision of a licensed electrician.

4.18 Report of work done by licensee.

Every person licensed under the provisions of this chapter and doing electrical work on the Fort Berthold Reservation shall report the same to the Construction Management Office forms furnished by the Construction Management Office for that purpose.

4.19 Installations made with master electrician, class B electrician, or power limited electrician - Requirement for liability insurance.

4.19.1 A contract, agreement, or undertaking with another for the installation of electrical wiring or power limited wiring or the installation of electrical or power limited system parts of other apparatus may not be entered by anyone other than a master electrician or power limited electrician. A class B electrician may not enter a contract, undertaking, or agreement for the installation of electrical wiring, except for:

a. Farmstead electrical wiring; or
b. Residential electrical wiring in one or two family dwellings located in a segment with a population of two thousand five hundred or fewer.

4.19.2 If a licensee is acting as a contractor, that licensee shall submit to the Construction Management Office evidence of the existence of public liability insurance with a licensed insurance carrier, with policy limits of at least five hundred thousand dollars.

4.20 Standards for wiring, apparatus, and equipment.

All electrical and power limited wiring, apparatus, or equipment must comply with the rules of the Construction Management Office under authority of the laws of the Three Affiliated Tribes and in conformity with the approved methods of construction for safety to life and property. The regulations in the national electrical code and the national electrical safety code as approved by the American national standards institute are prima facie evidence of these approved methods. Although the Construction Management Office, with the authorization and approval of the Tribal Business Council, may make more stringent requirements by ordinance, application of the ordinance must be limited to individuals licensed by the Construction Management Office under this chapter. An electrical or power limited system installation may not be connected for use until proof has been furnished to the person supplying electrical energy that there is compliance with the applicable regulations. The manufacturer of a new manufactured building or modular unit shall make any changes required for the proof within fourteen days from the notice that the building or unit does not comply with the applicable regulations. This section does not apply to the movement of a new manufactured building or modular unit onto or within the exterior boundaries of the Fort Berthold Reservation before the process of being connected for use.

4.21 Inspection of installation - Condemnation.

4.21.1 The Construction Management Office is authorized to enter into a Memorandum of Understanding ("MOU") with the state board to facilitate Construction Management Office inspections of electrical installations and power limited system installations located on the Fort Berthold Reservation in accordance with state board standards. If there is a disagreement between an electrician and an inspector over interpretation or over a correction for violation issued by any inspector, the Construction Management Office shall review the identified disagreement and render a final decision, which either party may appeal to the Construction Management Office.

4.21.2 The Construction Management Office may condemn installations hazardous to life and property or may order specific corrections to be made. The Construction Management Office may order disconnection of service after notice to the owner of the property. The order is subject to the owner's right of appeal to the Construction Management Office. A condemned installation may not be reconnected for service until proof has been furnished that the installation has been brought up to the required standards.

4.21.3 The Construction Management Office is authorized to charge a master electrician, class B electrician, or power limited electrician responsible for the installation a fee for inspections.

4.21.4 The Construction Management Office is authorized to make provisions for inspection of all electrical and power limited systems installed within the exterior boundaries of the

Fort Berthold Reservation. The Construction Management Office shall register the name of the inspector within ten days of appointment.

4.22 Criminal penalty - Civil proceedings. A person that violates any of the provisions of this chapter is guilty of a class B misdemeanor. In addition to criminal proceedings, the Construction Management Office may commence tribal court proceedings as follows:

4.22.1 The Construction Management Office may issue a cease and desist order against a person allegedly making or offering to make installations in violation of section 4.4 or 4.6 based upon information provided to the Construction Management Office by its inspectors or other persons, by investigation reports, affidavits, complaints of witnesses, or oral testimony given to the Construction Management Office. Violation of the cease and desist order may be considered by the tribal court in issuing a temporary or permanent restraining order and in ordering the payment of costs and attorney's fees in proceedings authorized under this section.

4.22.2 The Construction Management Office may apply to the Fort Berthold District Court for a temporary or permanent injunction, enjoining persons from performing, advertising, or contracting for making electrical installations without a valid license issued by the Construction Management Office in violation of section 4.4 or 4.6. The tribal court may not require a written undertaking, security, or bond as a basis for issuing any temporary or permanent restraining order under this section unless the tribal court specifically orders and states the basis for requiring the security. Upon a determination that a violation of section 4.4 or 4.6 has occurred, the tribal court may assess against the defendants the actual costs incurred and reasonable attorneys' fees necessary for the investigation and court proceedings against the unlicensed person.

4.23 License to nonresidents - Reciprocity.

To the extent that other jurisdictions which provide for the licensing of electricians provide for similar action, the Construction Management Office may grant licenses of the same grade or class to electricians licensed by other jurisdictions, upon payment by the applicant of the required fee, after being furnished with proof that the qualifications of the applicant are equal to the qualifications of holders of similar licenses operating on the Fort Berthold Reservation and in North Dakota.

4.24 Exemption for coal mines.

The jurisdiction of the Construction Management Office and other requirements of this chapter do not apply to installations, wiring, apparatus, or equipment that are part of a coal mine.

SECTION 5: THREE AFFILIATED TRIBES ELECTRICAL REGULATIONS

SECTION 5.1 - DEFINITIONS, GENERAL STATEMENT OF POLICY AND INTERPRETATIVE RULES

5.1.1. Definitions.

The terms used throughout this title have the same meaning as in the National Electrical Code except:

a. "Correction order", also marked as FS, indicates a correction is necessary before installation will be considered approved by the Construction Management Office. It means a notice, written by an electrical inspector to the person responsible for the electrical installation, stating violations and noncompliance of rules and regulations as listed shall be corrected within a designated time.
b. “E-cert” is an electronic version of a wiring certificate.
c. “Kitchen” means an area where food is prepared that includes a sink and one or more permanent cooking appliances.
d. “Service” means the conductors and equipment for delivering electric energy from the serving utility to the wiring system of the premises served.
e. “Service point” means the point of demarcation between the serving utility and the premises wiring. The service point is the point on the wiring system where the serving utility ends and the premises wiring begins. The serving utility generally specifies the location of the service point.
f. “Wiring certificate” means a document consisting of one or more copies that certifies electrical wiring and equipment was installed on premises and was done in strict compliance with all the provisions of the Three Affiliated Tribes Electrical Laws (Title VIII, Ch. 15, Section 4) and all the requirements of the Construction Management Office.

5.1.2 General statement of policy and interpretative rules.

a. Purpose and scope. The purpose of these standards is the practical safeguarding of persons and of buildings and building contents from electrical hazards arising from the use or control of electricity for light, heat, power, and control thereof, fire detection systems, and power limited systems located on the Fort Berthold Reservation. It covers the electrical and power limited installations and associated equipment necessary for its safe operation.
b. These standards, based on the National Electrical Code, are the result of years of experience and research to meet the demand for uniform standards to govern electrical and power limited systems wiring on the Fort Berthold Reservation, and provide basic rules for intelligent and uniform installation and inspection.
c. All requirements contained herein must be given careful consideration to ensure greatest permanence, convenience, and safety. These standards do not constitute a design specification for any particular installation, or an instruction manual for untrained

individuals. Skill and experience are necessary factors for a safe and adequate wiring installation. Whenever these requirements differ or are in conflict with the requirements of the NFPA 70 2017 edition National Electrical Code and NFPA 101 2015 edition Life Safety Code® through December 31, 2020, and NFPA 70 2020, edition National Electrical Code and NFPA 101 2018 edition Life Safety Code® thereafter, and applicable sections in the Three Affiliated Tribes Building Code pertaining to fire detection, fire alarms, fire communications, and smoke detectors, the more restrictive requirements are the minimum.

d. Severability. If any section, sentence or clause, or provision of this chapter or the applicability thereof to any person or circumstances is held invalid, the remainder of this chapter and the application of such provision to other persons or circumstances are not affected thereby.

5.1.3 Administrative powers and duties.

a. The Construction Management Office shall administer laws, rules, and wiring standards of the Three Affiliated Tribes, the electrical requirements of the NFPA 70 2017 edition National Electrical Code and applicable NFPA 72, 101, 110 2015 edition Life Safety Code® through December 31, 2020, and NFPA 70 2020 edition National Electrical Code and NFPA 72, 101, 110 2018 edition Life Safety Code® thereafter, and applicable sections in the Three Affiliated Tribes Building Code pertaining to fire detection, fire alarms, fire communications, and smoke detectors. Whenever any action is taken by the Construction Management Office to enforce the provisions of any sections contained in these electrical regulations, the NFPA 70 2017 edition National Electrical Code and NFPA 101 2015 edition Life Safety Code® through December 31, 2020, and NFPA 70 2020 edition National Electrical Code and NFPA 101 2018 edition Life Safety Code® thereafter, such acts must be done in the name of and on behalf of the Three Affiliated Tribes.

b. The electrical regulations of these standards, the NFPA 70 2017 edition National Electrical Code and NFPA 101 2015 edition Life Safety Code® through December 31, 2020, and NFPA 70 2020 edition National Electrical Code and NFPA 101 2018 edition Life Safety Code® thereafter, may be modified or waived by special permission in particular cases when such modification or waiver is specifically permitted or in particular cases when an advancement in the technology of electricity makes such modification or waiver advisable in the best interest of the people of the Three Affiliated Tribes. Such “special permission”, in all cases, must be obtained from the Construction Management Office in writing before the commencement of the work.

c. The Three Affiliated Tribes Construction Management Office is authorized to enter into a Memorandum of Understanding (“MOU”) with the state board to provide for the state board’s support, technical assistance, and resources to assist the Construction Management Office in inspecting electrical installations. Under no circumstances will the state board conduct an inspection without the approval of the Construction Management Office. Except in emergency circumstances, the inspector shall also request permission from the property owner or agent before entering a dwelling, other building, or other

place so enclosed as manifestly to exclude intruders. If the landowner refuses to give permission, the Construction Management Office may petition the Fort Berthold district court for an order authorizing the inspector to enter the property to conduct the inspection. Emergency circumstances include situations presenting imminent danger to health, safety, or property.

Section 5.2 - LICENSURE OF ELECTRICIANS LICENSING REQUIREMENTS

5.2.1 Application, examination, and annual license fees.

a. Upon receiving an application packet for an electrician's license from an applicant, the Construction Management Office shall process and review the applicant's employment verification of electrical construction experience as outlined under this section. Upon final approval of the application, the applicant shall be sent an invitation to take the examination. The invitation shall outline the available testing dates. Upon receiving the invitation, the applicant shall contact the Construction Management Office and inform the Construction Management Office as to the date chosen to take the examination. Examination fees shall be paid separately to the examination testing center provider, if required.
b. An applicant shall have the necessary qualifications, training, and technical knowledge to wire, install, and repair electrical apparatus and equipment in accordance with the standard rules and regulations of the National Electrical Code.
c. The Construction Management Office issues an identification card to currently licensed and registered electricians. This identification card, along with a government-issued picture identification card, shall be in the possession of the electrician when doing electrical work. If the identification card is misplaced or destroyed, a replacement charge to cover administrative costs shall be imposed.
d. The application fees are as follows:

(1) Master license	$50.00
(2) Journeyman license	$25.00
(3) Class B license	$40.00
(4) Apprentice registration	$10.00
(5) Power limited license	$50.00
(6) Power limited apprentice registration	$10.00

e. Effective November 1, 2020, annual renewals must be submitted to the Construction Management Office. The license and registration or annual renewal fees are as follows:

(1) Master license	$50.00 Expires April 30th
(2) Journeyman license	$25.00 Expires March 31st

(3) Class B license	$40.00 Expires April 30th
(4) Apprentice registration	$10.00 Expires January 31st
(5) Power limited license	$50.00 Expires April 30th
(6) Power limited apprentice registration	$10.00 Expires January 31st

Expired licenses and registrations shall require a reinstatement fee equal to the annual fee.

5.2.2 Master electrician.

A master electrician shall have at least two thousand hours of experience working as a licensed journeyman electrician under the supervision of a contracting master electrician or master of record. There are three categories of master electricians, which are as follows:

a. A contracting master is an individual responsible to adhere to all laws and rules of the Three Affiliated Tribes wiring standards and has shown proof of liability insurance.
b. A master of record is an individual responsible to adhere to all laws and rules of the Three Affiliated Tribes wiring standards for the partnership, company, corporation, limited liability company, or association and has shown proof of liability insurance that the master of record is covered by the organization. The master of record is not allowed to work on other property other than property owned or leased by the organization.
c. A noncontracting master is an individual responsible to adhere to all laws and rules of the Three Affiliated Tribes wiring standards and has the same responsibility as a journeyman electrician. Electrical work shall be done under the supervision of a contracting master or master of record.

5.2.3 Journeyman electrician.

A journeyman electrician shall have completed eight thousand hours experience, which experience may not be obtained in less than three years, registered as an apprentice electrician (of which up to three thousand hours may apply under the qualifications of a class B electrician) under the supervision of a contracting master or master of record licensed electrician in an area where electrical construction work is done in a jurisdiction with similar licensing and inspection rules to the Three Affiliated Tribes, and successfully completed apprentice electrician training. Two thousand hours credit may be granted for a graduate of a two-year or more electrical school accepted by the Construction Management Office. Practical experience consists of a minimum of four thousand hours and a maximum of eight thousand hours credit may be granted for wiring and installing electrical wiring, apparatus, and equipment. Practical electrical experience gained through a contracting master electrician also consists of an apprentice completing a Construction Management Office-approved training program. Credit allowed in other areas may include any combination of the following:

a. A maximum of one thousand hours credit for repairing electrical wiring, apparatus, and equipment and light, heat and power.
b. A maximum of one thousand hours credit for wiring fire alarm technology circuits or systems;

c. A maximum of two thousand hours credit for wiring process control circuits or power limited systems; and
d. A maximum of two thousand hours credit of electrical construction experience gained in the armed forces of the United States which the Construction Management Office has determined is equivalent to work performed under the supervision of a Three Affiliated Tribes licensed electrical contractor.

5.2.4 Class B electrician.

A class B electrician shall have completed three thousand hours experience in farmstead or residential wiring, in one-family or two-family dwellings, under the supervision of a master or class B electrician. Commercial wiring experience will not be credited for experience toward a class B license. One thousand hours credit will be granted for a graduate of a two-year electrical school approved by the Construction Management Office.

5.2.5 Power limited electrician.

A power limited electrician shall have completed six thousand hours experience, which experience may not be obtained in less than two and one-half years, registered as a power limited apprentice electrician under the supervision of a contracting master, master of record, contracting power limited, or a power limited electrician of record. Experience must be obtained where power limited electrical construction work is done in a jurisdiction with similar licensing and inspection rules to the Three Affiliated Tribes. The Construction Management Office also may approve licenses based on power limited education or a Construction Management Office-approved tradesman certification. Classification types of a power limited electrician must be defined by the Construction Management Office. There are three categories of power limited electricians, which are as follows:

a. A contracting power limited electrician is an individual responsible to adhere to all laws and rules of the Three Affiliated Tribes wiring standards and has shown proof of liability insurance.
b. A power limited electrician of record is an individual responsible to adhere to all laws and rules of the Three Affiliated Tribes wiring standards for the partnership, company, corporation, limited liability company, or association and has shown proof of liability insurance that the power limited electrician of record is covered by the organization. The power limited electrician of record is not allowed to work on other property other than property owned or leased by the organization.
c. A noncontracting power limited electrician is an individual responsible to adhere to all laws and rules of the Three Affiliated Tribes wiring standards. Power limited electrical work must be done under the supervision of a contracting master, master of record or a contracting power limited electrician or a power limited electrician of record.

5.2.6 Provisional military spouse licensure.

Provisional military spouse licensure shall be provided by the Construction Management Office. The Construction Management Office shall develop procedures for military spouse licensure that are consistent with the process described in N.D.C.C. section 43-51-11.1

5.2.7 Apprentice electrician.

There are two categories of apprentice electrician training:

a. Apprentice electricians who have successfully completed at least two years of electrical school approved by the Construction Management Office.
b. Apprentice electricians who have successfully completed five hundred seventy-six hours of training classes recognized by the Construction Management Office. The Construction Management Office may consult with the state board in determining which classes to approve. An applicant who has prior experience outside of the state of North Dakota may take a placement examination to verify the practical experience obtained in order to apply credit toward the verification of hours. If the applicant fails the placement examination, the applicant is ineligible to retake the examination. An appeal may be submitted in writing to the Construction Management Office within thirty days.

An apprentice electrician who has not successfully completed training as stated in subsection a. or b. is required to be registered with the Construction Management Office, but is not eligible to take the journeyman or class B license examination. If the individual receives a license from another jurisdiction based on the verification that the majority of practical experience was obtained on the Fort Berthold Reservation or in the state of North Dakota the individual is not eligible for examination for licensure or a reciprocal license.

5.2.8 Power limited apprentice electrician.

A power limited apprentice electrician shall meet the following requirements to be eligible for examination:

a. A power limited apprentice must be registered with the Construction Management Office under the same classification as the power limited electrician under whom the apprentice will be working and have completed six thousand hours of work experience under the direct supervision of a power limited electrician; or
b. A power limited apprentice must possess a valid Construction Management Office-recognized tradesman certification. An applicant who has prior experience outside of the Fort Berthold Reservation may take a placement examination to verify the practical experience obtained in order to apply credit toward the verification of hours. If the applicant fails the placement examination, the applicant is ineligible to retake the examination. An appeal may be submitted in writing to the Construction Management Office within thirty days.

A power limited apprentice electrician who has not complied as stated in subsection a. or b. is not eligible to take the power limited electrician license examination. If the individual receives a license from another jurisdiction based on the verification that the majority of practical

experience was obtained on the Fort Berthold Reservation or in the state of North Dakota, the individual is not eligible for examination for licensure or a reciprocal license.

5.2.9 Supervision and responsibilities.

a. A licensed electrician shall supervise not more than three apprentices. An individual over sixteen years of age may work as an apprentice under a licensed master, class B or power limited electrician, but the master, class B or power limited electrician may not allow an apprentice to work on any installation without direct constant supervision by a Three Affiliated Tribes or North Dakota licensed electrician working with the apprentice at the worksite.
b. When an apprentice is found to be doing electrical or power limited work not under the direct supervision of a licensed electrician, an investigative fee may be charged to cover the costs incurred by the Construction Management Office.
c. Contractors shall maintain records of all individuals who are or will be performing electrical or power limited work for that contractor and shall permit the Construction Management Office to examine and copy all such records as required by this section. It is the responsibility of the master, class B, or power limited electrician to ensure all individuals who are or will be performing electrical or power limited work for that contractor either be licensed electricians or registered apprentices with the Construction Management Office. Credit may not be given for hours spent working under a power limited electrician to any applicant for a master, journeyman, or class B electrician license.
d. Any master, class B, or power limited electrician who fails or refuses to comply with this section or who fails or refuses to comply or demonstrate compliance with this section at the request of the Construction Management Office or its representative shall subject that individual's license to nonrenewal, suspension, or revocation by the Construction Management Office.
e. A master, class B, or power limited electrician may exercise that person's privileges as a licensed master, class B, or power limited electrician for no more than one shop or business. A master, class B, or power limited electrician must be actively engaged in the supervision of every project certified under that electrician's license. A master, class B, or power limited electrician shall notify the Construction Management Office immediately upon changing their status for the business they represent.
f. Maintenance personnel regularly employed by the owner or property manager may maintain or make minor repairs to existing electrical wiring devices and appliances, but are precluded from extending or changing the characteristics of existing circuits, feeders, or other electrical apparatus.

Section 5.3 - EDUCATION

5.3.1 Education requirements for licensure and renewal.

No master, journeyman, power limited, or class B electrician license will be renewed unless proof of eight continuing education hours have been submitted, of which a minimum of fifty percent of the hours shall be based on the NFPA 70 2017 edition National Electrical Code through December 31, 2020, and NFPA 70 2020 edition National Electrical Code thereafter. The remaining credits shall be subjects related to the electrical industry. Approval of the education curriculum is required by the Construction Management Office.

5.3.2 Class approvals.

a. Classes, apprenticeship programs, and instructors shall have prior approval by the Construction Management Office and requests for approval shall be made no later than thirty days prior to class instruction. Construction Management Office approval of continuing education classes and instructors accepted expires when the Three Affiliated Tribes adopts an updated edition of the National Electrical Code. Approved apprenticeship programs shall be reviewed at intervals set by the Construction Management Office.
b. Application for approval of educational classes and instructors shall be on a form provided by the Construction Management Office. A complete description (detailed curriculum outlining the subject matter along with the time and sequence of each item) and copies of all materials provided to the attendants shall be submitted. All educational classes shall meet minimum education requirements set by the Construction Management Office. Such minimum requirements shall be consistent with those requirements set by the state board.
c. Education programs held in states other than North Dakota may be considered for credit if the program meets the requirements of the Construction Management Office.
d. The Construction Management shall be notified in writing no later than fifteen days prior to the date, time, and location of the class. A representative of the Construction Management Office shall be entitled to attend without charge and have the authority to audit or review education classes.
e. The Construction Management Office may withdraw approval of any educational classes not in compliance with this section.
f. The provider of the class shall forward an attendance list to the Construction Management Office on a form supplied by the Construction Management Office within fifteen days following the class. A certificate of completion shall also be provided to each attendee. Each certificate of completion and attendance list shall include the name of the provider, the name of the instructor, the class identification number, the date and location of the class, and the number of code and non-code hours of instruction for education units. For all classes, include the attendee's name, license or registration number, and last four digits of the electrician's social security number. It is the responsibility of the

attendee to have a copy of this certificate of completion. The certificates shall be sent to the Construction Management Office only if requested by the Construction Management Office. The provider shall be responsible to keep accurate attendance by periodically checking attendees during the class. For providers that conduct continuing education classes on the Fort Berthold Reservation, the attendance record shall be submitted to the Construction Management Office.

g. Continuing education credits can be deposited with the Construction Management Office for a period up to two license renewal periods. Continuing education credits will not be given for attending the same continuing education class more than once in a code cycle (example: same sponsor, same title, and same class approval number).

5.3.3 Instructor qualifications.

Instructors shall submit their qualifications to the Construction Management Office before the class. Classes may not be approved unless the instructor has one or more of the following qualifications:

a. A master electrician with at least one year's experience in electrical inspection.
b. A journeyman or master electrician who is certified as an instructor through a vocational education department.
c. An individual with a valid teaching accreditation from a trade or technical school, college, or university teaching an electrical curriculum.
d. A registered or licensed electrical engineer with at least four years' experience in design of premise electrical wiring systems.
e. A representative from the national fire prevention association, testing laboratories, international association of electrical inspectors, and other product manufacturer representatives with five years' practical experience in the subject taught.
f. Instructor of an apprenticeship training program.

5.3.4 Education advisory committee.

a. The Construction Management Office shall form an education advisory committee to review educational classes and programs.
b. The committee shall develop minimum requirements in the area of study for the electrical education of individuals registered and licensed by the Construction Management Office.
c. The committee shall review the approved classes and programs every five years or as necessary and submit a report to the Construction Management Office for final approval.
d. The Construction Management Office shall preside over the committee meetings.
e. The committee shall meet as deemed necessary, but no less than once per year.

Section 5.4 - ELECTRICAL WIRING CERTIFICATES

5.4.1 Electrical certificates.

a. All electrical installations, including power limited system installations defined by the National Electrical Code Special Occupancies, articles 500 through 517, with a value of five hundred dollars or more, must have an electrical wiring certificate submitted by the master, class B or power limited electrician supervising the installation on a form prescribed by the Construction Management Office. A project with multiple address locations requires an electrical wiring certificate for each location.
b. Before work commences on any electrical installation when a new entrance is installed, an existing entrance is altered or repaired, a building is moved, when a mobile home feeder is installed, or when the cost of the repair work or additional installation exceeds five hundred dollars, the master, class B, or power limited electrician supervising such installation shall submit an electrical wiring certificate and distribute as follows:

    (1) A startup copy of the certificate must be submitted to the Construction Management Office and a copy to the power company before work is commenced and before an electrical installation may be energized.
    (2) Within fifteen days of completion, use, or occupancy, whichever is first, the final paperwork must be submitted to the Construction Management Office, along with the proper fee. The wiring certificate must be completed with the location and a proper description of work completed.
    (3) A copy must be retained by the master, class B, or power limited electrician.
    (4) A copy must be left in or on the panel or given to the owner.

c. Certificates with job cost of twenty thousand dollars or less are valid twelve months from the original filing date. A new wiring certificate must be filed on all unfinished work.
d. E-certs are available upon request and submission of an application from any master, class B or power limited electrician holding a proper current license from the board or Construction Management Office. Electrical (paper) wiring certificates are available until August 31, 2020, or the effective date of the 2020 Laws, Rules & Wiring Standards. The master, class B, or power limited electrician is responsible for all certificates issued to and by that person. A charge of twenty-five dollars to cover administrative codes costs must be assessed on each lost electrical paper wiring certificate issued to any master, class B, or power limited electrician, unless returned to the Construction Management Office.
e. Whenever an electrical installation made by or under the supervision of a master, class B, or power limited electrician is commenced or in use without submitting an electrical wiring certificate, the certificate may be considered late and the normal inspection fee, as required under this section, is increased in the amount of fifty dollars. In addition when time and travel are expended by employees of the Construction Management Office to obtain a late certificate, an investigative fee may be charged to cover the costs incurred.

f. Property owners who are self-wiring or doing their own electrical work shall comply with the following before any electrical work commences:
    (1) Notify the Construction Management Office of intent to self-wire.
    (2) Must own and occupy the residential property or farmstead where the electrical work will be done.
    (3) Review plans or drawings depicting wiring to be done with a Construction Management Office electrical inspector.
    (4) Inspection fees will be calculated as stated in this section with a minimum of fifty dollars.
    (5) Certification and inspection are required as stated in this section.

5.4.2 Fees.

a. The electrical and power limited systems inspection fee shall be based on the total amount of the contract or total cost to the owner, including extras. This includes power limited systems in National Electrical Code chapter 5 special occupancies, articles 500 through 517.
   The following items need not be included in the cost:
    (1) Appliances, including dishwashers, heat pumps, air-conditioners, disposals, and similar equipment.
    (2) Heating, ventilating, and air-conditioning (HVAC) units.
    (3) Electric motors, PLC, generators; and
    (4) Industrial machines.
b. The contractor is responsible to collect the proper inspection fee on each installation. When the owner furnishes the material and the contractor furnishes the labor, the owner shall provide the contractor with the total amount expended for materials used in connection with the installation, and the contractor shall then calculate and collect the necessary inspection fee from the owner. Whenever materials are donated or removed from an existing installation and placed at another location or labor is donated to an installation, the contractor shall estimate the cost of these materials and labor and include the amount in the job cost for the purpose of calculating the proper inspection fee. The contractor shall maintain all job-related records for a minimum of four years and shall permit the Construction Management Office to examine and copy all such records as requested.
c. It shall be grounds for discipline of a master, class B, or power limited electrician's license if it is discovered that they charged or collected from the customer an electrical inspection fee greater than the fee actually in effect.
d. Effective October 1, 2020, inspection fees shall be as follows:

Job Cost:	Inspection Fee:
Up to $500.00	$50.00 (minimum fee)

$500.00 to $20,000.00	$50.00 for the first $500.00 plus 1.25% on balance up to $20,000.00
Over $20,000.00	$293.75 for the first $20,000.00 plus 1/10 of 1% on balance over $20,000.00

Effective July 1, 2024, inspection fees shall be as follows:

Job Cost:	Inspection Fee:
Up to $500.00	$50.00 (minimum fee)
$500.00 to $20,000.00	$50.00 for the first $500.00 plus 2% on balance up to $20,000.00
Over $20,000.00	$440.00 for the first $20,000.00 plus 1/10 of 1% on balance over $20,000.00

e. Companies having supervision of elevators, dumbwaiters, electrically driven irrigation machine or out-of-state structures or skids installed on the Fort Berthold Reservation shall submit reports to the Construction Management Office. The report shall be completed, signed by owner or manager, and forwarded to the Construction Management Office with the inspection fee. The inspection fee shall be as follows:
    (1) Elevators and dumbwaiters having horsepower rating up to 5 horsepower - $25.00
    (2) Elevators and dumbwaiters having horsepower rating 5 horsepower through 15 horsepower - $40.00
    (3) Elevators and dumbwaiters having horsepower rating over 15 horsepower - $60.00
    (4) Electrically driven irrigation machines - $50.00
    (5) Out-of-North Dakota structures or skids – Based on inspection fee schedule.
f. Whenever a correction order is written and corrections are not completed within the allotted time, there shall be an administration charge of fifty dollars, which shall be paid to the Construction Management Office by the master, class B, or power limited electrician.
g. All re-inspections shall be paid for by the contractors at a minimum charge of one hundred dollars. In addition, an investigative fee may be charged to cover the costs incurred to be calculated at a rate of fifty dollars per hour and mileage rates.
h. For inspections not covered in this section or special services, the fee shall be fifty dollars per hour, including travel time, plus mileage.

5.4.3 Carnivals, circuses, fairs and similar events.

1. All carnivals, circuses, fairs, and similar events shall comply with article 525, 2017 edition, National Electrical Code through December 31, 2020, and article 525, 2020 edition, National Electrical Code thereafter.
2. All installations shall be approved by the electrical inspector before usage.
3. Each carnival, circus, fair, or similar event operating or intending to operate on the Fort Berthold Reservation shall notify the Construction Management Office each year of its itinerary and make application for the initial inspection thirty days before the first engagement on the Fort Berthold Reservation. Failure to notify the Construction Management Office may result in expenses incurred for excess time and travel to inspect these installations.
4. The fee shall be paid to the inspector at the first engagement or inspection as follows:
    a. $15.00 each ride or concession;
    b. $15.00 reinspection fee on each unit, if required; and
    c. $50.00 each transformer or generator truck.
5. Each ride or concession wired properly will be issued a certification of compliance, serving for an entire season, subject to subsequent inspections.
6. Minor code violations will be issued a correction order with instructions to correct each violation before the next engagement. A reinspection will be required.
7. The electrical inspector is empowered to write a correction order for immediate compliance should the inspector find a condition dangerous to life and property.

Section 5.5 - ELECTRICAL WIRING STANDARDS

Part 5.5.1 - GENERAL REQUIREMENTS

5.5.1.1 Requirements for electrical installations. Electrical installations shall be planned to provide adequate capacity for the load.

a. Wiring systems shall have conductors of sufficient capacity to furnish each outlet without excessive line loss or voltage drop. The voltage drop shall not exceed five percent at the farthest outlet of power, heating and lighting loads, or combinations of such loads. (See appendix for example.)
b. All wiring materials and equipment shall be listed by nationally recognized testing laboratories to safeguard life and property. It is the duty of the electrical installer to secure permission from the Construction Management Office to use materials, devices, and methods of installation not specifically covered by these standards. Equipment not approved under a testing laboratory category shall be evaluated by a registered professional engineer and recorded on evaluation forms accepted by the Construction Management Office.

Exception: Manufacturing firms that install industrial machinery for use by the firm itself and employ professional engineers may evaluate the industrial machinery according to NFPA 79 or UL 508 Standards. This evaluation shall be maintained with the equipment at all times and a copy submitted to the Construction Management Office.

c. When wiring public school buildings, approval shall be received from the department of public instruction and the Construction Management Office.
d. Overhead conductors shall not cross over water wells or known sites where water wells may be drilled. A minimum distance of twenty feet [6.10 meters] in all directions shall be maintained for overhead conductors.
e. In the wiring of nursing homes and hospitals, reference shall be made there may be special requirements pertaining to operating rooms, delivery rooms, and emergency lighting.
f. Aluminum conductors in sizes smaller than no. 6 shall not be used. Aluminum conductors installed and all corresponding materials shall be approved by testing laboratories.
g. All new construction shall follow the energy-efficient related requirements for design and construction of buildings in accordance with the Three Affiliated Tribes Building Codes.

5.5.1.2 Water damaged electrical equipment.

Water damaged electrical equipment wiring and equipment exposed to water damage must comply with the following:

a. All breaker panel boards, breakers, fuses, disconnect switches, controllers, receptacles, switches, light fixtures, and electric heaters that have been submerged or exposed to

water damage must be replaced or all electrical equipment, switchgear, motor control centers, boilers and boiler controls, electric motors, transformers, and other similar equipment, such as appliances, water heaters, dishwashers, ovens, and ranges that have been submerged must be reconditioned by the original manufacturer or by its approved representative or replaced.

b. Electrical wiring may require replacement depending on the type of wire or cable and what application it was listed for.
c. Splices and terminations must be checked to ensure compliance with article 110.14, 2017 edition, National Electrical Code through December 31, 2020, and article 110.14, 2020 edition, National Electrical Code thereafter.
d. Energized electrical panels that have been submerged must be de-energized to prevent loss of life and property. Other recommendations can be found in "Guidelines for Handling Water Damaged Electrical Equipment" published by the national electrical manufacturers association (NEMA).

5.5.1.3 Markings of means of egress, illumination of means of egress, and emergency lighting.

The purpose of this section is to provide marking of means of egress, illumination of means of egress, and emergency lighting of means of egress. Installations must comply with the requirements of NFPA 101® (7.10.6 and 7.10.7), Life Safety Code®, 2015 edition through December 31, 2020, and NFPA 101® (7.10.6 and 7.10.7), Life Safety Code®, 2018 edition thereafter or more stringent codes adopted by the Three Affiliated Tribes. A condensed guide is included in the appendix for convenience, for complete and official information refer to the applicable standard.

5.5.1.4 Smoke alarms, heat alarms, fire alarm systems and carbon monoxide alarm requirements for evacuation and life safety.

Alarm systems stated in this section shall be installed in accordance with the Three Affiliated Tribes Building Code under the supervision of a master or class B electrician. In new construction, all alarm systems shall receive their primary power from the building wiring and when primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection.

5.5.1.4.1 Dwelling units, congregate residences, and hotel or lodging house guest rooms that are used for sleeping purposes shall be provided with smoke alarms. Alarms shall be installed in accordance with the approved manufacturer's instructions.

a. When more than one smoke alarm is required to be installed within an individual dwelling unit the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual unit. Smoke alarms shall be installed in the following locations:

(1) In each sleeping room.

(2) Outside each separate sleeping area in the immediate vicinity of the sleeping rooms.

(3) On each additional story of the dwelling, including basements and habitable attics but not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.

(4) In dwelling units where the ceiling height of a room open to the hallway serving the bedrooms exceeds that of the hallway by twenty-four inches [60.96 centimeters] or more, smoke alarms shall be installed in the hallway and in the adjacent room.

b. Heat alarms. For new construction, an approved heat alarm shall be installed in the attached single tenant garage of a residence and interconnected with the smoke alarms within the residence.
c. Household fire alarm systems installed in accordance with NFPA 72 that include smoke alarms, or a combination of smoke detectors and audible notification device installed as required by this section for smoke alarms, shall be permitted. The household fire alarm system shall provide the same level of smoke detection and alarm as required by this section for smoke alarms. Where a household fire warning system is installed using a combination of smoke detector and audible notification device, it shall become a permanent fixture of the occupancy and owned by the homeowner. The system shall be monitored by an approved supervising station and be maintained in accordance with NFPA 72 upper level.

5.5.1.4.2 Apartment houses, hotels, and congregate residences shall be provided with a manual and automatic fire alarm system in accordance with the requirements of the Three Affiliated Tribes Building Code.

5.5.1.4.3 An approved carbon monoxide alarm shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms in dwelling units within which fuel-fired appliances are installed and in dwelling units that have attached garages. A table in the appendix is offered as a condensed guide for convenience. For further information consult the Three Affiliated Tribes Building Code.

5.5.2 - WIRING AND PROTECTION

5.5.2.1 (NEC 210) Branch circuits.

Branch circuits shall comply with article 210, 2017 edition, National Electrical Code through December 31, 2020, and article 210, 2020 edition, National Electrical Code thereafter.

a. The total connected load shall be divided as evenly as practicable, between the two ungrounded conductors of a three-wire system and three conductors of a four-wire wye system.
b. In a dwelling unit, a separate circuit with disconnect shall be provided for the purpose of operating or controlling electrical equipment for primary source heating units. Wiring requirements for fixed electrical space heating equipment is provided under article 424, 2017 edition, National Electrical Code through December 31, 2020, and article 424, 2020 edition, National Electrical Code thereafter.
c. A minimum of six 20-amp small appliance branch circuits shall be installed for counter receptacles in kitchens that are used to serve public gatherings at schools, churches, lodges, and similar buildings. Any island counter in these locations shall have at least one receptacle.
d. In dwelling occupancies. A minimum of three 20-amp small appliance branch circuits shall be installed to supply receptacle outlets in kitchen, pantry, dining room, and breakfast room. These circuits shall not supply other outlets and shall have conductors not smaller than no. 12. Two of these circuits shall supply receptacle outlets on or near work counter area and so arranged that adjacent receptacles are not on the same circuit.
e. In dwelling occupancies, one 20-amp bathroom circuit for receptacles shall not feed more than two bathrooms.
f. Fifteen and twenty ampere receptacles supplying sewer pumps and sump pumps shall not need arc fault circuit protection, but shall be ground-fault protected or a single receptacle on a dedicated circuit.
g. Fifteen and twenty ampere receptacles supplying power for garage door openers located in attached or detached garages associated with dwelling units shall be ground-fault protected or a single receptacle installed.
h. Portable cleaning equipment receptacle outlets shall be installed in corridors and located so that no point in the corridor along the floor line, measured horizontally, is more than twenty-five feet [7.62 meters] from an outlet.
i. Exception: 2017 edition, National Electrical Code through December 31, 2020, and 2020 edition, National Electrical Code thereafter, article 210.11(C)(4): Requirements shall not include buildings two hundred fifty square feet or smaller.
j. Exception: 2017 edition, National Electrical Code through December 31, 2020, and 2020 edition, National Electrical Code thereafter, article 210.12(A): AFCI protection is not required for the following:
    (1) Refrigeration appliances if a single receptacle on a dedicated circuit is installed;

(2) Furnaces used for main heating source.

5.5.2.2 (NEC 230) Services.

Electrical services shall comply with article 230, 2017 edition, National Electrical Code through December 31, 2020, and article 230, 2020 edition, National Electrical Code thereafter.

a. Perpendicular mast used for support of a service may not be less than two-inch [5.08-centimeter] galvanized rigid steel conduit or intermediate metal conduit, fitted with storm collar flashing.
b. Outside switch location. The equipment may not be mounted lower than two feet [.6096 meter] above grade level unless listed for such purpose. If installed outside, the service or services must be installed on the structure or within ten feet of the structure.
c. All services in single-family dwellings must be located in a single accessible location.

Exception: Special permission shall be granted by the electrical inspector for a second service location to be added where there is no available space for the service equipment. The second service location must be installed in accordance with article 230.2, 2017 edition, National Electrical Code, through December 31, 2020, and article 230.2, 2020 edition, National Electrical Code thereafter.

d. Rating of service switch. Any new or old single-family dwelling where the main house panel or service is altered or repaired, the dwelling is moved, or where the dwelling is rewired, a minimum one hundred ampere service-rated panel must be installed. Replacement of service mast or meter enclosure is an alteration of the service.
    (1) A one hundred ampere main house panel must be installed using ungrounded conductors sized for the proper ampacity. The panel must contain provisions for a minimum of twenty full-sized branch circuit spaces.
    (2) A greater than one hundred ampere but less than two hundred ampere main house panel must be installed using ungrounded conductors sized for the proper ampacity. The panel or panels must contain provisions for a minimum of thirty full-sized branch circuit spaces.
    (3) A two hundred ampere or larger main house panel must be installed using ungrounded conductors sized for the proper ampacity. The panel or panels must contain provisions for a minimum of forty full-sized branch circuit spaces.
    (4) Service and feeder calculation for electric heating loads must be sized to one hundred twenty-five percent of the full load rating.
a. For the purpose of separating services within one building, each portion of a building separated by one or more fire walls must be considered a separate building as defined by Three Affiliated Tribes Building Code.
b. 230.67 surge protections for dwelling unit services is not required.

5.5.2.3 (NEC 240) Overcurrent protection. Overcurrent protection must comply with article 240, 2017 edition, National Electrical Code through December 31, 2020, and article 240, 2020 edition, National Electrical Code thereafter.

a. Exterior overcurrent devices must be located at a height of no less than two feet [.6096 meters] above grade level to the bottom of the enclosure.

Exception: If raising the switch would exceed the height requirements of NEC 240.24(A).

b. Switchboards and panel boards may not be located in bathrooms, clothes closets, stairways, or crawl spaces.

5.5.2.4 (NEC 250) Grounding and bonding. Grounding and bonding must conform to article 250, 2017 edition, National Electrical Code through December 31, 2020, and article 250, 2020 edition, National Electrical Code thereafter.

a. At motor connections, a bonding jumper sized in accordance with table 250.122, 2017 edition, National Electrical Code through December 31, 2020, and table 250.122, 2020 edition, National Electrical Code thereafter, must be provided around all flexible conduit. The bonding jumper is not required if a separate grounding conductor is included.
b. Grounding of metal outdoor lighting standards.
    (1) Definition of lighting standard is a pole exceeding twelve feet [3.66 meters] in height measured from the bottom of the base or from the intended grade level of poles.
    (2) The metal lighting standard must be connected to a one-half inch [12.70 millimeter] by ten-foot [3.05 meter] copperweld ground rod, or twenty feet [6.10 meters] of one or more bare or zinc galvanized or other electrically conductive coated steel reinforcing bars or rods (rebar) of not less than one-half inch [1.27 centimeters] in diameter, by the means of a bonding jumper. The ten-foot [3.05 meter] ground rod must be driven in the center of the metal standard base and project slightly above the base. Both ground rod and equipment grounding conductor must be connected to the metal standards. The bonding jumper must be in accordance with 2017 edition, National Electrical Code through December 31, 2020, and 2020 edition, National Electrical Code thereafter, and in no case smaller than no. 8 copper or no. 6 aluminum.
c. The grounding electrode conductor must be connected to the grounded service conductor in the enclosure for the service disconnect.

5.5.3 - WIRING METHODS AND MATERIALS

5.5.3.1 (NEC 300) Wiring methods.

a. Agricultural buildings. This section covers all buildings housing livestock, poultry, and other areas of similar or like nature. All electrical panel boards, wiring devices, and equipment shall be installed in accordance with the provisions of article 547, 2017 edition, National Electrical Code through December 31, 2020, and article 547, 2020 edition, National Electrical Code thereafter. A site-isolating device shall be permitted to be installed at the distribution point where two or more agricultural building structures are supplied from the distribution point.

b. Electric metallic tubing shall not be used in concrete below grade, in concrete slab or masonry in direct contact with earth. A vapor barrier, if used, will have no effect on the requirements of the section. Electric metallic tubing shall not be embedded in earth or fill.
c. Aluminum conduit shall not be installed in contact with earth or embedded in concrete.
d. The installation of rigid nonmetallic conduit shall comply with the provision of article 352, 2017 edition, National Electrical Code through December 31, 2020, and article 352, 2020 edition, National Electrical Code thereafter. Expansion fittings for rigid nonmetallic conduit shall be provided to compensate for thermal expansion and contraction in accordance with section 352.44, 2017 edition, National Electrical Code through December 31, 2020, and section 352.44, 2020 edition, National Electrical Code thereafter. When installed outdoors and above grade, one hundred forty degrees Fahrenheit [60 degrees Celsius] shall be considered the minimum change in degrees.
e. Fertilizer rooms, meatpacking plants, salt processing plants, and similar locations are judged to be occupancies where severe corrosive conditions are likely to be present. It is recommended that nonmetallic conduit with nonmetallic boxes and fittings be used as the wiring method for such occupancies. Ferrous and nonferrous metal raceways shall be used providing the raceway, boxes, and fittings are properly protected against corrosion.
f. In any room of an existing building where the sheetrock or wall covering has been removed from all walls, the electrical wiring requirements shall comply with the provisions of 2017 edition, National Electrical Code through December 31, 2020, and 2020 edition, National Electrical Code thereafter.
g. Metal raceways or metal clad cable (type MC) rated for the environment shall be installed in the following occupancies:
    (1) Hospitals;
    (2) Nursing homes;
    (3) Related patient care areas;
    (4) Places of assembly; and
    (5) Dormitories designed to house more than sixteen people. Metal raceways or metal clad cable (type MC) shall be used in fixed wiring methods including fire alarms along with metal boxes or nonmetallic raceways encased in not less than two inches of concrete.

Exception 1: As provided in article 640, 2017 edition, National Electrical Code, sound reproduction and similar equipment; in article 800, 2017 edition, National Electrical Code, communication circuits; and in article 725, 2017 edition, National Electrical Code, for class 2 and class 3 remote control and signaling circuits through December 31, 2020, and article 640, 2020 edition, National Electrical Code, sound reproduction and similar equipment; in article 800, 2020 edition, National Electrical Code, communication circuits; and in article 725, 2020 edition, National Electrical Code, for class 2 and class 3 remote control and signaling circuits thereafter.

Exception 2: Listed two-hour fire-rated cables as permitted in article 695.6, article 700.9D, and article 760, 2017 edition, National Electrical Code through December 31, 2020, and article 695.6, article 700.9D, and article 760, 2020 edition, National Electrical Code thereafter.

Adjacent areas separated by an approved fire barrier may be wired in any approved wiring method in chapter 3 of the 2017 edition, National Electrical Code through December 31, 2020, and chapter 3 of the 2020 edition, National Electrical Code thereafter. For the purpose of this section, a fire barrier is defined as a continuous assembly, vertical or horizontal, in accordance with the Three Affiliated Tribes Building Code.

5.5.3.2 (NEC 314) Boxes and fittings.

a. Not more than one extension ring may be used on outlet boxes unless special permission has been obtained from the electrical inspector having jurisdiction.
b. Boxes or conduit bodies shall be installed at each opening, splice, or connection, except as provided in article 604, 2017 edition, National Electrical Code through December 31, 2020, and article 604, 2020 edition, National Electrical Code thereafter.

5.5.4 - EQUIPMENT FOR GENERAL USE

5.5.4.1 (NEC 422) Appliances. Exception: 2017 edition, National Electrical Code, article 422.16 through December 31, 2020, and 2020 edition, National Electrical Code, article 422.16 thereafter: The use of not more than six feet of flexible appliance cord shall be permitted on permanently installed one hundred twenty-volt twenty amp or less fuel-fired furnaces in residential dwellings. The receptacle for this appliance shall be GFCI protected, or a single receptacle, with a lockable in-use cover, and the cord shall meet all requirements of NEC 422.16.

5.5.5 - SPECIAL OCCUPANCIES

5.5.5.1 (NEC 500) Hazardous locations.

a. Classification of hazardous locations is required to be completed by owner, representative, or engineer that has the qualifications and shall provide documentation as required by the provisions of article 500.4, 2017 edition, National Electrical Code through December 31, 2020, and article 500.4, 2020 edition, National Electrical Code thereafter, including the reference standards as listed in article 500.4, 2017 edition, National Electrical Code through December 31, 2020, and article 500.4, 2020 edition, National Electrical Code thereafter.
b. For classifications of oilfield installations refer to API RP 500, Classification of Locations for Electrical Installations at Petroleum Facilities, third edition, December 2012.
c. Surge arrestors shall be provided for all services in grain elevators.
d. Hot bearing or other similar detection systems shall be installed in accordance with articles 500-516, 2017 edition, National Electrical Code through December 31, 2020, and articles 500-516, 2020 edition, National Electrical Code thereafter.

5.5.5.2 (NEC 550) Mobile home parks.

Service equipment may be installed on manufactured homes as required in article 550.32(b) if the following requirements are met:

a. The mobile home is located on property owned by the homeowner and not in mobile home park.
b. The mobile home is secured to a permanent foundation that complies with the Three Affiliated Tribes Building Code.

5.5.6 - SPECIAL EQUIPMENT

5.5.6.1 (NEC 625) Electric vehicle charging system.

625.41 Overcurrent protection. Overcurrent protection for feeders and branch circuits supplying vehicle charging equipment must be sized for continuous duty and must have a rating of not less than one hundred twenty-five percent of the maximum load of the equipment. For these installations, “maximum load of equipment” means the setting the electrician adjusted the device to. The adjustment may not be readily accessible or cannot easily be adjusted by the consumer. The electrician shall label the device if set to a value less than the maximum nameplate rating. The contractor shall assure the size of the service feeding these devices is adequate.

APPENDIX

Short Cut
At 75° C
Voltage Drop Formulas 167^0 F

$$\text{Voltage drop} = \frac{K \times L \times I}{CMA}$$

$$\text{CMA} = \frac{K \times L \times I}{\%\ drop \times voltage}$$

$$\text{Length} = \frac{CMA \times Voltage\ drop}{K \times I}$$

Area of circle = πr^2

L = length in feet, one way

I = load in amps

E = volts

CMA = circular-mil area

K-factor = 25.8 multiplying factor for copper, 42.4 multiplying factor for aluminum at 75°C.

For three-phase circuits, use formula, then multiply the results by .86

Percent drop permissible voltage drop times voltage of circuit as follows:

5% of 120	120 x .05 = 6 volts
5% of 208	208 x .05 = 10.4 volts
5% of 240	240 x .05 = 12 volts

Examples with copper wire:

240 volts, 1,000 foot distance, 10 ampere load, 5% volt drop maximum

$$\text{CMA} = \frac{25.8 \times 1000 \times 10}{.05 \times 240}$$

= 21,500 CMA minimum = #6 cu minimum

Same values as above but use #8 copper wire instead

$$\text{Voltage drop} = \frac{25.8 \; x \; 1000 \; x \; 10}{16510}$$

= 15.6 volts/240 = 6.5% volt drop

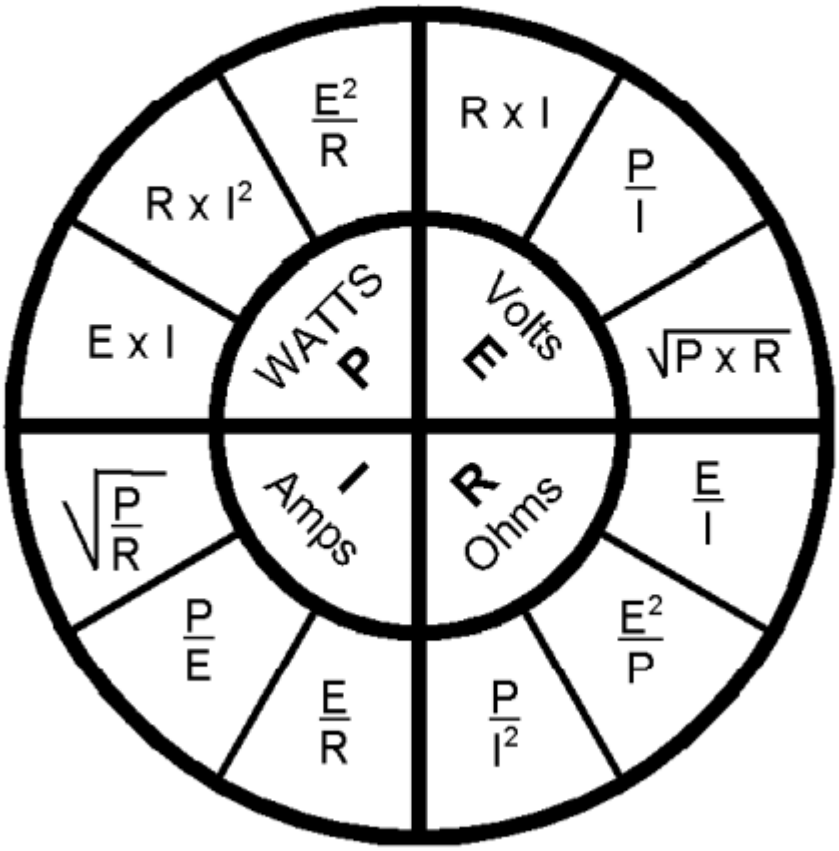
120 volts, 8 ampere load, 100 foot distance, 3% volt drop maximum

$$\text{CMA} = \frac{25.8 \; x \; 100 \; x \; 8}{.03 \; x \; 120}$$

= 5733 CMA minimum = #12 cu minimum

Refer to Chapter 9 Table 8 of NEC for conductor properties

OHM'S LAW


WATTS
P
Volts
E
I
Amps
R
Ohms
E x I
R x I²
E²/R
R x I
P/I
√P x R
√P/R
P/E
E/R
E/I
E²/P
P/I²

Means of Egress Condensed Guide

1. Marking of means of egress. All required exits and access to exits shall be marked by readily visible signs. For externally illuminated signs, letters shall be not less than six inches [150 millimeters] high. Internally illuminated signs shall be listed per ANSI/UL 924 which assures proper letter size. Chevron-shaped arrows are required to indicate direction to exits. Every sign shall be suitably illuminated. For externally illuminated signs see subsection 7.10.6, Life Safety Code®, NFPA 101, 2015 edition through December 31, 2020, and subsection 7.10.6, Life Safety Code®, NFPA 101, 2018 edition thereafter and for internally illuminated signs see subsection 7.10.7.

2. Illumination of means of egress. Illumination of means of egress shall provide continuous, dependable, illumination of not less than one foot-candle at floor level for all areas such as corridors, stairways, and exit doorway, providing a lighted path of travel to the outside of the building and public way during all times that the means of egress is available for use. For new stairs, the required minimum illumination level is ten foot-candle during conditions of stair use. Illumination shall be from a source of reasonable assured reliability and may be supplied from normal lighting circuits or special circuits with switching controlled by authorized personnel. Illumination required for exit marking shall also serve for illumination of means of egress and shall be so arranged that failure of a single unit, such as burning out of a single bulb will not leave any area in darkness.

3. Emergency lighting. Emergency lighting systems shall be so arranged to provide the required illumination automatically in event of any interruption or failure of the normal power supply. An acceptable alternate source of power may be an electric generator or approved battery. In occupancies where emergency lighting is required, the circuits supplying exit marking and illumination of means of egress shall be supplied by the emergency system. Other areas of the facilities only requiring exit marking and illumination of means of egress may be supplied by the normal source.

4. Classification of occupancy based on chapter 6, Life Safety Code®, NFPA 101, 2015 edition through December 31, 2020, and chapter 6, Life Safety Code®, NFPA 101, 2018 edition thereafter.

Note: Check with the Construction Management Office to determine occupancy and occupant load.

Assembly. Assembly occupancies include all buildings or portions of buildings used for gathering together fifty or more persons for such purposes as deliberation, worship, entertainment, eating, drinking, amusement, or awaiting transportation. Assembly occupancies also include special amusement buildings regardless of occupant load.

Assembly occupancies might include the following:

Armories	Libraries
Assembly halls	Mortuary chapels
Auditoriums	Motion picture theaters

Bowling lanes	Museums
Clubrooms	Passenger stations and terminals of air, surface, underground, and marine public transportation facilities
Colleges and university	Places of religious worship
Classrooms, fifty persons and over	Poolrooms
Conference rooms	Recreation piers
Courtrooms	Restaurants
Dance halls	Skating rinks
Drinking establishments	Theaters
Exhibition halls	Gymnasiums

Occupancy of any room or space for assembly purposes by fewer than fifty persons in a building or other occupancy and incidental to such other occupancy shall be classified as part of the other occupancy and shall be subject to the provisions applicable thereto.

Educational. Educational occupancies include all buildings or portions of buildings used for educational purposes through the twelfth grade by six or more persons for four or more hours per day or more than twelve hours per week.

Educational occupancies include the following:

Academies Schools
Kindergartens

Other occupancies associated with educational institutions shall be in accordance with the appropriate part of Life Safety Code®, NFPA 101, 2015 edition through December 31, 2020, and Life Safety Code®, NFPA 101, 2018 edition thereafter.

In cases when instruction is incidental to some other occupancy, the section of Life Safety Code®, NFPA 101, 2015 edition through December 31, 2020, and Life Safety Code®, NFPA 101, 2018 edition thereafter, governing such other occupancy applies. For example:

College and university classrooms under fifty persons - business occupancy
College and university classrooms fifty persons and over – assembly
Instructional building - business occupancy
Laboratories, instructional - business occupancy
Laboratories, noninstructional - industrial

Day care. Day care occupancies include all buildings or portions of buildings in which four or more clients receive care, maintenance, and supervision, by other than their relatives or legal guardians, for less than twenty-four hours per day.

Day care occupancies include the following:

Child day care occupancies
Adult day care occupancies, except where part of a health care occupancy
Nursery schools
Day care homes
Kindergarten classes that are incidental to a child day care occupancy

In areas when public schools offer only half-day kindergarten programs, many child day care occupancies offer state-approved kindergarten classes for children who require full day care. As these classes are normally incidental to the day care occupancy, the requirements of the day care occupancy should be followed.

Health care. Health care occupancies are those used for purposes such as medical or other treatment or care of persons suffering from physical or mental illness, disease, or infirmity and for the care of infants, convalescents, or infirm aged persons. Health care occupancies provide sleeping facilities for four or more occupants and are occupied by persons who are mostly incapable of self-preservation because of age, physical or mental disability, or because of security measures not under the occupants' control.

Health care occupancies include the following:

Hospitals
Nursing homes
Limited care facilities

Ambulatory health care. Ambulatory health care occupancies are those used to provide services or treatment simultaneously to four or more patients on an outpatient basis. The patients are considered incapable of self-preservation due to the treatment rendered, the use of anesthesia, or the injury for which they are receiving emergency or urgent care.

Detention and correctional. Detention and correctional occupancies are used to house individuals under varied degrees of restraint or security and are occupied by persons who are mostly incapable of self-preservation because of security measures not under the occupants' control.

Detention and correctional occupancies include the following:

Adult and juvenile substance abuse centers
Adult and juvenile work camps
Adult community residential centers
Adult correctional institutions
Adult local detention facilities

Juvenile community residential centers
Juvenile detention facilities
Juvenile training schools

Residential. Residential occupancies are those occupancies in which sleeping accommodations are provided for normal residential purposes and include all buildings designed to provide sleeping accommodations.

Exception. Those classified under health care or detention and correctional occupancies.

Residential occupancies are treated separately in Life Safety Code®, NFPA 101, 2015 edition through December 31, 2020, and Life Safety Code®, NFPA 101, 2018 edition thereafter, in the following groups:

One-family and two-family dwelling unit
Lodging or rooming house
Hotels and Dormitories
Apartment building
Residential board and care occupancy

Mercantile occupancy. An occupancy used for the display and sale of merchandise.

Mercantile occupancies include the following:

Auction rooms
Department stores
Drugstores
Restaurants with fewer than fifty persons
Shopping centers
Supermarkets

Office, storage, and service facilities incidental to the sale of merchandise and located in the same building should be considered part of the mercantile occupancy.

Business. Business occupancies are those used for the transaction of business other than those covered under mercantile.

Business occupancies include the following:

Air traffic control towers (ATCTs)
City halls
College and university instructional buildings, classrooms under fifty persons, and instructional laboratories
Courthouses
Doctors’ offices
Townhalls
General offices
Outpatient clinics, ambulatory
Dentists’ offices

Doctors' and dentists' offices are included unless of such character as to be classified as ambulatory health care occupancies.

Industrial. Industrial occupancies include factories making products of all kinds and properties devoted to operations such as processing, assembling, mixing, packaging, finishing or decorating, and repairing. Industrial occupancies include the following:

Dry cleaning plants	Power plants
Factories of all kinds	Pumping stations
Food processing plants	Refineries
Gas plants	Sawmills
Hangars (for servicing or maintenance)	Telephone exchanges
Laundries	

In evaluating the appropriate classification of laboratories, the Construction Management Office should determine each case individually based on the extent and nature of the associated hazards. Some laboratories may be classified as occupancies other than industrial, for example, a physical therapy laboratory or a computer laboratory.

Storage. Storage occupancies include all buildings or structures utilized primarily for the storage or sheltering of goods, merchandise, products, vehicles, or animals.

Storage occupancies include the following:

Barns	Hangars (for storage only)
Bulk oil storage	Parking structures
Cold storage	Warehouses
Freight terminals	Truck and marine terminals
Grain elevators	

Storage occupancies are characterized by the presence of relatively small numbers of persons in proportion to the area. Any new use that increases the number of occupants to a figure comparable with other classes of occupancy changes the classification of the building to that of the new use. Multiple occupancies. A building or structure in which two or more classes of occupancy exists shall be classified as a multiple occupancy. Multiple occupancies shall be protected either as mixed occupancies or as separated occupancies, in accordance with subsection 6.1.14.3 or 6.1.14.4, respectively, of Life Safety Code®, NFPA 101, 2015 edition through December 31, 2020, and Life Safety Code®, NFPA 101, 2018 edition thereafter. Where exit access from an occupancy traverses another occupancy, the multiple occupancy shall be protected as a mixed occupancy. In implementing the mixed occupancies form of protection, the building shall comply with the most restrictive requirements of the occupancies involved, unless separate safeguards are approved.

5. Occupant load factor table.

Use	**Square Feet per Person**
Assembly use – less concentrated use	15 net*

Areas of concentrated use without fixed seating	7 net*
Waiting space	3 net*
Bleachers, pews, and similar bench-type seating	Note 1
Fixed seating	Note 2
Kitchens	100 gross**
Libraries	
In stack areas	100 gross**
In reading rooms	50 net*
Swimming pools	
Water surface	50 gross**
Pool decks	30 gross**
Exercise rooms with equipment	50 gross
Exercise rooms without equipment	15 gross
Lighting and access catwalks, galleries, and gridirons	100 net
Casinos and similar gaming areas	11 gross
Skating rinks	50 gross
Stages	15 net*
Educational use	
Classroom area	20 net*
Shops, laboratories, and similar vocational areas	50 net*
Day care use	
Maximum number of persons intended to occupy that floor, but not less than	35 net*
Health care use	
Sleeping departments	120 gross**
Inpatient departments	240 gross**
Ambulatory health care	150 gross**
Detention and correctional use	
Maximum number of persons intended to occupy that floor, but not less than	120 gross**
Residential use	
Hotels, motels, dormitories, apartment buildings:	
Maximum probable population, but not less than	200 gross**
Residential board and care use	Note 3
Mercantile use (including malls)	
Street level and below (sales)	30 gross**
Sales area on two or more street floors	40 gross
Upper floor (sales)	60 gross**
Storage, receiving, or shipping (not open to the general public)	300 gross**

Assembly areas	See “Assembly”
Business use (other than below)	150 gross**
Concentrated business use	50 gross**
Air traffic control tower observation levels	40 gross**
Collaboration rooms/spaces ≤ 450 ft2 (41.8 m2) in area	30 gross
Collaboration rooms/spaces > 450 ft2 (41.8 m2) in area	15 gross
Other purposes	Note 4
Industrial use	
General and high hazard industrial	100 gross**
Special purpose industrial	N/A
Storage use	
In storage occupancies	N/A
In mercantile occupancies	300 gross**
In other than storage and mercantile occupancies	500 gross**

* Net floor area is the actual occupied area, not including accessory unoccupied areas or thickness of walls.

** Gross floor area is the floor area within the inside perimeter of the outside walls of the building under consideration with no deduction for hallways, stairs, closets, thickness of interior walls, columns, or other features. Notes to occupant load table.

Note 1. Bleachers, pews, and similar bench-type seating: one person per eighteen linear inches.

Note 2. Fixed seating. The occupant load of an area having fixed seats shall be determined by the number of fixed seats installed. Required aisle space serving the fixed seats shall not be used to increase the occupant load.

Note 3. Refer to chapters 32 and 33 of Life Safety Code®, NFPA 101, 2015 edition through December 31, 2020, and chapters 32 and 33 of Life Safety Code®, NFPA 101, 2018 edition thereafter.

Note 4. Occupant load factors associated with the use.

6. Building classification table.

x - indicates required
o - indicates not required

Occupancy	Marking of Means Egress	Illumination of Means Egress	Emergency Lighting

Assembly	x	x	x
Educational	x	x	x
Day care	x	x	x
Interior stairs and corridors	x	x	x
Assembly use spaces	x	x	x
Flexible and open plan buildings	x	x	x
Interior or limited access portions of buildings	x	x	x
Shops and laboratories	x	x	x
Family day care homes (more than three but fewer than seven persons)	o	x	o
Group day care homes (seven to twelve persons)	o	x	o
Health care occupancies (Note 1) (for complete details see article 517 of NEC and NFPA standard 99)	x	x	x
Detention and correctional	x	x	x
<u>Residential</u>			
Hotels and dormitories	x	x	x Note 2
Apartment buildings			
Twelve or less apartments	x	x	o Note 3
More than twelve apartments or greater than three stories in height	x	x	x Note 3
Residential board and care			
More than sixteen residents	x	x	x Note 2
<u>Mercantile</u>			
Class A – Over thirty thousand square feet [2787.09 square meters] or greater than three stories	x	x	x
Class B –Three thousand square feet to thirty thousand square feet [278.71 square meters to 2787.09 square meters] or three thousand square feet [278.71 square meters] or less and two or three stories	x	x	x

Class C – Under three thousand square feet [278.71 square meters] and one story	x Note 5	x	o
Malls	x	x	x
Business	x	x	o
Three or more stories in height	x	x	x
Fifty or more persons above or below level of exit discharge	x	x	x
Three hundred or more persons	x	x	x
All limited access and underground	x	x	x
Industrial	x	x Note 6	x Note 6 & 7
Storage	x	x Note 8	x Note 8 & 9

Special structures (refer to chapter 11, Life Safety Code®, NFPA 101, 2015 edition through December 31, 2020, and chapter 11, Life Safety Code®, NFPA 101, 2018 edition thereafter).

Mixed occupancies (Note 5).

NOTES:

Note 1. Exception: Power supply for exit and emergency lighting shall conform to NFPA 110.

Note 2. Exception: Where each guest room, guest suite or resident sleeping room has an exit direct to the outside of the building at street or ground level emergency lighting is not required.

Note 3. Exception: Buildings with only one exit need not be provided with exit signs.

Note 4. Exception: Where the same means of egress serve multiple use or combined occupancies, exit lighting, exit signs, and emergency lighting shall be provided for the occupancy with the most stringent lighting requirements. The occupant load of each type of occupancy shall be added to arrive at the total occupant load.

Note 5. Exception: Where an exit is immediately apparent from all portions of the sales area, the exit marking is not required.

Note 6. Exception: Special purpose industrial occupancies without routine human habitation.

Note 7. Exception: Structures occupied only during daylight hours, with skylights or windows arranged to provide the required level of illumination on all portions of the means of egress during these hours.

Note 8. Exception: Storage occupancies do not require emergency lighting when not normally occupied.

Note 9. Exception: In structures occupied only during daylight hours, with skylights or windows arranged to provide the required level of illumination of all portions of the means of egress during these hours, emergency lighting is not required.

Fire Alarm System Condensed Guide

All signaling devices for all occupancies shall meet Americans with Disabilities Act (ADA) requirements (check ADA requirements). Smoke alarms in hotels, motels, and apartments are not to be tied to the central alarm system (alarm in room or apartment only). Central alarm trouble indicator shall be located where it will be heard. Systems with two or more zones shall have an annunciator panel located at an entrance approved by the local Fire Protection District. The Three Affiliated Tribes may have additional or more stringent requirements. Be aware the table is the minimum and the owner or designer shall ask for more.

SECTION 6 - THREE AFFILAITED TRIBES PLUMBING ORDINANCE

6.1 Definitions.

In this section, unless the context or subject matter otherwise requires:

6.1.1 "Board" means the North Dakota state board of plumbing.

6.1.2 "Journeyman plumber" means any person, other than a master plumber, who, as the person's principal occupation, is engaged in the practical installation, alteration, and repair of plumbing.

6.1.3 "Master plumber" means a person skilled in the planning, supervision, and the practical installation, alteration, and repair of plumbing, and familiar with the laws, rules, and regulations governing the same.

6.1.4 "Office" Means the Construction Management Office.

6.1.5 "Plumber's apprentice" means any person other than a journeyman or a master plumber, who, as the person's principal occupation, is engaged in learning and assisting in the installation, alteration, and repair of plumbing and drainage, under the immediate and personal supervision of either a master or a journeyman plumber.

6.1.6 "Plumbing" means the installation, maintenance, extension, alteration, and removal of all piping, plumbing fixtures, plumbing appliances, and other appurtenances in connection with bringing water into, and using the same in buildings, and for removing liquids and water-carried wastes therefrom.

6.2 Construction Management Office and state board of plumbing.

The state board of plumbing consists of the members described in N.D.C.C. § 43-18-02. The Construction Management Office is authorized to enter into a Memorandum of Understanding ("MOU") with the state board of plumbing to the purposes of receiving support, resources and technical assistance to facilitate the construction Management Office's enforce of the Three Affiliated Tribes plumbing code. This includes enforcement of plumbing licensure and education requirements.

6.3 Construction Management Office may hire and fix compensation of employees — Incur necessary expenses.

The Construction Management Office may employ inspectors, who must be registered plumbers; and such administrative staff, as may be necessary. The Construction Management Office shall fix the compensation of such employees, and may incur such other expenses as may be required. All such salaries and expenses must be paid only out of such moneys as may be in the Construction Management Office budget.

6.4 Duties of Construction Management Office.

The Construction Management Office:

a. May enter into an agreement with the state plumbing board which shall provide for the Construction Management Office to examine applicants and approve licensure for plumbers working on the Fort Berthold Reservation in alignment with the state board's process and procedures. It shall also provide for the Construction Management Office to administer and oversee continuing education requirements.
b. Shall enforce the provisions of this chapter.
c. Shall prescribe rules and regulations, with approval and authorization of the Tribal Business Council, not inconsistent with the provisions of this chapter for the examination, regulation, and licensing of plumbers, either as master plumbers, journeyman plumbers, plumber's apprentices, or any of such classifications.
d. Shall adopt rules that set fees for licensure which may include a fee for:
    (1) An examination, within the limits established by this chapter.
    (2) An application, not to exceed one hundred dollars.
    (3) A renewal, within the limits established by this chapter.
    (4) A late renewal, not to exceed one hundred dollars.

6.5 Construction Management Office to adopt plumbing code — Provisions have force of law.

The Construction Management Office shall formulate, prepare, and circulate among all plumbers working on the Fort Berthold Reservation a Three Affiliated Tribes plumbing code, which must contain the minimum basic standards for plumbing, drainage, and ventilation of plumbing in buildings of all classes. The provisions of said code have the force and effect of law and any violation thereof constitutes a violation of this chapter.

6.6 Firm engaged in installing plumbing to employ master plumber — Exceptions.

No person, firm, corporation, or limited liability company shall engage in the business of installing plumbing and shall not install plumbing in connection with the dealing in and selling of plumbing materials and supplies in any location on the Fort Berthold Reservation having a public system of waterworks or sewerage, unless at all times a registered and licensed master plumber, who is responsible for the proper installation thereof, is in charge of such work. In cities of less than one thousand population and in all rural areas, a licensed journeyman plumber may engage in the business of installing plumbing.

6.7 License required — Exception for homeowner and full-time employee.

No person, firm, corporation, or limited liability company shall engage in the business of a master plumber, journeyman plumber, or plumber's apprentice in any location on the Fort Berthold Reservation having a public system of waterworks or sewerage unless registered and licensed to do so by the Construction Management Office. Anyone not so licensed may do plumbing work which complies with the provisions of the minimum standards prescribed by the Construction Management Office on premises or that part of premises owned and actually occupied by the person as a residence, or may do plumbing repair on premises where the person is employed in full-time maintenance work, unless otherwise forbidden to do so by the laws of the Three Affiliated Tribes. Public water system employees may install and maintain service lines and water meters on premises served by the water system.

6.8 When license not required.

Employees of dealers in household appliances need not be licensed pursuant to this chapter when installing household appliances, if any necessary plumbing work is incidental to the installation of the appliance and the work could be performed by a plumber's apprentice.

6.9 Conviction not bar to licensure — Exceptions.

Conviction of an offense does not disqualify a person from licensure under this chapter unless the Construction Management Office determines that the offense has a direct bearing upon a person's ability to serve the public as a plumber, or that, following conviction of any offense, the person is not sufficiently rehabilitated.

6.10 Advertising prohibited — Exceptions — Penalty.

6.10.1 Except as provided in this section, if a plumbing license is required under section 6.7 or any other provision under the laws of the Three Affiliated Tribes, no person offering plumbing contracting services may advertise as a plumbing contractor, master plumber, or journeyman plumber unless the person employs a licensed journeyman plumber, or the person is a licensed master plumber. Any advertisement must contain the appropriate license number. This section does not apply to advertising purchased or contracted for prior to July 1, 1989.

6.10.2

a. A person violating this section is guilty of a class B misdemeanor for a first conviction, but no fine in excess of one hundred dollars and no term of imprisonment may be imposed.
b. A person violating this section is guilty of a class A misdemeanor for a second or subsequent conviction, but the penalties are as follows:
    (1) For a second conviction, no fine in excess of one thousand dollars and no term of imprisonment may be imposed.
    (2) For a third or subsequent conviction, a fine not to exceed one thousand dollars or imprisonment not to exceed thirty days, or both, may be imposed.

6.11 Plumbing inspectors — License required — Exception.

A person employed by the Construction Management Office to inspect plumbing installations must be licensed as a journeyman or master plumber. This section does not apply to an inspector employed by the board of plumbing or a political subdivision as of July 2, 1989.

6.12 Examination — When held — Notice.

Examinations must be held at the time and place prescribed by the Construction Management Office. Notice of such examinations must be given by mail to all persons who have made application to take the examination. The Construction Management Office may call a special examination at any time.

6.13 License — How obtained — Fee.

Any person qualified under the rules of the Construction Management Office who desires to take the examination to become a registered and licensed plumber shall make application to the Construction Management Office therefore and pay to the Construction Management Office the examination fee. Such fee may not exceed two hundred dollars for a master plumber's certificate and license and one hundred dollars for a journeyman plumber's certificate and license. If upon examination the applicant is found by the Construction Management Office to be qualified as a master plumber or journeyman plumber, or both, it shall issue to the applicant a certificate of registration and license which entitles the applicant to do the work and be a plumber as specified in the license. A master plumber's and journeyman plumber's license may be issued to one and the same person, and the holder of a master plumber's license may be granted a journeyman plumber's license without the payment of the journeyman's fee. All certificates and licenses must be numbered consecutively and may not be transferable, and no person may work under the license issued to another person. Should a person fail upon examination to qualify as a master or journeyman plumber, such person has the right to review the examination to determine the reasons for failure and has the right to appeal to the Construction Management Office.

6.14 Reciprocity with other jurisdictions.

The Construction Management Office may register, without examination, upon payment of the required fee, nonresident applicants registered under the laws of other jurisdictions having requirements for regulating plumbers which the Construction Management Office determines are substantially equivalent to the requirements of the Three Affiliated Tribes in those instances when such other jurisdiction grants similar privileges to plumbers licensed under this chapter.

6.15 Construction Management Office to keep register of licenses issued.

The Construction Management Office shall keep a register in which must be entered the names and addresses of all persons to whom certificates of registration and license are issued under the provisions of this chapter as master plumbers, and also a register in which must be entered the names and addresses of all persons to whom certificates of registration and license are issued under the provisions of this chapter as journeyman plumbers. Such register must be open to the public for inspection.

6.16 Temporary license — When issued.

The Construction Management Office, upon the payment of the regular examination fee, may issue a temporary permit to engage in the business of master plumber or journeyman plumber, or both, to any person who furnishes satisfactory evidence of the person's qualifications. Such permits are revocable permits and are effective to December thirty-first of the year in which they are issued. No person may be issued such temporary permits for longer than four years.

6.17 Plumber licensed by Construction Management Office may practice at any place on the Fort Berthold Reservation

A plumber registered and licensed by the Construction Management Office to engage in the business of master plumber, journeyman plumber, or plumber's apprentice may engage in or work at the business of plumbing at any place on the Fort Berthold Reservation.

6.18 Renewal of license — Fee.

A certificate and license issued under the provisions of this chapter is valid for only one year and expires on the thirty-first day of December of the year in which it was issued. The certificate must be renewed by the Construction Management Office upon application made within thirty days after the expiration thereof and on the payment of a sum not to exceed two hundred dollars for a master plumber's certificate and license, and the sum of one hundred dollars for a journeyman plumber's certificate and license. The Construction Management Office may increase fees with the authorization and approval of the Tribal Business Council.

6.19 Continuing education.

After January 1, 1991, each applicant for renewal of a master or journeyman plumber's license under section 6.18 must have successfully completed prior thereto at least two credit hours, and thereafter a minimum of two credit hours and not to exceed four credit hours within a two-year period, of continuing education relating to the plumbing trade.

Credit hours for educational sessions must be determined by the Construction Management Office on a continuing basis to evaluate new sessions as they become available for fulfilling the educational requirements of this section. The Construction Management Office may charge a fee sufficient to offset expenses incurred for any educational sessions for which it is directly responsible.

6.20 Report of work — Exception.

A person shall report doing plumbing work subject to inspection under section 6.21 to the Construction Management Office upon forms furnished by the Construction Management Office. This section does not apply to plumbing installations in buildings that are not connected to a public system of waterworks or sewerage.

6.21 Inspection of installation — Exception.

The Construction Management Office has jurisdiction over and shall make provision for inspection of plumbing installations or alterations to public buildings and installations in newly constructed dwelling units, except as provided in this section. The Construction Management Office may charge the person responsible for the installation a reasonable fee not to exceed the cost of inspection. No inspection is required for any repair work or plumbing fixture replacement which requires only minor alteration, or to buildings that are not connected to a public system of waterworks or sewerage, and does not apply to maintenance work conducted by regularly employed maintenance personnel on the business premises of their employer.

6.22 Grounds for revocation of license.

The Construction Management Office may revoke any certificate issued under the provisions of this chapter if the holder is guilty of:

a. Commission of an offense determined by the Construction Management Office to have a direct bearing upon the holder's ability to serve the public as a plumber, or the

Construction Management Office determines, following conviction of any offense, that the holder is not sufficiently rehabilitated;

b. Error or fraud in obtaining the holder's certificate;
c. Permitting the use of the holder's certificate and license in violation of this chapter;
d. Incompetency;
e. Failure to furnish certification of completion of continuing education as required under section 6.19; or
f. Failure to report work as required under section 6.20.

6.23 Revocation — Hearing.

A certificate of registration and license issued under the provisions of this chapter may be revoked only after a hearing of the charges by the Construction Management Office. The holder of the certificate must be notified in writing by the Construction Management Office of the charges against the holder and of the time and place fixed for the hearing. Such notice must be served by registered or certified mail, addressed to the post-office address of the certificate holder as shown in the holder's certificate of registration and license. The time set for the hearing must be not less than ten days after the service of the notice. The hearing must be public and full opportunity must be given the accused to produce witnesses and evidence in the accused's own behalf and to examine the witnesses against the accused. After hearing all the evidence, the Construction Management Office shall render its decision in writing and the accused must be furnished, by mail, a copy thereof. If the accused is found guilty of any offense for which revocation of the license is provided, the certificate of registration and license is revoked automatically.

6.24 Revocation of license — When reinstated.

A person whose certificate of registration and license issued under the provisions of this chapter has been revoked by the Construction Management Office may not be permitted to apply for a license for a period of one year from the date of the revocation. After the expiration of such time, the Construction Management Office may consider an application for reinstatement of such person and upon a showing that the disability has been removed or that there is no further likelihood that the offense will be repeated, the Construction Management Office may reinstate the license.

6.25 Apprenticeship.

Every apprentice plumber shall, within thirty days after beginning apprenticeship, register with the Construction Management Office on a registration application form which will be supplied by the Construction Management Office, showing date of beginning apprenticeship, age, schooling, previous experience, employer, and such other information as the Construction Management Office may require, except that a person who is working in a school-work program need not register. A registration certificate issued under the provisions of this section shall be valid for only one year and shall expire on the thirty-first day of December of the year in which it was issued. The certificate shall be renewed by the Construction Management Office upon application made within thirty days after the expiration thereof and on payment of the sum set by

the Construction Management Office. This certificate of registration shall be the license required to be employed as a plumber's apprentice on the Fort Berthold Reservation.

6.26 Reporting violations to Construction Management Office.

The Construction Management Office may, with authorization and approval of the Tribal Business Council, enter into MOUs with neighboring local jurisdictions and the state plumbing board to provide for shared reporting of willful violations of the Three Affiliated Tribes plumbing code any incompetence on the part of any registered and licensed plumber that comes to the attention of the Construction Management Office, local jurisdiction, or state plumbing board.

6.27 Working as plumber without license.

It is unlawful for any person to work, for compensation, as a master plumber, journeyman plumber, or plumber's apprentice without being registered and licensed as a plumber in such classification.

6.28 Violation of chapter — Penalty.

Any person that violates the Three Affiliated Tribes plumbing code adopted under 6.5; violates section 6.6, 6.7, 6.11, 6.20, or 6.27; or works under the license of another person in a manner that is in violation of section 6.13 is guilty of a class B misdemeanor.

6.29 Injunction.

In addition to the criminal penalty provided in section 6.28, the civil remedy of injunction is available to plumbing inspectors to restrain and enjoin violations of any provisions of this chapter. Any person claiming to be injured in person or property because of violations of this chapter may bring a civil action for damages in Fort Berthold District Court.

SECTION 6.1 - WATER CONDITIONING CONTRACTORS AND INSTALLERS ORDINANCE

6.1.1 Definitions.

In this chapter, unless the context or subject matter otherwise requires:

a. "Board" means the state board of plumbing.
b. "Office" means the Construction Management Office of the Three Affiliated Tribes.
c. "Water conditioning contractor" means a person who plans and manages the installation and repair of water conditioning equipment, and in conjunction therewith sells or leases such equipment.
d. "Water conditioning installation and repair" means the installation of appliances, appurtenances, and fixtures designed to treat water so as to alter, modify, add or remove mineral, chemical, or bacterial content, and the repair of such equipment, to a water distribution system. "Water conditioning installation and repair" does not mean the exchange of such appliances, appurtenances, and fixtures when the plumbing system has

previously been installed or adapted to or for such appliances, appurtenances, and fixtures, and no substantial change in such plumbing system is required.

e. "Water conditioning installer" means any person who is engaged in the practical installation and repair of water conditioning equipment.

6.1.2 Administration.

The Construction Management Office is authorized to enter into a Memorandum of Understanding ("MOU") with the state plumbing board for the board's support, resources, and technical assistance to assist the Construction Management Office in administering and enforcing the requirements of this section. All fees and money obtained by the Construction Management Office through the administration of this section must be used for the regulation of the business of water conditioning installation and repair, through the Construction Management Office, and all such fees and money will remain with the Construction Management Office for such purpose.

6.1.3 Duties of the Construction Management Office.

The Construction Management Office shall:

a. Enforce the provisions of this chapter.
b. Prescribe rules and regulations, with the authorization and approval of the Tribal Business Council, that are not inconsistent with the provisions of this chapter for the examination, regulation, and licensing of water conditioning contractors and water conditioning installers.

6.1.4 Licenses — Examination — Fees — Apprentices.

a. No person, firm, corporation, or limited liability company, except plumbers holding valid plumbers licenses pursuant to the Three Affiliated Tribes plumbing code, shall engage in the business of water conditioning contractor or water conditioning installer on the Fort Berthold Reservation having a system of waterworks or sewage unless registered and licensed to do so by the Construction Management Office. Installation and repair of water conditioning equipment shall be done by the person holding a water conditioning installer's license.
b. The Construction Management Office shall hold not less than one public meeting per year for the purpose of examination of persons who may desire to become registered and licensed in the water conditioning business pursuant to this chapter. Notice of such examinations must be given by mail to all persons who have made application to take the examination and the examination provided for herein may be held in conjunction with the plumbers license examination.
c. Examination for licenses and registration shall be upon application as prescribed by the Construction Management Office and payment of the examination fee. Such fee shall be forty dollars and twenty dollars for registration and licensure as a water conditioning contractor and water conditioning installer, respectively. If the holder of an installer's license is also a contractor, the fee shall be forty dollars. The examination shall be as

prescribed by the Construction Management Office but shall be limited to the installation and repair of water conditioning equipment as such relates to plumbing. The issuance of licenses and registrations hereunder shall be as prescribed by the Construction Management Office in alignment by the procedures for obtaining a plumbers license.

d. An apprentice may be employed by any licensee under this chapter. When so employed the apprentice shall perform the apprentice's employment under the direct supervision of the licensee and when engaged in installation or repair pursuant to this chapter the apprentice shall be under the direct supervision of a licensed installer. Upon employment and termination of employment the name of the apprentice and the apprentice's employer shall be communicated to the Construction Management Office.

6.1.5 Temporary licenses — Issuance.

The office, upon payment of the fees provided in this chapter, shall issue special temporary permits to engage in water conditioning installation and repair as provided in this chapter to those applicants who furnish sufficient proof that they were engaged in such business on January 1, 1973. Such special temporary permits are retroactive to January 1, 1973, and expire thirty days after the date the second examination, but no later than July 1, 1974. The Construction Management Office may prescribe rules and regulations under which regular temporary permits may be issued which must be generally in accordance with requirements for temporary licensure of plumbers.

6.1.6 Conviction not bar to licensure — Exceptions.

Conviction of an offense does not disqualify a person from licensure under this chapter unless the office determines that the offense has a direct bearing upon a person's ability to serve the public as a water conditioning contractor, or that, following conviction of any offense, the person is not sufficiently rehabilitated.

6.1.7 Renewal of license and registration — Fee.

Except for special temporary licenses as provided in this chapter, a license issued under this chapter is valid for only one year and expires on December thirty-first of the year in which it was issued. The license must be renewed by the Construction Management Office upon application made within thirty days after the expiration thereof and on the payment of the fees as provided in section 6.1.4.

6.1.8 Revocation of licenses.

The Construction Management Office may revoke any license issued under the provisions of this chapter if the licensee has:

a. Committed an offense determined by the office to have a direct bearing upon a holder's ability to serve the public as a water conditioning contractor, or the office determines, following conviction of any offense, that a holder is not sufficiently rehabilitated;
b. Committed a fraud in obtaining the holder's certificate;
c. Permitted the use of the holder's license in violation of this section; or

d. Performed work or business in an incompetent manner.

6.1.9 Revocation — Hearing — Reinstatement.

A license issued under the provisions of this chapter may be revoked only upon a charge in writing filed with the Construction Management Office and after a hearing thereon by the Construction Management Office. Such hearing must be conducted in accordance with the procedures set forth in section 6.23. Reinstatement of a license revoked under this section may be made in accordance with section 6.24.

6.1.10 Violations — Penalty.

Any person that violates the three affiliated tribes plumbing code adopted under section 6.5 of the Three Affiliated Tribes Plumbing Ordinance, violates subsection a. of section 6.1.4, or works under the license of another person in a manner that is in violation of subsection c. of section 6.1.4 is guilty of a class B misdemeanor.

SECTION 6.2 - SEWER AND WATER INSTALLERS

6.2.1 Definitions.

In this section, unless the context or subject matter otherwise requires:

a. "Board" means the state board of plumbing.
b. "Office" means the Construction Management Office of the Three Affiliated Tribes.
c. "Sewer and water contractor" means any person who installs, plans, and manages the installation and repair of building sewer and water service.
d. "Sewer and water installation" means the installation of building sewer and water service and the repair of existing building sewer and water service.
e. "Sewer and water installer" means any person, other than a sewer and water contractor, who installs and repairs building sewer and water service.

6.2.2 Duties of the Office.

The Construction Management Office is authorized to enter into a Memorandum of Understanding ("MOU") with the state board for the board's resources, support and technical assistance to assist the Office in implementing and enforcing this section. The Office shall:

a. Enforce this section.
b. Adopt rules, with the authorization and approval of the Tribal Business Council, not inconsistent with this section for the examination, regulation, and licensing of sewer and water contractors and sewer and water installers.
c. Exempt from the provisions of sections 6.2.6, 6.2.7, and 6.2.8 those sewer and water contractors and installers as defined in 6.2.1 who have at least one year's work experience prior to July 1, 1987.

6.2.3 Licenses.

No person, firm, corporation, or limited liability company, except plumbers holding valid licenses under the Three Affiliated Tribes plumbing code, may engage in the business of sewer and water contractor or sewer and water installer unless registered and licensed by the Construction Management Office to do so. This license allows the licensee to do plumbing necessary for sewer and water installation.

6.2.4 Sewer and water installer apprentice license.

All applicants for a building sewer and water installer apprentice license shall complete an application identifying the building sewer and water installer under whose supervision the applicant is working. The license is without charge for two years and must be renewed annually.

6.2.5 Out-of-jurisdiction applicants.

An applicant for a sewer and water contractor's license or a sewer and water installer's license from outside the exterior boundaries of the Fort Berthold Reservation may take the examination upon showing by affidavits that the applicant has experience in the state in which the applicant is licensed. This experience must be the same as is required of applicants from the Fort Berthold Reservation or North Dakota. The Construction Management Office shall provide applicants with application forms and affidavit forms necessary to comply with this section. The Construction Management Office shall investigate the validity of the affidavits. A rejected application must be treated as an adjudicative proceeding.

6.2.6 Experience for testing.

An applicant for a sewer and water installer's license shall show evidence of two years' experience as a building sewer and water installer apprentice in North Dakota or on the Fort Berthold Reservation. Applicants for a sewer and water installation contractor's license must have one year's experience as an installer in North Dakota or on the Fort Berthold Resrvation. All applicants shall show that their work complies with the Three Affiliated Tribes plumbing code. Proof of experience must be shown by affidavits which the Construction Management Office may investigate. The Construction Management Office shall provide applicants with application forms. If the application is rejected, the matter must be treated as an adjudicative proceeding.

6.2.7 Examination requirements.

The examination for applicants for licensure must consist of:

a. Questions pertaining to the application and maintenance of basic principles of sewer and water installation.
b. Questions which require the application of the Three Affiliated Tribes plumbing code and the Three Affiliated Tribes industrial safety code to building sewer and water installation.

The questions for the sewer and water contractor and the building sewer and water installer need not be the same. The passing grade for the building sewer and water contractor must be eighty percent, and the sewer and water installer's passing grade must be seventy percent.

6.2.8 Examination fees.

An applicant for a sewer and water contractor's license shall pay an examination fee of one hundred dollars, and an applicant for a building sewer and water installer's license shall pay an examination fee of twenty-five dollars before taking the examination for the first time. The re-examination fee is fifty dollars for a sewer and water contractor's license and ten dollars for a sewer and water installer's license. No additional fee may be charged for the first year of licensure. No applicant may be examined for the same license more often than every three months.

6.2.9 License renewal fees.

The license renewal fee for a sewer and water contractor after the first year of licensure may not exceed one hundred dollars per year, and the license renewal fee for a sewer and water installer after the first year of licensure may not exceed twenty-five dollars per year. The license renewal fee for a sewer and water installer apprentice after the first two years of licensure is twenty-five dollars.

6.2.10 Revocation of licenses.

The Construction Management Office may revoke any license issued under this chapter if the licensee has:

a. Committed an offense, determined by the Construction Management Office to have a direct bearing upon a holder's ability to serve the public as a sewer and water contractor, sewer and water installer, or a sewer and water installer apprentice, or the Construction Management Office determines, following conviction of any offense, that a holder is not sufficiently rehabilitated;
b. Committed a fraud in obtaining the license;
c. Permitted the use of the license in violation of this section; or
d. Performed work or business in an incompetent manner as determined by the Construction Management Office.

6.2.11 Administration of funds.

All fees and moneys obtained by the Construction Management Office through the administration of this chapter must be used for the regulation of the business of sewer and water installation and repair.

6.2.12 Violation — Penalty.

Any person that violates the Three Affiliated Tribes plumbing code adopted under section 6.5 of the plumbing ordinance, violates section 6.2.3, or works under the license of another person in a manner that is in violation of section 6.2.6 is guilty of a class B misdemeanor.

SECTION 7 - THREE AFFILIATED TRIBES PLUMBING CODE (REGULATIONS)

SECTION 7.1- LICENSURE

Chapter 1 - Plumber Licensure

7.1.1.1 -Application for journeyman or master plumber license.

No applicant shall be entitled to take the examination for either the master or journeyman plumber's certificate and license unless and until the applicant furnishes to the Construction Management Office satisfactory evidence that the applicant possesses sufficient practical experience to enable the applicant to perform satisfactorily the duties of the classification for which the applicant has made application.

a. Applicants for a journeyman plumber's examination and license shall have had four years' experience as an apprentice plumber under a licensed master plumber. Applicants who are working at the plumbing trade in localities where state licenses are not required, who have had five years of experience (one thousand nine hundred hours per year and a total of nine thousand five hundred hours) and who furnish four affidavits verifying years of experience, may make application for a journeyman examination screening test. The screening test is defined as an oral and written test given by the Construction Management Office and a plumbing inspection report, signed by a Construction Management Office plumbing inspector, of an installation installed by the applicant to determine the applicant's qualifications for writing the journeyman examination.
b. Applicants who are journeyman plumbers in other jurisdictions who desire to work on the Fort Berthold Reservation may make application for a journeyman examination and license. Proof of such journeyman license from another jurisdiction shall be vouched for as provided on the application form furnished by the Construction Management Office.
c. All applicants for a master plumber's license must be twenty-one years of age and must have had two years' (three thousand four hundred hours) experience as a journeyman plumber licensed by the Three Affiliated Tribes or any other jurisdiction that either has or conforms to a state licensing law. Proof of such journeyman license from another jurisdiction shall be vouched for as provided on the application form furnished by the Construction Management Office.
d. Applicants who are master plumbers in states other than North Dakota who desire to work on the Fort Berthold Reservation may make application for a master examination and license. Proof of such master license from another jurisdiction shall be vouched for as provided on the application form furnished by the Construction Management Office.
e. All applications will expire and be canceled after a period of six months from date of approval if the applicant fails to appear for examination within the six-month period.

7.1.1.2 Application for apprentice plumber - Supervised practice.

An applicant for registration as an apprentice must have reached the age of eighteen years. An apprentice shall serve a term of four years, not less than one thousand nine hundred hours per year, with a total of not less than seven thousand six hundred hours.

a. The Construction Management Office may grant hourly credit toward a term of apprenticeship when the applicant furnishes proof of previous practical experience in the trade, or is a graduate of a course in plumbing at an accredited school having at least a nine month, one thousand twenty hours course in plumbing. The number of hours credit for each hour of the course according to the graduating grade average shall be: A average - two hours, B average - one and three-quarter hours, C average - one and one-half hours, and a D average - one hour. Credit for trade-related experience shall be determined by criteria established by the Construction Management Office consistent with those criteria established by the state board.
b. A master plumber employing a registered apprentice shall report to the Construction Management Office any changes made in relation to continued employment of such apprentice. It is the employer's duty and responsibility to not permit an apprentice to perform work unless under the direct supervision and in the immediate presence of either a master or journeyman plumber. There shall not be more than five plumber's apprentices under the immediate and personal supervision of either a master plumber or journeyman plumber employed on any installation, alteration, or repair project.
c. Apprentice plumbers who have had three years (five thousand seven hundred hours) experience in learning and assisting in the installation, alteration, and repair of plumbing, and working for a master plumber, may work during their fourth year of apprenticeship by themselves without being under the direct supervision of a master or journeyman plumber.

7.1.1.3 Examination fee for each examination.

An applicant for examination shall be entitled to one examination only for each examination fee paid.

7.1.1.4 Examination subjects and passing grades.

Examination for applicants desiring to become registered and licensed plumbers shall consist of: answering questions pertaining to the basic principles of plumbing and the plumbing code; preparing drawings on which the applicant is to draw all stacks, wastes, and vents, and to insert the minimum pipe sizes. The examinations for master and journeyman plumber need not be the same. The passing grade for a master plumber shall be eighty percent, and the journeyman plumber passing grade shall be seventy percent.

7.1.1.5 Reexamination.

If an applicant fails to pass an examination, the applicant shall be denied the right to take another examination until at least six months shall have passed from the date of the applicant's last examination.

7.1.1.6 Reexamination of apprentice plumber.

An apprentice plumber who has written and failed the journeyman examination must rewrite the examination at the end of the six-month period or work under direct supervision of a licensed master or journeyman plumber.

7.1.1.7 Master plumber - Renewal of journeyman and master plumber certificate.

The holder of a master plumber's certificate and license may renew the holder's journeyman certificate and license upon payment of the journeyman renewal fee and during the same year may reinstate the holder's master plumber's certificate and license upon payment of the difference between the journeyman renewal fee and the master renewal fee.

7.1.1.8 Renewal of expired license.

No certificate and license need be renewed by the Construction Management Office later than one year subsequent to its expiration. The Construction Management Office may, in its discretion, require that a holder of a license which has been expired for one year or more submit to a new examination.

SECTION 7.1

CHAPTER 2 – Water Conditioning Constructor and Installer Licensure

7.1.2.1 Application for water conditioning installer or contractor license.

No applicant shall be entitled to take the examination for either the water conditioning contractor or water conditioning installer's certificate and license unless and until the applicant furnishes to the Construction Management Office satisfactory evidence that the applicant possesses sufficient practical experience to enable the applicant to perform satisfactorily the duties of the classification for which the applicant has made application.

a. Applicants for a water conditioning installer's examination and license shall have had one year's experience as an apprentice water conditioning installer under a licensed water conditioning contractor. A one-year term of apprenticeship is defined as not less than one thousand nine hundred hours.
b. Applicants who are water conditioning installers in other jurisdictions who desire to work on the Fort Berthold Reservation may make application for a water conditioning installer's examination and license. Proof of such water conditioning installer's license from another jurisdiction shall be vouched for as provided on the application form furnished by the Construction Management Office.
c. Graduates of the plumbing course of an accredited trade school having at least a nine-month (one thousand twenty hours) course in plumbing shall be eligible to make application for a water conditioning installer's examination and license.
d. All applicants for a water conditioning contractor's license must be twenty-one years of age and must have had one year's (one thousand nine hundred hours) experience as a water conditioning installer licensed by the Construction Management Office or any other jurisdiction that either has or conforms to a state licensing law. Proof of such water conditioning installer's license from another jurisdiction shall be vouched for as provided on the application form furnished by the Construction Management Office.
e. Applicants who are water conditioning contractors in other jurisdictions who desire to work on the Fort Berthold Reservation may make application for a water conditioning contractor's examination and license. Proof of such water conditioning contractor's license from another jurisdiction shall be vouched for as provided on the application form furnished by the Construction Management Office.
f. All applications will expire and be canceled after a period of six months from date of approval if the applicant fails to appear for examination within the six-month period.

7.1.2.2 Examination fee for each examination.

An applicant for examination shall be entitled to one examination only for each examination fee paid.

7.1.2.3 Examination subjects and passing grades.

Examination for applicants desiring to become registered and licensed water conditioning contractors or water conditioning installers shall consist of answering questions pertaining to the

basic principles of the code and questions which are based upon the code. The questions for water conditioning contractors and water conditioning installers need not be the same. The passing grade for a water conditioning contractor shall be eighty percent, and the water conditioning installer passing grade shall be seventy percent.

7.1.2.4 Reexamination.

If an applicant failed to pass an examination, the applicant shall be denied the right to take another examination until at least six months shall have passed from the date of the applicant's last examination.

7.1.2.5 Reexamination of apprentice water conditioning installer.

An apprentice water conditioning installer who has written and failed the water conditioning installer's examination must rewrite the examination at the end of the six-month period or work under the direct supervision of a licensed water conditioning contractor or water conditioning installer.

7.1.2.6 Water conditioning contractor - Renewal of installer and contractor certificate.

The holder of a water conditioning contractor's certificate and license may renew the holder's water conditioning installer's certificate and license upon payment of the twenty-dollar fee and during the same year may reinstate the holder's water conditioning contractor's certificate and license upon payment of an additional twenty dollars.

7.1.2.7 Renewal of expired license.

No certificate and license need be renewed by the Construction Management Office later than one year subsequent to its expiration. The Construction Management Office may, in its discretion, require that a holder of a license which has been expired for one year or more submit to a new examination.

7.1.2.8 Issuance of water conditioning installer's certificate and license.

The Construction Management Office issues a person a water conditioning installer's certificate and license upon and with the understanding that the holder thereof shall not engage in the business of installing water conditioners unless at all times a registered and licensed water conditioning contractor, who is responsible for the proper installation of the water conditioners, is in charge of such work.

7.1.2.9 Report of water conditioning equipment installation.

It shall be the duty of water conditioning contractors to report to the Construction Management Office all installations of water conditioning equipment in localities that do not enforce a permit and inspection program for the installation of water conditioning equipment.

SECTION 7.1

CHAPTER 3 - SEWER AND WATER CONTRACTOR AND INSTALLER LICENSURE

7.1.3.1 Application for sewer and water installer or contractor license.

No applicant is entitled to take the examination for either the sewer and water contractor or sewer and water installer's certificate and license unless and until the applicant furnishes to the Construction Management Office proof that the applicant possesses sufficient practical experience to enable the applicant to perform satisfactorily the duties of the classification for which the applicant has made application. If the applicant fails to appear for examination, the application will expire after a period of six months from date of verification of the application. The Construction Management Office will consider the following as sufficient practical experience.

a. A one-year term of practical experience is defined as one thousand seven hundred hours.
b. Graduates of a plumbing course of an accredited trade school having at least a nine-month (one thousand twenty hours) course in plumbing shall satisfy the apprentice requirements and be eligible to make application for a sewer and water installer's examination and license.
c. Apprentice plumbers registered with the Construction Management Office or the state of North Dakota and having two years' experience are eligible to make application for a sewer and water installers examination and license. A one-year term of apprenticeship is defined as not less than one thousand seven hundred hours.

7.1.3.2 Examination fee for each examination.

An applicant for examination is entitled to one examination only for each examination fee paid.

7.1.3.3 Reexamination of apprentice sewer and water installer.

An apprentice sewer and water installer who has written and failed the sewer and water installer's examination must rewrite the examination at the end of a three-month period. During the three-month period the sewer and water installer apprentice may work under the direct supervision of a licensed sewer and water installer.

7.1.3.4 Renewal of expired license.

Any person may renew his license without examination if renewal occurs within one year following expiration. The Construction Management Office shall require that a holder of a license which has been expired for one year or more submit to a new examination.

7.1.3.5 Renewal of sewer and water contractor and installer certificate and license.

The holder of a sewer and water contractor's certificate and license may renew the sewer and water installer's certificate and license upon payment of the installer's renewal fee and during the

same year may reinstate the holder's contractor's certificate and license upon payment of the difference between the installer and contractor renewal fee.

7.1.3.6 License renewal.

A certificate and license issued under the provisions of this chapter is valid for not more than one year, beginning the first day of July and expiring on the thirtieth day of June of the following year.

SECTION 7.2 - PLUMBING INSTALLATION STANDARDS

CHAPTER 1 - ADMINISTRATION

7.2.1.1 Conformance with the Three Affiliated Tribes Plumbing Code.

a. Three Affiliated Tribes Plumbing Code defined. The Tribal Business Council adopts, as the Three Affiliated Tribes plumbing code, the 2018 edition of the Uniform Plumbing Code published by the international association of plumbing and mechanical officials (IAPMO), to be known as the Three Affiliated Tribes Plumbing Code, including chapters 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, and 17; appendices A, B, C, D, E, I, and M; and Standards for Private Sewage Disposal Systems (Three Affiliated Tribes Law and Order Code, XIII, Chapter 15, § 7.2.2)
b. All plumbing including materials, must meet or exceed the minimum provisions of this section and the Three Affiliated Tribes Plumbing Code.

7.2.1.2 General statement of policy.

The scope of this code excludes the development of specific standards related to any, all, or any combination of the composition, dimensions, or mechanical and physical properties of materials, fixtures, devices, and equipment used or installed in plumbing systems. The inclusion of a material, even though indicated as approved for purposes of the code, does not infer unqualified endorsement as to its selection of serviceability in any or every installation. The establishment of trade jurisdictional areas is not within the scope of this code.

7.2.1.3 Administrative powers and duties.

The plumbing inspectors of the Construction Management Office shall administer laws, rules, plumbing installation standards of the Three Affiliated Tribes, and the Three Affiliated Tribes Plumbing Code. In all cases when any action is taken by the inspectors of the Construction Management Office to enforce the provisions of any sections contained in this section or the Three Affiliated Tribes Plumbing Code, such acts must be done in the name of and on behalf of the Three Affiliated Tribes.

7.2.1.4 Application for plumbing installation certificate.

Any plumbing installation requiring inspection must have a plumbing installation certificate properly executed by the master or journeyman plumber in charge of the installation. The Construction Management Office shall have paper or electronic certificates for the person in charge of the installation.

a. Inspection fees for each certificate issued must be according to the schedule of fees shown on the plumbing installation certificate. If work has commenced prior to submittal of the certificate and proper fees, the fee will be double or actual cost incurred to investigate, whichever is less. Requested inspection, reinspection, or inspection for which no fee is specifically indicated must be charged at fifty dollars per hour, plus travel expense.

b. Paper certificates must be signed by the applicant and the original returned to the Construction Management Office along with the proper fees prior to commencement of work. The duplicate copy must be retained by the plumbing contractor and the triplicate copy must be submitted to the building owner. Electronic certificates are processed online. The issuing certificate fee must be charged for each certificate that must be reissued.

SECTION 7.2

CHAPTER 2 - PRIVATE SEWAGE DISPOSAL SYSTEMS

7.2.2.1 General provisions.

a. All sewage treatment systems shall be constructed, added to, or altered in accordance with this chapter. When a public or noncommunity sewerage system is deemed available to a premise used for human occupancy if such premise is within two hundred feet 60.96 meters, the Tribal Health Department Office of Environmental Health shall require that sewage be discharged into that system.
b. Where public or noncommunity sewage treatment systems are not available and construction of an individual sewage treatment system is contemplated for a building of human occupancy or use or addition to, or alteration of any existing sewage treatment system, the master plumber or sewer and water contractor, or septic system installer, previous to beginning any construction may be required to make application to the Tribal Health Department for a written permit to make the desired installation.
c. "Sewage treatment" under this section means all private methods of collecting and disposing of domestic sewage including septic tanks, privies, chemical toilets, and any others.
d. All domestic sewage shall be disposed of by an approved method of collection, treatment, and effluent discharge. Domestic sewage or sewage effluent shall not be disposed of in any manner that will cause pollution of the ground surface, ground water, bathing area, lake, pond, watercourse, or create a nuisance. It shall not be discharged into any abandoned or unused well, or into any crevice, sink hole, or other opening either natural or artificial in a rock formation.
e. Where water under pressure is not available, all human body wastes shall be disposed of by depositing them in approved privies, chemical toilets, or such other installations acceptable to the Tribal Health Department Office of Environmental Health.
f. Water-carried sewage from bathrooms, kitchens, laundry fixtures, and other household plumbing shall pass through a septic or other approved sedimentation tank prior to its discharge into the soil or into an alternative system. Where underground disposal for treatment is not feasible, consideration will be given to special methods of collection and disposal.
g. The building contractor, owner, plumbing contractor, or disposal system installer are jointly responsible for compliance with this chapter.

h. Abandoned disposal systems, septic tanks, pumping and other chambers, and seepage beds shall be disconnected from the buildings. The tanks and chambers shall be pumped out and filled with earth.
i. No property shall be improved in excess of its capacity to properly absorb sewage effluent in the quantities and by the means provided in this code.
j. When there is insufficient lot area or improper soil conditions for adequate sewage treatment for the building or land use proposed, and the Construction Management Office so finds, no building permit shall be issued and no private sewage treatment shall be permitted. Where space or soil conditions are critical, no building permit shall be issued until engineering data and test reports satisfactory to the Construction Management Office have been submitted and approved or a private sewage treatment system complying with the provisions of this section has first been designed.
k. Nothing contained in this chapter shall be construed to prevent the Construction Management Office from requiring compliance with higher requirements than those contained herein where such higher requirements are essential to maintain a safe and sanitary condition.
l. “Continuing education” under this section means a structured, professionally presented curriculum Construction Management Office.
m. “Installer” under this section means an individual or contractor that engages in the construction of onsite sewage treatment systems. Homeowners who work on their own systems are not included in this definition.
n. "Mottled soil" under this section means soil from a soil boring which is marked with spots of contrasting colors. Any soil having spots of contrasting colors is considered to be mottled.
o. "Sewage treatment" under this section means all private methods of collecting and disposing of domestic sewage including septic tanks, privies, chemical toilets, and any others.
p. A "chamber or pump chamber" under this section means a watertight receptacle for receiving effluent from the septic tank which will be used for placement of an effluent grade pump to distribute that effluent to the treatment area.
q. "Noncommunity" under this section means a collector system for sewage disposal serving a group of homes which uses lagoons or other collective methods of disposal and treatment which are not otherwise regulated by the Three Affiliated Tribes.

7.2.2.2 Installation - Excavator and installer requirements.

a. Individuals or business contractors may be required by the Construction Management Office to have or obtain a license or permit to install individual onsite sewage treatment systems as described in this chapter.
b. Where required by Construction Management Office, installers of septic systems must obtain at least eight contact hours of suitable continuing education every two years which pertains to onsite septic system installation. Reciprocity for training in states other than North Dakota can be made on an individual basis by the Construction Management Office.

c. The installer of a treatment system shall submit an “as built” drawing of the system to the Construction Management Office within thirty days after the system has been completed.

7.2.2.3 Design of individual sewage system.

a. Design. The design of the individual sewage treatment system must take into consideration location with respect to wells or other sources of water supply, topography, water table, soil characteristics, area available, and maximum occupancy of the building.
b. Type of system. The type of system to be installed shall be determined on the basis of location, soil permeability, and ground water elevation.
c. Sanitary sewage. The system shall be designed to receive all sanitary sewage, including laundry waste, from the building. Drainage from footings or roofs shall not enter the system.
d. Discharge. The system shall consist of a septic tank discharging into either a subsurface treatment field or one or more seepage beds or into a combination of both, if found adequate as such and approved by the Construction Management Office.
e. Ground water. No plumbing fixture may be connected to any individual sewage treatment system where ground water may collect above the sewage treatment system causing a flooded condition, unless the elevation of the fixture trap is a sufficient height above the elevation of the finished grade of the ground in which the sewage treatment field is installed to prevent backup. The minimum separation distance from the bottom of the treatment area must equal or exceed twenty-four inches 60.96 centimeters.
f. Alternate design. Where soil conditions are such that neither of the systems mentioned in subsection d. can be expected to operate satisfactorily, approval of an alternate design shall be secured from the Construction Management Office.
g. Sewage flow. Design criteria for sewage flow according to the type of establishment is indicated in the following table:

SEWAGE FLOWS ACCORDING TO TYPE OF ESTABLISHMENT

Gallons Per Person Per Day

Type of Establishment (Unless Otherwise Noted)

Airports (per passenger) 5

Apartments-multiple family (per resident) 60

Assembly halls (per seat) 2

Bars (per seat) 5

Bathhouses and swimming pools 10

Bowling alleys (per lane) 75

Camps:

Campground with central comfort stations 35

With flush toilets, no showers 25

Construction camps (semipermanent) 50

Day camps (no meals served) 15

Resort camps (night and day) with limited plumbing 50

Luxury camps 100

Churches (per sanctuary seat) 5

Churches with kitchens (per sanctuary seat) 7

Cottages and small dwellings with seasonal occupancy 50

Country clubs (per member present) 25

Dwellings:

Boardinghouses 50

Additional for nonresident boarders 10

Luxury residences and estates 15

Multiple family dwellings (apartments) 60

Roominghouses 40

Single-family dwellings 75

Factories (gallons per person, per shift, exclusive of industrial wastes) 35

Hospitals (per bed space) 250

Hotels (per guest) 50

Institutions other than hospitals (per bed space) ... 100

Laundries, self-service (gallons per machine) 500

Mobile home parks (per space) 250

Motels (per bed space) 50

Picnic parks (sanitary waste only) 5

Picnic parks with bathhouses, showers,

and flush toilets 10

Restaurants (toilet and kitchen wastes per patron) .. 10

Restaurants (kitchen wastes per meal served) 3

Restaurants additional for bars and

cocktail lounges 2

Schools:

Boarding 75

Day, without gyms, cafeterias, or showers 15

Day, with gyms, cafeteria, and showers 25

Day, with cafeteria, but without gyms

or showers 20

Service stations (per vehicle served) 10

Theaters:

Movie (per auditorium seat) 5

Drive-in (per car space) 5

Travel trailer parks without individual water and

sewer hookups (per space) 50

Travel trailer parks with individual water and

sewer hookups (per space) 100

Workers:

Construction (at semipermanent camps) 50

Day, at school and offices (per shift) 15

7.2.2.4 Location of sewage system.

a. The minimum lot size in which a private treatment system may be installed is forty thousand square feet 3716.00 square meters. Smaller lot sizes may be approved by the Construction Management Office if a centralized sewage treatment system is provided or the soil conditions present throughout the lot are such that a second treatment area is able to be installed in the lot.

b. The following table provides for the minimum distances that shall be observed in locating the various components of the treatment system:

	Well <100'	Well >100'	Distribution Device	Treatment Area	Property Lines	Building
Building Sewer	100	50	-	-	-	-
Septic Tank	100	50	5	10	10	10
Distribution Device	100	50	-	-	10	20
Treatment Area	100	50	5	-	10	10
Well <100'	-	-	100	100	n/a	n/a
Well >100'	-	-	50	50	n/a	n/a
Water line (pressure)	-	-	10	10	n/a	n/a
Water line (suction)	-	-	50	50	n/a	n/a
Surface water bodies	n/a	n/a	100	100	n/a	n/a

c. All proposed sites for individual sewage treatment systems must be evaluated as to:

(1) Depth to the highest known or calculated ground water table or bedrock;
(2) Soil conditions, properties, and permeability;
(3) Slope;
(4) The existence of lowlands, local surface depressions, and rock outcrops;
(5) All legal setback requirements from existing and proposed buildings, propertylines, sewage tanks, soil treatment systems, water supply wells, buried water pipes and utility lines, the ordinary high water mark of lakes, rivers, streams, flowages, and the location of all soil treatment systems and water supply wells on adjoining lots to the proposed soil treatment system, sewage tank, and water supply well; and
(6) Surface water flooding probability.

d. Privies, septic tanks, and underground treatment means shall not be within two hundred feet 60.96 meters measured horizontally from the high water level in the reservoir or the banks of tributary streams when situated less than three thousand feet 914.4 meters upstream from potable water intake structures. Sewage treatment facilities situated beyond three thousand feet 914.4 meters upstream from intake structures shall be located no less than one hundred feet 30.48 meters measured horizontally from the high water level in the reservoir or the banks of the tributary streams.

7.2.2.5 Percolation tests.

When percolation tests are required, they must be made as follows:

a. Test hole dimensions and locations. Each test hole must be six inches 15.24 centimeters in diameter, have vertical sides, and be bored or dug to the depth of the bottom of the proposed individual sewage treatment system. Soil texture descriptions must be recorded noting depths where texture changes occur.
b. Preparation of the test hole. The bottom and sides of the hole must be carefully scratched to remove any smearing and to provide a natural soil surface into which water may penetrate.

All loose material must be removed from the bottom of the test hole and two inches 5.08 centimeters of one-fourth-inch to three-fourths-inch .635-centimeter to 1.90-centimeter gravel must be added to protect the bottom from scouring.

c. Soil saturation and swelling. The hole must be carefully filled with clear water to a minimum depth of twelve inches 30.48 centimeters over the soil at the bottom of the test hole and maintained for no less than four hours. The soil must then be allowed to swell for at least sixteen, but no more than thirty hours. In sandy soils, the saturation and swelling procedure is not required and the test may proceed if one filling of the hole has seeped away in less than ten minutes.
d. Percolation rate measurement.

(1) In sandy soils. Adjust the water depth to eight inches 20.32 centimeters over the soil at the bottom of the test hole. From a fixed reference point, the drop in water level must be measured in inches centimeters to the nearest one-eighth inch .34 centimeter at approximately ten-minute intervals. A measurement can also be made by determining the time it takes for the water level to drop one inch 2.54 centimeters from an eight-inch 20.32-centimeter reference point. If eight inches 20.32 centimeters of water seeps away in less than ten minutes, a shorter interval between measurements must be used, but in no case may the water depth exceed eight inches 20.32 centimeters. The test must continue until three consecutive percolation rate measurements vary by a range of no more than ten percent.

(2) In other soils. Adjust the water depth to eight inches 20.32 centimeters over the soil at the bottom of the test hole. From a fixed reference point, the drop in water level must be measured in inches centimeters to the nearest one-eighth inch .34 centimeter at approximately thirty-minute intervals, refilling between measurements to maintain an eight-inch 20.32-centimeter starting head. The test must continue until three consecutive percolation rate measurements vary by a range of no more than ten percent. The percolation rate can also be made by observing the time it takes the water level to drop one inch 2.54 centimeters from an eight-inch 20.32-centimeter reference point if a constant water depth of at least eight inches 20.32 centimeters has been maintained for at least four hours prior to the measurement.

e. Calculating the percolation rate. Divide the time interval by the drop in water level to obtain the percolation rate in minutes per inch 2.54 centimeters.

Percolation rates determined for each test hole must be averaged to determine the final soil treatment system design.

A percolation test may not be run where frost exists below the depth of the proposed soil treatment system.

7.2.2.6 Soil borings.

When soil borings are required, they must be made as follows:

a. Each boring or excavation must be made to a depth at least three feet 0.91 meters deeper than the bottom of the proposed system or until bedrock or a water table is encountered, whichever is less.
b. A soil texture description must be recorded by depth and notations made where texture changes occur.
c. Particular effort must be made to determine the highest known water table by recording the first occurrence of mottling observed in the hole, or if mottling is not encountered, the open holes in clay or loam soils must be observed after standing undisturbed a minimum of sixteen hours, and depth to standing water, if present, must be measured.

7.2.2.7 Septic tanks.

a. Liquid capacity. The liquid capacity of all septic tanks shall conform to the tables contained in subsection g. of section 7.2.2.3 and this subsection as determined by the number of bedrooms or apartment units in dwelling occupancies and the occupant load or the number of plumbing fixture units as determined from table 7-3 of the Uniform Plumbing Code, whichever is greater, in other building occupancies.

CAPACITY OF SEPTIC TANKS*

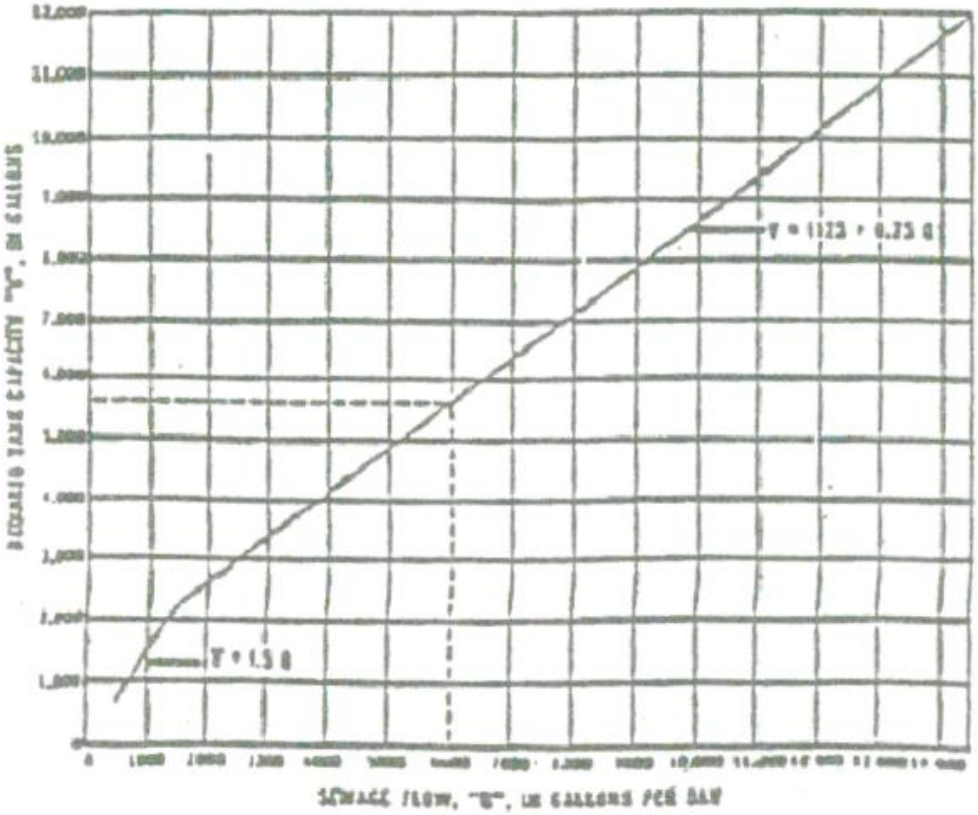
Single-Family Dwellings - Number of Bedrooms	Multiple Dwelling Units or Apartments - One Bedroom Each	Other Uses - Maximum Fixture Units Served	Minimum Septic Tank Working Capacity in Gallons
1-3		20	1000
4	2	25	1200
5 or 6	3	33	1500
7 or 8	4	45	2000
	5	55	2250
	6	60	2500
	7	70	2750
	8	80	3000
	9	90	3250
	10	100	3500

Extra bedroom, 150 gallons each.

Extra dwelling units over 10, 250 gallons each.

Extra fixture units over 100, 25 gallons per fixture unit.

* NOTE: Septic tank sizes in this table include sludge storage capacity and the connection of domestic food waste disposal units without further volume increase.



b. Septic tank construction. Septic tanks must be constructed of sound durable materials not subject to excessive corrosion or decay and must be watertight. Each such tank must be structurally designed to withstand all anticipated earth or other loads and must be installed level and on a solid bed. All tanks regardless of material or method of construction must conform to the following criteria:
    (1) The liquid depth of any septic tank or compartment shall be not less than thirty inches 76.20 centimeters, nor more than six and one-half feet 1.97 meters. No tank may have an inside horizontal dimension less than twenty-four inches 60.96 centimeters.
    (2) The space in the tank between the liquid surface and the top of the inlet and outlet baffles must be not less than twenty percent of the total required liquid capacity, except that in horizontal cylindrical tanks this space must be not less than fifteen percent of the total required liquid capacity.
    (3) There must be at least one inch 2.54 centimeters between the underside of the top of the tank and the highest point of the inlet and outlet devices. The inlet invert must be not less than three inches 7.62 centimeters above the outlet invert.

(4) Baffles must be integrally cast with the tank, affixed with a permanent waterproof adhesive or affixed with stainless steel connectors, top and bottom, and be constructed of acid-resistant concrete, acid-resistant fiberglass or plastic.

(5) The inlet baffle must extend at least six inches 15.24 centimeters, but not more than twenty percent of the total liquid depth below, the liquid surface and at least one inch 2.54 centimeters above the crown of the inlet sewer.

(6) The outlet baffle and the baffles between compartments must extend below the liquid surface a distance equal to forty percent of the liquid depth, except that the penetration of the indicated baffles or sanitary tees for horizontal cylindrical tanks must be thirty-five percent of the total liquid depth. They also must extend above the liquid surface. In no case may they extend less than six inches 15.24 centimeters above the liquid surface.

(7) Inlet baffles must be no less than six inches 15.24 centimeters or no more than twelve inches 30.48 centimeters measured from the end of the inlet pipe to the nearest point on the baffle. Outlet baffles must be six inches 15.24 centimeters measured from beginning of the outlet pipe to the nearest point on the baffle. Sanitary tees used as baffles must be at least four inches 10.16 centimeters in diameter.

(8) The inlet and outlet must be located opposite each other along the axis of maximum dimension. The horizontal distance between the nearest points of the inlet and outlet devices must be at least four feet 1.22 meters.

(9) There may be one or more manholes. Manholes must be at least eighteen inches 45.72 centimeters in diameter, and located within six feet 1.83 meters of all walls of the tank. The manhole must extend through the cover to a point within twelve inches 30.48 centimeters but no closer than six inches 15.24 centimeters below finished grade. The manhole cover must be corrosion resistant, rated three hundred-pound 136.07-kilogram load bearing, and covered with at least six inches 15.24 centimeters of earth. When in the opinion of the Construction Management Office the manhole is permitted above finish grade, it must be safely secured.

(10) There must be an inspection pipe of at least four inches 10.16 centimeters in diameter or a manhole over both the inlet and outlet devices. The inspection pipe must extend through the cover and be capped flush or above finished grade. A downward projection of the centerline of the inspection pipe must be directly in line with the centerline of the inlet or outlet device.

c. Multiple tanks.

(1) When more than one tank is used to obtain the required liquid volume, the tanks must be connected in series.

(2) No more than four tanks in series can be used to obtain the required liquid volume.

(3) The first tank must be no smaller than any subsequent tanks in series.

d. Septic tank materials. See table 14-1 of the Uniform Plumbing Code.

e. Depth of septic tank. Where septic tanks are installed above frostline, precautions must be taken to prevent the septic tank from freezing.
f. Service limited. No septic tank shall serve more than one property unless authorized by the Construction Management Office.
g. Disposal of effluent. The effluent from all septic tanks shall be disposed of underground by subsurface absorption trench, seepage beds, or approved alternative systems.

7.2.2.8 Distribution box.

a. Use. A distribution box may be used when more than one line of absorption field or more than one seepagebed is used.
b. Connection. Each lateral line shall be connected separately to the distribution box and shall not be subdivided.
c. Invert level. The inlet invert shall be at least one inch 2.54 centimeters above the invert of the outlets. The size of the distribution box shall be sufficient to accommodate the number of lateral lines.
d. Watertight. The distribution box shall be of watertight construction arranged to receive the septic tank effluent sewer and with an outlet or connecting line serving each trench or seepage bed.
e. Inspection. The sides of the box should extend to within a short distance of the ground surface to permit inspection and shall have a concrete marker at grade.

7.2.2.9 Absorption trenches.

a. Design. Absorption trenches shall be designed and constructed on the basis of the percolation test results or other soil data. Trench bottom area required is shown in the table in subsection d. The bottom of the trench shall be dug so it is dead level throughout its length. The maximum depth to the bottom of absorption trenches may not exceed forty-eight inches 121.92 centimeters. The trench bottom must be at least twenty-four inches 60.96 centimeters above the mottled soil condition indicating a water table or from standing water in the borehole.
b. Filter material. The filter material shall cover the four-inch 10.16-centimeter diameter pipe to a depth of two inches 3.08 centimeters measured from the crown of the pipe and extend the full width of the trench and shall be not less than six inches 15.24 centimeters deep beneath the bottom of the four-inch 10.16-centimeter diameter pipe. The filter material may be washed rock or crushed stone ranging in size from one inch to three inches 2.54 centimeters to 7.62 centimeters. The filter material shall be covered by red rosin paper40, hay, straw, or approved filter fabric40, as the laying of the pipe proceeds. Approved graveless systems may be used in lieu of rockfill providing an equivalent surface area of soil is utilized.
c. Spacing. Trenches must have a minimum spacing of undisturbed earth of six feet 1.83 meters for eighteen-inch to twenty-four-inch 45.72-centimeter to 60.96-centimeter trench widths and nine feet 2.74 meters for trenches up to thirty-six inches 91.44 centimeters wide.

d. Absorption field. The size and requirements for absorption fields shall conform to those given in the following table:

Table - Recommended absorption trench area.

Percolation Rate Minutes/Inch	Soil Classification	Depth of Rock Below Distribution Pipe 6"	12"	18"	24"
	-Trench bottom area loading rate, gal/ft²/day				
.1 to 5	Sand	1.2	1.5	1.80	2.1
6 to 15	Sandy loam	0.8	1.0	1.20	1.4
16 to 30	Loam	0.6	0.75	0.90	1.05
31 to 45	Silt loam	0.5	0.63	0.76	0.89
46 to 60	Clay loam	0.45	0.57	0.68	0.79
	-Square feet of trench bottom/bedroom[1]				
.1 to 5		125	100	85	70
6 to 15		190	150	125	110
16 to 30		250	200	165	145
31 to 45		300	240	200	170
46 to 60		330	265	220	190

[1]Based on sewage volume of 150/GPD/Bedroom

e. Absorption lines.
   (1) Gravity distribution. Absorption lines shall be constructed of four-inch 10.16-centimeter pipe. For approved plumbing materials, see table 14-1 of chapter 14 of the Uniform Plumbing Code.
   (2) Pressure distribution. Absorption lines must be constructed of one and one-half-inch to two-inch 3.81-centimeter to 5.08-centimeter rigid plastic pipe with one-fourth-inch 6.35-millimeter holes drilled in the bottom of the pipes. The number of perforations and spacing of perforations for different diameter pipes for pressure distribution laterals must not exceed ten percent of the average pressure head on the perforations. The pipe and connections must be able to withstand a pressure of at least forty pounds per square inch. The perforated laterals should be attached to a two-inch 5.08-centimeter manifold pipe and should have the ends capped. The laterals should be spaced no further than forty inches 101.6 centimeters on center and no further than twenty inches 50.80 centimeters from the edge of the rock. Pipe must be installed level and capped at the ends. The manifold must be supported and backfilled by hand.
f. Grade. The absorption trench bottom must be level.

7.2.2.10 Piping material.

All piping from building drain to sewage treatment system shall be four inches 10.16 centimeters or larger service schedule 40 acrylonitrile-butadiene-styrene or polyvinyl chloride plastic pipe,

type PSP PVC sewer pipe SDR 3540, and fittings A.S.T.M. D3033 or D3034, exclusive of the absorption lines, which shall be as in subsection e. of section 7.2.2.9.

7.2.2.11 Pumps and pump systems.

This section pertains to pumps installed after the septic tank. Sumps and ejectors installed before the septic tank must meet the requirements set forth in section 710.0 of the Uniform Plumbing Code.

a. Pumping chambers.
    (1) The pumping chambers must be watertight and constructed of corrosion-resistant material.
    (2) The working capacity of the pumping chamber must equal one-fourth of the daily sewage flow. Total capacity of the pumping chamber must equal or exceed daily sewage flow.
    (3) A secure cover must be provided that is either bolted on or heavy enough to prevent unauthorized entry.
    (4) An external electrical outlet must be provided for connection to the pump and control switches. Openings for wiring into the pump chamber must be sealed.
    (5) No electrical splices or connections shall be located in the pump chamber or riser.
b. Pumps.
    (1) Effluent lift pumps must be of cast bronze, cast iron, or plastic construction and must be designed for handling septic tank effluent. Pedestal sump pumps with an open motor are not allowed.
    (2) Set the pump on a pedestal on the bottom of the pump chamber to minimize grit and solids entering the impeller.
    (3) The pump must have maximum lift capability at least five feet 1.52 meters greater than the actual elevation, plus pipe friction loss. A pump to a sewage mound ("Wisconsin mound") shall deliver seven and five-tenths gallons 28.38 liters per minute for each one hundred square feet 9.29 square meters of rock area.
    (4) Outlet piping must be one and one-fourth inches 31.75 millimeters in diameter or greater. The pipe must be laid below frostline or uniformly graded to drain back to the pump chamber. Volume of drain back should not exceed ten percent of the working capacity of the pump chamber. If piping is set to drain back, any check valves on the pump should be removed and a one-fourth-inch 6.35-millimeter drain-hole drilled on the low point of the outlet pipe. Piping connection to the pump must be with a union or quick disconnect coupling near the top of the pump chamber.
c. Pump controls.
    (1) On-off switching for sewage pumps must be sealed mercury float switches or of a type approved by the Construction Management Office.
    (2) Electrical connections must not be made in the pump chamber or pump chamber riser.

7.2.2.12 Alternative systems.

a. Mounds. Mounds may be constructed on soils having a percolation rate faster than one hundred twenty minutes per inch 2.54 centimeters. For soils slower than one hundred twenty minutes per inch 2.54 centimeters, either the system must be moved to more amenable soil or see subsection b. on lagoons.
    (1) Location. Mounds may not be located on sites of greater than twelve percent slope. For moderately permeable soils, the Construction Management Office may approve construction on slopes over six percent. Mounds may not be built in areas where water may pond.
    (2) Design. The basal sand area of the mound must be sized on the basis of eighty-three hundredths gallons 3.12 liters per square foot 0.09 square meter per day. The basal sand may be twelve inches to twenty-four inches 30.48 centimeters to 60.96 centimeters deep and must extend at least five feet 1.52 meters beyond the rock filter material in all directions. The rock layer may be twelve inches to twenty-four inches 30.48 centimeters to 60.96 centimeters deep and may not exceed ten feet 3.05 meters in width. Only pressure distribution may be used in the mound, so piping shall be one and one-half-inch to two-inch 38.10-millimeter to 50.80-millimeter diameter rigid ABS or PVC. A one and one-fourth inch 31.75 millimeters hole must be drilled every thirty-six inches 91.44 centimeters and the ends of the lateral must be capped. A one-fourth inch 6.35 millimeters hole shall be drilled in the top of the cap to serve as a siphon break. Laterals shall be spaced no further than forty inches 101.60 centimeters on center and no further than twenty inches 50.80 centimeters from the edge of the filter rock. Surface water must be diverted by a berm located uphill from the base of the mound.
    (3) Specifications. Sand must be uniformly graded, with no more than fifteen percent fines. Filter rock must be one inch to three inches 25.40 millimeters to 76.20 millimeters in diameter, washed or screened to less than ten percent fines. A jar test should be used to determine sand suitability. In a one quart .95 liters jar, place two inches 50.8 millimeters of the sand. Add water to three-fourths level, cap, shake, and set aside to settle. If a layer of silt is present on top which is more than one-eighth inch 3.18 millimeters thick, the sand is not suitable for mound construction.
    (4) Construction.

        (i) Scarify the area with backhoe teeth or a cultivator. Do not remove topsoil. Bring outlet pipe from pump up into the center of the mound area.

        (ii) Lay sand on scarified area. Do not compact the soil with machinery tires. Level sand to desired depth.

        (iii) Lay filter rock down the center of the sand layer. Level.

        (iv) Connect piping to manifold and lay pipe on rock. Cover pipe with rock and level by hand. Holes must be on bottom of the pipe.

(v) Lay sand up to the top of the rock on all sides, sloping sand away at a three-to-one or four-to-one slope.

(vi) Cover rock with red rosin paper, hay, or filter fabric.

(vii) Backfill entire mound to a three-to-one or four-to-one grade. Downhill side of mound on slopes must be backfilled at a four-to-one or longer grade. Cover mound with topsoil.

(viii) Seed grass over mound. Trees and shrubs may be planted on the toe and up the sides of the mound, but do not plant shrubs or trees on top. If vegetation is not established before winter, cover mound with hay or straw to prevent freezing.

b. Lagoons - Total containment. In areas where normal septic systems will not function, and where the Construction Management Office finds that a nuisance will not be presented, a lagoon may be used for onsite sewage disposal.
   (1) Design. Depth may not exceed five feet 1.52 meters, and side berms shall be graded to three-to-one for proper aeration. The site must be fenced, and the berms must be seeded. The berms must be at least one foot 0.30 meter higher than the liquid level at design capacity. Inlet pipes must discharge onto a splash pad to minimize erosion. Outlet pipes may not be installed without the approval of the Construction Management Office.
   (2) Maintenance. Weeds must be controlled in the lagoon and on the berms to maximize aeration.
   (3) Prohibitions. Lagoons may not be constructed on sand, gravel, or light loamy soils. No lagoon may be discharged into receiving waters or onto the ground without the approval of the Three Affiliated Tribes Environmental Division.
c. Alternative design. Alternate designs for construction of sewage treatment systems complying with the intent of this code may be submitted to the Construction Management Office for approval.

7.2.2.13 Chemical toilets.

a. All requests for permission to erect and use chemical toilets shall be approved by the Construction Management Office.
b. Where approved by the Construction Management Office, chemical toilets shall be as follows:

   A chemical toilet consists of a toilet seat connected by a metal hopper to a metal tank containing chemicals, usually sodium hydroxide. All connections to the toilet seat and the tank shall be watertight. A rod shall extend above the floor of the room to operate the agitator in the chemical tank.

c. A supply of the chemical shall be available in a closed container for periodic additions to the toilet.

7.2.2.14 Privies.

a. All requests for permission to erect and use privies shall be approved by the Construction Management Office and Tribal Health Department.
b. General specifications for the design and construction of a privy. A privy pit must be constructed by providing a watertight structure in the pit. The watertight structure shall provide a minimum capacity of sixty cubic feet 1.70 cubic meters. A privy building shall be placed over the structure. The floor of this building shall be of wood or concrete with the privy seat of suitable material which is easily cleaned and serviceable. A vent located adjacent to the seat shall extend from the vault to a point above the roof of the building. The seat shall be provided with a cover which shall be self-closing.

All openings in the building shall be screened to prevent the entrance of flies. The building shall be so constructed so as to prevent the entrance of rats to the vault. The privy door shall be self-closing.

c. Removable cans. When removable cans are used in a privy, they shall be placed in watertight vaults and provision made for removing the seat so the cans can be moved for disposal of the contents in a manner acceptable to the Construction Management Office. The privy building shall comply with the above specifications for a pit privy building.

7.2.2.15 Septic tank pumpers.

a. Every person engaged in the business of removing and disposing of the solid and liquid contents of private sewage treatment systems shall obtain an annual license from the Three Affiliated Tribes Environmental Division.
b. All solid and liquid contents of chemical toilets, septic tanks, pump chambers, and watertight pits for septic tank effluent shall be removed, when necessary, and disposed of in conformance with subsections c. through i.
c. Every pumper shall obtain a license from the Construction Management Office to engage in such operations.
d. A metal license tag with the number of the license issued shall be posted in a conspicuous place on the left side of the servicing unit.
e. Every vehicle used for pumping purposes shall be equipped with a watertight tank so that there will be no spillage on private premises or on highways or roads.
f. All portable receptacles used for transporting liquid or solid waste shall be watertight, equipped with tight-fitting lids, and cleaned daily.
g. All pumps and hose lines shall be maintained so as to prevent leakage.
h. All waste material shall be disposed of in such a place and in such a manner as will not constitute a nuisance or a menace to public health.
i. Waste material collected by a pumper shall not be discharged into ditches, watercourses, lakes, ponds, tidewater, or at any point where it can pollute any water supply, bathing area, or shellfish growing area. It shall not be deposited on the surface of the ground within one thousand feet 304.8 meters of any residence or public road on the Fort Berthold Reservation.

SECTION 7.3 - WATER CONDITIONING CODE

CHAPTER 1 - DEFINITIONS

7.3.1.1

For the purpose of this section, the following terms shall have the meaning indicated in this section. No attempt is made to define ordinary words which are used in accordance with their established dictionary meaning except where it is necessary to define their meaning as used in this section to avoid misunderstanding.

a. “Absorption" means the physical, electrostatic, surface attraction of an absorbent for molecules of a gas, liquid, dissolved or suspended substance.
b. "Accessible" means having access thereto but which first may require the removal of an access panel, door, or similar obstruction. "Readily accessible" means direct access without the necessity of removing or moving any panel, door, or similar obstruction.
c. "Acid neutralizer" means neutralizer.
d. "Acidity" means the presence of compounds that release hydrogen in solution.
e. "Administrative authority" means the Construction Management Office of the
f. “Air break (drainage system)” means a piping arrangement in which a drain from a fixture, appliance, or device discharges indirectly into a fixture, receptacle, or interceptor at a point below the flood level rim of the receptacle so installed as to prevent backflow or siphonage.
g. “Airgap (drainage system)” means the unobstructed vertical distance through the free atmosphere between the outlet of waste pipe and the flood level rim of the receptacle into which it is discharging.
h. “Airgap (water distribution system)” means the unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet supplying water to a tank, plumbing fixture or other device and the flood level rim of the receptacle.
i. “Alkalinity”" means the presence of bicarbonates, carbonates, or hydroxides in water.
j. “Anchors” means supports.
k. “Approved” means accepted or acceptable under an applicable standard stated or cited in this section, or accepted as suitable for the proposed use under procedures and powers of the Construction Management Office.
l. "Backflow" means the flow of water or other liquids, mixtures, or substances into the distributing pipes of a potable supply of water from any source or sources other than its intended source. Backsiphonage is one type of backflow.
m. "Backflow connection" means any arrangement whereby backflow can occur.
n. "Backflow preventer" means a device or means to prevent backflow.
o. "Backsiphonage" means the flowing back of used, contaminated, or polluted water from a plumbing fixture or vessel or other sources into a potable water supply pipe due to a negative pressure in such pipe.
p. "Backwash filter" means any filter requiring reverse flow for maintenance.

q. "Backwashing" means reversing the flow of water through a bed of ion exchanger or filter material.
r. "Brine" means a solution of sodium chloride (salt) used for regenerating water softeners.
s. "Bypass" means a connection or a valve system that allows raw water to be supplied while the water conditioner is being cleaned or media changed or serviced in any manner.
t. "Building" means a structure having walls and a roof designed and used for the housing, shelter, enclosure, or support of persons, animals, or property.
u. "Building classification" means the arrangements adopted by the Construction Management Office for the designation of buildings in classes according to occupancy.
v. "Calcium" is one of the principal elements making up the earth's crust, the compounds of which when dissolved in water make the water hard. The presence of calcium in water is a factor contributing to the formation of scale and insoluble soap curds which are means of clearly identifying hard water.
w. "Calcium carbonate equivalent" is commonly used for expressing all forms of hardness and other salts in the same terms.
x. "Capacity" is expressed in total gallons (liters) of water treated meeting the specifications and produced in a defined period of time.
y. "Cartridge" means any removable preformed or prepackaged component, containing the filter media.
z. "Cartridge filter" means a filter using a cartridge or cartridges.
aa. "Cation exchange", in water softening, is principally the exchange of calcium and magnesium ions in water for sodium ions on an insoluble ion exchange material. Ferrous iron and other metals such as manganese and aluminum are sometimes present in small quantities. These metals are also exchanged, but they may precipitate and foul the exchanger bed.
bb. "Clear water waste" means cooling water and condensate drainage from refrigeration, and air-conditioning equipment; cooled condensate from steam heating systems; cooled boiler blowdown water; water softeners; wastewater drainage from equipment rooms and other areas where water is used without an appreciable addition of oil, gasoline, solvent, acid, etc., and treated effluent in which impurities have been reduced below a minimum concentration considered harmful.
cc. "Code" means this section and subsequent amendments thereto, or any rule or regulation which the Construction Management Office, with the authorization and approval of the Tribal Business Council, may lawfully adopt.
dd. "Color throw" means the imparting of color by any part of a water softener to the effluent during any state of the operating cycle.
ee. "Compensated hardness" means water with a total hardness of over four hundred milligrams per liter as calcium carbonate and over one hundred milligrams per liter of sodium as calcium carbonates.
ff. "Corrosion" means the attack by water on any part of a water system, causing the wasting away of metal parts. This would include the most noticeable effects of corrosion, which are: leakage, flow stoppage, valve failure, etc.

gg. "Cross connection" means any connection or arrangement between two otherwise separate piping systems, one of which contains potable water and the other either water of unknown or questionable safety or steam, gas, or chemical whereby there may be a flow from one system to the other, the direction of flow depending on the pressure differential between the two systems. (See backflow and backsiphonage.)

hh. "Cubic feet" means the volumetric unit used for measuring ion exchange materials. Volume is measured on an in-place, backwashed, drained, and settled condition.

ii. "Deionization" means the removal of all ionized minerals from the water in a two-step ion exchange process.

jj. "Demineralization" means essentially the same as deionization.

kk. "Developed length" means the length of a pipe line measured along the center line of the pipe and fittings.

ll. "Disinfection" means the process of destroying harmful micro-organisms, done in accordance with the Uniform Plumbing Code.

mm. "Distillation" means a process of removing solids from water by converting the water to vapor (by heating), and condensing the water (by cooling), and collecting the condensate.

nn. "Distributors" means devices to distribute or collect the water.

oo. "Drain" means any pipe which carries wastewater or water-borne wastes in a building drainage system.

pp. "Drain line" means a line used to carry backwash water, spent regenerant, and rinse water to the waste system.

qq. "Drainage system" includes all the piping, within public or private premises, which conveys sewage, rainwater, or other liquid wastes to a point of disposal. It does not include the mains of a public sewer system or private or public sewage-treatment or disposal plant.

rr. "Dwelling unit" means one or more rooms with provision for living, sanitary, sleeping, cooking, and eating facilities arranged for the use of one family or individual.

ss. "Effective opening" means the minimum cross-sectional area at the point of water supply discharge, measured or expressed in terms of (a) diameter of a circle, or (b) if the opening is not circular, the diameter of a circle of equivalent cross-sectional area.

tt. "Effluent" means the water or solution which emerges from a water conditioner during any phase of the operating cycle.

uu. "Existing work" means a plumbing system or any part thereof installed prior to the effective date of this section.

vv. "Filter" means a device installed as part of the water system through which water flows for the removal of turbidity, taste, color, or odor.

ww. "Filter area" means the effective cross-sectional area applicable to the surface type filter media only, usually expressed in square feet.

xx. "Filter medium (filter media)" means medium.

yy. "Fixture supply" means the water supply pipe connecting a fixture to a branch water supply pipe or directly to a main water supply pipe.

zz. "Fixture unit (drainage - d.f.u.)" means a measure of the probable discharge into the drainage system by various types of plumbing fixtures. The drainage fixture-unit value for a particular fixture depends on its volume rate of drainage discharge, on the time duration of a single drainage operation, and on the average time between successive operations.

aaa. "Fixture unit (supply - s.f.u.)" means a measure of the probable hydraulic demand on the water supply by various types of plumbing fixtures. The supply fixture-unit value for a particular fixture depends on its volume rate of supply, on the time duration of a single supply operation, and on the average time between successive operations.

bbb. "Floc" means a flocculent mass formed by the aggregation of a number of fine suspended particles.

ccc. "Flood level rim" means the edge of the receptacle from which water overflows.

ddd. "Flooded" means the condition which results when the liquid in a container or receptacle rises to the flood-level rim.

eee. "Flow pressure" means the pressure in the water supply pipe near the faucet or water outlet while the faucet or water outlet is wide-open and flowing.

fff. "Flow rate" means the quantity of water or regenerant flowing, measured in gallons per minute.

ggg. "Galvanic corrosion" means when dissimilar metals are in contact with each other and with a solution which can carry electricity, a galvanic cell is established, which generates a flow of electricity, and as a result, one of the metals is gradually consumed.

hhh. "Grade" means the fall (slope) of a line of pipe in reference to a horizontal plane. In drainage it is usually expressed as the fall in a fraction of an inch per foot length of pipe.

iii. "Grains per gallon" means a common basis of reporting water analysis in the United States and Canada. One grain per United States gallon equals seventeen and one-tenth milligrams per liter or seventeen and one-tenth parts per million. One grain per Imperial gallon equals fourteen and three-tenths milligrams per liter or fourteen and three-tenths parts per million. One grain is one seven-thousandths pounds or six hundred forty-seven ten-thousandths.

jjj. "Ground water" means subsurface water occupying the zone of saturation. Confined ground water is a body of ground water overlain by material sufficiently impervious to sever free hydraulic connection with overlying ground water. Free ground water is ground water in the zone of saturation extending down to the first impervious barrier.

kkk. "Hangers" means supports.

lll. "Hardness" means dissolved calcium and magnesium salts in water. Compounds of these two elements are responsible for most scaling in pipes and water heaters, and cause numerous problems in laundry, kitchen, and bath. Hardness is usually expressed in grains per gallon as calcium carbonate equivalent.

mmm. "Hardness leakage" means calcium and magnesium present in water after passing through a water softener.

nnn. "Hard water" means treated water containing calcium and magnesium salts in concentration of one grain per gallon 17.1 milligrams per liter or more (as calcium carbonate equivalent).

ooo. "Horizontal pipe" means any pipe or fitting which makes an angle of less than forty-five degrees with the horizontal.

ppp. "Hydrogen sulfide" means an inflammable, poisonous gas that is found in some water supplies and which makes water smell like rotten eggs.

qqq. "Indirect waste pipe" means a waste pipe which does not connect directly with the drainage system, but which discharges into the drainage system through an air break or airgap into a trap, fixture, receptor, or interceptor.

rrr. "Individual water supply" means a supply other than an approved public water supply which serves one or more families.

sss. "Insanitary" means contrary to sanitary principles - injurious to health.

ttt. "Installation" means the piping or valving by which water conditioners are connected into the water supply system, including a drain line.

uuu. "Installed" means altered, changed, or a new installation.

vvv. "Ion exchange" means a process whereby ions in solution are interchanged by a reactive material (see ion exchanger).

www. "Ion exchanger" means an insoluble reactive material capable of interchanging ions combined with the material for ions in the solution.

xxx. "Iron" is an element often present in ground waters in a soluble form (such as ferrous bicarbonate) in quantities usually ranging from zero to ten parts per million. It is sometimes present in larger amounts. Iron may exist in surface waters due to natural causes or pollution. Iron in solution is susceptible to oxidation, precipitating as reddish-brown floc when contacted by air (causing staining and discoloration). Iron can be removed by aeration or chlorination followed by filtration. Iron in solution can be removed by ion exchange. Oxidizing filters such as manganese treated zeolite are used for removing large amounts of iron from water supplies.

yyy. "Liquid waste" means the discharge from any fixture, appliance, area, or appurtenance, which does not contain human or animal waste matter.

zzz. "Magnesium" is one of the elements making up the earth's crust, the compounds of which when dissolved in water make the water hard. The presence of magnesium in water is a factor contributing to the formation of scale, and insoluble soap curds which are means of clearly identifying hard water.

aaaa. "Main" means the principal pipe artery to which branches may be connected.

bbbb. "Manganese greensand" means a processed, natural alumino silicate, converted to the oxidized manganese form. This is a granular material, generally used for the removal of iron or sulfides, in oxidizing filters.

cccc. "Manganese zeolite" means a processed natural, or synthetic alumino silicate, converted to the oxidized manganese form (see manganese greensand).

dddd. "May" is a permissive term.

eeee. "Media" is the plural of medium.

ffff. "Medium" means the active material in a filter.

gggg. "Micron" means a linear measure of size; one-thousandth of a millimeter; denoted by the Greek letter symbol u. The micron is used in filtration work to define particle size, in which case it refers to the diameter, or the largest dimension of the particle. It is also used to measure the size of pores, openings, or wire mesh.

hhhh. "Milligrams per liter" is a common basis of reporting water analysis in the United States and Canada. One milligram per liter equals one pound per million pounds of water; seventeen and one-tenth milligrams per liter equals one grain per United States gallon.

iiii. "Neutralizer - (neutralizing filter)" means a filter type, mainly used to neutralize acidity or reduce free carbon dioxide in water.

jjjj. "Nonpotable water" means water not safe for drinking or for personal or culinary use.

kkkk. "Nuisance" means public nuisance at common law or in equity jurisprudence; whatever is dangerous to human life or detrimental to health; whatever building, structure, or premise is not sufficiently ventilated, sewered, drained, cleaned, or lighted, in reference to its intended or actual use; and whatever renders the air or human food or drink or water supply unwholesome.

llll. “Office” means the Construction Management Office of the Three Affiliated Tribes.

mmmm. "Operating pressure" means the pressure range within which the equipment properly functions.

nnnn. "Pathogenic organisms" means organisms that are capable of producing disease.

oooo. "Person" means a natural person, the natural person's heirs, executors, administrators or assigns, and includes a firm, partnership or corporation, its or their successors or assigns. Singular includes plural and male includes female.

pppp. "Ph value" means a number denoting alkalinity or acidity. Numbers below seven indicate acidity, which increases as the number becomes smaller. Numbers above seven indicate alkalinity, which increases as the number becomes larger. The Ph scale runs from zero to fourteen, seven being the neutral point.

qqqq. "Pitch" means grade.

rrrr. "Plumbing appliance" Any one of a special class of plumbing fixtures which is intended to perform a special plumbing function. Its operation or control may be dependent upon one or more energized components, such as motors, controls, heating elements, or pressure or temperature-sensing elements. Such fixtures may operate automatically through one or more of the following actions: a time cycle, a temperature range, a pressure range, a measured volume or weight; or the fixture may be manually adjusted or controlled by the user or operator.

ssss. "Plumbing appurtenance" means a manufactured device, or a prefabricated assembly, or an on-the-job assembly of component parts, and which is an adjunct to the basic piping system and plumbing fixtures. An appurtenance demands no additional water supply, nor does it add any discharge load to a fixture or the drainage system. It is presumed that it performs some useful function in the operations, maintenance, servicing, economy, or safety of the plumbing system.

tttt. "Plumbing inspector" means Construction Management Office.

uuuu. "Plumbing system" includes the water supply, water-treating or water-using equipment, and distribution pipes, plumbing fixtures and traps; soil, waste, and vent

pipes, sanitary and storm drains and building sewers, including their respective connections, devices, and appurtenances to an approved point of disposal.

vvvv. "Pollution" means the addition of sewage, industrial wastes, or other harmful or objectionable material to water. Sources of sewage pollution may be privies, septic tanks, subsurface irrigation fields, seepage pits, sink drains, barnyard wastes, etc.

wwww. "Portable exchange tank" means a softener or filter unit which is owned by a dealer and supplied on an exchange basis to a customer.

xxxx. "Potable water" means water free from impurities present in amounts sufficient to cause disease or harmful physiological effects and conforming in its bacteriological and chemical quality to the requirements of the public health service drinking water standards or the regulations of the Environmental Division.

yyyy. "Precoat" means the application of a loose filter medium to a supporting membrane.

zzzz. "Pressure drop or pressure loss" means a differential in pressure during flow due to frictional resistance in the system. It may be expressed in pounds per square inch of feet of head (of water).

aaaaa. "Private or private use" applies, in the classification of plumbing fixtures, to fixtures in residences and apartments and similar installations.

bbbbb. "Public or public use" applies in the classification of plumbing fixtures, to every fixture not defined under private use and public includes all installations where a number of fixtures are installed and their use may be restricted or unrestricted.

ccccc. "Public water main" means a water supply pipe for public use controlled by Fort Berthold Rural Water.

ddddd. "Rated service flow" means the manufacturer's specified maximum flow at which the conditioner will deliver water for a minimum period of ten minutes at a pressure drop not to exceed fifteen pound per square inch 6.80 kilograms per 6.45 square centimeters.

eeeee. "Rated softening capacity" is based on grains of hardness removed (as calcium carbonate) while producing soft water between successive regenerations and must be related to pounds of salt required for each regeneration.

fffff. "Raw water" means water at the inlet of the water treating unit.

ggggg. "Receptor" means a fixture or device which receives the discharge from indirect waste pipes.

hhhhh. "Recharging cycle" means when a water softener becomes exhausted and is incapable of removing hardness, the bed must be "recharged" by passing a strong solution of salt through it.

iiiii. "Regeneration" includes, in general, the backwash, brine, and fresh water rinse steps, necessary to prepare the exchanger bed for service after exhaustion. Specifically, the term may be applied to the "brine" step in which a sodium chloride solution is passed thru the exchanger bed. The sodium ions displace the hardness ions from the exchanger to permit the hardness to be rinsed to drain; also, includes the maintenance steps (not necessarily in this order) to backwash, precoating, or fresh water rinse or other treatment necessary to prepare or restore a conditioner for service.

jjjjj. "Resin" means a synthetic organic ion exchange material such as high capacity cation exchange resin widely used in water softeners.

kkkkk. "Rim" means an unobstructed open edge of a fixture.

llllll. "Rinse" means that part of the cycle of a water conditioner operation where water is introduced to remove spent backwash water or regenerant prior to placing the conditioner into service.

mmmmm. "Riser" means a water supply pipe which extends vertically one full story or more to convey water to branches or to a group of fixtures.

nnnnn. "Roughing-in" means the installation of all parts of the plumbing system which can be completed prior to the installation of fixtures. This includes drainage, water supply, and vent piping, and the necessary fixture supports, or any fixtures that are built into the structure.

ooooo. "Rust" - see iron.

ppppp. "Salt" means high purity sodium chloride of a granular, rock, or briquetted type used for regenerating a water softener.

qqqqq. "Scale" means a hard insoluble mineral deposit (usually of calcium and magnesium compounds).

rrrrr. "Service run" means that part of the operating cycle of a water conditioner in which the raw water supply is passed through a conditioner, thereby producing quality water.

sssss. "Shall" is a mandatory term.

ttttt. "Shielded (insulated)" means the separation of metallic parts by a nonconductor.

uuuuu. "Slope" means grade.

vvvvv. "Soft water" means treated water containing less than one grain per gallon (17.1 milligrams per liter) dissolved calcium and magnesium salts (as calcium carbonate equivalent).

wwwww. "Soil pipe" means a pipe which conveys sewage containing human or animal waste to the building drain or building sewer.

xxxxx. "Solution feeder" means a small pump or eductor unit used to feed a measured amount of chemical solution into a water supply to solve a water problem.

yyyyy. "Supports" means devices for supporting and securing pipe, fixtures, and equipment.

zzzzz. "Suspended matter" means all undissolved material in water.

aaaaaa. "Turbidity" means any undissolved materials in water, such as finely divided particles of sand, clay, etc.

bbbbbb. "Upflow" means the direction (up) in which water flows through the ion exchange bed during any phase of the operating cycle.

cccccc. "Vacuum" means any pressure less than that exerted by the atmosphere.

dddddd. "Vacuum breaker" means backflow preventer.

eeeeee. "Vacuum breaker, nonpressure type (atmospheric)" means a vacuum breaker which is not designed to be subject to static line pressure.

ffffff. "Vacuum breaker, pressure type" means a vacuum breaker designed to operate under conditions of static line pressure.

ggggggg. "Vacuum relief valve" means a device to prevent excessive vacuum in a pressure vessel.

hhhhhh. "Vertical pipe" means any pipe or fitting which makes an angle of forty-five degrees or less with the vertical.

iiiiii. "Waste" means liquid waste and industrial waste.

jjjjjj. "Waste pipe" means a pipe which conveys only waste.

kkkkkk. "Water conditioning" is any processing of water which renders it more satisfactory for use.

llllll. "Water distributing pipe" means a pipe within the building or on the premises which conveys water from the water service pipe to the point of usage.

mmmmmm. "Water outlet" means a discharge opening through which water is supplied to a fixture, into the atmosphere (except into an open tank which is part of the water supply system), to a boiler or heating system, to any devices or equipment requiring water to operate but which are not part of the plumbing system.

nnnnnn. "Water riser pipe" means riser.

oooooo. "Water service pipe" means the pipe from the water main or other source of potable water supply to the water distributing system of the building served.

pppppp. "Water softener" means a device installed as part of a water system which produces soft water by cation exchange removing calcium and magnesium (hardness from flowing water, replacing it with sodium, thereby requiring periodic regeneration with sodium chloride (salt).

qqqqqq. "Water supply system" means the water service pipe, the water-distributing pipes, and the necessary connecting pipes, fittings, control valves, and all appurtenances in or adjacent to the building or premises.

rrrrrr. "Zeolite" means a processed natural, or synthetic, alumino silicate. See also manganese greensand and manganese zeolite.

SECTION 7.3

CHAPTER 2 - GENERAL PROVISIONS

7.3.2.1 Conformance with code.

All plumbing materials and water conditioning systems or parts thereof installed hereafter shall meet or exceed the minimum provisions of this section and conform to national sanitation foundation, underwriters laboratories, or water quality association listed standards.

7.3.2.1 Fittings and connections.

a. Prohibited fittings. No running threads, bands, or saddles shall be used in the drainage system. No drainage or vent piping shall be drilled, tapped, burned, or welded. The provisions of this subsection may be waived by the Construction Management Office.
b. Obstruction to flow. No fitting, connection, device, or method of installation which obstructs or retards the flow of water in the water conditioning system in an amount greater than the normal frictional resistance to flow, shall be used unless it is indicated as acceptable in this section or is approved by the Construction Management Office as

having a desirable and acceptable function and as of ultimate benefit to the proper and continuing functioning of the water conditioning system.

7.3.2.3 Health and safety.

Where a health or safety hazard exists on a premise by reason of an existing installation, the owner or the owner's agent shall make such corrections as may be necessary to abate such nuisance and bring the water conditioning installation within the provisions of this section 7.3.

7.3.2.4 Safety.

Any part of a building or premise which is changed, altered, or required to be replaced as a result of the installation, alteration, renovation, or replacement of a water conditioning system, or any part thereof, shall be left in a safe, nonhazardous condition.

7.3.2.5 Electrical grounding.

Whenever the cold water distribution piping is used for grounding the electrical system it shall not be interrupted by a nonmetallic bushing, union, or valve unless an electrician licensed by the Construction Management Office installs a properly sized bonding jumper with approved clamps and connections. (Refer to article 250 of the National Electrical Code.)

7.3.2.6 Workmanship.

Water conditioning systems shall be installed in workmanlike manner conforming to generally accepted good practice.

7.3.2.7 Protection of pipes.

a. Breakage. Pipes passing under or through walls shall be protected from breakage. Any plumbing pipe passing under a footing or through a foundation wall shall be provided with a relieving arch; or there shall be built into the masonry wall an iron-pipe sleeve two pipe sizes greater than the pipe passing through; or equivalent protection shall be provided as may be approved in writing by the Construction Management Office.
b. Corrosion. Pipe subject to corrosion by passing through or under corrosive fill, such as, but not limited to, cinders, concrete, or other corrosive material, shall be protected against external corrosion by protective coating, wrapping, or other means which will resist such corrosion.
c. Cutting or notching. Any structural member weakened or impaired by cutting, notching, or otherwise, shall be reinforced, repaired, or replaced, so as to be left in a safe structural condition in accordance with the requirements of the building code or as required by the proper Construction Management Office.

7.3.2.8 Sleeves.

In exterior walls annular space between sleeves and pipes shall be filled or rightly caulked with coal tar, asphaltum compound, lead, or other material found equally effective and approved as such by the Construction Management Office.

7.3.2.9 Openings for pipes.

In or on buildings where openings have been made in walls, floors, or ceilings for the passage of pipes, they shall be closed and protected by the installation of approved metal collars securely fastened to the adjoining structure.

7.3.2.10 Used material or equipment.

It shall be unlawful to sell, offer for sale, purchase, or install any used water conditioning material or equipment, unless it conforms to the standards and regulations set forth in this section.

7.3.2.11 Condemned equipment.

Any water conditioning equipment condemned by the Construction Management Office because of wear, damage, defects, or sanitary hazards shall not be used for water conditioning purposes.

7.3.2.12 Connections to plumbing systems required.

Every water conditioning unit, appliance, or appurtenance thereto which is to receive or discharge any liquid waste shall discharge to the sanitary drainage system of the building in accordance with the requirements of this section.

7.3.2.13 Piping measurements.

Except where otherwise specified in this section, all measurements shall be made to the center lines of the pipes.

SECTION 7.3

CHAPTER 3- MATERIALS

7.3.3.1 Materials.

a. Minimum standards. Materials shall conform at least to the standards cited in this chapter, which shall be considered minimum standards, when used in the construction, installation, alteration, or repair of water conditioning systems or parts thereof, except that:

    (1) The Construction Management Office shall allow the extension, addition to, or relocation of existing water pipes with materials of like grade or quality as permitted under the Three Affiliated Tribes Plumbing Code.

    (2) Materials not covered by the standards cited in this chapter may be used with the approval of the Construction Management Office.

b. General requirements. All materials, fixtures, or equipment used in the installation, repair, or alteration of any water conditioning system shall conform at least to the standards listed in this chapter except as otherwise approved by the Construction Management Office.

All materials installed in water conditioning systems shall be so handled and installed as to avoid damage so that the quality of the material will not be impaired.

No defective or damaged materials, equipment, or apparatus shall be installed or maintained.

All materials used shall be installed in strict accordance with the standards under which the materials are accepted and approved, including the appendices of the standards, and in strict accordance with the manufacturer's instructions.

c. Standards applicable to plumbing materials. A material shall be considered approved if it meets one or more of the standards in Uniform Plumbing Code. Materials not listed in the Uniform Plumbing Code shall be used only as provided for in subsection b. of section 7.3.3.2. or as permitted elsewhere in this section.
d. Identification of materials. Materials shall be identified as provided in the standard to which they conform.

7.3.3.2: Alternate materials and methods.

a. Existing buildings. In existing buildings or premises in which plumbing installations are to be altered, renovated, or replaced, such new materials and work shall meet or exceed the provisions of this section. Where the Construction Management Office shall find that the full performance of bringing such work into compliance with all requirements of this section would result in exceptional undue hardship by reason of excessive structural or mechanical difficulty, or impracticability, a deviation may be granted by the Construction Management Office only where, and to the extent, necessary to ameliorate such exceptional or undue hardship, and only where, and to the extent, such deviation can be granted without impairing the intent and purpose of this section. A record, open to inspection by the public shall be maintained by the Construction Management Office of each and every deviation allowed under the terms of this subsection.
b. Approval. The Construction Management Office may approve the use of fixtures, appurtenances, materials, and methods of a type not conforming with the requirements of, nor expressly prohibited by, this section after determination that such fixture, appurtenance, material, or method is of such design or quality, or both, as to appear to be suitable, safe, and sanitary for the use for which it is intended. A record of such instances shall be maintained and shall be available to the public. Action shall be taken within reasonable time to amend this section so as to either authorize or prohibit such use. Any person desiring to install or use a fixture appurtenance, material, or method of a type not conforming with the requirements of, nor expressly prohibited by, this section shall, prior to such installation or use, submit to the Construction Management Office such proof as may be required to determine whether such fixture, appurtenance, material, or method is of such design or quality, or both, as to appear to be suitable, safe, and sanitary for the use for which it is intended. In the event the Construction Management Office determines that it does appear to be suitable, safe, and sanitary for the use for which it is intended, the Construction Management Office may then permit such use; provided, that the

manner of installation or use is otherwise in accordance with this section. In view of the special nature of these cases, such use shall be subject to periodic inspection by the Construction Management Office and such fixture, appurtenance, material, or method shall, upon order, be discontinued or removed if such inspection indicates it is unsuitable, unsafe, insanitary, or contrary to the provisions of this or other applicable codes.

c. Tests. When there is insufficient evidence to verify claims for alternate materials the Construction Management Office may require as proof of suitability tests of compliance by an approved agency at the expense of the applicant.
d. Test procedure. Tests shall be made in accordance with generally recognized standards; but in the absence of such standards, the Construction Management Office shall specify the test procedure.
e. Repeated tests. The Construction Management Office may require tests to be repeated if, at any time, there is reason to believe that an alternate material no longer conforms to the requirements on which its approval was based.
f. Limitation of lead content. Pipe and fittings used in the potable water supply system may not contain more than eight percent lead.

SECTION 7.3

CHAPTER 4 - JOINTS AND CONNECTIONS

7.3.4.1 Tightness.

Joints and connections in the water conditioning system shall be watertight for the pressure required by test.

7.3.4.2 Types of joints for piping materials.

a. Threaded. Every threaded joint shall conform to the American National Taper Pipe Thread, ANSI B2.1-1960. All burrs shall be removed. Pipe ends shall be reamed or filed out to size of bore, and all chips shall be removed. Pipe joint compound shall be used only on male threads.
b. Soldered. Joints in copper tubing shall be made by the appropriate use of approved brass or copper fittings. The surface to be joined by soldering shall be cleaned bright by manual or mechanical means. The joints shall be properly fluxed with an approved noncorrosive paste-type flux and made up with approved solder. For potable water used in copper, brass, or wrought copper fittings must be made with a solder and flux containing not more than two-tenths percent lead. Soldered joints may not be used for tube installed underground.
c. Flared. Every flared joint for annealed-temper copper water tube shall be made with fittings meeting approved standards. The tube shall be reamed and then expanded with a proper flaring tool.
d. Brazed. Brazed joints shall be made by first cleaning the surfaces to be joined down to the base metal, applying flux approved for such joints and for the filler metal to be used, and making the joint by heating to a temperature sufficient to melt the approved brazing filler metal on contact.

e. Slip. Every slip joint shall be made using approved packing or gasket material, or approved ground joint brass compression rings. Ground joint brass connections which allow adjustment of tubing but provide a rigid joint when made up shall not be considered as slip joints.
f. Expansion. Every expansion joint shall be of approved type and its material shall conform with the type of piping in which it is installed.
g. Split couplings. Couplings made in two or more parts and designed for use with plain end or grooved pipe or approved fittings and with compression gaskets may be used for hot and cold water piping and conductors and leaders. Each manufacturer must have the manufacturer's complete joining assembly approved for the intended use by the Construction Management Office.

7.3.4.3 Types of joints between different piping materials.

Every joint from copper tube to threaded pipe shall be made by the use of brass or copper converter fittings. The joint between the copper pipe and the fitting shall be properly soldered, and the connection between the threaded pipe and the fitting shall be made with a standard pipe size screw joint.

7.3.4.4 Unions.

Unions in the water supply system shall be metal-to-metal with ground seats.

SECTION 7.3

CHAPTER 5 - HANGERS AND SUPPORTS

7.3.5.1: Attachment to building.

Hangers and anchors shall be securely attached to the building construction at sufficiently close intervals to support the piping and its contents.

7.3.5.2: Vertical piping.

a. Threaded pipe standard pipe size - at every other story height.
b. Copper tube - at each story height but not more than ten foot 3.05 meter intervals.

7.3.5.3: Horizontal piping.

a. Horizontal pipe of the following materials shall be supported at not more than the distance intervals shown.
b. Steel threaded pipe - one-inch 2.54 centimeter diameter or less - eight foot 2.44 meter intervals. Over one-inch 2.54 centimeter diameter - ten foot 3.05 meter intervals.
c. Copper tube, one and one-fourth inch 31.75 millimeter or less - six foot 1.83 meter intervals.
d. Copper tube, one and one-half inch 38.1 millimeter or over - ten foot 3.05 meter intervals.

7.3.5.4 Material.

Hangers, anchors, and supports shall be of metal or other material of sufficient strength to support the piping and its contents.

7.3.5.5 Strain and stresses in pipe.

Piping in a water conditioning system shall be installed so as to prevent strains and stresses which will exceed the structural strength of the pipe. Provision shall be made for expansion and contraction of the piping.

SECTION 7.3

Chapter 6 - INDIRECT WASTE PIPING AND SPECIAL WASTE

7.3.6.1 Indirect wastes.

a. Airgap or air break required. All indirect waste piping shall discharge into the building drainage system through an airgap or air break, as set forth in this section.
b. Connections from water distribution system. Indirect waste connections shall be provided for drains, overflows, or relief pipes from the water distribution system by means of an airgap.

7.3.6.2 Installation of indirect waste piping.

a. Materials. Indirect waste piping shall meet the material, pipe sizing, and construction requirements of the Uniform Plumbing Code.
b. Waste pipe. Any indirect waste pipe exceeding five feet 1.52 meters in length shall be trapped.
c. Maximum length. Any indirect waste pipe exceeding fifteen feet 4.57 meters shall be vented.
d. Cleaning. Indirect waste piping shall be so installed as to permit access for flushing and cleansing.

7.3.6.3 Airgap and air break.

a. Methods of providing an airgap. The airgap between the indirect waste and the building drainage system shall be at least twice the effective diameter of the drain served and shall be provided by one of the following methods:
    (1) To a receptor - Extend the indirect waste pipe to an open, accessible individual waste sink, floor drain, or other suitable fixture which is properly trapped and vented. The indirect waste shall terminate a sufficient distance above the flood level rim of the receiving fixture to provide the required airgap, and shall be installed in accordance with the Uniform Plumbing Code.
    (2) The inlet side of the fixture trap - Provide an airgap in the drain connection on the inlet side of the trap which receives the waste from the indirect waste.
b. Methods of providing an air break. When an air break is required between the indirect waste and the building drainage system, the distance to which the outlet of the indirect waste pipe extends below the flood level rim of the receptacle into which it is discharging shall be prescribed by the Construction Management Office.

7.3.6.4 Receptors or sumps.

a. Installation. Waste receptors or sumps serving indirect waste pipes shall not be installed in any toilet room, nor in any inaccessible or unventilated space such as a closet or storeroom.
b. Location. The receptor must be located so that the required airgap between the indirect waste line and receptor can be maintained under all conditions of backflow. If this is not possible then the receptor at such a location must be a sewer ejector installed as required under the Uniform Plumbing Code and the discharge must be indirectly connected to the building drainage system as required by the Uniform Plumbing Code.
c. Strainers and baskets. Every indirect waste receptor shall be equipped with a readily removable metal basket over which all indirect waste pipes shall discharge, or the indirect waste receptor outlet shall be equipped with a beehive strainer not less than four inches 10.16 centimeters in height.
d. Splashing to be prevented. All plumbing receptors receiving the discharge of the indirect waste pipes shall be of such shape and capacity as to prevent splashing or flooding.
e. Domestic or culinary fixtures prohibited as receptors. No plumbing fixture which is used for domestic or culinary purposes shall be used to receive the discharge of an indirect waste except that in a residence a laundry tray may be used as a receptor for a water conditioning unit.

7.3.6.5 Clear water wastes.

Water lifts, expansion tanks, cooling jackets, sprinkler systems, drip or overflow pans, water conditioning units, or similar devices which waste clear water only, when emptying into the building drainage system, shall discharge through an indirect waste by means of an airgap or air break.

SECTION 7.3

CHAPTER 7 - WATER SUPPLY AND DISTRIBUTION

7.3.7.1 Quality of water supply.

Only potable water shall be accessible to plumbing fixtures supplying water for drinking, bathing, culinary use, or the processing of food, medical, or pharmaceutical products.

7.3.7.2 Identification of potable nonpotable water.

In all buildings where dual water distribution systems, one potable water and the other nonpotable water, are installed each system shall be identified either by color marking or metal tags as required in ANSI A 13.1-1959 or other appropriate method as may be approved by the Construction Management Office.

7.3.7.3 Water required.

Every building equipped with plumbing fixtures and used for human occupancy or habitation shall be provided with a potable supply of cold water in the amounts and at the pressures

specified in this chapter. For residences or buildings in which people are employed, hot water shall be provided.

Every building shall have a private and individual connection to the public water supply system or a private water supply approved by the Construction Management Office. Exception to this section shall be approved in writing by the Construction Management Office.

7.3.7.4 Protection of potable water supply.

a. General. A potable water supply system shall be designed, installed, and maintained in such manner as to prevent contamination from nonpotable liquids, solids, or gases from being introduced into the potable water supply through cross-connections or any other piping connections to the system.
b. Interconnections. Interconnection between two or more public water supplies shall be permitted only with the approval of the Tribal Health Department Office of Environmental Health.
c. Cross-connection control. Cross-connections are prohibited except when and where, as approved by the Construction Management Office, suitable protective devices are installed, tested, and maintained to insure proper operation on a continuing basis.
d. Individual water supplies. Cross-connections between an individual water supply and a potable public supply shall not be made unless specifically approved by the Construction Management Office.
e. Toxic materials. Piping conveying potable water shall be constructed of nontoxic material.
f. Chemicals and other substances. No chemicals or other substances that could produce either toxic conditions, taste, odor, or discoloration in a potable water system shall be introduced into or used in such systems.
g. Painting of water tanks. The interior surface of a potable water tank shall not be lined, painted, or repaired with any material which will affect either the taste, odor, color, or potability of the water supply when the tank is placed in or returned to service.
h. Used piping. Piping which has been used for any other purpose than conveying potable water shall not be used for conveying potable water.

7.3.7.5 Water pumping and storage equipment.

a. Pumps and other appliances. Water pumps, filters, softeners, tanks, and all other appliances and devices used to handle or treat potable water shall be protected against contamination.
b. Prohibited location of potable supply tanks. Potable water gravity tanks or manholes of potable water pressure tanks shall not be located directly under any soil or waste piping.

7.3.7.6 Disinfection of potable water system.

New or repaired potable water systems shall be disinfected prior to use whenever required by the Tribal Health Department Office of Environmental Health. The method to be followed shall be that prescribed by the Tribal Health Department Office of Environmental Health or, in case no

method is prescribed by Tribal Health Department Office of Environmental Health, the following:

a. The pipe system shall be flushed with clean, potable water until no dirty water appears at the points of outlet.
b. The system or part thereof shall be filled with a water-chlorine solution containing at least fifty parts per million of chlorine and the system or part thereof shall be valved off and allowed to stand for twenty-four hours.
c. The system or part thereof shall be filled with a water-chlorine solution containing at least two hundred parts per million of chlorine and allowed to stand for three hours.
d. Following the allowed standing time the system shall be flushed with clean potable water until no chlorine remains in the water coming from the system.
e. The procedure shall be repeated if it is shown by a bacteriological examination made by the Environmental Division that contamination still persists in the system.

7.3.7.7 Water supply system materials.

a. Water distribution system pipe. Water distribution system pipe shall be of brass pipe, copper tube, or copper pipe, galvanized wrought iron pipe, galvanized open-hearth iron pipe, or galvanized steel pipe. Copper tube when used underground shall not be less than type L and when used above ground not less than type M.
b. Fittings. The materials of which water supply system pipe fittings are made shall conform to the type of piping materials used in the water supply system. The fittings shall have no ledges, shoulders, or reductions which can retard or obstruct flow in the piping.
c. Material strength. All materials used for water piping must be suitable for use with the maximum temperature and pressure and velocities that may be encountered in the installation, including temporary increases and surges.

7.3.7.8 Water supply control valves.

a. Valves in dwelling units. All water closets and kitchen sinks shall have individual fixture valves installed. Valves must also be installed for each bath, shower, powder room, or fixture group. A group of fixtures means two or more fixtures adjacent to each other in the same family unit, but not necessarily in the same room. In a one family unit, one or two bathrooms back to back or one over the other may be considered a group. However, in each dwelling unit with two or more bathroom groups not adjacent to each other, one or more control valves or individual fixture valves shall be provided so that each group may be isolated from the other.

   In more than single family dwelling units, one or more control valves shall be provided so that the water to any plumbing fixture or group of fixtures in any one dwelling unit may be shut off without stopping flow of water to fixtures in other dwelling units. These valves shall be accessible inside the building unit controlled.

b. Riser valves. Except in single family dwellings a valve shall be installed at the foot of each water supply riser. In multistory buildings a valve shall be installed at the top of

each water supply downfeed pipe and also at the base where required to isolate this riser for servicing.

c. Individual fixture valves. In occupied buildings other than dwellings, the water service line to each fixture or other piece of equipment shall be provided with a valve or fixture stop to shut off the water to the fixture or to the room in which it is located. Except in single family dwellings, sill cocks and wall hydrants shall be separately controlled by a valve inside the building.
d. Valve to be accessible. All water supply control valves shall be placed so as to be accessible for service and maintenance.
e. Control valve design. Except to single fixtures, control valves on all water lines shall when fully opened have a cross sectional area not less than eighty-five percent of the cross sectional area of the line in which they are installed.

7.3.7.9 Water supply distribution.

a. Supply demand. The supply demand in gallons per minute in the building water distributing system shall be determined on the basis of the load in terms of supply fixture units and of the relationship between load and supply demand as shown in the tables contained in the Uniform Plumbing Code.
b. Size of fixture supply. The minimum sizes of a fixture supply pipe shall be as shown in the table contained in the Uniform Plumbing Code. The fixture supply pipe shall be extended to within at least thirty inches 76.2 centimeters of the point of connection to the fixture, and be within the same area and physical space as the point of connection to the fixture. Not more than two fixtures shall be supplied by a one-half inch 12.7 millimeter pipe. All future fixture connections must be considered in sizing pipe at the time of initial installation.
c. Existing installations. Pipe sizes in existing installations may be increased but shall not be decreased.
d. Minimum size inlet and outlet. The minimum size inlet and outlet piping to water softeners and water filters must be not less than the distribution pipe served. Control valves must be installed in the inlet and outlet lines. A bypass valve must be installed between the inlet and outlet line valves.

SECTION 7.3

CHAPTER 8 - WATER SOFTENER UNITS

7.3.8.1 General.

a. The objective of this chapter is to provide a standard of quality, capacity, and performance for water softener units. Water softener performance is to be based upon referee tests procedures described in 7.3.8.9.
b. A manual bypass for raw water shall be provided as part of installation connections, and a drain for regenerational effluents shall be provided as described in chapter 6 on Indirect Waste Piping and Special Waste.

c. The regeneration process must include no less than the following operations, although not necessarily in this sequence except for subdivision 4:
    (1) Exchanger bed must be capable of being cleaned of filtered turbidity.
    (2) Regenerate with salt and rinse from exchanger bed.
    (3) Terminate rinse.
    (4) Return to service.
d. The operation under subdivision (1) of subsection c. may be eliminated in softeners of upflow design. Softeners of upflow design shall not be used for water having an iron content in excess of three tenths parts per million, or a turbidity in excess of ten parts per million.

7.3.8.2 Classification of water softeners.

a. Manual direct salting regeneration. All operations are performed manually and dry salt is added directly into the water softener. Sufficient water is removed to make room for salt. Termination of the rinsing process (subsection c. of section 7.3.8.1) may be automatic.
b. Manual brine regeneration. All operations are performed manually. Brine instead of dry salt is used for regeneration.
c. Semiautomatic direct salting regeneration. All operations are performed manually except the operations under subsection c. of section 7.3.8.1.
d. Automatic regeneration. All operations, including bypass of raw water supply, are performed automatically after setting timer or closing electric switch. Brine is used for regeneration. Salt is added to salt dissolving chamber or brine container as required.
e. Fully automatic regeneration. Regeneration, including bypass of raw water supply, is initiated and performed automatically. Salt storage is sufficient for multiple regenerations.

7.3.8.3 Softener construction.

a. Materials shall be selected for their strength and resistance to corrosion by water and brine; shall be free of objectionable color throw, taste and odor; and shall not impart toxic substances to the water.
b. Softener tanks shall be constructed for a minimum working pressure of one hundred twenty-five pounds per square inch 56.70 kilograms per 6.45 square centimeters and a hydrostatic test pressure of two hundred pounds per square inch 90.72 kilograms per 6.45 square centimeters.
    (1) Tanks shall be suitably corrosion resistant as to types of material or protective mechanism. Types of materials would include corrosion resistant, or noncorrosive materials such as high nickel alloys, 18-8 stainless steel and plastics. Plastic tanks shall meet the requirements of the national sanitation foundation.
    (2) Mild steels are not to be used unless the interior of the tank is protected by a lining or coating such as hot dip galvanizing; organic coating; glass, ceramic or rubber lining. Galvanized tanks shall contain not less than one and five tenths ounces 42.53 grams of zinc per square foot 929.03 square centimeters. If the internal coating or protective mechanism is not suitable for protecting the exterior

of the tank, a suitable external protective means, such as hot dip galvanizing, porcelain enamel, or organic finish shall be used.

c. Valves, piping, and screens.
    (1) Valves, piping, and screens shall be constructed of suitable corrosion resistant materials. Dissimilar metals shall be insulated or shielded when deemed necessary by the manufacturer.
    (2) Automatic water softeners employing electrical or hydraulic operating controls shall be of sturdy construction with durable combination valves and time clocks. They shall be constructed to minimize the possibility of admitting salt water into the house water system when the manufacturer's instructions are followed. All electrical components shall be "approved" as defined in the current National Electric Code (published by national board of fire underwriters).
    (3) The ion exchanger shall be of a suitable type, insoluble in water, of good durability, free from objectionable color-throw, taste, odor, and should not impart toxic substances to the water.

7.3.8.4 Softener rating.

a. Softener rating shall be based on grains of hardness removed (as calcium carbonate) between successive regenerations and must be related to the pounds of salt required for each regeneration.
b. The number of cubic feet, the type of ion exchanger (such as greensand, carbonaceous, siliceous gel, resin), the amount of salt required for each regeneration shall be given for each softener, and manufacturer's specified backwash, rinse, and softening flow rates in gallons per minute shall be given for each softener of downflow design. The same information with the exception of manufacturer's specified backwash rate shall be given for water softeners of upflow design.
c. Grain capacity shall be validated by actual test runs as specified on at least one size of each model. Manufacturer's test results must be correlated and extended to other sizes of the same model. Manufacturer's certified test data to be supplied when required.

7.3.8.5 Field performance.

a. The softener shall deliver not less than four gallons per minute 15.14 liters per minute of soft water.
b. Pressure drop from inlet to outlet of the softener, including valving and exchanger (at manufacturer's specified softening flow rate) shall not exceed fifteen pounds per square inch 6.80 kilograms per 6.45 square centimeters.

7.3.8.6 Application of equipment.

a. Water analysis. A chemical analysis of the water supply, made according to accepted water analysis standards, shall be furnished with the recommendation for water conditioning equipment. For those waters containing a hardness of four hundred milligrams per liter 23 grains per gallon and or sodium in excess of one hundred

milligrams per liter (6 grains per gallon) of calcium carbonate. The compensate hardness to determine the increased amount of resin needed.

b. Capacity and sizing. To assure adequate softening capacity, the following formula may be used (based upon daily water needs per person of fifty gallons 189.27 liters) to determine the required size of manual and semiautomatic softeners:

G x P x H x F = Softening capacity requirements in grains of hardness.

Where "G" is fifty gallons (daily needs per person).

Where "P" is the number of persons to occupy dwelling.

Where "H" is the hardness of the water supply expressed in grains per gallon, and "F" is the desired frequency of regeneration in days.

Note: G = twenty-eight gallons if water closets are not supplied with softened water.

G = twenty gallons if only hot water is to be softened.

c. The following table supplies the ratio of occupancy to the number of bedrooms within the dwelling to be used with the formula supplied in subsection b. in determining adequate size of equipment.

Number of bedrooms	2	2	4	5	6
Estimated number of occupants	4	5	6	7	8
Total Gallons Used Per Day G = 50	200	250	300	350	400
G = 28	112	140	168	196	224
G = 20	80	100	120	140	160
Minimum number of days between regeneration and automatic equipment	1	1	1	1	1
Minimum number of days between regeneration and manual and semiautomatic equipment	7	7	7	7	7

(1) Manual or semiautomatic water softeners having a softening capacity of less than eight hundred gallons 3028.33 liters between each regeneration shall not be acceptable.

(2) Automatic regeneration and fully automatic regeneration equipment (section 7.3.8.2) shall in no case be sized to require regeneration more than once in any twenty-four-hour period unless acceptable provision is made to deliver soft water during the regeneration process.

d. When the water softener is to be installed on a private water supply system, attention should be directed to the capacity of the pump and well and to the operating pressure of the water system to assure proper operations and regeneration of the softener.

7.3.8.7 Installation.

a. Drainage. Drainage from the softener in regenerating shall discharge to the building drain through an air break or air gap, to a laundry tray, floor drain, or similar properly trapped and vented fixture or stand pipe. If a fixture is not accessible it shall be the duty of the water conditioning contractor to obtain the services of a licensed plumber to install a trapped and vented outlet.

b. Brine rinse. Installations requiring rinsing of brine through building water distribution piping shall not be acceptable.

c. Piping. Pipe used in installations shall not create a corrosive condition because of dissimilarity of metals, and shall not create more than a ten percent pressure drop in system when system operates at forty pounds per square inch 18.14 kilograms per 6.45 square centimeters or less, and shall not create a pressure drop of more than twenty percent when system operates at a pressure of forty-one pounds per square inch 18.60

kilograms per 6.45 square centimeters or more (when softener is operating at manufacturer's specified softening flow rate).

d. Disinfection. Disinfection of all installations shall comply with the manufacturer's instructions or the water conditioning equipment manufacturer's association's instruction.
e. Operating instructions. The manufacturer or installer shall provide and attach to, or near, the softening equipment a set of instructions for use of the owner, detailing the method of operation, regeneration, and maintenance required.

7.3.8.8 Warranties.

a. On equipment. The manufacturer shall provide the user of the equipment with an unconditional warranty of not less than three years on the water softener tank and brine container, and the first year on all other materials and parts which may become defective.
b. On installation. Warranty replacement parts shall be furnished and installed by contractor without additional charge during the first year after date of installation. Equipment carrying a manufacturer's warranty in excess of one year shall be plainly denoted in the submission.

7.3.8.9 Referee test procedures for water softening equipment.

a. Water quality. Water used for test runs shall have a hardness of between fifteen and twenty grains per gallon 256.5 and 342 milligrams per liter (as calcium carbonate), ph in range of six and nine tenths to eleven, and water temperature shall be between fifty-five degrees and sixty-five degrees Fahrenheit 12.77 and 18.33 degrees Celsius. If unavailable in natural form, it shall be prepared to this specification in the ratio of two-thirds calcium and one-third magnesium. To determine hardness of the influent water, a constant percentage of influent water shall be collected during the test run and the composite tested for hardness by accepted water hardness test methods. (As described in the water conditioning foundation engineering manual and "Standard Methods for the Examination of Water and Waste Water", published by American public health association, 1790 Broadway, New York, New York).
b. Water softener test.
    (1) The softener shall be connected to water supply in accordance with manufacturer's standard installation instructions.
    (2) A meter shall be placed in outlet line from the softener to measure rate of flow and volume of water.
    (3) The softener shall operate within water pressure range and shall be regenerated in accordance with manufacturer's instructions. With softener valves in softening position, water delivered at outlet shall be tested by accepted water hardness test methods with one grain per gallon 17.1 milligrams per liter hardness leakage as the determining end point.
c. Softening flow rate.
    (1) Softening capacity runs shall be at constant rate of flow at fifty percent of manufacturer's specified softening rate. This shall be considered equivalent performance to the intermittent flow obtained in the home.

(2) A pressure drop test shall be made. The pressure loss from inlet to outlet of softener, including valving and exchanger at manufacturer's specified softening flow rate, shall not exceed fifteen pounds per square inch 6.80 kilograms per 6.45 square centimeters.

d. Test records.
   (1) Hardness of effluent shall be tested at intervals of not less than ten percent of the total softening run and shall meet test specified below.
   (2) Five complete softening capacity runs shall be made on each model. Data for the first two runs shall be discarded. Capacity shall be based on the average of three succeeding runs which do not show a variance of ten percent from the average.
   (3) Hardness test shall be one grain per gallon 17.1 milligrams per liter of hardness leakage as the determining end point as described in accepted water hardness test procedures.
e. Softening capacity.
   (1) Capacity of the water softener is to be determined only between points at which hardness of effluent meets the accepted water hardness test.
   (2) Softening capacity rating in grains of hardness removed shall be the gallon capacity multiplied by the average hardness of the raw water as determined by a composite percentage sample required under subsection a.

SECTION 7.3

CHAPTER 9 - INSPECTIONS

7.3.9.1 Inspections.

All new water conditioning installations, and such portions of existing systems as may be affected by new work or any changes, shall be inspected to ensure compliance with all the requirements of this section and to assure that the installation and construction of the water conditioning installation is in accordance with this section and the Uniform Plumbing Code.

7.3.9.2 Notification.

a. Advance notice. It shall be the duty of the holder of a water conditioning contractors license to give a notice to the Construction Management Office when water conditioning installation is ready for test or inspection.
b. Water conditioning contractor's responsibility. It shall be the duty of the holder of a license to make sure that the work will stand the test prescribed before giving the notification.
c. Retesting. If the Construction Management Office finds that the work will not pass the test, the holder of a license shall be required to make necessary corrections and the work shall then be resubmitted for test or inspection.
d. Test. Tests shall be conducted in the presence of the Construction Management Office or the Construction Management Office's duly appointed representative.

7.3.9.3 Violations.

Notices of violations shall be written and mailed or delivered by the Construction Management Office to the person responsible at the time inspection was made.

7.3.9.4 Reinspections.

Reinspections of water conditioning installations or any part thereof shall be made when deemed necessary by the Construction Management Office.

7.3.9.5 Covering of work.

a. Requirements. No water conditioning or water distribution system or part thereof shall be covered until it has been inspected, tested, and accepted as prescribed in this section.
b. Uncovering. If any water conditioning installation or water distribution system or part thereof which is installed, altered, or repaired, is covered before being inspected, tested, and approved, as prescribed in this section, it shall be uncovered for inspection after notice to uncover the work has been issued to the responsible person by the Construction Management Office.

7.3.9.6 Material and labor for tests.

The equipment, material, and labor necessary for inspection or tests shall be furnished by the person to whom the license is issued or by whom inspection is requested.

7.3.9.7 Inspection and test not required.

No test or inspection shall be required where a water conditioning system, or part thereof, is set up for exhibition purposes and has no connection with a water or drainage system.

7.3.9.8 Test of water supply system.

Upon completion of a section or of the entire water supply system, it shall be tested and proved tight under a water pressure not less than the working pressure under which it is to be used. The water used for tests shall be obtained from a potable source of supply.

7.3.9.9 Certificate of approval.

Upon the satisfactory completion and final test of the water conditioning installation, a certificate of approval shall be issued by the Construction Management Office to the water conditioning contractor to be delivered to the owner.

7.3.9.10 Correction of defects.

Wherever there is reason to believe that the water conditioning installation has become defective, it shall be subjected to test or inspection and any defects found shall be corrected as required in writing by the Construction Management Office.

7.3.9.11 Maintenance.

The water conditioning and water distribution system of any premises located on the Fort Berthold Reservation shall be maintained in a sanitary and safe operating condition by the owner or the owner's agent.

SECTION 8 - THREE AFFILIATED TRIBES FIRE PROTECTION LAWS

SECTION 8.1 CONSTRUCTION MANAGEMENT OFFICE AND FIRE PROTECTION DISTRICTS

8.1.1 Enforcement of Three Affiliated Tribes Fire Code.

The Construction Management Office, working in coordination with the Fire Protection Districts, is authorized to enter into a Memorandum of Understanding ("MOU") with the North Dakota state fire marshal for support, resources and technical assistance to facilitate fire code enforcement in buildings located on the Fort Berthold Reservation.

8.1.2 Duties of the Construction Management Office

The Construction Management Office, Reservation Fire Protection Districts may jointly enforce all the laws of the Three Affiliated Tribes providing for:

a. The prevention of fires.
b. The storage, sale, and use of combustibles and explosives.
c. The installation and maintenance of automatic or other fire alarms and fire extinguishing equipment.
d. The means and adequacy of exits in case of fires from all public and private elementary and secondary schools, from all public places, and from all other places in which fifty or more persons congregate from time to time for any purpose.
e. The suppression of arson and the investigation of the cause and origin of fires.
f. The education of the people living on the Fort Berthold Reservation through organized programs on the hazards of fire.

8.1.3 Inspections — Construction Management Office — Education.

1. The Construction Management Office and the Reservation Fire Protection Districts may perform fire safety inspections on fuel dispensing and storage sites, child-care facilities, public and private elementary and secondary schools, and all public buildings and places where 50 or more people congregate. The Construction Management Office and Reservation Fire Protection Districts charge a fee not to exceed fifty dollars for conducting these fire safety inspections.
2. The Reservation Fire Protection Districts shall provide the Construction Management Office education regarding the fire safety requirements of licensed early childhood program premises, including smoke detector and carbon monoxide alarm requirements.

8.1.4 Rules for prevention of fires to be issued.

The Construction Management Office, in coordination with the Reservation Fire Protection Districts and with the approval and authorization of the Tribal Business Council, shall make rules not inconsistent with the provisions of this code for the prevention of fires and shall explain such rules fully to all Three Affiliated Tribes government officers. All such rules must be posted in such conspicuous places as will tend to be of the greatest benefit to the residents of the Fort Berthold Reservation, and when called upon, the Construction Management Office shall appear

before the Tribal Business Council and explain the benefits derived from compliance with such rules and regulations in the reduction of hazardous conditions and loss by fire.

8.1.5 Educational programs — Provided by Construction Management Office.

The Construction Management Office shall work in coordination with the Reservation Fire Protection Districts to provide educational programs on the hazards of fire.

8.1.6 Construction Management Office may adopt rules for explosives — Penalty.

The Construction Management Office shall work collaboratively with the Fire Protection Districts to propose safety rules for the storage, sale, and use of combustibles and explosives, not otherwise provided by law for Tribal Business Council authorization and approval. Any person who willfully refuses to comply with the safety rules adopted by the Tribal Business Council under this section is guilty of a class B misdemeanor. Rules adopted by the Tribal Business Council pursuant to this section may not be more restrictive than those promulgated by the North Dakota building and fire codes and do not apply to the transportation of explosives and dangerous articles regulated by the interstate commerce commission. The Construction Management Office may make reasonable provisions for the application or nonapplication of all or any portion of the national fire codes.

SECTION 8

CHAPTER 2- LIQUIFIED PETROLEUM GAS REGULATION

8.2.1 Liquefied petroleum gas defined.

The term “liquefied petroleum gas”, as used in this chapter, means and includes any material which is composed predominantly of any of the following hydrocarbons, or mixtures of the same: propane, propylene, butane (normal butane or isobutane), and butylenes.

8.2.2 Construction Management Office to make rules.

The Construction Management Office, in coordination with the Fire Protection Districts, and with the authorization and approval of the Tribal Business Council, shall adopt rules setting forth minimum general standards covering the design, construction, location, installation, and operation of equipment for storage, handling, transporting by tank truck, tank trailer, and utilizing liquefied petroleum gases and specifying the odorization of said gases and the degree thereof. The rules must be such as are reasonably necessary for the protection of the health, welfare, and safety of the public and persons using such materials and must be in substantial conformity with the generally accepted standards of safety concerning the same subject matter. The rules must substantially comply with national standards for the design, installation, construction of containers, and pertinent equipment for the handling and storage of liquefied petroleum gases, such as those promulgated by the international code council and the national fire protection association.

8.2.3 Liquefied petroleum gas furnace or other appliance permitted in residential or commercial building.

No government entity of the Three Affiliated Tribes, including the Construction Management Office, may by rule, resolution, or ordinance prohibit the installation in the basement of any residential or commercial building of a furnace or other appliance that uses liquefied petroleum gas.

8.2.4 Penalty.

Any person violating any of the provisions of this chapter or of the regulations of the Construction Management Office made pursuant to it is guilty of a class B misdemeanor.

8.2.5 Abatement.

In addition to the penalties provided in section 8.2.4, any person, firm, or corporation who violates or remains in violation of any of the provisions hereof, or of any rule or regulation promulgated by the Construction Management Office hereunder, may be directed and ordered by Construction Management Office, by notice in writing setting forth the facts relating to such violation to correct said violation. Such notice in writing must be served personally upon said person or mailed by registered or certified mail to the principal office of said person, firm, or corporation or if an individual, to the individual's residence. If such order is not complied with and such violation not corrected within twenty days of the date of service of said order the Construction Management Office shall file, in Fort Berthold District Court a petition or complaint setting forth the facts relating to the making and serving of such order and praying for an injunction or an abatement, and the court upon notice and proper hearing shall make such determination thereof as seems necessary and proper to correct the violation and secure enforcement of said abatement order. Every order issued by the officials hereinbefore mentioned under the provisions of this section is prima facie evidence of the truth of the matters and things therein set forth. The tribal court may issue such temporary orders pending full hearing as may seem necessary and expedient. The procedures must be as prescribed for the securing of an injunction or for the abatement of hazards in the laws of the Three Affiliated Tribes or under the rules and practices of the court.

SECTION 9 - THREE AFFILIATED TRIBES FIRE PREVENTION CODE

9.1 Fire prevention rules - Intent.

It is the intent of this section to prescribe regulations consistent with nationally recognized good practice for the safeguarding of life and property from the hazards of fire and explosions.

9.2 Fire prevention rules - Scope.

a. This section supplements all laws defined within the Three Affiliated Tribes Tribal Law and Order Code relating to fire safety and applies to all persons without restrictions, unless specifically exempted.
b. This section applies to existing conditions, as well as to conditions arising after the adoption of this section, except that conditions legally in existence at the time of adoption of this section and, not in strict compliance with this section, shall be permitted to continue only if, in the opinion of the Fire Protection Districts, they do not constitute a distinct hazard to life or property.
c. Where there is a conflict between this section and those provisions of the Three Affiliate Tribes Tribal Law and Order Code, the provisions of the Three Affiliated Tribes Tribal Law and Order Code shall prevail.

9.3 Definitions.

The following definitions shall be used when referred to in the content of this section:

a. "Authority having jurisdiction", "bureau of fire prevention", "chief", "chief of the fire department", "chief of the fire prevention bureau", "fire chief", "fire code official", "fire department", "fire marshal", "fire marshal's office", "fire prevention bureau", "fire prevention engineer", "fire prevention inspector", "fire protection engineer", "inspector", or "office of the fire marshal refers to the Construction Management Office.
b. "City or "jurisdiction" refers to the Three Affiliated Tribes of the Fort Berthold Reservation
c. "Fire prevention code", "fire prevention rules", or "fire code" refers to the rules provided for within this section.
d. "Local jurisdiction" refers to the Three Affiliated Tribes of the Fort Berthold Reservation.

9.4 Fire prevention rules.

The fire prevention rules for the Three Affiliated Tribes include, but are not limited to, the following:

Fire code. The Three Affiliated Tribes Fire Code includes:

a. The provisions of the Three Affiliated Tribes Building Code, providing for fire-safe construction and operation.
b. The provisions of the International Fire Code (IFC), 2018 edition International Code Council (ICC), with the following exceptions and modifications:

(1) Chapter 1. Scope and Administration:

101.1 Title. The words "[NAME OF JURISDICTION]" are replaced with “Three Affiliated Tribes”.

102.1 Construction and design provisions. Subsection 3 does not apply.

102.4 Application of building code. Insert "as amended by the Three Affiliated Tribes " after the words "International Building Code" in both instances.

102.6 Historic buildings. Does not apply.

105.1.1 Permits required. The words "obtain the required permit" are replaced with "may be required to obtain a permit".

110.4Violation penalties. Does not apply.

(2) Chapter 2. Definitions.

Fireworks, 1.4G. After "1507" insert "1 or any combustible or explosive composition, or any substance or combination of substances or article prepared for the purpose of producing a visible or an audible effect by combustion, explosion, deflagration, or detonation. The term includes any blank cartridge, toy pistol, toy cannon, toy cane, or toy gun in which an explosive other than a toy paper cap is used; balloon that requires fire underneath to propel the balloon; firecracker, torpedo, skyrocket, Roman candle, daygo bomb, sparkler, or other item of like construction; item containing any explosive or flammable compound; or any tablet or other device containing any explosive substance. This section does not apply to any toy paper cap containing not more than twenty-five hundredths of a grain [16.20 milligrams] of explosive composition per cap."

[BG] Group E, day care facilities. The word "five" is replaced with "twelve".

[BG] Five or fewer children. The word "five" is replaced with "twelve" in both instances in this paragraph.

[BG] Five or fewer children in a dwelling unit. The word "five" is replaced with "twelve" in both instances in this paragraph.

[BG] Institutional Group I-4, day care facilities. The word "five" is replaced with "twelve". Classification as Group E. The word "five" is replaced with "twelve".

[BG] Five or fewer occupants receiving care. The word "five" is replaced with "twelve" in both instances in this paragraph.

[BG] Five or fewer occupants receiving care in a dwelling unit. The word "five" is replaced with "twelve" in both instances in this paragraph.

[BG] Care facilities within a dwelling. The word "five" is replaced with "twelve" and the words "provided an automatic sprinkler system is installed in accordance with Section 903.3.1.3 or Section P2904 of the International Residential Code" are deleted.

(3) Chapter 3. General Requirements.

308.1.4 Open-flame cooking devices. Exception 3. The words "2. pounds [nominal 1 pound (0.454 kg) LP-gas capacity]" is replaced with "20 pounds (9.07 kg)".

308.1.3 Sky lanterns. Does not apply.

308.3 Group A occupancies. Exception 1. The following is added: "1.4 Open-flame devices for food warming."

(4) Chapter 5. Fire Service Features.

510.1 Emergency responder radio coverage in new buildings. In the first sentence, replace "New" with "Where required by the fire code official, new".

(5) Chapter 9. Fire Protection and Life Safety Systems.

The following is added:

"905.1.1 Standpipe hose. The installation of fire hose on standpipes may be omitted when approved by the fire code official. Approved standpipe hose valves and connections shall be provided where required."

907.2.10.2 Groups R-2, R-3, R-4, and I-1. The following subsection is added: "4. In dwelling units where the ceiling height of a room open to the hallway serving the sleeping rooms exceeds that of the hallway by twenty-four inches [610 mm] or more, smoke detectors must be installed in the hallway and in the adjacent room."

(6) Chapter 10. Means of Egress.

1010.1.9.4 Locks and Latches. The following is added:

"7. Egress doors from occupied roofs, or doors used to gain access to the interior of the building may be locked from the outside if all of the following are provided:

7.1 Compliance with all aspects of Section 1010.1.9.4 subsection 2.

7.2 Compliance with section 1009.8.

7.3 The door locks must unlock on actuation of the automatic sprinkler system and automatic fire detection system and the door locking system must be installed to have the capability of being unlocked by a switch located at the fire command center."

1011.1 General. The following is added as an exception:

"Stairways used only to attend equipment or private stairways serving an occupant load of ten or fewer persons and which are not accessible to the public need not comply with sections 1011.2 through 1011.13."

1030.3. Maximum height from floor. The words "44 inches (1118 mm)" are replaced with "48 inches (1219.2 mm)".

2. Chapter 61. Liquefied Petroleum Gases.

6103.2.1.6 Use with self-contained torch assemblies. The words "2.7 pounds (1.2 kg)" are replaced with "12 pounds (5.44 kg)".

Section 5: Availability of standards.

The standards listed in section 4 “Fire Prevention Rules” are available from:

1. National Fire Protection Association

   Batterymarch Park

   Quincy, Massachusetts 02269

   (617) 328-9290

2. International Code Council, Inc.

   4051 West Flossmoor Road

   Country Club Hills, IL 60478-5795

   (800) 214-4321

SECTION 10 - BOILER ORDINANCE OF THE THREE AFFILIATED TRIBES

10.1 Definitions.

As used in this chapter, unless the context otherwise requires:

a. "Boiler" means a closed vessel in which water is heated, steam is generated, steam is superheated, or any combination thereof, under pressure or vacuum for use externally to the boiler by the direct application of heat from the combustion of fuels, or from electricity or nuclear energy. The term includes fired units for vaporizing liquids other than water when these units are separate from processing systems and are complete within themselves.
b. "Office" means the Construction Management Office of the Three Affiliated Tribes.

10.2 Chief boiler inspector, deputy inspectors — Appointment — Jurisdiction.

The Office shall employ a chief boiler inspector and deputy inspectors. The chief boiler inspector has jurisdiction over all boilers on the Fort Berthold Reservation except as otherwise provided.

10.3 Qualifications of chief boiler inspector — Deputy inspectors.

a. An individual is not eligible to the office of chief boiler inspector unless that individual:
    (1) Has had at the time of the appointment at least five years' experience in the construction, inspection, operation, maintenance, or repair of high-pressure boilers and pressure vessels as a mechanical engineer, boilermaker, steam operating engineer, or boiler inspector. An applicant possessing a mechanical engineering degree from an accredited school may substitute that degree for two years of the five years' experience, at the discretion of the Office.
    (2) Holds a commission issued by the national board of boiler and pressure vessel inspectors or obtains the commission within one year after the date of appointment by the office.
    (3) Is not directly or indirectly interested in the manufacture or sale of boilers or steam machinery or articles used in the construction or maintenance of engines or boilers.
b. The office shall establish qualifications for a deputy inspector which are not inconsistent with the requirements of the position.

10.4 Powers and duties of chief boiler inspector.

a. The chief boiler inspector shall:
    (1) Keep a complete record of the type, dimensions, maximum allowable working pressure, age, condition, location, and date of the last-recorded internal and external inspection of boilers to which this chapter applies.
    (2) Cooperate and assist in loss prevention programs sponsored by the Office.
b. The chief boiler inspector may delegate powers and duties to any deputy inspector or special inspector.

10.5 General requirement.

Every boiler on the Fort Berthold Reservation must be constructed, installed, and maintained according to rules adopted to implement this chapter.

10.6 Exempt boilers — Inspection of exempt boilers.

This chapter does not apply to:

a. Any boiler subject to federal inspection or under federal control.
b. Any boiler located on a farm and used solely for agricultural purposes.
c. Any heating boiler located in a private residence or in an apartment house of less than six family units.
d. Any hot water supply boiler not exceeding the following limitations:
e. Input of two hundred thousand British thermal units per hour.
f. Pressure of one hundred sixty pounds per square inch [1103.16 kilopascals] gauge.
g. Temperature of two hundred fifty degrees Fahrenheit [121.11 degrees Celsius].
h. Any portable steam cleaner commonly used in a garage.
i. Any boiler of a miniature model locomotive, boat, tractor, or stationary engine design constructed as a hobby, not for commercial use, having an inside diameter not exceeding ten inches [25.4 centimeters] and a grate area not exceeding one and one-half square feet [1393.54 square centimeters] and which is properly equipped with a safety valve, water level indicator, and pressure gauge.
j. Any electric boiler used as an integral part of an espresso coffee machine, provided that the boiler does not exceed one and one-half cubic feet [.0566 cubic meter] in water capacity, does not exceed fifty pounds per square inch [344.74 kilopascals] pressure, and is constructed, approved, or certified to the American society of mechanical engineers code or to other national or international standards.

10.7 Inspection of boilers.

a. The chief boiler inspector shall inspect each boiler used or proposed to be used within the exterior boundaries of the Fort Berthold Reservation. The inspection must be thorough as to the construction, installation, condition, and operation as provided by the rules adopted to implement this chapter. An exempt boiler may be inspected by the chief boiler inspector when the owner, the owner's agent, or the user of the boiler makes written request for inspection to the office.
b. Each boiler of one hundred thousand pounds [45359.24 kilograms] per hour or more capacity, used or proposed to be used within the exterior boundaries of the Fort Berthold Reservation, which has internal continuous water treatment under the direct supervision of a graduate engineer or chemist, or one having equivalent experience in the treatment of boiler water when the water treatment is for the purpose of controlling and limiting serious corrosion and other deteriorating factors, and with respect to which boiler the chief boiler inspector has determined the owner or user has complied with the prescribed recordkeeping requirements, must be inspected at least once every thirty-six months internally while not under pressure, and at least once every twelve months externally while under pressure. If a hydrostatic test is necessary to determine the safety of a boiler,

the test must be conducted by the owner or user of the equipment under the supervision of the chief boiler inspector. The owner or user of a boiler of one hundred thousand pounds [45359.24 kilograms] per hour or more capacity desiring to qualify for thirty-six-month internal inspection intervals shall keep available for examination by the chief boiler inspector accurate records showing the date and actual time the boiler is out of service and the reason for being out of service, and the results of the chemical and physical analysis of the boiler water, whether from laboratory analysis of samples taken at regular intervals of not more than forty-eight hours or from continuous online analyzers, which will adequately show the condition of the water and any other elements or characteristics of the water capable of producing corrosion or other deterioration of the boiler or its parts. If an inspection discloses deficiencies in equipment or in operating procedures, inspections may be required once every twelve months.

10.8 Special inspector.

a. Upon written request of an employer, the office may appoint as a special inspector an inspector in the employ of:
   (1) An insurance company authorized to insure boilers in the state of North Dakota against loss from explosion;
   (2) A company qualified by the national board of boiler and pressure vessel inspectors as an accredited owner/user inspection organization; or
   (3) A company qualified by the national board of boiler and pressure vessel inspectors as an accredited authorized inspection agency.
b. An individual may not be appointed as a special inspector unless that individual has passed the examination prescribed by the national board of boiler and pressure vessel inspectors.
c. An inspection performed by a special inspector must be performed in accordance with this chapter and a complete report of the inspection must be filed with the office in the time, manner, and form as prescribed by the office.
d. If a complete report is not filed by the special inspector's employer with the department within ninety days from the certificate due date, the chief boiler inspector may make the required inspection, unless an extension of time is granted by the chief boiler inspector. The special inspector's employer must pay the inspection fees as required by section 10.9 for a special inspection.
e. The chief boiler inspector may inspect any boiler to which a special inspection applies.
f. The office may, for cause, suspend or revoke the appointment of any special inspector.

10.9 Inspection and certificate fees.

a. Upon completion of inspection, the owner or user of a boiler shall pay to the office fees or a combination of inspection and certificate fees. The office shall determine the inspection fees. Certificate fees are determined by section 10.10. The office shall determine and annually may adjust a fee scale for the internal inspections of power boilers, internal inspections of low-pressure heating boilers, external inspections of all boilers, and inspection of boilers used exclusively for exhibition purposes.

b. Not more than two hundred dollars may be charged or collected for any one inspection of a boiler, except for special inspections made upon request. All other inspections made by the chief boiler inspector, including shop inspections and reviews and special inspections when requested by the owner or user of a boiler, must be charged at a rate not to exceed five hundred dollars per day or three hundred dollars per half day of four hours or less, plus payment for mileage, meals, and hotel expenses at a rate approved by the Tribal Business Council.
c. The annual fee for the issuance of a reciprocal commission card for a special inspector is forty dollars and the annual fee for the issuance of a welder-qualified card is twenty dollars.
d. The fee for taking an examination for a hobby boiler operating license is twenty-five dollars and the fee for a hobby boiler operating license is twenty-five dollars.
e. A hobby boiler operating license issued under this section is valid for six years.

10.10 Certificate of inspection — Certificate to be posted.

The office shall issue a certificate of inspection for each boiler inspected upon receipt of an inspection report certifying that the boiler is in a safe condition to be operated. The office shall charge a fee of thirty-five dollars per year for each year that a certificate is valid, or part of a year thereof, for each certificate of inspection issued as the result of inspections authorized under sections 10.7 and 10.8. The fees are the liability of the owner or user and must be paid in accordance with rules adopted by the office. A certificate may not be issued for any boiler not in a safe condition to be operated or for a boiler for which the inspection and certificate fees have not been paid in full. A certificate is not valid for a period of more than thirty-six months for power boilers described in section 10.7, and no more than twelve months for other power boilers, twelve months for steam traction engines, and thirty-six months for low-pressure boilers except that a two-month grace period may be extended for any certificate. Upon written request from a special inspector, the chief boiler inspector may issue a short-term certificate. Each certificate of inspection must be posted conspicuously under glass in the boiler room or adjacent to the boiler inspected.

10.11 Certificate of inspection required — Penalty.

A person may not operate a boiler on the Fort Berthold Reservation without a valid certificate of inspection. A violation of this section is a class A misdemeanor on the part of the owner, user, or operator of the boiler.

10.12 Manufacturer’s data report.

The boiler manufacturer shall provide the office with a manufacturer’s data report. When signed by an authorized inspector, this data sheet together with the stamp on the boiler is the record denoting the boiler has been constructed in accordance with the rules adopted to implement this chapter.

10.13 Disposition of funds.

All funds collected and received under this chapter must be paid to t office to be used to defray the costs of boiler inspections.

10.14 Rules — Penalty for violation — Hearing.

a. The office, with authorization and approval of the Tribal Business Council, shall adopt rules for the safe and proper installation, use, operation, and inspection of boilers and pressure vessels subject to this chapter.
b. The office, with authorization and approval of the Tribal Business Council, shall adopt rules for the licensing of operators of hobby boilers used during parades, exhibitions, and threshing shows where the public is invited.
c. A fee must be charged for an operating license, for a license renewal, and for an examination conducted to determine minimum competence. Individuals operating hobby boilers within the exterior boundaries of the Fort Berthold Reservation as of July 1, 2007, are considered acceptable for a license without additional training or examination. An individual who is not a resident of the Fort Berthold Reservation and who holds a boiler operator license or credential from a state other than North Dakota or Canadian province is exempt from Construction Management Office licensure as a hobby boiler operator.
d. The office may not issue a certificate of inspection to any owner or user of a boiler who fails or refuses to comply with the rules. The office shall revoke any certificate presently in force upon evidence that the owner or user of the boiler is failing or refusing to comply with the rules.
e. Any owner or user of a boiler may request a hearing before the office within fifteen days from service of an order refusing or revoking a certificate of inspection. It is the burden of the owner or user to show cause why the certificate of inspection should not be refused or revoked. If no hearing is requested within the required period, the order of the office becomes final and is not subject to further proceedings.

SECTION 11 - BOILER CODE

CHAPTER 1- DEFINITIONS

11.1.1 As used in this section:

a. "Alteration" means a change in an item described on an original manufacturer's data report which affects the pressure retaining capability of the pressure retaining item. An alteration includes nonphysical changes, such as an increase in the maximum allowable internal or external working pressure, an increase in design temperature, or a reduction in minimum temperature. For boilers used in the power generation industry exceeding one hundred thousand pounds of steam per hour output, increases in steaming capacity may not be considered an alteration if a new baseline steaming capacity is established based on either an engineering evaluation or a review of the operating history and a conditional assessment of the boiler and its components. An engineering evaluation or conditional assessment must be made by the boiler owner with review and comment by the authorized inspection agency responsible for the in-service inspection of the boiler. Engineering evaluations and conditional assessments are subject to the review and approval of the chief boiler inspector.
b. "Apartments" means all multiple dwellings, including condominiums.
c. "Approved" means approved by the Construction Management Office.
d. "A.S.M.E. code" means the boiler and pressure vessel construction code of the American society of mechanical engineers of which sections I, II, IV, V, VIII (divisions 1, 2, and 3), IX, and X, 2019 edition, are hereby adopted by the Construction Management Office and incorporated by reference as a part of this section. A copy of the American Society of Mechanical Engineers Code is on file at the office of the boiler inspection program. The American Society of Mechanical Engineers Code may be obtained from the American Society of Mechanical Engineers headquarters at 2 Park Avenue, New York, New York 10016-5990 or from www.asme.org.
e. "Boiler" means a closed vessel in which water is heated, steam is generated, steam is superheated, or any combination thereof, under pressure or vacuum for use externally to itself by the direct application of heat from the combustion of fuels or from electricity or nuclear energy. The term boiler includes fired units for vaporizing liquids other than water when these units are separate from processing systems and are complete within themselves, as defined under the Three Affiliated Tribes Boiler Ordinance.
f. "Certificate inspection" means an inspection, the report of which is used by the chief boiler inspector to decide whether a certificate may be issued under 10.10 of the Three Affiliated Tribes Boiler Ordinance.
g. "Certificate of competency" means a certificate issued by a jurisdiction indicating that a person has passed an examination prescribed by the national board of boiler and pressure vessel inspectors.
h. "Chief inspector" means the chief boiler inspector appointed by the Construction Management Office to serve in the capacity as stated by law.

i. "Condemned boiler" means a boiler that has been inspected and declared unsafe or disqualified by legal requirements by an inspector qualified to take such action who has applied a stamping or marking designating its rejection.
j. "Deputy inspector" means a boiler inspector or inspectors employed by the Construction Management Office to assist the chief inspector in making inspections of boilers.
k. "Existing installations" includes any boiler constructed, installed, or placed in operation before July 1, 1973.
l. "External inspection" means an inspection made when a boiler is in operation.
m. "Fusion welding" means a process of welding metals in a molten or molten and vaporous state, without the application of mechanical pressure or blows. Such welding may be accomplished by the oxyacetylene or oxyhydrogen flame or by the electric arc. Thermic welding is also classed as fusion.
n. "High-pressure, high-temperature water boiler" means a water boiler operating at pressures exceeding one hundred sixty pounds per square inch gauge [1103.17 kilopascals] or temperatures exceeding two hundred fifty degrees Fahrenheit [121.16 degrees Celsius]. For practical purposes it must be deemed the same as a power boiler.
o. "Hot water supply boiler" means a fired boiler used exclusively to supply hot water for purposes other than space heating and includes all service-type and domestic-type water heaters not otherwise exempt section 10.6 of the Three Affiliated Tribes Boiler Ordinance.
p. "Inspector" means the chief boiler inspector or any deputy inspector or special inspector.
q. "Internal inspection" means an inspection made when a boiler is shut down and handholes and manholes are opened for inspection of the interior.
r. "Low pressure and heating boiler" means a boiler operated at pressures not exceeding fifteen pounds per square inch gauge [103 kilopascals] for steam or at pressures not exceeding one hundred sixty pounds per square inch gauge [1103.17 kilopascals] and temperatures not exceeding two hundred fifty degrees Fahrenheit [121.1 degrees Celsius] for water.
s. "Major repair" means a repair upon which the strength of a boiler would depend. Major repairs are those that are not of a routine nature as described in the National Board Inspection Code.
t. "Miniature boiler" means any boiler that does not exceed any of the following limits:
    (1) Sixteen inch [40.64 centimeter] inside diameter of shell.
    (2) Twenty square feet [1.86 square meter] heating surface.
    (3) Five cubic feet [.142 cubic meter] gross volume, exclusive of casing and insulation.
    (4) One hundred pounds per square inch gauge [689.48 kilopascals] maximum allowable working pressure.
u. "National board" means the national board of boiler and pressure vessel inspectors, 1055 Crupper Avenue, Columbus, Ohio 43229, whose membership is composed of the chief inspectors of government jurisdictions who are charged with the enforcement of the provisions of the American Society of Mechanical Engineers Code.

v. "National Board Inspection Code" means the manual for boiler and pressure vessel inspectors supplied by the national board. The National Board Inspection Code, 2019 edition, is hereby adopted by the Construction Management Office and incorporated by reference as a part of this section. Copies of this code may be obtained from the national board at 1055 Crupper Avenue, Columbus, Ohio 43229.
w. "New boiler installations" includes all boilers constructed, installed, or placed in operation after July 1, 1973.
x. "Nonstandard boiler" means a boiler that does not bear the TAT stamp, North Dakota stamp, the national board stamping, the American society of mechanical engineers stamp, or the stamp of any state or political subdivision which has adopted a standard of construction equivalent to that required by this section.
y. "Owner or user" means any person, firm, corporation, government entity, or political subdivision owning or operating any boiler that is not specifically exempt under section 10.6.
z. "Power boiler" means a closed vessel in which steam or other vapor (to be used externally to itself) is generated at a pressure of more than fifteen pounds per square inch gauge [103 kilopascals] by the direct application of heat.
aa. "Reciprocal commission" means a commission issued by the Construction Management Office to persons who have passed a written examination prescribed by the national board and who hold a national board commission issued by the national board, or to persons who have passed the written examination prescribed by the national board and are employed by an accredited national board owner/user inspection organization.
bb. "Reinstalled boiler" means a boiler removed from its original setting and re-erected at the same location or erected at a new location without change of ownership.
cc. "Reinstalled pressure vessel" means a pressure vessel removed from its original setting and re-erected at the same location or erected at a new location without change of ownership.
dd. "Repair" is a restoration of any damaged or impaired part to an effective and safe condition.
ee. "Secondhand boiler" means a boiler of which both the location and ownership have been changed after primary use.
ff. "Secondhand pressure vessel" means a pressure vessel of which both the location and ownership have been changed after primary use.
gg. "Service-type or domestic-type water heater" means a fired water heater of either instantaneous or storage type, used for heating or combined heating and storage of hot water to be used exclusively for domestic or sanitary purposes, with temperatures not exceeding two hundred ten degrees Fahrenheit [98.68 degrees Celsius], and a heat input not in excess of two hundred thousand British thermal units [2.11 x 10 to the 8 th power joules] per hour, and pressure not to exceed one hundred sixty pounds per square inch [1103.17 kilopascals].
hh. "Special inspector" means an inspector regularly employed by an accredited national board authorized inspection agency or an inspector who has passed the national board

examination and is employed by an accredited national board owner/user inspection organization.

ii. "Standard boiler" means a boiler that bears the stamp of the Three Affiliated Tribes, the state of North Dakota or of another state that has adopted a standard of construction equivalent to that required by this section or a boiler that bears the national board stamping or American society of mechanical engineers stamp.

jj. "Three Affiliated Tribes boiler construction code" is used to designate the accepted reference for construction, installation, operation, and inspection of boilers and will be referred to as this section. Anything not amended or specifically covered in this section must be considered the same as the American society of mechanical engineers code.

kk. "Steam traction engines" means boilers on wheels which are used solely for show at fairs and other exhibitions in which the public is invited to attend.

SECTION 11

CHAPTER 2- ADMINISTRATION

11.2.1 Inspection reports to be submitted.

a. Power boilers. Each authorized inspection agency or owner/user inspection organization, to which a special inspector commission has been issued, shall submit to the chief boiler inspector complete data of each high-pressure boiler insured or inspected by it or covered by a written inspection agreement. A complete report of each boiler inspection must be filed electronically with the chief boiler inspector on form SFN 10706 within fifteen days of inspection.

b. Low pressure, hot water heating, and hot water supply boilers. Each authorized inspection agency or owner/user inspection organization shall submit to the chief boiler inspector complete data of each boiler insured or inspected by it or covered by a written inspection agreement. A complete report of each boiler inspection must be filed electronically with the chief boiler inspector on form SFN 10706 within fifteen days of inspection.

11.2.2 Insurance companies and other authorized inspection agencies to notify the chief inspector of new, canceled, or suspended risks.

Each insurance company or other authorized inspection agency shall notify the chief inspector within thirty days of each boiler insured, covered by a written inspection agreement, canceled, not renewed, or suspended because of unsafe conditions.

11.2.3 Insurance companies and other authorized inspection agencies to notify the chief inspector of defective boilers and boiler accidents.

If a special inspector, upon the first inspection of a boiler, finds that the boiler or any of the appurtenances are in such condition that the inspector's company refuses insurance or the boiler does not comply with the provisions of this section, the company shall submit a report of the defects to the chief inspector. When an accident occurs to an insured boiler or to a boiler covered by a written inspection agreement which requires major repairs as defined in 11.2.1, or which

results in the boiler being removed from service, that accident must be reported to the chief boiler inspector within thirty days of the insuring or inspecting company first becoming aware of the accident.

11.2.4 Owner/user inspection organizations making own inspections.

The chief inspector is not required to inspect boilers in any establishment owned and operated by an owner/user inspection organization provided an annual boiler inspection program is established and maintained by such organization and all boilers and appurtenances are constructed, installed, operated, and repaired in accordance with the provisions of this section. When boilers are inspected by an employee of an owner/user inspection organization, such inspector must hold a certificate of competency or a commission issued by the Construction Management Office, the state of North Dakota, or a state that has adopted the American Society of Mechanical Engineers Code. A complete report of each boiler inspection must be filed electronically with the chief inspector on form SFN 10706 within fifteen days of inspection.

11.2.5 Defective conditions disclosed at time of external inspections.

If upon an external inspection there is evidence of a leak or crack, enough of the covering of the boiler must be removed to satisfy the inspector, in order that the inspector may determine the safety of the boiler. If the covering cannot be removed at that time, the inspector may order the operation of the boiler stopped until the covering can be removed and proper examination can be made.

11.2.6 Owner or user to notify the chief inspector in case of accident.

When an accident occurs which requires major repairs as defined in 11.2.1, the owner or user immediately shall notify the chief inspector and submit a detailed report of the accident. In case of an explosion, notice must be given immediately by telephone or electronically and the parts of the boiler may not be removed or disturbed before an inspection has been made by an inspector, unless for the purpose of saving human life or property.

11.2.7 Operating without a certificate of inspection.

The owner or user who causes a boiler to be operated after inspections without possessing a valid certificate of inspection is subject to the penalty under 10.11 of the Three Affiliated Tribes Boiler Ordinance.

11.2.8 Validity of inspection certificate for boilers.

a. A certificate of inspection, issued in accordance with this section, is valid until expiration unless some defect or condition affecting the safety of the boiler is disclosed and if all inspection fees have been paid. A certificate of inspection is valid for the following time periods:
    (1) Thirty-six months for power boilers over one hundred thousand pounds [45359.24 kilograms] of steam per hour as allowed by section 10.7.
    (2) Twelve months for steam traction engines.
    (3) Twelve months for all other power boilers.

(4) Thirty-six months for hot water heating and hot water supply boilers.
(5) Twenty-four months for low-pressure steam boilers.

b. A certificate issued for a boiler inspected by a special inspector is valid only if the boiler for which it was issued continues to be insured by a duly authorized insurance company, covered by a written inspection agreement with an authorized inspection agency, or inspected by an accredited owner/user inspection organization. A two-month grace period must be extended for any certificate.

11.2.9 Restamping boilers.

When the stamping on a boiler becomes indistinct, the inspector shall instruct the owner or user to have it restamped. Request for permission to restamp the boiler must be made to the chief inspector and proof of the original stamping must accompany the request before authorization by the chief inspector. Restamping authorized by the chief inspector may be done only by an inspector, and must be identical with the original stamping, except that it is not required to restamp the American Society of Mechanical Engineers Code symbol. Notice of completion of such restamping must be filed with the chief inspector by the inspector who stamped the boiler or pressure vessel, together with a facsimile of the stamping.

11.2.10 Condemned boilers and condemned pressure vessels.

Any boiler having been inspected and declared unsafe by the chief inspector or the inspector's deputy must be stamped by the inspector with the letter X and the letters TAT as shown on the following facsimile that will be designated a condemned boiler: XX TAT XX.

11.2.11 Owner and installer to notify chief boiler inspector of boilers to be installed on the Fort Berthold Reservation or brought onto the Fort Berthold Reservation for temporary use.

a. The owner shall notify the chief boiler inspector before any new or secondhand boiler may be operated on the Fort Berthold Reservation, giving its location and operating pressure.
b. The installer shall notify the chief boiler inspector before any new or secondhand boiler may be installed on the Fort Berthold Reservation, giving its location and operating pressure.
c. The owner shall notify the chief boiler inspector of boilers removed from location, junked, or sold.
d. The owner shall notify the chief boiler inspector within fifteen days of removing a boiler from its location as to whether it has been junked or sold. If it has been sold, the name and address of the purchaser must be given.
e. When a boiler is brought on the Fort Berthold Reservation on a temporary basis and is to be removed from the Reservation, a notice must be given as to the date it will be removed.

11.2.12 Owner to notify the chief boiler inspector of businesses closed or reopened.

a. It is the responsibility of the owner of a building complex or owner of a boiler to notify the chief boiler inspector of plans to discontinue use of a boiler due to business being permanently closed.
b. If a business is destroyed by fire, flood, or windstorm, the owner shall notify the chief boiler inspector as to plans developed for the disposition of the boiler.

11.2.13 Removal of used boilers from the Reservation.

When a nonportable standard boiler located on the Fort Berthold Reservation is moved to another jurisdiction for use or repair, the owner shall apply to the chief boiler inspector before the boiler may be reinstalled in on the Fort Berthold Reservation.

11.2.14 Nonstandard boilers.

A nonstandard boiler used on the Fort Berthold Reservation, if moved outside of the exterior boundaries of the Reservation, may not be reinstalled on the Reservation without permission of the chief boiler inspector.

11.2.15 Installing used or secondhand boilers.

Before a used or secondhand boiler may be installed on the Fort Berthold Reservation, an inspection must be made by an inspector. (Note: It is recommended that before a used or secondhand boiler is shipped for installation or operation on the Fort Berthold Reservation, that it be inspected by a Three Affiliated Tribes inspector, or by a national board commissioned inspector, and data submitted by the inspector filed by the buyer or owner or user with the chief boiler inspector for the chief inspector's approval. Otherwise hardships may be encountered should the boiler be condemned after installation.)

11.2.16 Reinstalled boilers.

When a stationary boiler is moved and reinstalled, the fittings and appliances must comply with all requirements for new installations.

11.2.17 Reporting repairs to be made.

a. The owner or person in charge of a boiler repair shop making major repairs to a boiler shall notify the chief boiler inspector of each major repair or alteration to be made to a boiler, and the anticipated repair must be approved before work is started; or
b. If the boiler is insured, covered by a written inspection agreement with an authorized inspection agency, or owned by an owner/user inspection organization, the special inspector may authorize the repair. After such repairs are made, the repairs are subject to the approval of an inspector.

11.2.18 Reports of welded repair or alterations.

a. All alterations and major repairs made to boilers on the Fort Berthold Reservation must be reported on the appropriate national board form. The completed form must be sent to the chief boiler inspector by the repair concern effecting the repair or alteration within thirty days of the completion of the repair or alteration.

b. Subject to the administrative procedures of the boiler inspection program and the approval of the inspector, repairs of a routine nature may be given prior approval and the requirement for the repair stamping may be waived. The National Board Inspection Code must be used as a guideline in determining repairs of a routine nature.

11.2.19 Stamping of boilers.

a. Every boiler built for use on the Fort Berthold Reservation must conform in every detail to the boiler laws and rules of the Three Affiliated Tribes. When correctly constructed in accordance with these laws and rules the boiler must be stamped with a stamp of the Three Affiliated Tribes and assigned number.
b. A boiler may not be operated on the Fort Berthold Reservation unless it is stamped with the American society of mechanical engineers stamp and registered with the national board or can qualify for a Three Affiliated Tribes stamp. A request for a Three Affiliated Tribes stamp must be accompanied by a manufacturer's data report with supporting evidence that the boiler meets all requirements of the laws of the Three Affiliated Tribes.
c. Upon completion of the installation, all boilers must be inspected by an inspector. Initial certificate inspections may only be made by the chief inspector or deputy inspectors. At the time of this inspection, each boiler must be stamped with a serial number of the Three Affiliated Tribes preceded by the letters TAT. The letters and figures may not be less than five-sixteenths inch [7.94 millimeters] in height. If construction does not permit stamping, a numbered metal tag must be attached in a conspicuous place. The stamping may not be concealed by lagging or paint and must be exposed at all times.

11.2.20 Welders' requirements.

a. Any person welding on new or existing boilers shall register with the chief boiler inspector sufficient data to show a satisfactory performance qualification test for American society of mechanical engineers position "6G" or equivalent. This data must be documented on a current American society of mechanical engineers section IX "QW-484" form. Tests of welded specimens must be made by a certified testing laboratory.
b. In lieu of the above requirements, a firm in possession of a valid American society of mechanical engineers certificate of authorization for new boiler construction or a valid national board "R" certificate of authorization for repairing or altering existing boilers may allow welder's qualifications to be audited by the chief boiler inspector at the chief boiler inspector's discretion. The welders must be qualified according to the requirements of American Society of Mechanical Engineers Boiler and Pressure Vessel Code, section IX.

11.2.21 Alterations to boilers.

Alterations, as defined in this section, must be made by a firm in possession of a valid national board "R" certificate of authorization, with alterations included within its scope of activity.

11.2.22 Major repairs to boilers.

Major repairs, as defined in this section, must be made by:

a. A firm in possession of a valid national board "R" certificate of authorization for the type of vessel to be repaired; or
b. A firm authorized by the Construction Management Office to do repairs to boilers. Such authorization may be issued only upon a successful review of that firm's repair capabilities by the chief inspector. Such a review must be based on the National Board Inspection Code and must be made on a frequency determined by the chief inspector. Such authorization may be revoked or not renewed by the chief inspector for cause.

SECTION 11

CHAPTER 3 - GENERAL REQUIREMENTS

11.3.1 Inspection of boilers.

The owner or user shall prepare a boiler subject to regular inspections for such inspections or hydrostatic tests when notified by the inspector. The owner or user shall prepare each boiler for internal inspection and shall prepare for and apply the hydrostatic test whenever necessary, on the date specified by the inspector, which may not be less than seven days after the date of notification.

11.3.2 Boiler inspection fees.

The following will be charged for boiler inspections:

a. High pressure boilers.

(1) Internal inspections.	Fee
- 50 square feet [4.65 square meters] or less of heating surface	$ 90.00
- Over 50 square feet [4.65 square meters] and not over 500 square feet [46.45 square meters]	$ 110.00
- Over 500 square feet [46.45 square meters] and not over 4,000 square feet [371.61 square meters]	$ 130.00
- Over 4,000 square feet [371.61 square meters] of heating surface	$ 160.00
(2) External inspections.	
- 50 square feet [4.65 square meters] of heating surface or less; 100 KW or less	$ 70.00
- Over 50 square feet [4.65 square meters] of heating surface; over 100 KW	$ 90.00

(3) Portable oilfield boilers. Internal and external inspections of portable oilfield boilers must be charged inspection fees of seventy-five dollars per hour, including travel time, plus expenses for meals, mileage, and lodging.

b. Low pressure boilers.

(1) Internal inspections.

- Without manway	$ 85.00
- With manway	$ 95.00

(2) External inspections.

- Hot water heat and low-pressure steam	$ 60.00
- Hot water supply $ 45.00	

c. Steam traction engines.

- Internal	$ 70.00
- External	$ 65.00
- Hydrostatic test	$ 80.00
- Ultrasonic survey, per hour	$ 50.00

d. Certificate fee, per certificate	$ 20.00, per year of certificate issued

11.3.3 Preparation for internal inspection.

The owner or user shall prepare a boiler for internal inspection in the following manner:

a. Water must be drawn off and the boiler thoroughly washed.
b. All manholes and handhole plates, washout plugs, and plugs in water column connections must be removed, the furnace and combustion chambers thoroughly cooled and cleaned, at the discretion of the inspector.
c. All grates of internally fired boilers must be removed, at the discretion of the inspector.
d. At each annual inspection, brickwork must be removed as required by the inspector in order to determine the condition of the boiler, headers, furnace, supports, or other parts.
e. The steam gauge must be removed for testing, at the discretion of the inspector.
f. Any leakage of steam or hot water into the boiler must be cut off by disconnecting the pipe or valve at the most convenient point.
g. Any low-water fuel cutoff float chamber must be opened and cleaned.

h. Safety concerns such as asbestos and confined space entry must be addressed by the owner to provide for the safety of the inspector. Applicable state or federal regulations must be used to decide if safety measures must be taken.

11.3.4 Boiler improperly prepared for inspection.

If a boiler has not been properly prepared for an internal inspection or the owner or user fails to comply with the requirements for hydrostatic test as set forth in this section, the inspector may decline to make the inspection or test and withhold the certificate of inspection until the owner or user complies with the requirements.

11.3.5 Removal of covering to permit inspection.

If the boiler is jacketed so that the longitudinal seams of shells, drums, or domes cannot be seen, enough of the jacketing, setting wall, or other form of casing or housing must be removed, at the discretion of the inspector, so that the size of the rivets, pitch of the rivets, and other data necessary to determine the safety of the boiler may be obtained, provided such information cannot be determined by other means.

11.3.6 Lap seam crack.

The shell or drum of a boiler in which a lap seam crack is discovered along a longitudinal riveted joint must be immediately discontinued from use. If the boiler is not more than fifteen years of age, a complete new course of the original thickness may be installed at the discretion of the chief inspector. Patching is prohibited. "Lap seam crack" means the typical crack frequently found in lap seams, extending parallel to the longitudinal joint and located either between or adjacent to rivet holes.

11.3.7 Hydrostatic pressure tests.

A hydrostatic pressure test, when applied to boilers of riveted or welded construction, except locomotive boilers, may not exceed one and one-half times the maximum allowable working pressure. Hydrostatic pressure applied to locomotive boilers may not exceed one and one-quarter times the maximum allowable working pressure. During the hydrostatic pressure test, the safety valve or valves must be removed, or each valve disk must be held down by means of a testing clamp and not by applying the additional load to the spring with the compression screw. The minimum temperature of the water used to apply a hydrostatic test must not be less than sixty degrees Fahrenheit [15.6 degrees Celsius], nor shall it exceed one hundred twenty degrees Fahrenheit [49.3 degrees Celsius]. (Note: For all cases involving the question of tightness, the pressure may be equal to the release pressure of the safety valve or valves having the lowest release setting.)

11.3.8 Automatic low-water fuel cutoff or water-feeding device.

a. Each automatically fired steam or vapor system boiler must be equipped with an automatic low-water cutoff located to automatically cut off the fuel supply when the surface of the water falls to the lowest safe waterline. For other than electric and miniature boilers, each automatically fired steam or vapor system boiler must be

equipped with at least two low-water fuel cutoffs, one of which must be readily testable. One low-water fuel cutoff must be set to function ahead of the other. Functioning of the lower of the controls shall cause safety shutdown and lockout. The manual reset may be incorporated into the lower cutoff control. Where a reset device is separate from the low-water fuel cutoff, a means shall be provided to indicate actuation of the low-water fuel cutoff. The manual reset device may be of the instantaneous type or may include a time delay of not more than three minutes after the fuel has been cut off. A system may incorporate a time delay component with the low-water fuel cutoff device to prevent short cycling. A time delay must not exceed the manufacturer's recommended timing, or ninety seconds, whichever is less. A high-pressure boiler regularly attended by a full-time operator is not considered as automatically fired, and is not required to be equipped with low-water fuel cutoffs. For other than electric boilers, the primary low-water fuel cutoff for low pressure steam boilers must be a float type that can be readily tested.

b. If a water-feeding device is installed, it must be constructed so that the water inlet valve cannot feed water into the boiler through the float chamber and located to supply requisite feedwater. The lowest safe waterline should not be lower than the lowest visible part of the water glass.
c. Such fuel or feedwater control device may be attached directly to a boiler or to the tapped openings provided for attaching a water glass directly to a boiler, provided that for low pressure boilers such connections from the boiler are nonferrous tees or Ys not less than one-half-inch [12.7 millimeter] pipe size between the boiler and the water glass, so that the water glass is attached directly and as close as possible to the boiler; the straight tapping of the Y or tee to take the water glass fittings, and the side outlet of the Y or tee to take the fuel cutoff or water-feeding device. The ends of all nipples must be reamed to full-size diameter.
d. Designs embodying a float and float bowl must have a vertical straight drainpipe at the lowest point in the water equalizing pipe connections by which the bowl and the equalizing pipe can be flushed and the device tested. This drainpipe and connections must be not less than national pipe standard (NPS) three-quarters inch.

11.3.9 Safety appliances.

a. A person may not remove, tamper with, or render inoperative any safety appliances prescribed by these rules except for the purpose of making repairs. The resetting of safety appliances may not exceed the accepted working pressure of the unit.
b. Repairs or adjustments made to safety or safety relief valves must be done by the manufacturer of the valve or an approved testing facility equipped to do such repairs or adjustments. The resetting of safety valves or safety relief valves may not exceed the accepted working pressure for the unit.
c. An approved testing facility must be one of the following:

    (1) A facility holding a valid certificate of authorization and "VR" symbol stamp issued by the national board of boiler and pressure vessel inspectors.

(2) An owner or user program for doing adjustments to set pressure or blowdown, or both, to boiler pressure relief valves owned by them, provided the adjusted settings or capacities, or both, and the date of the adjustments are recorded on a metal tag secured to the seal wire. All external adjustments must be sealed showing the identification of the organization making the adjustments. The chief boiler inspector shall review the training, qualifications, and procedures used to implement this program.

11.3.10 Blowoff tanks.

a. Blowoff piping from a boiler may not discharge directly into a sewer. A blowoff tank, constructed to the provisions of section VIII of the American Society of Mechanical Engineers Code, must be used where conditions do not provide an adequate and safe open discharge.
b. Blowoff tanks hereinafter installed, if of metal, must be designed for a minimum working pressure of fifty pounds per square inch [344.74 kilopascals].
c. The outlet from the blowoff tank must be twice the area of the inlet pipe and made to extend internally within eight inches [203.2 millimeters] from the bottom of the tank.
d. Vent pipe at least four times the area of the inlet pipe must lead to the outer atmosphere.
e. Vents must be as direct as possible to the outer air and discharge at a safe location. There may be no valve or other possible obstructions such as water pockets between the tank and the discharge end of the vent pipe.
f. All pipe connections between the tank and the boiler must be as direct as possible and must conform to the American Society of Mechanical Engineers Code.
g. For convenience in cleaning the tank, a manhole or an access opening must be provided.
h. If a blowoff tank is not vented as specified above, it must be constructed for a pressure equal to that allowed on the boiler to which it is attached or must be equipped with a safety valve or valves of sufficient capacity to prevent the pressure from exceeding the safe working pressure of the tank.
i. Boiler blowoff systems constructed in accordance with the national board rules and recommendations for the design and construction of boiler blowoff systems must be considered as complying with this section.

11.3.11 Blowoff piping.

a. The construction of the setting must be done in such a manner that it does not restrict the movement of the blowoff piping.
b. All blowoff piping, when exposed to furnace heat, must be protected by firebrick or other heat-resisting material so constructed that the piping may be readily inspected.
c. Each boiler must have a blowoff pipe, fitted with a valve cock, in direct connection with the lowest water space. Cocks must be of the gland or guard type and suitable for the pressure allowed. The use of globe-type valves is not permitted unless complying with the American Society of Mechanical Engineers Code. When the maximum allowable working pressure exceeds one hundred pounds per square inch gauge [689.48

kilopascals] each blowoff pipe must be provided with two valves or a valve and a cock, such valves and cocks to be of the extra heavy type.

d. When the maximum allowable working pressure exceeds one hundred pounds per square inch gauge [689.48 kilopascals], blowoff piping must be extra heavy from the boiler to the valve or valves and must be run full size without use of reducers or bushings. The piping must be at least extra heavy duty wrought iron or steel and may not be galvanized.
e. All fittings between the boiler and blowoff valve must be steel or extra heavy fittings of malleable iron. In case of renewal of blowoff pipe or fittings, they must be installed in accordance with the rules and regulations for new installations.

11.3.12 Location of blowoffs and vents.

The discharge of safety valves, blowoff pipes, and other outlets must be located so as to prevent injury to personnel. For high pressure boilers, vents from blowoff tanks, condensate tanks, and the discharge piping from safety valves must be as short and straight as possible and so arranged as to avoid undue stresses on the safety valve or valves. Safety valve discharge piping must be so designed and constructed as to prevent excessive back pressure, while not affecting safety valve capacity and performance.

11.3.13 Underground installations.

Where necessary to install a blowoff tank underground, it must be enclosed in a concrete or brick pit with a removable cover so that inspection of the entire shell and heads of the tank can be made.

11.3.14 Supports.

Each boiler must be supported by masonry or structural supports of sufficient strength and rigidity to safely support the boiler and its contents. There must be a minimum of vibration in the boiler and its connecting piping.

11.3.15 Pressure reducing valves.

a. Where pressure reducing valves are used, one or more relief or safety valves must be provided on the low-pressure side of the reducing valve in case the piping or equipment on the low-pressure side does not meet the requirements for the full initial pressure. The relief of safety valves must be located adjoining or as close as possible to the reducing valve. Proper protection must be provided to prevent injury or damage caused by the escaping steam from the discharge. Capacity of the relief valves must be such that the pressure rating of the lower pressure piping or equipment shall not be exceeded in case the reducing valve sticks open.
b. The use of hand-controlled bypasses around reducing valves is permissible. The bypass if used around a reducing valve may not be greater in capacity than the reducing valve unless the piping or equipment is adequately protected by relief valves or meets the requirements of the high-pressure system.
c. A pressure gauge must be installed on the low-pressure side of a reducing valve.

d. All low-pressure headers and their outlets must be protected by a safety valve or valves whose combined capacity is equivalent to the total amount of steam that can pass from the high-pressure system to the lower pressure system.

11.3.16 Ladders and runways.

To ensure safe access to batteries of boilers, a steel platform or runway at least eighteen inches [457.2 millimeters] in width must be provided, complete with standard railing and toe boards on either side, across the tops of adjacent boilers. Wherever arrangement and location permit, all runways must provide for two means of egress remotely located with respect to the other and connected to a permanent stairway or fixed ladder leading to the floor level. The inspector shall notify the chief inspector of the owners or users who shall provide for these requirements and the chief inspector shall give written notice to the owner or user that the installation be made.

11.3.17 Boiler logs.

A log must be kept as to all repairs made, unusual incidents, accidents, water tests, amounts, types, and dates of water treatment. Logs for hobby boilers also must include operating hours, operators, fusible plug installation dates, safety valve tests, and apprentice operator training data.

11.3.18 Major repairs and alterations.

If a major repair or alteration is necessary, an inspector must be called for consultation and advice as to the best method of making such repair or alteration. After such repair or alteration is made, it is subject to the approval of the inspector.

11.3.19 Same material to be used.

a. No repair to any boiler or steam pipe nor any of the connections thereto may be approved which is made in whole or in part of unsuitable material or is unsafe from any cause. Nothing herein may be construed to prevent the use of any boiler constructed of riveted iron or steel plates when the inspector has satisfactory evidence that such boiler or steam generator is equal in strength to and as safe from explosion as boilers constructed of the best quality of materials.
b. Quality of the material used in boiler construction and repair demands critical attention because in performing its function a steam boiler is continually subjected to disruptive stresses. These are due to high internal pressures and to changes in temperature. Disastrous consequences will inevitably follow if the material fails under these stresses.
c. The quality of the material used in the different parts of a boiler should be selected with special reference to the stresses and disruptive influences which each part encounters in service.
d. Galvanized pipe may not be used on any boiler or boiler system subject to this section, as this may cause deterioration of the boiler.
e. Sweated or soldered copper joints may not be used in steam piping and connections.
f. Repair material having a lesser tensile strength than that used in the original construction may not be used.

11.3.20 Repairs to boilers.

a. Rejection of repair. Any riveted or welded repair made to a boiler on the Fort Berthold Reservation which does not meet this section's requirements will be cause for rejection of the repair by an inspector.
b. Rejection of welds. Any weld found to contain heavy slag inclusions or to be porous or found to be cracked is reason for rejection of the weld and either part or all the weld must be removed by grinding or chipping and the weld must be replaced.

11.3.21 Removal of safety appliances.

a. A person may not attempt to remove or do any work upon a safety appliance, prescribed by these rules, while a boiler is in operation. If any of these safety appliances are repaired during an outage of a boiler, they must be reinstalled and in proper working order before the object is again placed in service. This provision does not apply to the removal and replacement of a gauge glass.
b. A person may not in any manner load the safety valve or valves to maintain a working pressure in excess of that stated on the certificate of inspection.

11.3.22 Repairs and renewals of boiler fittings and appliances.

Whenever repairs are made to fittings or appliances or it becomes necessary to replace them, the work must comply with all requirements for new installations.

11.3.23 Return pump.

Each condensate return pump where practicable must be provided with an automatic water level control set to maintain the water level within the limits of two gauge cocks.

11.3.24 Shop inspection - Manufacturing - Repairs - Alterations.

Any boiler or pressure vessel being constructed, repaired, or altered on the Fort Berthold Reservation must be inspected by an inspector holding a reciprocal commission issued by the Construction Management Office and a national board commission. The boiler inspection program may function as an authorized inspection agency. The boiler inspection program may cooperate with the national board and American society of mechanical engineers in making shop reviews and audits.

11.3.25 Construction Management Office to arrange for examinations.

The Construction Management Office shall cause examinations to be conducted at such times as is necessary for the qualification of inspectors.

11.3.26 Conditions not covered by this section.

a. In any conditions not covered by this section, the American Society of Mechanical Engineers Code for new installations applies.

b. If any section, subsection, sentence, clause, phrase, provision, or exemption of this section is declared unconstitutional or invalid for any reason, such invalidity does not affect the remaining portion of this section.

11.3.27 Inspection of boilers.

a. Each boiler used or proposed to be used within the Fort Berthold Reservation, except boilers exempt in section 10.6, must be thoroughly inspected as to their construction, installation, condition, and operation as follows:
   (1) Power boilers must be inspected annually both internally while not under pressure and externally while under pressure. However, any power boiler or steam generator, the operation of which is an integral part of or a necessary adjunct to other continuous processing operations, must be inspected internally at such intervals as are permitted by the shutting down of the processing operation. The chief boiler inspector may provide for extension of time between internal inspections, but an external inspection must be made, and report submitted, for purposes of issuing a certificate. In all other instances the certificate inspection must be an internal inspection when construction permits.
   (2) Power boilers of one hundred thousand pounds [45359.24 kilograms] per hour or more capacity, which comply with section 10.7, must be inspected at least once every thirty-six months internally while not under pressure and at least once every twelve months externally while under pressure.
   (3) Steam traction engines must be inspected at least once every twelve months. Inspections must alternate between internal inspections, external inspections, and hydrostatic tests.
   (4) Low-pressure steam boilers must be inspected annually. Low-pressure steam boilers of steel construction must be inspected alternately internally and externally. The issuance of a certificate must normally be based on the internal inspection.
   (5) Hot water heating and hot water supply boilers must be inspected triennially unless they are located in a nursing home, school, hospital, nursery school, or kindergarten, in which case they must be inspected annually. Internal inspections will be required when deemed necessary by the inspector.
   (6) A grace period of two months beyond the period specified in the above subdivisions may elapse between inspections.
b. Certificate inspections must be made during the period of thirty days prior to and thirty days after the expiration date of the certificate. Noncertificate inspections, when required by the provisions of this section, must be made between certificate inspections. The chief boiler inspector encourages reports to be made at any time adverse conditions are found, or when difficulty is encountered getting cooperation from the owner or user.
c. The inspections required under this section must be made by the chief boiler inspector, or by a deputy inspector, or by a special inspector provided for in this section.

d. If at any time a hydrostatic test is deemed necessary by the inspector, it must be made by the owner or user in the presence of, and under the supervision of the inspector, and must be approved by the inspector.
e. Cast iron boilers must be considered as boilers that do not lend themselves to internal inspections. Internal inspections of electric boilers must be made when deemed necessary by the inspector.

11.3.28 Steam traction engines.

All steam traction engines must conform to at least one of the following: Section 11 chapter 4, chapter 5, chapter 6, or chapter 7.

11.3.29 Safety valves.

a. Boiler safety valves and safety relief valves must be placed on, or as close as physically possible, to the boiler proper.
b. Safety valves or safety relief valves may not be placed on the feedline except when installed to provide control for feedwater pressure or to protect a feed pump against overpressure.

SECTION 11

CHAPTER 4 - POWER BOILERS – NEW INSTALLATIONS

11.4.1 Requirements.

a. All new boilers, except those exempt by law, to be installed on the Fort Berthold Reservation must be reported to the chief boiler inspector by the owner or user and by the installer.
b. After July 1, 1973, power boilers that are not exempt by law may not be installed on the Fort Berthold Reservation unless they have been constructed, inspected, and stamped in conformity with the applicable edition of the American Society of Mechanical Engineers Code for power boilers and are approved, registered, and inspected in accordance with the requirements of this section.
c. A boiler having the standard stamping of a state other than North Dakota or province of Canada that has adopted a standard of construction equivalent to the standard of the Three Affiliated Tribes may be accepted by the chief boiler inspector if the person desiring to install the boiler makes application for the installation and files with the application the manufacturer's data report covering the construction of the boiler.

11.4.2 Appurtenances - Piping and tests.

a. The inspector shall inspect all boilers and connected appurtenances for their safe operation and all pressure piping connecting them to the appurtenances and all piping up to and including the first stop valve, or the second stop valve when two are required.
b. Any pressure piping to the boiler, such as water column, blowoff valve, feedwater regulator, superheater, economizer, stop valves, etc., which are shipped connected to the

boiler as a unit, must be hydrostatically tested with the boiler and witnessed by an inspector.

c. All economizers, whether separately fired or not, and when located within the scope of boiler external piping, must be constructed to section I of the American Society of Mechanical Engineers Code. All superheaters must be constructed to section I of the American Society of Mechanical Engineers Code.
d. The chief boiler inspector may waive American society of mechanical engineers section I boiler external piping requirements for new and secondhand boilers of less than forty horsepower output if the boiler external piping is mechanically installed (i.e., no welding), the piping does not exceed two inch [5.08 centimeters] national pipe standard in size, the piping is schedule eighty minimum, and the boiler maximum allowable working pressure does not exceed one hundred fifty pounds per square inch [1034.22 kilopascals] gauge.

11.4.3 Exits from boiler rooms.

a. To lessen the hazard of being trapped within the boiler room, ash pit aisles, or other locations, there must be at least two means of exit as may be considered necessary by the inspector. Each elevation must be provided with at least two means of egress, each to be remotely located from the other.
b. All inspectors shall notify the chief inspector of the owners or users who must provide for these requirements. The chief inspector shall then give written notice to the owner or user that the necessary work must be completed within six months from the date of notification.

11.4.4 Boiler clearances.

a. All new boiler installations must be designed to allow for normal operation, cleaning, and inspections, and must have at least three feet [.91 meters] of clearance on each side of the boiler with no obstructions and boilers operated in battery may not be installed closer than four feet [1.22 meters] from each other.
b. All boilers must be installed to allow for removal of tubes without removing walls or other structures. The front or rear of any boiler may not be located any nearer than three feet [.91 meters] from any wall or structure.
c. On all boilers equipped with a manhole, at least seven feet [2.1336 meters] of clearance must be maintained from the top of the boiler manhole to the ceiling of the boiler room.

11.4.5 Carbon monoxide detector or alarm.

The owner or user shall install a carbon monoxide detector or alarm in equipment rooms where fuel fired boilers or fuel fired pressure vessels, or both are located in accordance with the authority having jurisdiction.

11.4.6 Safety valve capacity.

The minimum required relieving capacity of safety valves or safety relief valves for all types of boilers may not be less than the maximum designed steaming capacity as determined by the

manufacturer and must be based on the capacity of all the fuel burning equipment as limited by other boiler functions.

SECTION 11

CHAPTER 5- POWER BOILERS - EXISTING INSTALLATIONS

11.5.1 Maximum allowable working pressure for standard boilers.

The maximum allowable working pressure for standard boilers must be determined in accordance with the applicable provisions of the edition of the American Society of Mechanical Engineers Code under which they were constructed and stamped.

11.5.2 Maximum allowable working pressure for nonstandard boilers.

a. The maximum allowable working pressure on the shell of a nonstandard boiler must be determined by the strength of the weakest section of the structure, computed from the thickness of the plate, the tensile strength of the plate, the efficiency of the longitudinal joint or tube ligaments, the inside diameter of the weakest course and the factor of safety allowed by this section.

TStE/RFS = Maximum allowable working pressure, per square inch gauge where:

TS = Ultimate tensile strength of shell plates per square inch

t = Minimum thickness of shell plate, in weakest course, inches

E = Efficiency of longitudinal joint:

For tube ligaments and riveted construction, E shall be determined by the rules given in section I, part PR, of the American Society of Mechanical Engineers Code for power boilers. For seamless construction, E shall be considered one hundred percent.

R = Inside radius of the weakest course of the shell, in inches

FS = Factor of safety permitted

b. When the tensile strength of steel or wrought iron shell plate is not known, it must be taken as fifty-five thousand pounds per square inch [386.11 megapascals] for steel and forty-five thousand pounds per square inch [310.26 megapascals] for wrought iron.
c. The resistance to crushing of mild steel must be taken at ninety-five thousand pounds per square inch [655 megapascals] of the cross-sectional area.
d. When computing the ultimate strength of rivets in shear, the following values, in pounds per square inch [megapascals] of the cross-sectional area of the rivet shank must be used:

	POUNDS PER SQUARE INCH	MEGAPASCALS
Iron rivets in single shear	38,000	262.00
Iron rivets in double shear	76,000	524.00
Steel rivets in single shear	44,000	303.37
Steel rivets in double shear	88,000	606.69

When the diameter of the rivet holes in the longitudinal joints of a boiler is not known, the diameter and cross-sectional area of rivets, after driving, may be selected from the following table, or as ascertained by cutting out one rivet in the body of the joint.

SIZES OF RIVETS BASED ON PLATE THICKNESS

Thickness of plate, inches	1/4	9/32	5/16	11/32	3/8	13/32
Diameter of rivet after driving, inches	11/16	11/16	3/4	3/4	13/16	13/16
Thickness of plate, inches	7/16	15/32	1/2	9/16	5/8	
Diameter of rivet after driving, inches	15/16	15/16	15/16	1-1/16	1-1/16	

e. The following factors of safety must be increased by the inspector if the condition and safety of the boiler demand it:
    (1) The lowest factor of safety permissible on existing installations is four, except for horizontal-return-tubular boilers having continuous longitudinal lap seams more than twelve feet [3.66 meters] in length, when the factor of safety is eight; when this latter type boiler is removed from its existing setting, it may not be reinstalled for pressures in excess of fifteen pounds per square inch gauge [103 kilopascals].
    (2) Reinstalled or secondhand boilers must have a minimum factor of safety of six when the longitudinal seams are of lap-riveted construction, and a minimum factor of safety of five when the longitudinal seams are of butt-and-double-strap construction. Steam traction engines must be considered as secondhand boilers for purposes of determining their factors of safety.

11.5.3 Age limit of existing boilers.

a. The age limit of any boiler of nonstandard construction is thirty years except that after a thorough internal and external inspection and a hydrostatic pressure test of one and one-half times the allowable working pressure held for a period of at least thirty minutes during which no distress or leakage develops, any boiler having other than a lap-riveted

longitudinal joint may be continued in operation without reduction in working pressure. The age limit of any boiler having lap-riveted longitudinal joints and operating at a pressure in excess of fifty pounds per square inch [344.74 kilopascals] is twenty years; this type of boiler, when removed from an existing setting, may not be reinstalled for a pressure in excess of fifteen pounds per square inch [103 kilopascals]. A reasonable time for replacement, not to exceed one year, may be given at the discretion of the chief boiler inspector.

b. The shell or drum of a boiler in which a typical lap seam crack is discovered along a longitudinal riveted joint for either butt seam or lap joints must be permanently discontinued for use under steam pressure. "Lap seam crack" means the typical crack frequently found in lap seams extending parallel to the longitudinal joint and located either between or adjacent to rivet holes.
c. The age limit of boilers of standard construction installed prior to the date this law becomes effective is dependent on thorough internal and external inspection and hydrostatic pressure test of one and one-half times the allowable working pressure for a period of thirty minutes. If the boiler under these test conditions exhibits no distress or leakage, it may be continued in operation at the same working pressure.

11.5.4 Welded boilers.

Boilers that have either longitudinal or circumferential seams of fusion welded construction must have been constructed and stamped in accordance with the rules and regulations of the American Society of Mechanical Engineers Code or must have the standard stamping of another state that has adopted a standard of construction equivalent to the standards of the American Society of Mechanical Engineers Code.

11.5.5 Pressure on old boilers.

The maximum working pressure of an old boiler may not be increased to a greater pressure than would be allowed for a new boiler of the same construction.

11.5.6 Cast iron headers and mud drums.

The maximum allowable working pressure on a watertube boiler, the tubes of which are secured to a cast iron or malleable iron header, or which have cast iron mud drums, may not exceed one hundred sixty pounds per square inch gauge [1103.17 kilopascals].

11.5.7 Pressure on cast iron boilers.

The maximum allowable working pressure for any cast iron boiler, except hot water boilers, is fifteen pounds per square inch gauge [103 kilopascals].

11.5.8 Safety valves and safety relief valves.

Safety valves and safety relief valves must meet the requirements of the edition of the American Society of Mechanical Engineers Code, section 1, referenced in this section or the requirements of the edition of the American Society of Mechanical Engineers Code, section 1, to which the boiler they are installed was constructed.

11.5.9 Superheater safety valve requirements.

Superheater safety valves must meet the requirements of the edition of the American Society of Mechanical Engineers Code section referenced in this section or the requirements of the edition of the American Society of Mechanical Engineers Code section to which the superheater they are installed was constructed.

11.5.10 Capacity.

a. The minimum safety valve or safety relief valve relieving capacity for all high-pressure boilers other than steam traction engines must be determined by the edition of the American Society of Mechanical Engineers Code, section 1, referenced in this section or by the requirements of the American Society of Mechanical Engineers Code, section 1, to which the boiler they are installed was constructed.
b. The minimum safety valve relieving capacity for steam traction engines must be determined using the edition of the National Board Inspection Code referenced in this section.

11.5.11 Mounting.

The mounting of safety valves and safety relief valves must meet the requirements of the edition of the American Society of Mechanical Engineers Code, section 1, referenced in this section or by the requirements of the edition of the American Society of Mechanical Engineers Code, section 1, to which the boiler they are installed was constructed.

11.5.12 Operation.

1. The operation of safety valves and safety relief valves must meet the requirements of the edition of the American Society of Mechanical Engineers Code, section 1, referenced in this section or by the requirements of the edition of the American Society of Mechanical Engineers Code, section 1, to which the boiler they are installed was constructed.
2. If the operating conditions of a valve are changed so as to require a new spring for a different pressure, the valve must be adjusted by the manufacturer, the manufacturer's authorized representative, or by a holder of a valid national board "VR" certificate who shall furnish and install a new nameplate.

11.5.13 Steam stop valves.

a. Each discharge outlet, except safety valve, safety relief valves, reheater inlet and outlet, or superheater inlet connections, must be fitted with a stop valve located at an accessible point in the steam-delivery line and as near the boiler nozzle as is convenient and practicable. When such outlets are over two inch [50.8 millimeter] pipe size, the valve or valves used on the connection must be of the outside-screw-and-yoke-rising-spindle type so as to indicate from a distance by the position of its spindle whether it is closed or open, and the wheel may be carried either on the yoke or attached to the spindle. A plug-cock-type valve may be used provided the plug is held in place by a guard or a gland, the valve is equipped to indicate from a distance whether it is closed or open, and the valve is

equipped with a slow-opening mechanism. In the case of a single boiler and prime mover installation, the stop valve required herein may be omitted provided the prime mover throttle valve is equipped with an indicator to show whether the valve is open or closed and is designed to withstand the required hydrostatic pressure test of the boiler.

b. When the boilers are connected to a common header, the connection from each boiler having a manhole opening must be fitted with two stop valves having an ample free-blow drain between them. The discharge of this drain must be visible to the operator while manipulating the valve. The stop valves must consist preferably of one automatic nonreturn valve (set next to the boiler) and a second valve of the outside-screw-and-yoke type must be used. Where intercommunicating systems of different pressures are installed, every boiler on each system must be equipped with an automatic nonreturn valve set next to the boiler.
c. When more than one stop valve is required, it must have a pressure rating at least equal to that required for the expected steam temperature and pressure at the valve, or the pressure rating at least equal to eighty-five percent of the lowest set pressure of any safety valve on the boiler drum and for the expected temperature of the steam at the valve, whichever is greater.
d. All valves and fittings on steam lines must have a pressure rating of at least one hundred pounds per square inch [689.48 kilopascals] in accordance with the applicable American national standards institute standard.

11.5.14: Feedwater valves and piping.

a. Except for high-temperature water boilers, the feed piping must be provided with a check valve near the boiler and a valve or cock between the check valve and the boiler. When two or more boilers are fed from a common source, there also must be a globe or regulating valve on the branch to each boiler located between the check valve and the source of supply. Whenever globe valves are used on feed piping, the inlet must be under the disk of the valve. On single boiler-turbine unit installations, the boiler feed shutoff valve may be located upstream from the boiler feed check valve.
b. When the supply line to a boiler is divided into branch feed connections and all such connections are equipped with stop-and-check valves, the stop-and-check valves in the common source may be omitted.
c. If a boiler is equipped with duplicate feed arrangements, each such arrangement must be equipped as required by these rules.
d. A combination stop-and-check valve in which there is only one seat and disk and a valve stem is provided to close the valve when the stem is screwed down must be considered only as a stop valve, and a check valve must be installed as otherwise provided.
e. Where an economizer or other feedwater-heating device is connected directly to the boiler without intervening valves, the feed valves and check valves required must be placed on the inlet of the economizer or feedwater-heating device.
f. The recirculating return line for a high-temperature water boiler must be provided with the same stop valve, or valves, required by 11.5. 13 for the main boiler and the required stop valve or valves is optional. A check valve may not be a substitute for a stop valve.

g. Except as provided for in subsections h. and j., boilers having more than five hundred square feet [46.45 square meters] of water-heating surface must have at least two means of feeding water. Each source of feeding must be capable of supplying water to the boiler at a pressure of six percent higher than the highest setting of any safety valve on the boiler. For boilers that are fired with solid fuel not in suspension, and for boilers whose setting or heat source can continue to supply sufficient heat to cause damage to the boiler if the feed supply is interrupted, one such means of feeding must not be subject to the same interruption as the first method.
h. Except as provided for in subsection g., boilers fired by gaseous, liquid, or solid fuel in suspension may be equipped with a single means of feeding water provided means are furnished for the immediate shut off of heat input if the water feed is interrupted.
i. For boilers having a water-heating surface of not more than one hundred square feet [9.29 square meters], the feed piping and connection to the boiler may not be smaller than one-half inch [12.7 millimeter] pipe size. For boilers having a water-heating surface more than one hundred square feet [9.29 square meters], the feed piping and connection to the boiler may not be less than three-quarter inch [19.05 millimeter] pipe size.
j. High-temperature water boilers must be provided with means of adding water to the boiler or system while under pressure.
k. The feedwater must be introduced into a boiler in such a manner that the water will not be discharged directly against surfaces exposed to gases of high temperature or to direct radiation from the fire or close to any riveted joints of the furnace sheets or of the shell. For pressures of four hundred pounds [2757.92 kilopascals] or over, the feedwater inlet through the drum must be fitted with shields, sleeves, or other suitable means to reduce the effects of temperature differentials in the shell or head. If necessary, the discharge end of the feed piping must be fitted with a baffle to divert the flow from riveted joints. Feedwater may not be introduced through the blowoff.

11.5.15 Blowoff valves and piping.

a. A "blowoff" means a pipe connection provided with valves through which the water in the boiler may be blown out under pressure, excepting drains such as are used on water columns, gauge glasses, or piping of feedwater regulators, etc., used for the purpose of determining the operating condition of such equipment. Piping connections used primarily for continuous operation, such as deconcentrators on continuous blowdown systems, are not classed as blowoffs but the pipe connections and all fittings up to and including the first shutoff valve must be equal at least to the pressure requirements for the lowest set pressure of any safety valve on the boiler drum and with the corresponding saturated-steam temperature.
b. A surface blowoff may not exceed two and one-half inch [63.5 millimeter] pipe size, and the internal and external pipes, when used, must form a continuous passage, but with clearance between their ends and arranged so that the removal of either will not disturb the other.
c. Each boiler, except high temperature water boilers, must have a bottom blowoff pipe fitted with a valve or cock in direct connection with the lowest water space practicable.

d. All waterwalls and water screens which do not drain back into the boiler, and all integral economizers must be equipped with blowoff valves.
e. Except as permitted for miniature boilers, the minimum size of pipe and fittings is one inch [25.4 millimeters], and the maximum size is two and one-half inches [63.5 millimeters], except that for boilers with one hundred square feet [9.29 square meters] of heating surface or less, the minimum size of pipe and fittings is three-fourths inch [19.05 millimeters].
f. Condensate return connections of the same size or larger than the size herein specified may be used, and the blowoff may be connected to them. In such case the blowoff must be so located that the connection may be completely drained.
g. A bottom blowoff pipe when exposed to direct furnace heat must be protected by firebrick or other heat-resisting material which is so arranged that the pipe may be inspected.
h. An opening in the boiler setting for a blowoff pipe must be arranged to provide free expansion and contraction.
i. On a boiler having multiple blowoff pipes, a single master valve may be placed on the common blowoff pipe from the boiler, in which case only one valve on each individual blowoff is required. In such a case either the master valve or the individual valves or cocks must be of the slow-opening type.
j. Two independent slow-opening valves, or a slow-opening valve and a quick-opening valve or cock, may be combined in one body and may be used provided the combined fitting is the equivalent of two independent slow-opening valves, or a slow-opening valve and a quick-opening valve or cock and provided further that the failure of one to operate cannot affect the operation of the other.
k. The bottom blowoff pipes of every traction or portable boiler must have at least one slow-opening or quick-opening blowoff valve or cock conforming to the requirements of 11.5.15.
l. Only one blowoff valve, which must be of a slow-opening type, is required on forced circulation and electric boilers having a normal water content not exceeding one hundred gallons [378.54 liters].

11.5.16 Factors of safety.

The minimum factor of safety may not be less than four for existing installations. The Office of Construction Management authorizes an inspector to increase the factor of safety if the condition of the boiler or pressure vessel warrants it. If the owner or user does not concur with the inspector's decision, the owner or user may appeal to the Construction Management Office who may request a joint inspection by the chief boiler inspector and the deputy inspector or special inspector. Each inspector shall render the inspector's report to the Construction Management Office, and the Construction Management Office shall render the final decision, based upon the data contained in all the inspector's reports.

11.5.17 Inspection of inaccessible parts.

If in the opinion of the inspector, as the result of conditions disclosed at the time of inspection, it is advisable to remove the interior or exterior lining, covering, or brickwork to expose certain parts of the vessel not normally visible, the owner or user shall remove such material to permit proper inspection and the drilling of any part of the vessel to ascertain thickness.

11.5.18 Repairs and renewals of fittings and appliances.

Whenever repairs are made to fittings and appliances or it becomes necessary to replace them, the work must comply with the requirements for new installations.

11.5.19 Fusible plugs.

a. Fire-actuated fusible plugs, if used, must conform to the requirements of the American Society of Mechanical Engineers Code for power boilers.
b. They may be replaced by steel plugs if the boiler is gas-fired or oil-fired and is equipped with a low water fuel cutoff.

11.5.20 Water columns, gauge glasses, and gauge cocks.

a. Outlet connections (except for damper regulator, feedwater regulator, low-water fuel cutoff, drains, steam gauges, or such apparatus that does not permit the escape of an appreciable amount of steam or water therefrom) may not be placed on the piping that connects the water column to the boiler. The water column must be placed on the piping that connects the water column to the boiler. The water column must be provided with a valved drain of at least three-quarter inch [19.05 millimeter] pipe size, the drain to be piped to a safe location.
b. Each boiler constructed prior to 1999 must have three or more gauge cocks located within the visible length of the water glass, except when the boiler has two water glasses located on the same horizontal lines. Boilers not over thirty-six inches [.914 meters] in diameter, in which the heating surface does not exceed one hundred square feet [9.29 square meters] need have but two gauge cocks.
c. For all installations where the water gauge glass or glasses are more than thirty feet [9.14 meters] from the boiler operating floor, it is recommended that water level indicating or recording gauges be installed at eye height from the operating floor.

11.5.21 Steam pressure gauge.

a. Each steam boiler must have a steam gauge, with dial range not less than one and one-half times the pressure at which the safety valve is set, connected to the steam space or to the steam connection to the water column. The steam gauge must be connected to a siphon or equivalent device of sufficient capacity to keep the gauge tube filled with water and so arranged that the gauge cannot be shut off from the boiler except by a cock placed near the gauge and provided with a tee or lever handle arranged to be parallel to the pipe in which it is located when the cock is open.
b. When a steam pressure gauge connection longer than eight feet [2.44 meters] becomes necessary, a shutoff valve may be used near the boiler provided the valve is of the outside-screw-and-yoke type and is locked open. The line must be ample size with

provision for free blowing. Each boiler must be provided with a one-quarter inch [6.35 millimeter] nipple and globe valve connected to the steam space for the exclusive purpose of attaching a test gauge when the boiler is in service so that the accuracy of the boiler steam gauge may be ascertained.

11.5.22 Pressure on nonstandard steam traction engines.

All steam traction engines that are of nonstandard boiler construction are limited to a maximum allowable working pressure of one hundred pounds per square inch [690 kilopascals], unless a thorough ultrasonic thickness survey, engineering analysis, and other inspections, approved by the chief boiler inspector, determine that a different pressure is appropriate. The maximum allowable working pressure may not be greater than that permitted by the original manufacturer. Boilers herein described are not subject to the age limits of section 11.5.3.

11.5.23 Duties of owners.

a. It is the duty of the owner or user of any steam traction engine on wheels to notify the chief boiler inspector of sale or other disposition of steam traction engines.
b. Within ten days of purchase, any person purchasing any steam traction engine shall notify the chief boiler inspector where it will be located and operated.

11.5.24 Inspection and repair of standard and nonstandard steam traction engines.

The National Board Inspection Code referenced in this section must be used for the inspection and repair of all steam traction engines unless otherwise noted in this section.

SECTION 11

CHAPTER 6 - MINIATURE BOILERS - NEW INSTALLATIONS

11.6.1 Requirements.

a. All new boilers, except those exempt by law, to be installed on the Fort Berthold Reservation must be reported to the chief boiler inspector by the owner or user and by the installer.
b. A miniature boiler, except one exempt by law, may not be installed on the Fort Berthold Reservation unless it has been constructed, inspected, and stamped in conformity with section 1 of the American Society of Mechanical Engineers Code and is approved, registered, and inspected in accordance with this section.
c. A miniature boiler having the standard stamping of another state that has adopted a standard of construction equivalent to the standard of the Three Affiliated Tribes may be accepted by the inspector. However, the person desiring to install the same shall make application for the installation and shall file with this application the manufacturer's data report covering the construction of the boiler in question.
d. All new installation boilers, including reinstalled boilers, must be installed in accordance with the requirements of the American Society of Mechanical Engineers Code and these regulations.

e. The owner or user shall install a carbon monoxide detector or alarm in equipment rooms where fuel-fired boilers and/or fuel-fired pressure vessels are located in accordance with the authority having jurisdiction.

SECTION 11

CHAPTER 7 - MINIATURE BOILERS - EXISTING INSTALLATIONS

11.7.1 General rules.

The rules adopted for power boilers applying to strength of materials and calculations to determine maximum allowable working pressure must be used for miniature boilers unless a special rule is stated in those rules.

11.7.2 Maximum allowable working pressure.

The maximum allowable working pressure for standard boilers on the shell of a boiler or drum must be determined by section 11.5.1.

11.7.3 Maximum allowable working pressure for nonstandard boilers.

Nonstandard miniature boilers:

a. Must conform to all requirements of this chapter.
b. Must have a factor of safety as given in section 11.5.2.
c. Must be given an initial inspection that must include a hydrostatic pressure test.
d. May not have solder or silver solder as a method of attachment of any pressure part of the entire assembled unit.
e. May have a plate for the Three Affiliated Tribes stamp and registration number to be welded to boiler proper. The plate must be placed in a conspicuous and accessible location with a minimum size thickness of one-sixteenth inch [1.59 millimeters], length two inches [50.8 millimeters], and width one inch [25.4 millimeters].
f. May not exceed the design criteria limits as defined in 11.1.1.
g. Of the watertube, fired-coil and fired-radiator design must be considered as not meeting the requirements of this section.
h. Exceeding twelve inches [304.80 millimeters] internal diameter must have at least one, one-inch [25.4 millimeter] opening in the bottom of the shell and one, one-inch [25.4 millimeter] opening in each water leg. Boilers not exceeding twelve inches [304.80 millimeters] internal diameter must have one, one-half inch [12.7 millimeter] opening in the shell and one, one-half inch [12.7 millimeter] opening in each water leg.
i. Construction material used for fabrication of the shell must be steel of at least fifty-five thousand pounds per square inch [386.11 megapascals] tensile strength. Material of tubes may be steel, brass, or copper with a rating equal to materials from section 2 of the American Society of Mechanical Engineers Code.

11.7.4 Safety valves.

a. Each miniature boiler must be equipped with an American society of mechanical engineers approved safety valve set at or below the maximum allowable working pressure.
b. The safety valve must be plainly marked by the manufacturer showing name or identifying trademark, nominal diameter, and pressure at which it is set to release.
c. The safety valve relieving capacity of each boiler must be such that it will discharge all the steam that can be generated by the boiler without allowing the pressure to rise more than six percent above the maximum allowable working pressure.
d. In those cases where the boiler is supplied with feedwater directly from a pressure main or system without the use of a mechanical feeding device, the safety valve must be set to release at a pressure not in excess of ninety-four percent of the lowest pressure obtained in the supply main or system feeding the boiler. Return traps may not be considered mechanical feeding devices.

11.7.5 Gauge glass and water level indicator.

a. Each miniature boiler must be equipped with a water gauge glass for determination of water level.
b. The lowest permissible water level must be at a point one-third of the height of the shell, except where the boiler is equipped with internal furnace in which case it may not be less than one-third of the tube length above the top of the furnace. For small boilers where there is insufficient space for the usual type of gauge glass, water level indicators of the glass bull's-eye type may be used.

11.7.6 Feeding and feedwater piping.

a. Every miniature boiler must be provided with at least one feed pump or other mechanical feeding device except if the following conditions exist:
    (1) If the boiler is connected to a water main or system having sufficient pressure to feed the boiler at any time while under pressure.
    (2) If the fuel burned is such that all heat input can be discontinued instantaneously by the operation of a valve, cock, or switch, thereby permitting the boiler pressure to be quickly lowered to a point where water can be introduced from the connection of the water main.
    (3) If the boiler is operated without extraction of steam (closed system) in which case the boiler is filled, when cold, through the connection or opening provided in accordance with the following rule.
b. Each miniature boiler must be fitted with a feedwater connection that may not be less than one-half inch [12.7 millimeter] iron pipe size. The feed piping must be provided with a check valve near the boiler and a valve or check between the check valve and the boiler.
c. Feedwater may be introduced through the blowoff connection if the boiler is operated without extraction of steam (closed system).
d. Feedwater may not be introduced through the water column or gauge glass connections while the boiler is under pressure.

11.7.7 Blowoff piping.

a. Each miniature boiler must be provided with a blowoff connection not less than one-half inch [12.7 millimeter] iron pipe size, directly connected with the lowest water space.
b. Blowoff piping may not be galvanized and must be provided with a valve or cock.

11.7.8 Steam gauges.

Each miniature boiler must be equipped with a steam gauge having a dial range not less than one and one-half times the safety valve setting. The gauge must be connected to the steam space or to the steam connection to the gauge glass by a brass or bronze composition siphon tube, or equivalent device that will keep the gauge tube filled with water.

11.7.9 Stop valves.

The steam piping from a miniature boiler must be provided with a stop valve located as close to the boiler shell or drum as is practicable, except in those cases where the boiler and steam receiver are operated as a closed system.

11.7.10 Flue connections.

Each gas-fired boiler must be equipped with a four inch [10.16 centimeter] vent pipe or flue extended to an approved location outside the building or connected to a chimney flue. If the horizontal run is more than ten feet [3.05 meters], the vent must be increased to six inches [15.24 centimeters]. A draft hood of approved design must be provided on each boiler.

11.7.11 Duties of owners.

a. The owner and user of any steam traction engine or boiler on wheels shall notify the chief boiler inspector of sale or other disposition of steam traction engines.
b. Within ten days of purchase, any person purchasing any steam traction engine shall notify the chief boiler inspector where it will be located and operated.

11.7.12 Steam gauge.

The steam pressure gauge must show the pressure at which the boiler is actually being operated. Adjustments to the gauge to show a lesser pressure are prohibited, and if any gauge has been so adjusted, such act will be considered a willful violation of this section.

SECTION 11

CHAPTER 8 - HEATING, LOW PRESSURE, AND HOT WATER SUPPLY BOILERS - NEW INSTALLATIONS

11.8.1 Requirements.

a. Unless exempt by this section, a heating or low-pressure boiler may not be installed on the Fort Berthold Reservation unless it has been constructed, inspected, and stamped to conform with section IV of the American Society of Mechanical Engineers Boiler and

Pressure Vessel Code and is approved, registered, and inspected in accordance with the requirements of this section.

b. All new installation boilers, including reinstalled boilers, must be installed in accordance with the requirements of the National Board Inspection Code and this section.
c. Heating boilers shall have a minimum of at least thirty-six inches [914 millimeters] between the top of the heating boiler and any overhead structure and at least thirty-six inches [914 millimeters] between all sides of the heating boiler and adjacent walls, structures, or other equipment. Heating boilers having manholes shall have at least eighty-four inches [2,135 millimeters] of clearance between the manhole opening and any wall, ceiling, piping, or other equipment that may prevent a person from entering the heating boiler. Alternative clearances in accordance with the manufacturer's recommendations are subject to acceptance by the chief boiler inspector.
d. A manually operated emergency shutoff switch or circuit breaker must be located just outside the boiler room door and marked for easy identification. Consideration should be given to the type and location of the switch to safeguard against tampering. If the boiler room door is on the building exterior, the switch must be located just inside the door. If there is more than one door to the boiler room, there must be a switch located at each door. The emergency switch or circuit breaker must disconnect all power to the burner controls. This requirement is limited to single and modular boilers exceeding four hundred thousand British thermal units per hour input installed after January 1, 2006.
e. The owner or user shall install a carbon monoxide detector or alarm in equipment rooms where fuel-fired boilers and/or fuel-fired pressure vessels are located in accordance with the authority having jurisdiction.
f. Hot water supply boilers may not be installed unless constructed and approved in accordance with the American gas association, the American national standards institute, or the American Society of Mechanical Engineers Code.
g. All new boilers, except those exempt by law, to be installed on the Fort Berthold Reservation must be reported to the chief boiler inspector by the owner or user, and by the installer.

SECTION 11

CHAPTER 9 - HEATING, LOW PRESSURE, AND HOT WATER SUPPLY BOILERS - EXISTING INSTALLATIONS

11.9.1 American Society of Mechanical Engineers Code boilers.

The maximum allowable working pressure of a boiler built in accordance with the American Society of Mechanical Engineers Code may not exceed the pressure indicated by the manufacturer's identification stamped or cast upon the boiler or upon a plate secured to it.

11.9.2 Nonstandard riveted boilers.

The maximum allowable working pressure on the shell of a noncode riveted heating boiler must be determined in accordance with section 11.5.1 except that the maximum allowable working pressure of a steam heating boiler may not exceed fifteen pounds [103 kilopascals] and a hot

water boiler may not exceed thirty pounds [206.85 kilopascals] at a temperature not exceeding two hundred fifty degrees Fahrenheit [120 degrees Celsius].

11.9.3 Nonstandard welded boilers.

The maximum allowable working pressure of a noncode steel or wrought iron heating boiler of welding construction may not exceed fifteen pounds [103 kilopascals]. For other than steam service, the maximum allowable working pressure must be calculated in accordance with section IV of the American Society of Mechanical Engineers Code.

11.9.4 Nonstandard cast iron boilers.

a. The maximum allowable working pressure of a noncode boiler composed principally of cast iron may not exceed fifteen pounds [103 kilopascals] for steam service or thirty pounds [206.85 kilopascals] for hot water service.
b. The maximum allowable working pressure of a nonstandard boiler having cast iron shell or heads and steel or wrought iron tubes may not exceed fifteen pounds [103 kilopascals] for steam service or thirty pounds [206.85 kilopascals] for water service.

11.9.5 Fired radiators.

A radiator in which steam pressure is generated at a pressure of fifteen pounds [103 kilopascals] or less is considered a low-pressure boiler.

11.9.6 General.

If in the judgment of the inspector, a boiler is unsafe for operation at the pressure previously approved, the pressure must be reduced, proper repair made, or the boiler retired from service.

11.9.7 Pressure-relieving devices.

a. Safety valve requirements for steam boilers are:
    (1) Each steam boiler must have one or more American Society of Mechanical Engineers approved safety valves of the spring-pop type adjusted and sealed to discharge at a pressure not to exceed fifteen pounds per square inch [103 kilopascals]. Seals must be attached in a manner to prevent the valve from being taken apart without breaking the seal. The safety valves must be arranged so that they cannot be reset to relieve at a higher pressure than the maximum allowable working pressure of the boiler. For iron-and-steel-bodied valves exceeding two inch [50.8 millimeter] pipe size, the drain hole or holes must be tapped not less than three-eighths inch [9.53 millimeter] pipe size.
    (2) Each safety valve three-quarter inch [10.05 millimeters] diameter or over, used on a steam boiler, must have a substantial device that will positively lift the disk from its seat at least one-sixteenth inch [1.59 millimeters] when there is no pressure in the boiler. The seats and disks must be of suitable material to resist corrosion.
    (3) A safety valve for a steam boiler may not be smaller than three-quarter inch [19.05 millimeters] unless the boiler and radiating surfaces consist of a self-

contained unit. A safety valve may not be larger than four and one-half inches [114.3 millimeters]. The inlet opening must have an inside diameter equal to, or greater than, the seat diameter.

(4) The minimum relieving capacity of valve or valves is governed by the capacity marking on the boiler.

(5) The minimum valve capacity in pounds per hour is the greater of that determined by dividing the maximum British thermal units output at the boiler nozzle obtained by the firing of any fuel for which the unit is installed by one thousand, or is determined on the basis of the pounds of steam generated per hour per square foot of boiler heating surface. (One British thermal unit equals 1.055 x 10 to the third power joules.)

MINIMUM POUNDS OF STEAM PER HOUR PER SQUARE FOOT OF HEATING SURFACE

Boiler Heating Surface	Firetube Boilers	Watertube Boilers
Hand-fired	5	6
Stoker-fired	7	8
Oil, gas, or pulverized fuel-fired	8	10

(6) Safety valves must be installed with the valve spindle in the vertical position. Discharge piping, to a safe location, may be required by the inspector.

b. When a boiler is fired only by a gas having a heat value not in excess of two hundred British thermal units per cubic feet [745.58 x 10 to the fourth power joules per cubic meter], the minimum safety valve or safety relief valve relieving capacity may be based on the values given for hand-fired boilers above.

c. The safety valve or safety relief valve relieving capacity for electric boilers is three and one-half pounds [3692.5 joules] per hour per kilowatt input.

(1) The safety valve capacity for each steam boiler must be such that with the fuel-burning equipment installed and operated at maximum capacity the pressure cannot rise more than five pounds per square inch [34.47 kilopascals] above the maximum allowable working pressure.

(2) When operating conditions are changed, or additional boiler heating surface is installed, the valve capacity must be increased, if necessary, to meet the new conditions, the additional valves required, on account of changed conditions, may be installed on the outlet piping provided there is no intervening valve.

d. Safety relief valve requirements for hot water boilers are:

(1) Each hot water heating boiler must have at least one American society of mechanical engineers approved pressure relief valve set to relieve at or below the maximum allowable working pressure of the boiler. Each hot water supply boiler must have at least one officially rated safety relief valve or at least one American society of mechanical engineers approved pressure-temperature relief valve of the automatic-reseating type set to relieve at or below the maximum allowable

working pressure of the boiler. Pressure relief valves officially rated as to capacity must have pop action when tested by steam. When more than one safety relief valve is used on either hot water heating or hot water supply boilers, the additional valve or valves must be officially rated and may be set within a range not to exceed six pounds per square inch [41.47 kilopascals] above the maximum allowable working pressure of the boiler up to and including sixty pounds per square inch [413.69 kilopascals] and ten percent for those having a maximum allowable working pressure exceeding sixty pounds per square inch [413.69 kilopascals]. Safety relief valves must be spring loaded without disk guides on the pressure side of the valve. Safety relief valves must be arranged so that they cannot be reset to relieve at a higher pressure than the maximum permitted by this subdivision.

(2) Each safety relief valve must have a substantial device that will positively lift the disk from its seat at least one-sixteenth inch [1.59 millimeters] when there is no pressure on the boiler.

(3) Materials subject to deterioration or vulcanization when subject to saturated steam temperature corresponding to capacity test pressure may not be used for any part.

(4) A safety relief valve may not be smaller than three-quarter inch [19.05 millimeters] nor larger than four and one-half inch [114.3 millimeter] standard pipe size, except that boilers having a heat input not greater than fifteen thousand British thermal units per hour [15.38 x 10 to the seventh power joules] may be equipped with a rated safety relief valve of one-half inch [12.7 millimeter] standard pipe size. The inlet opening must have an inside diameter approximately equal to, or greater than, the seat diameter. The minimum opening through any part of the valve may not be less than one-quarter inch [6.35 millimeters] diameter or its equivalent area.

(5) The required steam-relieving capacity, in pounds per hour, of the pressure-relieving device or devices on a boiler must be determined by dividing the maximum output in British thermal units at the boiler nozzle obtained by the firing of any fuel for which the unit is designed by one thousand or by multiplying the square feet of heating surface by five. In every case, the requirements of d.(7) must be met. (One British thermal unit equals 1.055 x 10 to the third power joules.)

(6) When operating conditions are changed, or additional boiler heating surface is installed, the valve capacity must be increased, if necessary, to meet the new conditions and be in accordance with d(7). The additional valves required, on account of changed conditions, may be installed on the outlet piping provided there is no intervening valve.

(7) Safety relief valve capacity for each boiler must be such that with maximum heat input the pressure cannot rise more than six pounds per square inch [41.37 kilopascals] above the maximum allowable working pressure for pressures up to and including sixty pounds per square inch [413.69 kilopascals] and ten percent

for maximum allowable working pressures over sixty pounds per square inch [413.69 kilopascals].

(8) Safety relief valves must be installed with the spindle in the vertical position. Discharge piping, to a safe location, must be installed.

11.9.8 Steam pressure gauge.

a. Each steam boiler must have a steam gauge or a compound steam gauge connected to its steam space or to its water column or to its steam connections. The gauge or connection must contain a siphon or equivalent device that will develop and maintain a water seal that will prevent steam from entering the gauge tube. The connection must be arranged so that the gauge cannot be shut off from the boiler except by a cock placed in the pipe at the gauge and provided with a tee or a lever handle arranged to be parallel to the millimeter standard pipe size, but where steel or wrought iron pipe or tubing is used, they must be not less than one-half inch [12.7 millimeter] standard pipe size. The minimum size of a siphon, if used, must be one-quarter inch [6.35 millimeters] inside diameter. Ferrous and nonferrous tubing having inside diameters at least equal to that of standard pipe sizes listed above may be substituted for pipe in which it is located when the cock is open. The connections to the boiler must be not less than one-quarter inch [6.35 millimeter].

b. The scale on the dial of a steam boiler gauge must be graduated to not less than thirty pounds per square inch [206.84 kilopascals] nor more than sixty pounds per square inch [413.69 kilopascals]. The gauge must be provided with effective stops for the indicating pointer at the zero point and at the maximum pressure point. The travel of the pointer from zero to thirty pounds per square inch [206.84 kilopascals] pressure must be at least three inches [76.2 millimeters]. On a compound gauge, effective stops must be set at the limits of the gauge readings on both the pressure and vacuum sides of the gauge.

11.9.9 Water gauge glasses.

a. Each steam boiler must have one or more water gauge glasses attached to the water column or boiler by means of valved fittings not less than one-half inch [12.70 millimeter] pipe size, with the lower fitting provided with a drain valve of the straight type with opening not less than one-quarter inch [6.35 millimeters] diameter to facilitate cleaning. Gauge glass replacement must be possible under pressure. Water glass fittings may be attached directly to a boiler.

b. The lowest visible part of the water gauge glass must be at least one inch [25.4 millimeters] above the lowest permissible water level recommended by the boiler manufacturer. With the boiler operating at this lowest permissible water level, there must be no danger of overheating any part of the boiler. Transparent material other than glass may be used for the water gauge provided that the material will remain transparent and has proved suitable for the pressure, temperature, and corrosive conditions expected in service.

11.9.10 Stop valves and check valves.

a. If a steam boiler may be closed off from the heating system by closing a steam stop valve, there must be a check valve in the condensate return line between the boiler and the system.
b. If any part of a steam heating system may be closed off from the remainder of the system by closing a steam stop valve, there must be a check valve in the condensate return pipe from that part of the system.
c. If more than one boiler is connected to a system, they must each be equipped with main stops on the discharge and return side, in such a manner not affecting operation of any other boiler.
d. When single boilers are located above the system and can be drained without draining the system, stop valves are optional.

11.9.11 Feedwater connections.

a. Feedwater connections must be independent of any water gauge connections and be made to the condensate return pipe or reservoir of the condensate return tank.
b. Alternatively, makeup water or water treatment may be introduced through an independent connection. The water flow from the independent connection may not discharge directly against parts of the boiler exposed to direct radiant heat from the fire. Makeup water or water treatment may not be introduced through openings or connections provided for inspection or cleaning, safety valve, safety relief valve, blowoff, water column, water gauge glass, pressure gauge, or temperature gauge.
c. When there is more than one boiler connected to a system, each boiler must have an independent feedwater line.
d. There must be a stop valve and a check valve in the feedwater line at the boiler. For hot water heating boilers, the check valve must be a backflow preventer approved by the Construction Management Office.
e. Hot water heating boilers, not equipped with an approved low-water fuel cutoff, must be equipped with an automatic feeding device or pressure-reducing valve method of feeding, in addition to a manual bypass capable of feeding the boiler at a pressure of six percent above safety relief valve setting.

11.9.12 Pressure or altitude gauges.

a. Each hot water boiler must have a pressure or altitude gauge connected to it or to its flow connection in such a manner that it cannot be shut off from the boiler except by a cock with tee or lever handle placed on the pipe near the gauge. The handle of the cock must be parallel to the pipe in which it is located when the cock is open.
b. The scale on the dial of the pressure or altitude gauge must be graduated to not less than one and one-half nor more than three and one-half times the pressure at which the safety relief valve is set. The gauge must be provided with effective stops for the indicating pointer at the zero point and at the maximum pressure point.
c. Piping or tubing for pressure or altitude gauge connections must be of nonferrous metal when smaller than one inch [25.4 millimeter] pipe size.

11.9.13 Thermometers.

Each hot water boiler must have a thermometer located and connected so that it is easily readable when observing the water pressure or altitude. The thermometer must be located so that it will at all times indicate the temperature in degrees Fahrenheit [Celsius] of the water in the boiler at or near the outlet.

11.9.14 Temperature control.

Each automatically fired hot water boiler must be protected from over temperature by two temperature-operated controls.

a. Each individual automatically fired water boiler must have a safety limit control that will cut off the fuel supply to prevent water temperature from exceeding the maximum allowable temperature at the boiler outlet. The water temperature safety control must be constructed to prevent a temperature setting above the maximum allowable temperature and be of the manual reset type.
b. Each individual hot water boiler or each system of commonly connected boilers without intervening valves must have a control that will cut off the fuel supply when the water temperature reaches an operating limit, which must be less than the maximum allowable temperature.

11.9.15: Pressure control.

Each automatically fired steam boiler must be protected from over pressure by two pressure-operated controls.

a. Each automatically fired steam boiler must have a safety limit control that will cut off the fuel supply to prevent steam pressure from exceeding the fifteen pounds per square inch [103 kilopascals] maximum allowable working pressure of the boiler. Each control must be constructed to prevent a pressure setting above fifteen pounds per square inch [103 kilopascals] and be of the manual reset type.
b. Each individual steam boiler or each system of commonly connected steam boilers must have a control that will cut off the fuel supply when the pressure reaches an operating limit, which must be less than the maximum allowable pressure.
c. Shutoff valves of any type may not be placed in the steam pressure connection between the boiler and the controls described in subsections a. and b. These controls must be protected with a siphon or equivalent means of maintaining a water seal that will prevent steam from entering the control.

11.9.16 Provisions for thermal expansion in hot water systems.

a. All hot water heating systems incorporating hot water tanks or fluid relief columns must be so installed as to prevent freezing under normal operating conditions.
b. Systems with open expansion tank. If the system is equipped with an open expansion tank, an indoor overflow from the upper portion of the expansion tank must be provided

in addition to an open vent, the indoor overflow to be carried within the building to a suitable plumbing fixture or to the basement.

c. Closed-type systems. If the system is of the closed type, an airtight tank or other suitable air cushion must be installed that will be consistent with the volume and capacity of the system, and must be suitably designed for a hydrostatic test pressure of two and one-half times the allowable working pressure of the system. Expansion tanks for systems designed to operate above thirty pounds per square inch [206.85 kilopascals] must be constructed in accordance with the American Society of Mechanical Engineers Code, section VIII, division 1. Except for prepressurized tanks, provisions must be made for draining the tank without emptying the system. Provisions must also be made for changing of all tanks without emptying the system.

d. Expansion tank capacities for gravity hot water systems. Based on two-pipe system with average operating water temperature one hundred seventy degrees Fahrenheit [76.7 degrees Celsius], using cast iron column radiation with heat emission rate one hundred fifty British thermal units per hour per square foot [158.25 x 10 to the 3rd power joules per .0929 square meter] equivalent direct radiation.

Square Feet of Installed Equivalent Direct Radiation			Tank Capacity, Gallons
Up	to	350	18
Up	to	450	21
Up	to	650	24
Up	to	900	30
Up	to	1,100	35
Up	to	1,400	40
Up	to	1,600	2-30
Up	to	1,800	2-30
Up	to	2,000	2-35
Up	to	2,400	2-40

e. Expansion tank capacities for forced hot water systems. Based on average operating water temperature one hundred ninety-five degrees Fahrenheit [90 degrees Celsius], a fill pressure twelve pounds per square inch gauge [82.74 kilopascals] and a maximum operating pressure thirty pounds per square inch gauge [206.84 kilopascals].

System Volume, Gallons	Nonpressurized Tank Capacity Gallons	Prepressurized Tank Capacity Gallons
100	15	9
200	30	17
300	45	25
400	60	33
500	75	42
1,000	150	83
2,000	300	165

Note: System volume includes volume of water in boiler, radiation, and piping, not including the expansion tank.

f. Expansion tanks for hot water supply systems must be constructed in accordance with the American Society of Mechanical Engineers Code, section VIII, division 1 if over five gallons in size of water and air.

11.9.17 Return pump.

Each condensate return pump where practicable must be provided with an automatic water level control set to maintain the water level within the limits of two gauge cocks.

11.9.18 Repairs and renewals of fittings and appliances.

Whenever repairs are made to fittings or appliances or it becomes necessary to replace them, all work must comply with all requirements for new installations.

11.9.19 Low-water fuel cutoff.

a. Each automatically fired hot water heating boiler must have an automatic low-water fuel cutoff that has been designed for hot water service and which can be tested without draining the system or the boiler. It must be so located as to automatically cut off the fuel supply prior to the surface of the water falling below the lowest safe water level as established by the boiler manufacturer.
b. A coil-type or watertube boiler requiring forced circulation to prevent overheating of the coils or tubes must have a flow-sensing device installed in the boiler or piping in lieu of the required low-water fuel cutoff that will cut off the fuel supply when the circulation flow is interrupted. Functioning of the low-water fuel cutoff due to a low-water condition must cause safety shutdown and lockout. Where a reset device is separate from the low-water fuel cutoff, a means must be provided to indicate actuation of the low-water fuel cutoff. The manual reset may be the instantaneous type or may include a time delay of not more than three minutes after the fuel has been cut off.
c. Low-water fuel cutoff requirements for steam boilers are addressed by section 11.3.8.

11.9.20 Modular hot water heating boilers.

a. Individual modules must be limited to a maximum input of four hundred thousand British thermal units [4.22 x 10 to the eighth power joules] per hour (gas), three gallons [11.36 liters] per hour (oil), or one hundred fifteen kilowatt-hours (electricity).
b. Each module of a modular hot water heating boiler must be equipped with the following:
    (1) Pressure/altitude gauge (see section 11.9.12).
    (2) Thermometer (see section 11.9.13).
    (3) Operating temperature control (see section 11.9.14).
    (4) Safety relief valve (see section 11.9.7).
    (5) Drain valve (see section 11.9.21).
c. The assembled modular hot water heating boiler must be equipped with the following:
    (1) High-limit temperature control (see section 11.9.14).
    (2) Low-water fuel cutoff (see section 11.9.19).
    (3) Makeup feedwater connection (see section 11.9.11).
    (4) Expansion tank provisions (see section 11.9.16).
    (5) Stop valves (see section 11.9.10).

11.9.21 Bottom blowoff and drain valves.

a. Each steam boiler having a capacity over twenty-five gallons [94.6 liters] must have a bottom blowoff connection fitted with a valve or cock connected to the lowest water space practicable with a minimum size as shown below:

Minimum Required Safety Valve Capacity in Pounds of Steam/Hour			Steam Boiler Blowoff Piping Valve Size, Inches (Min.)
Up	to	500	3/4
501	to	1,250	1
1,251	to	2,500	1 1/4
2,501	to	6,000	1 1/2
6,001	and	larger	2

a. Each hot water boiler and each steam boiler having a capacity not exceeding twenty-five gallons [94.6 liters] must have a drain valve connected to the lowest water space practicable. The minimum size of this drain valve is three-quarter inch [1.9 centimeters].

11.9.22 Emergency shutoff switches.

a. A manually operated emergency shutoff switch or circuit breaker must be located just outside the boiler room door and marked for easy identification. Consideration should be given to the type and location of the switch to safeguard against tampering. If the boiler room door is on the building exterior, the switch must be located just inside the door. If there is more than one door to the boiler room, there must be a switch located at each door.
b. The emergency switch or circuit breaker must disconnect all power to the burner controls.
c. This requirement is limited to single and modular boilers exceeding four hundred thousand British thermal units per hour input installed after January 1, 2006.

SECTION 11

CHAPTER 10 - UNFIRED PRESSURE VESSELS

11.10.1 Construction and installation standards - Exceptions.

a. Unfired pressure vessels may not be installed on the Fort Berthold Reservation unless such vessels have been constructed in accordance with the American society of mechanical engineers boiler and pressure vessel code, section VIII, division 1, 2, or 3, and bear the American Society of Mechanical Engineers stamping as proof of such construction.
b. Manufacturers shall register unfired pressure vessels with the national board of boiler and pressure vessel inspectors. Unfired pressure vessels must bear the required stamping of the national board.
c. The requirements of this section apply to all pressure vessels within the scope of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code, section VIII, division 1, 2, or 3, with these exceptions:
    (1) Pressure vessels under federal control.
    (2) Pressure vessels that do not exceed four cubic feet [30 United States gallons] in volume and two hundred fifty pounds per square inch gauge [1723.70 kilopascals] in pressure.
    (3) Pressure vessels that do not exceed one and one-half cubic feet [11.22 United States gallons] in volume and six hundred pounds per square inch gauge [4136.88 kilopascals] in pressure.
    (4) Unfired pressure vessels installed or ordered prior to November 1, 1987. However, these unfired pressure vessels must be maintained in a safe operating condition using ANSI/NB-23 and ANSI/API-510 as guidelines. Unfired pressure vessels referenced by this section must be protected with the American Society of Mechanical Engineers stamped pressure relief devices as defined in section VIII of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code. Existing pressure relief devices installed on unfired pressure vessels referenced by this section will be considered acceptable if the pressure relief device is set for the correct pressure, if the usage is correct, and if the device is in a satisfactory operating condition.

11.10.2 Application of standards - Repairs.

These rules apply only to new construction, except as noted below:

a. Reinstalled pressure vessels must meet the rules for new construction. Exception: national board registration is required only for those vessels ordered and constructed after November 1, 1987.
b. Repairs to unfired pressure vessels and to safety and safety relief valves for those vessels:
    (1) Repairs to safety valves and safety relief valves must be such that valve function is not impaired and the repaired valve will perform to the standards for which it was originally constructed. It is recommended that these repairs be made by a

firm in possession of a valid "VR" certificate of authorization from the national board of boiler and pressure vessel inspectors.

(2) Repairs to unfired pressure vessels must be such that vessels repaired will be returned to a safe and satisfactory operating condition, provided there is not deviation from the original design. It is recommended that these repairs be made by a firm in possession of a valid "R" certificate of authorization from the national board of boiler and pressure vessel inspectors.

(3) The National Board Inspection Code and the American Petroleum Institute Code (ANSI/API-510, 2006 edition) cover repair and alteration procedures. The ANSI/API-510 may be used to cover the maintenance inspection, repair, alteration, and rerating procedure for pressure vessels used by the petroleum and chemical process industries. It is intended that ANSI/NB-23 cover installations other than those covered by ANSI/API-510.

a. Alterations to unfired pressure vessels:

(1) Alterations, as defined in ANSI/NB-23, must be made by a national board "R" certificate holder.

(2) Alterations may also be made by an organization operating under the provisions of ANSI/API-510, provided the alteration is within the scope of ANSI/API-510.

11.10.3 Allowance for TAT specials.

If, due to a valid impediment to compliance with the American Society of Mechanical Engineers Code in its entirety, an unfired pressure vessel cannot bear the American society of mechanical engineers and national board stamping, details in the English language, and specifications and calculations, approved by a registered professional engineer experienced in pressure vessel design, must be submitted to the chief inspector by the owner or user. Approval as "TAT special" must be obtained from the chief inspector before construction is started.

11.10.4 Change of service from anhydrous ammonia to propane.

Unfired pressure vessels that have been previously used in anhydrous ammonia service may be converted to liquid petroleum service only with all of the following conditions being met:

a. The pressure vessel is American Society of Mechanical Engineers Code constructed and national board registered.
b. The pressure vessel has a manhole opening for access or a manhole opening is provided as an alteration.
c. The pressure vessel is in satisfactory condition internally and externally using the National Board Inspection Code to determine acceptable condition.
d. The pressure vessel has passed a wet fluorescent magnetic particle test made by an individual possessing a valid American society for nondestructive testing level II or Ill certificate issued in accordance with the requirements of the American society for nondestructive testing.

SECTION 11

CHAPTER 11 - HOBBY BOILER OPERATOR LICENSING

11.11.1 Definitions.

a. "Hobby boiler" means a hand-fired steam boiler that operates above fifteen pounds per square inch [103.42 kilopascals] gauge pressure operated during a parade, an exhibition, or a threshing show where the public is invited and not otherwise exempt from section 10.6.
b. “Office” means the Construction Management Office of the Three Affiliated Tribes.

11.11.2 License required.

11.11.2.1 Except as provided in 11.11.2.3, no individual may operate a hobby boiler on the Fort Berthold Reservation unless licensed under this chapter.

11.11.2.2 The Construction Management Office may not issue a hobby boiler license to an individual unless the individual:

a. Files a written application with the Construction Management Office on a form prescribed by the Construction Management Office;
b. Passes an examination developed by the Construction Management Office and pays an examination fee of twenty-five dollars;
c. Provides evidence of the successful completion of one hundred twenty hours of apprenticeship training with a licensed hobby boiler operator. Training must include all of the following:

(1) Basic boiler, steam engine, and piping fundamentals;

(2) Initial firing of the boiler with wood or coal or both and warmup of the steam engine;

(3) Basic operation of the boiler and steam engine to include operation of:

(i) Blower valve;

(ii) Main steam valve;

(iii) Throttle valve and governor;

(iv) Injector and pump operation to include feedline stop and check valves;

(v) Gauge glass, gauge cocks, and water column;

(vi) Safety valve and fusible plug basics;

(vii) Blowdown valve use; and

(vii) Steam engine operation and drain valves.

(4) Normal shutdown procedures;

(5) Emergency shutdown procedures;

(6) Driving and steering to include the use of the reversing lever and stopping procedures; and

(7) Lining up for belt operation.

d. Is at least sixteen years of age; and
e. Pays a twenty-five dollar license fee.

11.11.2.3 A license is not required under this chapter if the hobby boiler operator is not a resident of Fort Berthold Reservation and is qualified by reason of possessing a valid license from another jurisdiction or Canadian province and this license has been approved by the Construction Management Office.

11.11.2.4 Attendance at one hobby boiler training seminar approved by the Construction Management Office may substitute for up to forty hours of apprenticeship training.

11.11.3 Existing operator licenses.

An individual who has operated a hobby boiler within the exterior boundaries of the Fort Berthold Reservation as of July 1, 2007, may receive a license without complying with subdivisions b and c of section 11.11.2.2. "Operated a hobby boiler" means demonstrated operating experience in boiler operations and maintenance that include sufficient training, observation, and personal participation to enable the individual to safely operate a hobby boiler.

11.11.4 Application.

An individual applying for a hobby boiler operator license must complete an application in the form provided by the Construction Management Office, pay any required fee, and provide a notarized affidavit signed by a licensed Three Affiliated Tribes hobby boiler operator attesting to the applicant's completion of one hundred twenty hours of training regarding the operation of a hobby boiler. The notarized affidavit need not be provided if it has already been provided by the applicant in connection with a previous application or if the applicant is applying for an existing operator license under section 11.11.3.

11.11.5 Term of the license.

A hobby boiler operator license is valid for six years except that an initial license expires on January first of the year after the license has been in effect for five years.

11.11.6 License renewal.

An individual may apply to renew a hobby boiler operator license for six years by submitting to the Construction Management Office a renewal request along with a twenty-five dollar renewal fee in advance of the license expiration date.

11.11.7 Hobby boiler operation.

11.11.7.1 Notwithstanding any other provision of this section and with the exception of the operation of miniature boilers, two licensed operators or a licensed operator and an apprentice operator must be in attendance on a hobby boiler during a parade or plowing demonstration or during belt operation. At least one licensed operator must be in attendance on a hobby boiler at all other times except when it is considered safe for a hobby boiler operator to leave the hobby boiler as described in subsection 11.11.7.2.

11.11.7.2 A hobby boiler operator is required to be in attendance on a hobby boiler any time the steam pressure is above fifteen pounds per square inch [103.42 kilopascals] gauge and rising unless all of the following conditions are met:

a. The water is above the one-third level in the gauge glass;
b. The fire is extinguished or banked;
c. All draft doors are closed;
d. The main steam outlet valve or dome valve is closed; and
e. The boiler pressure is at least twenty pounds per square inch [137.90 kilopascals] gauge below the safety valve set pressure and the boiler pressure is decreasing.

11.11.8 License denial or revocation.

1. The Construction Management Office may deny an application for a hobby boiler operator's license if the applicable requirements of the Three Affiliated Tribes Boiler Laws and this chapter are not met or if an applicant is not capable of operating a hobby boiler in a safe manner.
2. The Construction Management Office may revoke a hobby boiler operator's license if the applicable requirements of the Three Affiliated Tribes Boiler Ordinance and this chapter are not met, if an operator operates a hobby boiler carelessly or negligently or otherwise endangers the health and safety of others. An applicant or license holder may appeal the denial or revocation of a license by filing a written appeal with the Construction Management Office within ten days of receipt of written notice of such a decision.