

MAPLETON TOWNSHIP

ZONING ORDINANCE

**CASS COUNTY
NORTH DAKOTA**

May, 2006

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ARTICLE I INTRODUCTION

1.1 Title

These regulations shall be known, and may be cited and referred to as the Mapleton Township, Cass County, North Dakota Zoning Regulations.

1.2 Purpose and Intent

1.2.1 To protect public health, safety, morals, comfort, convenience, prosperity and general welfare of the Township of Mapleton, Cass County, North Dakota.

1.2.2 To secure safety from fire, panic, noxious fumes, and other dangers.

1.2.3 To promote orderly development of land and water resources and to prevent conflict among land uses and structures.

1.3 Authority

These regulations are adopted under the authority granted by Chapter 58-03 of the North Dakota Century Code.

1.4 Jurisdiction

1.4.1 General

These regulations shall apply to the use and enjoyment of all lands within Mapleton Township, Cass County, North Dakota.

1.4.2 Extraterritorial Areas

When an incorporated municipality has declared its intent in exercising its extraterritorial authority as provided by Chapter 40-47 of the North Dakota Century Code, these regulations shall not apply to the area delineated for that purpose.

1.5 Interpretation

These regulations shall be held to be minimum requirements adopted for promotion of purposes cited in Section 1.2. Whenever, the requirements of these regulations are at variance with the requirements of other lawfully adopted rules, regulations, ordinances, deed restrictions or covenants, the most restrictive shall govern unless otherwise specifically stated.

1.6 Severability

If any part, provision or portion of these regulations is adjudged invalid by a court of competent jurisdiction, the remainder of this ordinance shall not be affected thereby.

1.7 Effective Date

These regulations shall be effective upon adoption by the Township Board of Supervisors as provided by the North Dakota Century Code.

1.8 Exceptions

These regulations shall not apply to the use of land and buildings for agriculture as defined herein with the exception of feedlot operation.

ARTICLE 2 RULES AND DEFINITIONS

2.1 Rules

In construction of these regulations, the rules and definitions contained in this section shall be observed and applied except when the context clearly indicates otherwise.

- 2.1.1 Words used in present tense shall include the future.
- 2.1.2 Words used in singular number shall include the plural number, and the plural the singular.
- 2.1.3 Shall is a mandatory word and not discretionary.
- 2.1.4 May is a permissive word.

2.2 Definitions

- 2.2.1 **"Accessory Building and Uses"** means a subordinate building or portion of the main building the use of which is clearly incidental to and serves exclusively the principal building or principal use. The accessory building or use shall be located on the same zoning lot and it is established to contribute to the comfort, convenience or necessity of occupants of the principal building or principal use.
- 2.2.2 **"Adult Bookstore"** means an enclosed building having as a substantial or significant portion of its stock in trade, books, magazines, or other periodicals that are distinguished or characterized by their emphasis on matter depicting or describing sexual activities or anatomic areas, such as genitals, breasts, or buttocks.
- 2.2.3 **"Adult Cinema"** means an enclosed building used on a regular basis for presenting pictorial materials or other visual images by way of direct or indirect projection, which materials are distinguished or characterized by an emphasis on the depiction of sexual activities or specified anatomical areas, such as genitals, breasts, or buttocks, for observation by patrons therein return for the payment of consideration, irrespective of the number of patrons who may be able to view the presentation at one time.
- 2.2.4 **"Adult Entertainment Facility"** means an enclosed building wherein an admission is charged for entrance, or food or nonalcoholic beverages are sold or intended for consumption, and wherein may be observed live presentation of entertainment distinguished or characterized by an emphasis on matters depicting describing or relating to specified sexual activities or specified anatomical areas, such as genitals, breasts, or buttocks.
- 2.2.5 **"Adult Entertainment Center"** means an adult bookstore, adult cinema, adult entertainment facility or any combination thereof.
- 2.2.6 **"Agriculture"** means the process of producing food and fiber customary to the family farming operation with a minimum of 40 acres in area, excluding commercial feedlots, processing and manufacturing of the farm-based products.
- 2.2.7 **"Airport"** means any area designated for the landing and take off of aircraft and any appurtenant areas which are used or intended for use for airport buildings and structures including runways, taxiways, aircraft storage and tie down areas, hangars and other related facilities and open spaces other than landing strips used for family purposes.
- 2.2.8 **"Animal Feeding Operation"** AFO means a place where; livestock have been, are, or will be confined, concentrated and fed for 45 or more days in any 12 month period; animal waste or manure accumulates. This term does not include an animal wintering operation.
- 2.2.9 **"Animal Hospital or Kennel"** means a building or premises set up for treatment and boarding of domestic animals including veterinary facilities.
- 2.2.10 **"Animal Unit Equivalent"** means a unitless number developed from the nutrient and volume characteristics of manure for a specific livestock type. The term animal units is used to normalize the number of animals (e.g. head) for each specific livestock type which produce comparable bulk quantities of manure.
- 2.2.11 **"Building"** means any structure designed or intended for shelter, housing, business, office, and accommodation of persons, animals, chattels or property.
- 2.2.12 **"Building Area"** means that portion of the zoning lot that can be occupied by the principal use, excluding the front, rear and side yards.
- 2.2.13 **"Building Height"** means vertical distance from the grade to the highest point of the roof.

- 2.2.14 **"Building Line"** means a line establishing the minimum distance that structures may be placed from the lot lines or highway right-of-way. For the purposes of these regulations the building line is the same as setback line.
- 2.2.15 **"Building, Principal"** means a building, the principal use of which is single family and multi-family dwellings, and offices, shops, stores and other uses.
- 2.2.16 **"Channel"** means a natural or man-made watercourse for conducting the flowing water.
- 2.2.17 **"Club or Lodge"** means a private club or lodge which is a nonprofit association of persons for the purpose of gatherings and entertaining members including consumption of food and beverages.
- 2.2.18 **"Commercial Gravel Pit"** means any mining and extraction of earth materials for commercial or private sale.
- 2.2.19 **"Comprehensive Plan"** means a guide for management of the physical resources and development of the Township as adopted by the Board of Supervisors.
- 2.2.20 **"Conditional Use"** means use of a special nature not automatically permitted in a zoning district and which requires review and approval of the Zoning Commission after public hearing.
- 2.2.21 **"Conforming Building or Structure"** means a building or structure which complies with all requirements of these regulations and other regulations adopted by the Township.
- 2.2.22 **"Development"** means any man-made change to improved or unimproved real estate, including but not limited to the construction of buildings, structures or accessory structures, the construction of additions or alternations to buildings or structures, ditching, lagooning, dredging, filling, grading, paving, excavation and drilling operations.
- 2.2.23 **"Development Plan"** means a document including maps and data for physical development of an area as provided by these regulations.
- 2.2.24 **"Directory Sign"** is a sign that directs a person to a business location in Mapleton Township.
- 2.2.25 **"District"** means a section or sections of the township for which regulations governing the use of building and premises, the building heights, size of yards, lot area, lot width and the use are uniform.
- 2.2.26 **"Dwelling"** means any building or portion thereof, used exclusively for human habitation including single family and multiple family units but not including hotels or motels.
- 2.2.27 **"Dwelling, Multiple Family"** means a single building or portion thereof, containing two (2) or more dwelling units.
- 2.2.28 **"Dwelling, Single Family"** means a building containing one dwelling unit only.
- 2.2.29 **"Encroachment"** means any fill, building, structure or use including accessory uses projecting into the required yard areas or public and private property.
- 2.2.30 **"Establishment"** means a place of business for processing, production, assembly, sales, service of goods and materials.
- 2.2.31 **"Farming or Ranching"** means cultivating land for production of agricultural crops or livestock, or raising, feeding, or producing livestock, poultry, milk, or fruit. The term does not include producing timber or forest products, nor does the term include a contract where by a processor or distributor of farm products or supplies provides grain, harvesting, or other farm services.
- 2.2.32 **"Feedlot"** is a parcel of land that contains an operation for feeding or raising animals.
- 2.2.33 **"Flood Plain"** means an area that may be covered by floodwater including but not limited to regional floods.
- 2.2.34 **"Frontage"** means the front part of a lot abutting a public right-of-way, or road or highway.

- 2.2.35 "Grade"** means the land elevation at the horizontal intersection of the ground and the building.
- 2.2.36 "Home Occupation"** means any occupation which: (a) carried on in a dwelling unit by members of the family; (b) is clearly secondary to the use of residential dwelling units and (c) does not create excessive noise, traffic or conflict with adjoining uses.
- 2.2.37 "Hotel or Motel"** means a building in which lodging accommodations, with or without meals is provided for compensation.
- 2.2.38 "Junk or Salvage Yard"** means an open area where waste or scrap material, including parts of used motor vehicles, appliances and farm implements are bought, sold, exchanged, stored, baled, parked, disassembled or handled.
- 2.2.39 "Kennel, Animal"** means any premises where dogs, cats and other household pets are boarded, bred and maintained for compensation.
- 2.2.40 "Landfill"** means especially selected, designed, and operated sites for disposal of solid waste in accordance with N.D.C.C. 23-29-03 and the provisions of this ordinance.
- 2.2.41 "Lot"** means a piece, parcel, lot or area of land of continuous assemblage established by survey, plat or deed.
- 2.2.42 "Lot Lines"** means the property lines bounding the lot.
- 2.2.43 "Lot Width"** means the horizontal distance between the side lot lines of a lot measured at the front building setback line.
- 2.2.44 "Lot, Zoning"** means a single lot, parcel, tract of land within a zoning district developed or to be developed.
- 2.2.45 "Mobile Home"** means a manufactured trailer intended for family residential occupancy.
- 2.2.46 "Mobile Home Park"** means a parcel of land for which a detailed plan indicating the location of lots, blocks, streets, facilities and utilities exists.
- 2.2.47 "Non-conforming Building"** means any building which does not comply with any or all of these regulations.
- 2.2.48 "Non-conforming Use"** means any principal use of land or building which does not comply with any or all of these regulations.
- 2.2.49 "Open Space"** is a portion of a development that is permanently set aside for public or private use and will not be developed.
- 2.2.50 "Nursing Home or Convalescent Home"** means a home for the aged or infirm which unrelated persons are accommodated for compensation.
- 2.2.51 "Permitted Uses"** means those uses, buildings or structures which comply with the provisions of specific zoning districts because of the similarities in nature and relationship to each other. Permitted uses are distinct from conditional uses that are authorized only if certain requirements of these provisions are met after a public hearing and approval by the Board of Supervisors.
- 2.2.52 "Person"** means any individual, firm, corporation, partnership or legal entity.
- 2.2.53 "Planned Development"** means a grouping of buildings and structures on a site of five (5) or more acres in single ownership which is not limited by the yard or building height limitations but is based on a detailed development plan and recorded in the Office of the County Register of Deeds upon approval by the Township Board of Supervisors.
- 2.2.54 "Private Gravel Pit"** means for private use, incidental to farming, which is not for sale, the mining and extraction of earth materials.
- 2.2.55 "Public Roadway or Public Way"** means any dedicated and recorded right-of-way including alleys, sidewalks, streets, roads or highways.

- 2.2.56 "Regional Flood"** means a flood determined by the state and Federal Emergency Management Agency which is representative of large floods known to have occurred in the County.
- 2.2.57 "Service Station"** means any building or premises where automotive fuels, automotive related services, lubricants, parts, and supplies are made available to the motorist.
- 2.2.58 "Sign"** means any emblem, name, identification, description or illustration which is used for outdoor advertising having permanent location on the ground or attached to a trailer or other portable device, or attached to or painted on a building including bulletin boards, billboards and poster boards, but excluding real estate for sale signs, political campaign signs, public information and traffic signs.
- 2.2.59 "Site Plan"** means a detailed plan for making improvements to parcel(s) of land for the purpose of building and development as provided in these regulations.
- 2.2.60 "Structural Alterations"** means any change in the supporting elements of a building or structure including bearing elements, partitions, columns, beams, girders, roofs, exterior walls and embankment.
- 2.2.61 "Structure"** means anything constructed or erected, the use of which requires permanent location on the ground including advertising signs and billboards.
- 2.2.62 "Variance"** means the relaxation of the terms of the zoning regulations in relationship to building height, size of the front, rear and side yards, where the literal enforcement of these regulations could create unreasonable hardship, but it is not contrary to the purposes of the Township Comprehensive Plan and these regulations.
- 2.2.61 "Wind Energy Conversion Systems"** Any device that is designed to convert wind power to another form of energy such as electricity, mechanical or heat (also referred to by such common names as wind charger, wind turbine, and wind mill).
- 2.2.62 "Winter Feed Lot"** means a parcel of land where animals are sheltered incidental to farming at any time between October 15 and May 15 of cash production cycle under circumstances in which these animals do not obtain a majority of their feed and nutrients from grazing.
- 2.2.63 "Yard"** means an open space on the zoning lot which is unoccupied or unobstructed by any portion of a structure from the ground upward.
- 2.2.64 "Zoning Commission"** means a body consisting of the three (3) Township supervisors and appointed members under the authority of Chapter 58-03-13 of the North Dakota Century Code to review the planning issues, prepare plans, review the zoning requests and plats of subdivision, zoning amendments and conditional uses and make recommendations to the Board of Supervisors.

ARTICLE 3 GENERAL PROVISIONS

3.1 Compliance

No building or land shall hereafter be used or occupied and no building shall be erected, moved, or altered unless in conformity with these regulations.

3.1.1 Building Height, Lot Area and Yards

No building shall exceed the height, occupy larger part of lot area, and no lot shall be created smaller than the requirements of these regulations.

3.1.2 Substandard Lots

All existing lots at the date of adoption of these regulations shall be deemed buildable unless for the reasons of land suitability, flooding and other physical limitations contrary to the purpose of these regulations.

3.2 Amendments

The Township Board of Supervisors may, from time to time, amend, supplement or repeal any part of these regulations after a public notice and hearing.

3.3 Comprehensive Plan

These regulations are administered and enforced to implement the Comprehensive Plan of the Township, a document adopted by the Board of Supervisors as a policy guide for protection of the townships natural resources and accommodating the type of development deemed appropriate including but not limited to the following objectives.

- 3.3.1** To conserve and enhance the taxable value of land and buildings in the township.
- 3.3.2** To encourage the most appropriate use of land in the township.
- 3.3.3** To regulate and restrict the location and intensity of use of buildings and land not related to farming.
- 3.3.4** To separate and control unavoidable nuisance producing uses to minimize the adverse impacts on the surrounding areas or uses.
- 3.3.5** To facilitate traffic movement and promote development of compatible uses.

3.4 Non-conforming Uses

The lawful use of a building or premises existing at the date of adoption of these regulations may be continued. Where a non-conforming use is discontinued for a period of more than twelve consecutive calendar months any subsequent use or occupancy of such premises shall conform to these regulations. Whenever a building is destroyed or damaged by fire or other casualty to the extent of more than sixty percent (60%) of its market value it shall not be restored unless said building shall conform to the provisions of the district in which it is located. Non-conforming uses shall not be expanded to occupy a larger area of land than existed at the date of adoption of these regulations unless approved by the Township Board of Supervisors after a public hearing, to accrue after Zoning Commission has reviewed request and make recommendation to the Board of Supervisors.

3.5 Land Suitability

No land shall be used for a purpose which is held unsuitable for the reason of flooding, soil limitations, inadequate drainage, incompatibility with adjoining uses or any condition likely to be harmful to the health, safety or the welfare of the people in the area. The Township Zoning Commission and Board of Supervisors may require information and data to determine the land suitability. The Township may consult with county and state agencies to assist in its determination.

3.6 Conditionally Permitted Uses

Where a use is classified as a conditional use under these regulations and exists at the date of adoption of these regulations, it shall be considered a permitted use. Where a use is not allowed as a conditional use or permitted use, under these regulations, and exists at the date of adoption of these regulations, it shall be considered non-conforming and shall be subject to the non-conforming buildings and use provisions. Any use not listed as a permitted use or a conditional permitted use shall automatically be reviewed as a conditional use permit which will be approved by the zoning commission and supervisors after a public hearing.

3.7 Road and Highway Access

A permit for access to township roads is required by the Board of Supervisors. In granting the access permit to the township roads, the Board of Supervisors may adopt rules and regulations as to the number of access points per mile, the width, construction and other features of the access to the adjoining properties. The Board of Supervisors may place conditions when granting a road access permit. Farm driveways and field access points are exempt from these provisions.

3.8 Road and Highway Setback - Tree Plantings, Shelterbelts

All buildings and structures shall be placed at least 100 (one hundred) feet from township, county and state highway rights-of-way for the purpose of preventing hazardous accumulations of snow and to allow for future widening of public right-of-ways. Tree plantings and shelterbelts shall be planted as per the Natural Resources Conservation Service-North Dakota, Windbreak/Shelterbelt Establishment-380, Design and Installation Guide, as attached to this ordinance.

3.9 Riverbank and Floodway Setbacks

All buildings, structures and sewer systems shall be placed at least 200 (two hundred) feet from rivers, streams, floodways and legal drain right-of-ways for the purpose of preventing or reducing damages due to flooding and bank failures.

3.10 Standards

All structures or buildings shall conform to requirements of the North Dakota State Building Code, NDCC 54-21.3, the most recent addition of the National Fire Protection Association, and the National Electrical Code

All individual and community water supply and sewage disposal systems shall conform to the requirements set forth in the North Dakota Plumbing Code and Sanitary Code.

ARTICLE 4 ZONING DISTRICT BOUNDARIES AND MAP

4.1 Zoning Districts

In order to carry out the purposes and provisions of these regulations, the following zoning districts are hereby established.

- 4.1.1** A-1 Agricultural District
- 4.1.2** R-1 Single Family Rural Residential District
- 4.1.3** FP-1 Flood Plain District Overlay

4.2 Zoning District Map

4.2.1 Zoning Districts

The location and boundaries of the zoning districts are hereby established as shown on the "Zoning District Map" on file in the Office of the Township Code Administrator. The zoning district maps, together with all information shown thereon and all amendments thereto, shall be an integral part of these regulations.

4.2.2 Public Roads and Highways as Boundary

Where zoning district boundary lines are indicated as following roads and highways or extensions thereof, such boundary lines shall be construed to be the center line of said roads and highways or extension thereof unless clearly shown to the contrary.

4.2.3 Property Line as Boundary

Where a zoning district boundary line coincides approximately but not exactly with the property line, the zoning boundary shall be construed to be the lot line at that location. All section lines, quarter section lines and quarter section lines may be construed as the property lines.

4.2.4 District Description for Unsubdivided Lands

For unsubdivided property, zoning district boundaries are determined by metes and bounds description or by a legal description as deemed necessary.

4.2.5 Vacated Areas

Where a public road or highway is vacated by the official action of the Board of Township Supervisors, the zoning district boundaries shall be extended to the center of the vacated public road or highway.

4.2.6 Zoning District Boundary Interpretation

Where any uncertainty exists as to the exact location of the zoning district boundary lines, the Board of Supervisors shall determine the location of such boundary lines

4.2.7 Certification

The official zoning map shall bear a certificate with the signature of the Chairman of the Township Board of Supervisors and certification of the Township Clerk and date of adoption of the zoning map as an integral part of these regulations.

ARTICLE 5 ZONING DISTRICT REGULATIONS

5.1 A-1 Agricultural District

5.1.1 Purpose

The purpose of this district is to provide for preservation and protection of agricultural lands and to discourage uses incompatible with agricultural operations or detrimental to agricultural land utilization.

5.1.2 Permitted Uses

- 5.1.2.1 All types of farming and ranching operations including dairying, livestock and poultry raising, apiaries and fur farming.
- 5.1.2.2 Accessory Buildings and Structures.
- 5.1.2.3 Construction and Maintenance of drainage systems to manage water run-off.

5.1.3 Conditionally Permitted Uses

- 5.1.3.1 Four non-farm single family dwellings per quarter section (160 acres) provided that:

- a) Each dwelling shall be located on a separately surveyed and described parcel or lot.
- b) The number of non-farm single family dwellings which may be allowed shall not exceed four (4) per quarter section or quarter-quarter section and shall be calculated based on the number of existing non-farm single family dwellings or lots. The table below identifies the maximum number of non-farm single family residential dwellings or lots allowed per quarter section (or quarter-quarter section)

Permitted Number of New Non-farm Single-family Dwellings

# Existing Non-farm single family units or lots	Number of New Non-farm Single Family Dwellings Permitted			
	40 acres	80 acres	120 acres	160 acres
0 Units	1	2	3	4
1 Units	0	1	2	3
2 Units	0	0	1	2
3 Units	0	0	0	1
4 Units	0	0	0	0

- c) When one (1) or more non-farm single family dwellings are proposed for a location in a quarter-quarter of farmland which is under the ownership of two or more parties, the developer, prior to the institution of the county subdivision review procedures, must comply with the following provisions:
 - I. Provide the zoning administrator with a complete list of names and addresses of property owners within the same quarter-quarter.
 - II. Make an application (along with appropriate fee) for a conveyance agreement. At the time of submittal the Zoning Administrator shall schedule and publish the notice of hearing for the Zoning Commission hearing at which the request is to be heard.
 - III. The developer of the proposed subdivision within the quarter-quarter in question shall be in attendance at said public hearing. At that time he shall file with the Zoning Commission an agreement signed and executed by himself and all other owners of property within the quarter-quarter in the presence of a Notary Public. The agreement shall state that the right to develop a non-farm single family parcel in the quarter-quarter is conveyed to the developer and thereby relinquished by other property owners unless annexation or rezoning of the quarter-quarter were to occur. The agreement

shall also state that the County Commission and the planning commission have the authority to deny subdivision approval, whereby this agreement becomes null and void. In the absence of a notary public, the agreement must be signed by all property owners in the presence of the Zoning Commission at the public hearing at which the request is to be heard.

- IV. If the Zoning Commission approves the conveyance agreement, conditional use procedures may be initiated. If a cluster (grouping) of two (2) to four (4) non-farm single family dwellings is allowed within a single quarter-quarter (40 acres), the proposed cluster must not require additional public roadways other than the existing public roadway on which the proposed development is to front.
- V. The zoning commission may require the developer to erect or plant buffers to reduce the potential conflict between residential and agricultural uses; including deed restrictions which may reduce any future conflict between the proposed use and existing adjacent uses; and/or make any other requirements which are pertinent to each respective conditional use of this type.
- VI. As part of the conditional use proceedings, the developer of a proposed cluster (4/160) must also be in compliance with all other applicable sections of the zoning regulations including the restrictions or requirements of the A-1 Agricultural district.
- VII. If a conditional use permit is approved for a cluster (4/160), the developer must then initiate the platting process in conformance with the Cass County Subdivision Ordinance.

- 5.1.3.2 Borrow Pits
- 5.1.3.3 Cemeteries.
- 5.1.3.4 Churches.
- 5.1.3.5 Golf Courses.
- 5.1.3.6 Grain Elevators and Accessory Structures.
- 5.1.3.7 Home Occupations.
- 5.1.3.8 Parks and Playgrounds.
- 5.1.3.9 Mobile or Manufactured Homes.
- 5.1.3.10 Public and Private Schools.
- 5.1.3.11 Public Buildings and Facilities Including County Garages.
- 5.1.3.12 Stock Piling of Sand and Gravel for Road Construction and Maintenance.
- 5.1.3.13 Utility Lines and Pipe Lines Including Substations for Transformers, Pumping Stations and Lift Stations.
- 5.1.3.14 Water Reservoirs.
- 5.1.3.15 Manufacturing and Processing of Wood Products
- 5.1.3.16 Antique and Craft shops.
- 5.1.3.17 Art Studios.
- 5.1.3.18 Commercially Operated Air Landing Strip and Accessory Buildings.
- 5.1.3.19 Feedlots for feeding livestock, fur bearers and poultry subject to the provisions of 6.8.
- 5.1.3.20 Voltage Transmission Lines and Accessory Structures.

- 5.1.3.21 Manufacturing and Processing of Agricultural Products Produced in the Area.
- 5.1.3.22 Radio, TV Stations and Towers.
- 5.1.3.23 Sale and Services of Agricultural Equipment and Machinery.
- 5.1.3.24 Salvage and Junk Yards Subject to Provisions of Section 6.4.
- 5.1.3.25 Sanitary Landfills subject to the Provisions of Section 6.5.
- 5.1.3.26 Sewage Lagoons and Wastewater Treatment Facilities.
- 5.1.3.27 Skeet, Trap and Rifle Ranges if not Nearer than 1,000 (one thousand) Feet From Any Residence.
- 5.1.3.28 Storage of Farm Related Chemicals.
- 5.1.3.29 Veterinary Clinics, Animal Hospitals and Domestic Animal Kennels not nearer than 500 (five hundred) feet from any Residence except the Residence of the Owner or Operator.
- 5.1.3.30 Mining of Sand, Gravel, Clay and General Excavation subject to Provisions of Section 6.10.

5.1.4 Lot Area and Lot Width

- 5.1.4.1 For non-farm residential uses the lot area shall not be less than 3 (three) acres or the minimum required for sewer system by Cass County Public Health, whichever is greater.
- 5.1.4.2 For non-residential uses the lot area shall not be less than 3 (three) acres or the minimum required for sewer system by Cass County Public Health, whichever is greater.
- 5.1.4.3 The lot width for any use in agricultural district shall not be less than 250 (two hundred fifty) feet.

5.1.5 Yard Requirements

- 5.1.5.1 The minimum front yard, measured from the front lot line shall not be less than 100 (one hundred) feet for properties abutting township roads and 100 (one hundred) feet for properties fronting on other rights-of-ways.
- 5.1.5.2 The minimum rear yard, measured from the rear lot line shall not be less than 50 (fifty) feet.
- 5.1.5.3 The minimum side yard, measured from the side lot line shall not be less than 50 (fifty) feet.

5.1.6 Building Height

- 5.1.6.1 The building height for residential buildings shall not exceed two and one half stories or 35 (thirty-five) feet except for farm buildings and structures.
- 5.1.6.2 The building height for manufacturing of agricultural products shall be determined by the Township Board of Supervisors.
- 5.1.6.3 The building height, excepting the radio and TV towers and church steeples for all other uses shall not exceed 35 (thirty-five) feet.

5.1.7 Parking Requirements

For non-farm uses the parking requirements shall be subject to the provisions of Section 6.1 of these regulations

5.1.8 Sign Requirements

Sign requirements shall be subject to the provisions of Section 6.4 of these regulations.

5.2 R-1 Single Family Rural Residential District

5.2.1 Purpose

The R-1 single-family rural residential district is primarily established to promote a suitable residential rural environment and to accommodate low density detached single family residential units uninterrupted by conflicting uses and incompatible activities.

5.2.2 Permitted Uses

- 5.2.2.1 Single family detached dwelling units.
- 5.2.2.2 Churches, schools and township related facilities.
- 5.2.2.3 Neighborhood playgrounds and open spaces.
- 5.2.2.4 Accessory buildings and structures.
- 5.2.2.5 Home occupation.
- 5.2.2.6 Day care facilities subject to the requirements of the North Dakota State Department of Health and Consolidated Laboratories.

5.2.3 Conditional Uses

- 5.2.3.1 Public facilities including parks, public water and sewerage systems, and golf courses except miniature courses or driving ranges operated for commercial purposes.
- 5.2.3.2 Multi family dwelling units not exceeding 4 (four) units per acre provided that public water and sewer are available.
- 5.2.3.3 Mobile home parks, where public water and sewer is available, with the following requirements may be permitted.
 - (1) A site plan showing location of streets, utilities, off-street parking, driveways walkways blocks, lots, playground and park area.
 - (2) The mobile home park shall contain a minimum of 5 (five) acres of land
 - (3) The maximum number of mobile homes shall be 6 (six) units per gross acre.
 - (4) Each mobile home shall be placed on a lot at least 50 (fifty) feet wide with a minimum area of 5,000 (five thousand)square feet.
 - (5) Each unit shall be placed on a stand and anchored to provide a firm foundation and prevent accidental movement or overturning.
 - a) If located in a flood plain, must be placed on a permanent foundation of concrete, block or wood.
 - (6) Each unit shall have a minimum setback of 10 (ten) feet within the parks and 75 (seventy five) feet from the township roads and 100 one hundred) feet from other highway rights-of-way outside of the park.
 - (7) Each unit shall have a minimum side yard of 10 (ten) feet.
 - (8) The design and construction of private streets within the park shall conform to the design standards used by Richland County and Dwight Township.
 - (9) All units shall be served by underground utilities unless waived by the Zoning Commission.
 - (10) There shall be 2 (two) off-street parking spaces per unit.

- 5.2.3.4 Water reservoirs, water storage tanks, and water pumping stations.

5.2.4 Lot Area and Lot Width

- 5.2.4.1 A lot shall contain no less than three (3) acres for single family uses without public sewer.
- 5.2.4.2 Where public sewer is available, the minimum lot area shall be 10,000 (ten thousand) square feet for single family uses.
- 5.2.4.3 For multi family uses, the minimum lot area shall be 20,000 (twenty thousand) square feet with 5,000 (five thousand) square feet per unit provided that public sewer is available.
- 5.2.4.4 The minimum lot width shall be less than 100 (one hundred) feet.

5.2.5 Yard Requirements

- 5.2.5.1 The minimum front yard, measured from the front lot line, shall be no less than 100 (one hundred) feet on township roads and 100 (one hundred) feet for all other highway rights-of-way.
- 5.2.5.2 The minimum rear yard, measured from the rear lot line, shall not be less than 50 (fifty) feet.
- 5.2.5.3 The minimum side yard, measured from the side lot line, shall not be less than 10 (ten) feet on each side of a lot.

5.2.6 Building Height

No building shall be more than 2 1/2 (two and one half) stories or 35 (thirty five) feet high except farm buildings and church steeples.

5.2.7 Parking Requirements

- 5.2.7.1 There shall be a minimum of 2 (two) off-street parking spaces provided for each residential dwelling unit.
- 5.2.7.2 The parking needs for the conditionally permitted uses and non-residential uses shall be subject to the requirements of Section 6.1.

5.2.8 Sign Requirements

- 5.2.8.1 There shall be no more than one identification sign per residential dwelling structure not exceeding 5 (five) square feet in area. The sign may be wall, pedestal, ground or projecting type but it shall not project into the public right-of-way or public property.
- 5.2.8.2 Temporary signs including "For Rent", political campaign signs greeting signs and rally signs are permitted.

5.2.9 Manufactured Housing (Mobile Home or Pre-built Home)

Manufactured housing may be located in Mapleton Township provided:

- 5.2.9.1 A zoning certificate has been issued by the Township.
- 5.2.9.2 The structure meets or exceeds the National Manufactured Housing Construction and Safety Standard Act (42 U.S.C. 5401 et seq. (1976)).
- 5.2.9.3 The structure is placed on a permanent cement foundation and given skirts.
- 5.2.9.4 The structure must have a living area of at least 600 square feet.
- 5.2.9.5 The structure must have tie-downs.

5.3 FP-1 Flood Plain District Overlay

5.3.1 Applicability

The F-1 flood plain district consists of the lands that have been or may be covered by floodwater as delineated on the maps for Cass County and Mapleton Township prepared by the Federal Emergency Management Agency (FEMA) for administration of the National Flood Insurance Program or other maps and information provided by the state of North Dakota. The delineated areas as flood plain shall be an overlay for all zoning districts.

5.3.2 Purpose

The F-1 flood plain district is primarily established to designate those areas that need to accommodate the run-off water and to protect life, public and private property from the adverse effects of flooding by preventing development on the lands prone to flooding.

5.3.3 Permitted Uses

- 5.4.3.1 General Building uses including general farming, pasture, grazing and related uses provided that the buildings and structures for human habitation are flood proofed above the 100 Year Flood Plain as established by (FEMA).
- 5.4.3.2 Non-structural uses including ponding of run-off water and treated wastewater.
- 5.4.3.3 Public utilities including railroads, roads and highways, channels, and pipelines.
- 5.4.3.4 Outdoor recreational uses including, golf courses, bicycle trails, picnic areas and boat launching ramps.

5.3.4 Conditional Uses

Temporary buildings and structures not related to flood control and farming such as stands, fences, shelters, signs, temporary parking and garden sheds (10' x 16' max size).

5.3.5 Building Height

No building shall be more than 40 (forty) feet high excepting farm buildings and structures and communication relay towers.

5.3.6 Sign Requirements

For signs in F-1 district the provisions of Section 6.4 shall apply.

5.3.7 Flood Proofing Measures

Permitted and conditional uses proposed for the F-1 Flood Plain District that incorporate flood proofing techniques must comply with Section 209 through 1406 of the 1972 Edition of "Flood Proofing Regulations" (FPR), as developed by the Office of the Chief of Engineers, U.S. Army, Washington D.C., a copy of which is hereby incorporated by reference and declared to be part of this Ordinance. Where definition of terms as set forth in Section 301 of FPR conflict in meaning with the definition of terms as set forth in this Ordinance, the latter shall prevail. Appropriate conditions may be attached to the granting of a Conditional Use Permit, including, but not limited to, the following:

- 5.3.7.1 All buildings must be flood proofing minimum of 1.0 foot above the base flood elevation. Flood proofing measures shall be designed in a manner consistent with the flood protection elevation of the particular area, flood velocities, duration, rate of rise, hydrostatic and hydrodynamic forces and other factors associated with the regulatory flood. The applicant shall submit a plan certified by a registered engineer stating that the flood proofing measures are consistent with the regulatory flood protection and associated factors. The following flood proofing measures may be required without limitation:

- a. Anchorage to resist flotation and lateral movement.
- b. Installation of watertight doors, bulkheads or similar methods of construction.
- c. Reinforcement of walls to resist water pressure.
- d. The use of paints, membranes, or mortar to reduce the seepage of water through walls.
- e. The construction of water supply and waste treatment systems which will prevent the entrance of flood waters.
- f. The addition of mass or weight to structures to reduce flotation.
- g. The installation of pumps to lower water levels in structures.
- h. The installation of pumping facilities or comparable practices for subsurface drainage systems for buildings to relieve external foundation, wall, and basement floor pressures.
- i. The location of all electrical equipment, circuits, and installed appliances in a manner which will insure they are not subject to flooding and to provide protection from inundation by the regional flood.
- j. The location of all structural storage facilities for chemicals, explosives, buoyant materials, flammable liquids or other toxic materials which could be hazardous to public health, safety and welfare above the flood protection elevation or the provision of adequate flood proofing to prevent flotation of storage containers which could result in the escape of toxic materials into flood waters.
- k. State approved ring dike.

ARTICLE 6 SPECIAL PROVISIONS

6.1 Moving Structures

6.1.1 Permit Required

No building or structure shall be moved into Mapleton Township from any place outside the township or wholly within the township from one lot or parcel to another, or from the township to a point of the township without first making application to the Zoning Administrator and securing a permit therefore as hereinafter provided. The building or structure must be placed on a permanent slab or foundation within 5 days of moving into township. A permit fee shall accompany each application for a moving permit.

6.1.2 Buildings Exempted

No moving permit shall be required for moving farm structures of any size. No moving permit shall be required for the moving of any other house, building, or structure or part thereof in size smaller than the following dimension: 8 feet high, 10 feet wide and 15 feet long.

6.1.3 Code Compliance Required

Whether or not a permit is required, no building or structure shall be moved to a location within the township unless it will conform to the building, plumbing, heating, electrical and other construction regulations of the township relating to new structures. If construction, alteration or repair work on such building or structure will be necessary to make it conform to such regulations, permit for such work shall be obtained before such building or structure is moved in the township, which shall make provision for the doing of such work, including placing the structure on permanent footings, foundation or slab within 90 days after such building or structure is so located.

No such building or structure shall be moved to a location within the township unless it will conform to the zoning regulations of Mapleton Township and will be a building or structure of the same general character and appearance as other state code buildings or structures in the vicinity. If the Zoning Administrator shall be in doubt as to whether such building or structure will sufficiently conform to the character of the neighborhood into which it is proposed to be moved, he may refer the matter to the Board of Township Supervisors of Mapleton Township for determination, or, in the event that the Zoning Administrator refuses or neglects to issue a moving permit, the applicant has the right to petition the Board of Township Supervisors of Mapleton Township for a hearing. The Township Supervisors may hold a public hearing on said question and shall determine whether or not such building or structure will be permitted at the proposed location.

6.1.4 Contents of Application

Upon making an application required by these regulations, the applicant shall furnish the Zoning Administrator with such information as he may require relative to the size, location, method of construction and type of building or structure, the equipment proposed to be used in the moving, the length of time that such building or structure will be on the township roads, the days and hours when such moving is to be made, the financial responsibility of the applicant and the insurance protection carried by the applicant. The applicant shall give access to said building or structure to the Zoning Administrator for the purposes of inspection and shall permit the Zoning Administrator to inspect the equipment to be used in such moving. No such application for a moving permit shall be granted by the Zoning Administrator unless such building or structure can be moved with reasonable safety to persons or property within the township. The Zoning Administrator may impose such conditions as are necessary to assure compliance with the regulations of the township and to assure the public safety from injury to persons or property within the township.

6.1.5 Special Condition of Permit

If any conditions are imposed upon the proposed moving operation, said permit shall not be granted until the applicant shall have agreed to and assented to such conditions in writing.

6.1.6 Cash Deposit Required

Before any permit is issued, the applicant shall make a cash deposit with the Zoning Administrator to reimburse the township for any expense incurred in connection with said moving and to guarantee that all rubbish and materials will be removed from premises from which the building or structure has been moved, and that all wells and excavations be filled and leveled to existing grade and left in a safe and sanitary condition. If such conditions with respect to such premises are not met, the Zoning Administrator shall proceed to do the necessary work and charge the cost thereof against the cash deposit. After all work under said permit is completed and after deducting any expenses incurred by the township, any monies remaining in the cash deposit shall be returned to the person making such deposit. If said deposit is inadequate, the applicant shall, by reason of such application and permit, be obligated to pay any such additional expense within 30 days after the completion of said work. The amount of cash deposit or bond shall, in each instance, be set by the Board of Township Supervisors after inspection of the building to be moved, but said cash deposit or bond shall not exceed \$2,000.00.

6.1.6 Preparation Required Prior to Moving

Before moving any house, or structure, the owner of the premises from which it is moved shall plug the sewer line with a concrete stopper, shut off the water, and pay for all sewer and water service previously provided. The electric, telephone and gas service which might be connected to or with the house or structure shall be removed by the said company.

6.1.7 Displacement of Wires

In every case in which moving operation shall require the displacement of any overhead wires, it shall be performed by the person, firm or corporation owning, operating and controlling such wires. Prior to the issuance of a permit for moving operations which will entail the moving of overhead wires, the applicant shall furnish the Zoning Administrator with satisfactory proof that the displacement of such wires will be made by the person, firm or corporation owning, operating and controlling such wires on the dates and at the times designated for the passage of such house or structure.

6.1.8 Emergency Orders

At any time during such moving operation, the Zoning Administrator may issue any further order, whether of an emergency nature or otherwise, as may be necessary to compel compliance with these regulations, the terms of the application and permit, or to insure the public safety.

6.1.9 Revocation of Permit

Refusal by the permit holder or any person acting on his behalf to comply with the terms or provisions of these regulations or to adopt any safety or precautionary device or method imposed upon such moving operation shall be a violation of these regulations and shall be cause for immediate revocation of the permit.

6.1.10 Safety Measures

Any flares, street barriers, parking signs or similar safety devices required by law or required pursuant to the terms of these regulations shall be provided by the permit holder at his own expense.

6.2 Platting Development and Utilities Regulations

Platting non-farm development is regulated by the Cass County Subdivision Ordinance, adopted and effective March 6, 2006. The ordinance applies to any person, partnership, corporation, or limited liability company who or which being the owner or agent of and lot, tract, or parcel of land shall lay out, construct, open or dedicate any street, sanitary sewer, storm sewer, water main, or other improvements for public use, travel or other purposes or for the common use of occupants of buildings abutting thereon, or who sells, transfers or agrees or enter into an agreement to sell and land in a subdivision whether by reference to or by other use of a plat of such subdivision or erect any building thereon.

6.3 Off-Street Parking

6.3.1 Purpose

The purpose of this section is to provide for the off-street parking regulations to:

- 6.3.1.1 Increase the safety and capacity of public roads by requiring off-street parking or loading facilities.
- 6.3.1.2 Minimize adverse effects of off-street parking and off-street loading facilities on the adjacent properties.
- 6.3.1.3 Lessen congestion and preventing the overtaxing of public roads by regulating the location and capacity of off-street parking or off-street loading facilities.

6.3.2 General Requirements

- 6.3.2.1 An off-street automobile parking space shall be at least 9 (nine) feet wide and 20 (twenty) feet long, exclusive of access drives or ramps.
- 6.3.2.2 All open off-street parking areas with 4 (four) or more spaces and all loading berths shall be:
 - (1) Improved with all weather surfaces to provide a durable and dust free surface;
 - (2) Graded to dispose of all surface water run-offs but not be diverted to adjoining properties.

6.3.3 Special Requirements

- 6.3.3.1 No building shall be erected or enlarged without meeting the following parking requirements.
 - (1) Business; professional or public office building, studio, bank, medical or dental clinics, three (3) parking spaces plus one additional space for each four hundred (400) square feet of floor area over one thousand (1,000) square feet.

- (2) Hotels and motels; one parking space for each room plus one space for each two hundred (200) square feet of eating and drinking establishments or restaurants.
- (3) Private club or lodge; one parking space for each two hundred (200) square feet of service area.
- (4) Restaurant, eating and drinking establishment; one parking space for each one hundred (100) square feet of floor area.

6.4 Signs

6.4.1 Purpose

The purposes of regulating signs in the Township is to provide for a visually pleasant environment and minimize potentially unsafe conditions for all age groups, but yet offer many opportunities for public information.

6.4.1 Purpose

The purposes of regulating signs in the Township is to provide for a visually pleasant environment and minimize potentially unsafe conditions for all age groups, but yet offer many opportunities for public and private information and advertising.

6.4.2 General Requirements

- 6.4.2.1 No sign shall be located, erected, moved, reconstructed, extended, enlarged or structurally altered without obtaining a permit from the Township Code Administrator.
- 6.4.2.2 Signs shall not be permitted within 300 (three hundred) feet of any road crossing which is measured from the point of intersection of the road centerlines. For state and federal highways the state and federal sign requirements shall apply.
- 6.4.2.3 Directory signs shall not be larger than 20 (twenty) square feet in area for permitted uses.
- 6.4.2.4 Directory signs shall not be larger than 96 (ninety-six) square feet.

6.5 Sanitary Landfills and Solid Waste Sites

6.5.1 Compliance with North Dakota State Laws and Rules

Any person who operates sanitary landfills or solid waste sites shall comply with all North Dakota state laws and administrative rules set forth by the state agencies.

6.5.2 Compliance with County Ordinances and Procedures

Where a county solid waste ordinance exists, any person who operates a sanitary landfill or solid waste site shall comply with the County Ordinance, rules and procedures.

6.5.3 Township Ordinance and Procedures

The Township hereby adopts solid waste provisions, subject to the provisions of NDCC 11-33-20, to assure meeting the purposes of these regulations and the township comprehensive plan.

6.5.4 Purpose

The purpose of these provisions is to protect public health, ground and surface water, conflict with present land uses and preservation and protection of natural resources in the Township.

6.5.5 Site Approval Requirements

All solid sites require approval by Township Board of Supervisors.

6.5.6 Locational Standards

- 6.5.6.1 No landfill, incinerator shall be located within 1 mile of residential uses or unincorporated community.
- 6.5.6.2 No landfill shall be located in areas, which due to high water table, flooding, or soil conditions may affect the quality of surface and ground water.
- 6.5.6.3 No landfill operation shall be located nearer than 200 (two hundred) feet of all road and highway rights-of-way.

6.5.7 Data Submission Requirements

- 6.5.7.1 Maps of the area showing existing features such as roads, highways, vegetation cover, water courses, drainage way, soils, topography, depth of water table, wet lands, sloughs, existing uses, buildings and structures including the existing utility lines.
- 6.5.7.2 A plan for operation of the site including a descriptive text explaining consistency or inconsistency with the natural or man made environment.
- 6.5.7.3 Records of data and information submitted to the state of North Dakota appropriate agencies and the county as a part of application for state and county permits.
- 6.5.7.4 The Township Board of Supervisors may require additional information if it deems it necessary.

6.5.8 Statement of Findings

Upon the public notification and a public hearing the Township Board of Supervisors shall determine whether the proposed site meets the requirements of these regulations. The Township Board of Supervisors may place conditions for approval of the site.

6.6 Junk or Salvage Yards

6.6.1 Purpose

The purpose of these requirements is to preserve and protect the visual and other environmental amenities of the rural areas while allowing the salvage or junk yards as business places.

6.6.2 Site Approval Requirements

All sites for salvage and junkyards require approval by the Township Board of Supervisors.

6.6.3 Locational Standards

- 6.6.3.1 No salvage or junkyard shall be located within 500 (five hundred) feet of a residential district and 200 (two hundred) feet of commercial buildings and structures.
- 6.6.3.2 No salvage or junk yard shall be located in areas which due to high water table, flooding and soil conditions may affect the quality of surface and ground water.
- 6.6.3.3 No salvage or junk yard shall be located nearer than 100 (one hundred) feet of all road and highway rights-of-way.
- 6.6.3.4 All salvage yards and operations shall be screened from the public view unless the salvage material is placed 500 (five hundred) feet away from any highway right-of-way and screened by natural vegetation, building and landform.

6.8 Feed Lots

6.8.1 Purpose

These regulations are designed to allow feed lots for feeding of livestock, furbearers and poultry at the same time protect the adjoining uses against odor, run off and other incompatible characteristics associated with feed lots.

6.8.2 General Requirement

- (1) All feedlots as defined by this code are only permitted as conditional uses subject to the provisions of this code and the requirements of the North Dakota State Health Department. Wherever the provisions of this ordinance conflict with the requirement of ND State Health Department, the more restrictive requirements shall apply.
- (2) All feedlots shall be designed and constructed with all reasonable preventative measures to avoid surface run-off including construction of sealed collection and retention ponds.
- (3) Where appropriate, there shall be sufficient drainage to avoid pollution of the ground and surface water from the standing effluents.
- (4) Feedlots shall not be placed in the floodplains.
- (5) The applicant, as a part of site approval application, shall submit a plan for removal and disposal of the liquid and solid waste generated by the feed lot.
- (6) An "animal unit equivalent" is a unitless number developed from the nutrient and volume characteristics of *manure* for a specific *livestock* type. The term "animal units" is used to normalize the number of animal (e.g., head) for each specific *livestock* type which produce comparable bulk quantities of *manure*. The animal unit equivalents for types of *livestock* and the numbers of *livestock* for facility size thresholds of 300 animal units (a.u.), and so forth, are listed in the following table.
- (7) An Animal feeding operation or AFO means a lot or facility (other than an aquatic animal production facility) where the following conditions are met: a) Animals (other than aquatic animals) have been, are, or will be stable or confined and fed or maintained for a total of 45 days or more in any 12-month period; and b) Crops, vegetation, forage growth, post-harvest residues are not sustained in the normal growing seasons over any portion of the lot or facility. All AFO shall apply to the setback distance as listed in the following table. In no event shall an AFO be located nearer than .50 miles from a residential platted development, Commercial Zoning district, or any city limits, park, cemetery, church, school or residence other than owner/operator's residence.
- (8) The requirements are not applicable to winter feedlots as defined in the definitions.

**Livestock Equivalents (hd)
for Two Sizes (a.u.) of Animal Feeding Operations**

Livestock Type	Animal Unit Equivalent	300 a.u.	1,000 a.u.
1 horse	1.0	300 hd	1,000 hd
1 dairy cow	1.33	225	750
1 mature beef	1.0	300	1,000
1 beef feeder - finishing	1.0	300	1,000
1 beef feeder - backgrounding	0.75	400	1,333
1 mature bison	1.0	300	1,000
1 bison feeder	1.0	300	1,000
1 swine, >55 lbs.	0.4	750	2,500
1 goose or duck	0.2	1,500	5,000
1 sheep	0.1	3,000	10,000
1 turkey	0.2	1,500	5,000
1 chicken	0.1	3,000	10,000

SETBACK DISTANCES FOR ANIMAL FEEDING OPERATIONS

NUMBER OF ANIMAL UNITS	HOG OPERATIONS	OTHER OPERATIONS
Small AFO * 100 - 299	1 mi.	0.50 mi.
Medium AFO 300 - 999	2 mi.	1 mi.

Large AFO	1000 or more	2 mi.	2 mi.
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*Animal Feeding Operation

6.9 Animals Prohibited

Dangerous and/or exotic animals such as, but not limited to, lions, tigers, cheetahs, bears, venomous reptiles, alligators, etc. are prohibited except for traveling fairs, circuses, and brief veterinary care unless a conditional use permit is obtained.

6.10 Mining of Sand, Gravel, Clay and General Ground Excavation

6.10.1 Purpose

The purpose of these provisions is to provide for mining and extraction of materials for commercial uses, and to protect and preserve agricultural land by guiding such operations, and to minimize the traffic, noise, dust, fume and vibration impact on the adjoining uses and the city.

6.10.2 Site Approval Requirements

All excavation sites require approval by the Township. See definitions of "commercial gravel pit" and "private gravel pit". All new excavations are considered conditional uses and shall conform to provisions of the conditional use permit requirements of these regulations.

6.10.3 Data Submission Requirements

- (1) A site plan for operation and reclamation of the mined land including maps showing location of the land to be mined, location of roads and point of access to the site, adjacent residences within one mile of site, maps showing the existing and proposed contours after the land is mined and a time table for operation of the site. There will be a minimum 1 to 3 slope. All topsoil shall be replaced and planted to natural protected vegetation.
- (2) Reclamation of the site shall be completed within one year of the resource being exhausted, abandoned or closure of the operation of the site.
- (3) Proof of compatibility with the existing landform including the vegetation, surface and ground water resources.
- (4) Bonding required as follows:

0 – 5 acres	no bond
6 – 19 acres	\$25,000
20 – 39 acres	\$50,000
40 + acres	\$100,000

6.10.4 Proximity to Existing Uses

The operation of sand and gravel sites shall not be nearer than five hundred (500) feet from any residential uses.

6.10.5 Permit Requirements

Any person who operates a sand and gravel operation shall obtain a permit from the planning and zoning committee before starting any mining or excavation of the sand and gravel sites, and after review by the planning and zoning board and approval by the Township Board.

6.11 Garden Sheds

A garden shed shall be no larger than twelve (12) feet by twelve (12) feet and no greater than twelve (12) feet in height. Garden sheds shall be located no less than three (3) feet from the rear and side lot lines in rear corners of the property. There shall be no more than two (2) garden sheds on any zoning lot. Said structures shall have doors facing into the property.

6.12 Public Nuisances

The maintenance of public nuisances including, but not limited to noxious weeds, smoke, gases, radio interference, blighted structures or buildings, substantial noise in excess of 75 dB during the day and 65 dB at night, accumulation of junk, trash, rubbish, automobiles, dead or diseased trees shall be subject to the provisions of the Township.

6.13 Noise

Sustained noise of over 75 dB during the day and 65 dB at night is not allowed.

6.14 Recreational Vehicles and Travel Trailers

The use of recreational vehicles, travel trailers and other trailers used for temporary occupancy shall be limited to two hundred forty (240) days per year within the township. Storage of residents' recreational vehicles is unlimited.

6.15 Animal Units on Single Family Non-Farm Residential Lots

1. Animal Units shall not exceed one (1) unit per acre density provide that:
(a horse is considered one animal unit)
 - a. the parcel in question comprises an area of at least 3 acres, there shall be minimum of one (1) acres for one animal unit, and an additional acre for every additional animal unit kept on the property. More animal units on acreage will require a conditional use permit.
 - b. the residential use area shall be separated from the area to be used as an animal enclosure by a fence, and that the entire animal enclosure area shall be fenced to prevent escape and subsequent damage to adjacent property.
 - c. no structure intended for housing animals or any manure pile shall be closer than 500 feet from any residential structures other than that of the owner.
 - d. all manure and other animal wastes be removed and disposed of properly on at least an annual basis. Burning manure is not considered a proper disposal method and will not be allowed.
 - e. the number of animal units permitted shall be based on the size of the portion of the parcel to be used as an animal enclosure, and that animal enclosure area shall not be less than 2 acres.

6.16 Trees and Tree Plantings:

1. No person or persons, corporations or otherwise, whether owners or tenants of any property along the streets or roadways of the Township shall permit any trees to project more than eight (8) feet over the sidewalks, streets, and roadways, and less than twelve (12) feet above streets and roadways.
2. It is the duty of all persons, whether owners or tenants to keep the trees along public streets and roadways adjoining such property trimmed in such manner that trees shall not interfere with travel on said streets, roadways, and sidewalks.
3. No persons, firms or corporations shall plant any tree, shrub, or other vegetable growth except lawn grass on any road right-of-way, or within confines of the ditch back slope.
4. For the purpose of insuring reasonable visibility at street or roadway intersections, trees shall be trimmed to at least twelve (12) feet above street or roadway surface and eight (8) feet over sidewalks.
5. Shelterbelts and farmstead windbreaks shall be planted as per the Natural Resources Conservation Service-North Dakota, Windbreak/Shelterbelt Establishment-380, Design and Installation Guide, as attached to this ordinance.
6. Windbreaks shall be located no closer than 16 feet away from any property line unless both property owners execute a signed agreement allowing closer planting.
7. No trees or shrubs may be placed within (county setback, 33 ft) of a section line unless written permission has been secured from the Cass County Commission or the Mapleton Township Board of Supervisors.
8. No trees shall be placed within the easement area of overhead transmission lines unless permission has been secured from the appropriate utility company.

9. Windbreaks that are adjacent to or cross legal and private drainage ways should be set back at least one hundred (100) to prevent snow and ice buildup that would restrict spring drainage.

6.17 Fences

1. No site-obscuring fence over forty-eight (48) inches in height shall be erected within the front yard of any lot used for residential purposes.
2. No fence shall exceed a height of six (6) feet without first obtaining a permit from the Zoning Administrator.
3. No permanent fence shall be erected on a road right-of-way of within the confines of the ditch back stop.
4. Electrical fences shall conform in all respects to the State of North Dakota regulations for electrical wiring, and shall be energized only with underwriters laboratories approved equipment.

6.18 Home Occupations, Standards for Approval – Shall be considered as a conditional use and shall conform to the provisions of the conditional use permit requirements of these regulations.

Rural home occupations shall conform to the requirements for unincorporated community homes except:

- a. Rural Home Occupations may be located in a separate non-residential or farm building provided any building principally used for the home occupation shall not exceed one thousand two hundred and eighty (1,280) square feet. Minimum lot size for a separate non-residential building shall be one (1) acre.
- b. Employees are limited to two full time or four part time personnel.
- c. Structural additions may be made to a dwelling provided the alterations shall not exceed twenty-five (25) percent of the main floor of the area of the dwelling, but not including basement or garage floor area. A building permit is required.
- d. Location site shall be limited to single lot residential sites or farmstead sites.

6.19 Utilities

1. The term "utilities" includes, but is not limited to, electric power, electrical transmission lines, wind conversion systems, commercial wind generators, dams, electrical and telephone towers and substations, natural gas pipelines, the petroleum product pipelines, water and sewer lines, telephone lines and other above ground or underground communication and energy transfer lines and pipelines.
2. All new utility lines and pipelines require a permit.
3. All new utility lines and pipelines are considered conditional uses and shall conform to the provisions of the Conditional Use Permit requirements of these regulations.
4. All pipelines, natural gas, petroleum pipelines and other energy transfer lines shall be placed deep enough in the ground so as to not interfere with or become hazardous to normal farming operations.
5. Excavation for tunneling of any pipelines under roads, farm drains, group drains and local drains shall be done by the company owning or leasing said pipelines and the cost of said excavation and damages to be born by the said company.
6. All wind generators shall be set back one thousand (1,000) feet from residences other than that of the owner/operator.
7. All utilities shall notify the township supervisors within thirty days of abandoning a tower site or utilities. All utilities shall be removed within one year after abandonment.
8. All utilities, excluding wind generators, shall be set back the height of the tower plus twenty-five percent (25%).

ARTICLE 7 ADMINISTRATION AND ENFORCEMENT

7.1 Organization

To administer these regulations the following bodies are hereby vested with authority to act in behalf of the Township.

- (1) The Code Administrator
- (2) The Zoning Commission

7.2 The Code Administrator

The Code Administrator is a duly appointed township official authorized by the Board of Supervisors and is responsible to administer Zoning Regulations, to assist the Zoning Commission, and the Board of Supervisors on any matter related to planning for and development of the township.

7.2.1 Duties

- 7.2.1.1 Issue all zoning certificates, permits and maintain records thereof.
- 7.2.1.2 Issue all building and repair permits.
- 7.2.1.3 Maintain zoning related records and zoning district map including records of all amendments, conditional uses and variances.
- 7.2.1.4 Receive, file and forward to the Zoning Commission and Board of Supervisors all applications for zoning amendments, site approvals and conditional uses.
- 7.2.1.5 Prepare and publish notices and notify adjoining property owners.
- 7.2.1.6 Notify, in writing, the property owner or user upon finding violation of these regulations and cite the nature of violation clearly and require compliance within a reasonable time. If the notification is not replied to or steps are not taken to correct the violations within 30 (thirty) days, the Code Administrator shall make a report of the findings to the Board of Supervisors.

7.2.2 Interpretation of Regulations

All questions of interpretation of these regulations shall be presented to the Code Administrator and that such questions shall be presented to the Board of Supervisors only on appeal from the decision of the Code Administrator.

7.2.3 Building Permit Applications

Any person or persons intending to construct or reconstruct or relocate a building or make alteration, shall, before proceeding with the work, or commencing any excavation in connection with it, shall obtain a permit from the Code Administrator. These regulations shall also apply to the mobile homes.

- 7.2.3.1 Each application for a building permit shall be accompanied by a legal description and a map showing the actual dimension of the lot to be built upon, the size, shape and location of the building for observing the yard requirements of these regulations.
- 7.2.3.2 The application shall specify the type of the building, structure, material of which it is composed, the part or portion of the lot to be occupied by the principal building and accessory buildings and the probable building cost, together with such additional plans and specifications as required by these regulations.

7.2.4 Building Permits

The Code Administrator shall issue a building permit if the proposed building or structure conforms to zoning and building provision of these regulations. If the Code Administrator denies a permit because of non-conformance with these regulations, he shall inform the applicant of his/her right to appeal to the Board of Supervisors.

7.2.5 Building Permit Fees

The Code Administrator shall charge and collect a fee according to the Resolution of Fees and Schedules established by the Township Board of Supervisors. The applicant for a conditional use permit and amendment to the zoning ordinance, or building permit, shall be liable for and pay to the Township Clerk sufficient sums of money to pay for and cover all of the costs incurred by the Township for the processing of such application, including, but not limited to: publication costs; attorney's fees; mileage; copy expense, etc. No Permit shall be issued until all such costs as these described herein have been paid by the applicant, unless the Township Board of Supervisors has otherwise provided by resolution for a particular case.

7.2.6 Certificate of Occupancy or Use

The Code Administrator shall issue a certificate of occupancy upon inspection of the completed building, including placement of mobile homes and manufactured homes and assurance that all provisions and conditions set forth by the authority of these regulations are met. In the event the Code Administrator finds violations and deviations from the terms and conditions of these regulations, he shall make a report and recommendation for action to the Board of Supervisors.

7.2.7 Conditional Use and Site Approval Permits

The Code Administrator shall issue a conditional use or site approval permit upon approval of the application by the Zoning Commission and Board of Supervisors stipulating all conditions set forth.

7.2.8 Variances

The Code Administrator shall issue a permit if the Board of Supervisors reverses the decision. The terms of the variance or special use shall be stipulated in the permit.

7.3 The Zoning Commission

The Zoning Commission shall consist of the three township supervisors. Where a city is exercising extraterritorial zoning jurisdiction two members may be appointed by the city to the township zoning commission.

7.3.1 Duties

- 7.3.1.1 To hear and recommend action to the Board of Supervisors on all applications for amendments to zoning districts.
- 7.3.1.2 To hear and recommend action to the Board of Supervisors on all applications for conditional uses and site approvals in the manner prescribed in these regulations.
- 7.3.1.3 To study, examine and recommend action to the Board of Supervisors on issues which may adversely affect the natural resources and farming operations in the Township.
- 7.3.1.4 To serve in an advisory capacity to the Township Board of Supervisors whereby final action is implemented.

7.3.2 Notice of Hearings

The Zoning Commission shall fix a reasonable date for hearing of applications for zoning district amendments, conditional use permits, site approval applications and other matters before it, give public notice thereof in the official newspaper of the county and the nearest regularly published newspaper at least 15 (fifteen) days prior to the hearing. The notices shall give time and place of hearing and shall state the purpose of the hearing and that the applications and supporting documents for zoning district amendments and conditional use permits shall be available for public inspection by the Code Administrator.

7.3.3 Meetings

Meetings of the Zoning Commission shall be held at the call of the Chairperson and at such other times as the Zoning Commission may determine. All meetings shall be open to the public and any person may testify for or against a petition.

7.4.3 Violations and Penalties

8.2.2 Public Hearing Notice

Shall be the same as the provisions set forth for public hearing notice for zoning district amendment in Section 8.1.1.

8.2.3 Public Hearings

Shall be the same as the provisions set forth for public hearing for zoning district amendment in Section 8.1.2.

8.2.4 Data Submission Requirements

Shall be the same as the provisions set forth for data submission requirements for zoning district amendment in Section 8.1.3.

8.2.5 Deliberation and Decision

Shall be the same as the provisions set forth for deliberation and decision for zoning district amendment in Section 8.1.4

8.2.6 Standards

No application for conditional use shall be approved unless findings are made that all of the following conditions are present.

- 8.2.6.1 That the establishment, maintenance or operation of the conditional use will not be detrimental to or endanger the public health, safety, morals, comfort or general welfare.
- 8.2.6.2 That the uses, values and enjoyment of other property in the neighborhood for purposes already permitted shall be in no foreseeable manner substantially impaired or diminished by the establishment, maintenance or operation of the conditional use.
- 8.2.6.3 That the establishment of the conditional use will not impede the normal and orderly development and improvement of the surrounding property for uses permitted in the district.
- 8.2.6.4 That adequate utilities, access roads, drainage and other necessary site improvements have been or are being provided.
- 8.2.6.5 That adequate measures have been or will be taken to provide ingress and egress so designed as to minimize traffic impact on the area.
- 8.2.6.6 That the conditional use shall substantially conform to all applicable regulations of the district in which it is located.

8.2.7 Conditions and Guarantees

- 8.2.7.1 Prior to the decision on any conditional use, the Board of Supervisors may stipulate such conditions and restrictions upon the establishment, location, construction, maintenance and operation of the conditional use as deemed necessary to promote the public health, safety and general welfare of the township and to secure compliance with the standards and requirements specified in Section 8.2.6. In all cases in which conditional uses are granted, the Board of Supervisors shall require such evidence and guarantees as it may deem

necessary as proof that the conditions stipulated in connection therewith are being and will be complied with.

- 8.2.7.2 No alteration of a conditional use shall be permitted unless approved by the Board of Supervisors. Where the Board of Supervisors has approved or conditionally approved an application for a conditional use, such approval shall become null and void within 12 (twelve)

months of the date of the Board of Supervisors action unless the use is commenced, construction is underway or the current owner possesses a valid building permit.

8.3 Variances

Variance from the terms of these regulations as to building height, lot area and yard requirements may be granted provided that the applicant establishes proof of practical difficulty or undue hardship.

8.3.1 Public Hearing Notice

Notice of all such public hearings shall be published at least 15 (fifteen) days prior to the hearing in the official newspaper of the county. The notice of hearing shall include: (1) the time and place of hearing; (2) description of the property by street address for platted lands and clearly identifiable location for the unplatted lands; (3) the proposed use and requested zoning variance; (4) time and place for public inspection of the documents before the hearing.

8.3.2 Public Hearings

Shall be the same as the provisions set forth for public hearing notice for zoning district amendment in Section 8.1.

8.3.3 Data Submission Requirements

Petitions for variances shall be submitted with the following information.

- 8.3.3.1 Description of the property by street address for platted land and clearly identifiable location for the unplatted lands, the name and addresses of all owners of property lying within one mile of the site.
- 8.3.3.2 A map showing the existing land uses and zoning district classification of the area.
- 8.3.3.3 A fee shall be paid in accordance with the schedule established by the Zoning Commission.

8.3.4 Deliberation and Decision

In making its finding, the Zoning Commission and Board of Supervisors shall follow the same provisions set forth for deliberation and decision for zoning district amendments in Section 8.1.4.

8.3.5 Standards

No application for variance shall be approved unless it is found that all of the following are present.

- 8.3.5.1 That special conditions and circumstances exist which are peculiar to the premises and which are not applicable to other premises in the same zoning district.
- 8.3.5.2 That literal interpretation of these regulations would deprive the applicant of rights commonly enjoyed by other properties in the same zoning district.
- 8.3.5.3 That the special conditions and circumstances have not resulted from actions of the applicant.
- 8.3.5.4 That granting the variance requested will not confer upon the applicant any special privileges that are denied by these regulations to other premises.

8.3.6 Justification

- 8.3.6.1 That the reasons set forth in the application justify the granting of the variance.
- 8.3.6.2 The variance is the minimum which would make possible a reasonable use of the premises.

- 8.3.6.3 That the granting of variance will be in harmony with the general purpose of these regulations and will not be injurious to the surrounding premises, neighborhood or the city and will not be contrary to the comprehensive plan and the purposes of these regulations.
- 8.3.6.4 That there is practical difficulty or unnecessary hardship in use of the premises if the strict application of the regulations were to be carried out.

8.3.7 Authorized Variances

A variance shall not be granted for any yard or setback less than the yard or setback as required by these regulations.

- 8.3.7.1 To reduce not by more than twenty percent (20%) the applicable requirements for lot area and lot width.
- 8.3.7.2 To reduce the applicable off-street parking or loading facilities by no more than fifty percent (50%) of the requirements.
- 8.3.7.3 To permit the use of lot of record if it is smaller than the minimum size required by these regulations.
- 8.3.7.4 To permit roof alterations to provide additional windows, headroom or area for occupancy of third level.
- 8.3.7.5 To permit conversion of an existing building to a permitted residential use provided that is shall not conflict with the above standards cited in Sections 8.3.5 and 8.3.6.

8.4 Appeals of Administrative Decisions

8.4.1 Applicability

The Board of Township Supervisors shall be authorized to hear and decide appeals where it is alleged there is an error in any order, requirement, decision or determination made by an administrative official of the Township in the administration or enforcement of this zoning ordinance

8.4.2 Right to Appeal

Appeals of Administrative Decisions may be filed by any person aggrieved or by any officer, department, board or agency affected by any decision of the administrative officer.

8.4.3 Application Submittal

Applications for Appeals of Administrative Decisions shall be submitted to the Codes Administrator in a form established by the Codes Administrator along with a nonrefundable fee that has been established by the Board of Township Supervisors. No application shall be processed until the application is complete and the required fee has been paid.

8.4.4 Time of Filing Appeal

Appeals of Administrative Decisions shall be filed within 10 days of the date of the decision being appealed.

8.4.5 Effect of Filing

The filing of a complete application for appeal stays all proceedings in furtherance of the action appealed, unless the official whose decision is being appealed certifies to the Board of Township Supervisors, after the appeal is filed, that, because of facts stated in the certification, a stay would cause immediate peril to life or property. In such case, proceedings shall not be stayed other than by a restraining order, which may be granted by the Board of Township Supervisors, or by a court of record.

8.4.6 Transmittal of Papers

The Codes Administrator or the official whose decision is being appealed shall transmit to the Board of Township Supervisors all papers constituting the record upon which the action appealed is taken.

8.4.7 Review and Action – Board of Township Supervisors

Appeals of Administrative Decisions shall be taken to the Board of Township Supervisors. The Board of Township Supervisors shall grant to the administrative official's decision a presumption of correctness, placing the burden of persuasion of error on the appellant. In exercising the appeal power, the Board of Township Supervisors shall have all powers of the official from whom the appeal is taken, and the Board of township Supervisors may reverse or affirm wholly or partly or may modify the decision being appealed. If the Board of Township Supervisors determines that it is necessary to obtain additional evidence in order to resolve the matter, it shall remand the appeal to the official from whom the appeal is taken, with directions to obtain such evidence and to reconsider the decision in light of such evidence. A concurring vote of three members of the Board of Township Supervisors shall be necessary to reverse any order, requirement, decision, or determination of an administrative official.

8.4.8 Review Criteria; Findings of Fact

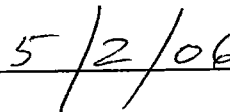
An appeal shall be sustained only if the Board of Township Supervisors finds that the administrative official erred. Every decision of the Board of Township Supervisors shall be accompanied by written findings of fact specifying the reason for the decision. These findings shall be filed in the office of the Board of Township Supervisors within 15 days after the date of the final action.

ARTICLE 9 ADOPTION

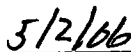
Whereas, the Mapleton Township Zoning Commission has recommended adoption of the Mapleton Township Zoning Ordinance to the Mapleton Township Board of Supervisors,

Therefore Be it Resolved, that the Mapleton Township Board of Supervisors hereby adopts the Mapleton Township Zoning Ordinance, 2006

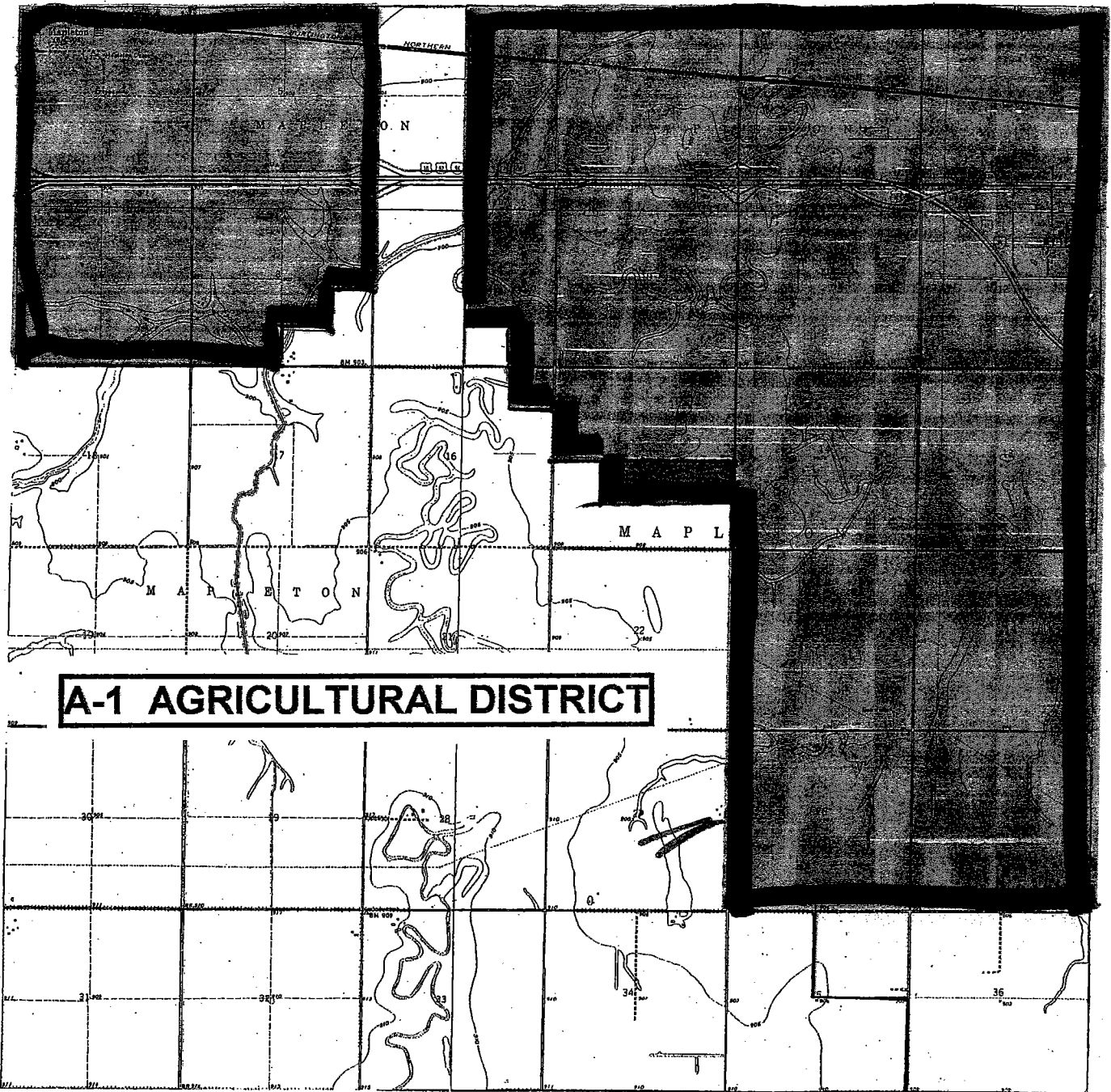

Chairman, Mapleton Township Board of Supervisors


Date


Clerk, Mapleton Township


Date

OFFICIAL ZONING MAP MAPLETON TOWNSHIP



A-1 AGRICULTURAL DISTRICT

LEGEND:

A-1 AGRICULTURAL DISTRICT

FARGO EXTRATERRITORIAL AREA

DATE OF ADOPTION: 5/2/06

SIGNED: John W Rutter chairman

ATTEST: Deborah
William Siskewicz

Windbreak/Shelterbelt Establishment – 380 DESIGN AND INSTALLATION GUIDE

This document provides conservation planners with the parameters, procedures, and requirements for developing site-specific plans for windbreak and shelterbelt systems for a variety of purposes. Where appropriate, specific references are cited to provide detailed information needed for a successful design. Note: eFOTG refers to NRCS' electronic Field Office Technical Guide.

The supporting documents needed to complete a windbreak design are:

- Windbreak Suitability Groups by County for each soil component are found in eFOTG Section II - Windbreaks/Forest Subfolder.
- Tree Care and Management is located in eFOTG Section I – Reference Subjects Subfolder – Windbreaks and Woodland Subfolder.
- Expected 20-Year Tree Heights by Windbreak Suitability Groups is located in eFOTG Section II - Windbreaks/Forest Subfolder
- Tree and Shrub Characteristics table is located in eFOTG Section I – Reference Subjects Subfolder – Windbreaks and Woodland Subfolder.

No matter the purpose of the planting, most plantings are simply modifications of two basic windbreak/shelterbelt designs.

1. Building site or livestock shelterbelts, which are multiple row plantings, designed to protect farmsteads, feedlots or other building sites. They may be designed to protect livestock or other animals wherever that protection is needed.
2. Field windbreaks that are single- or multiple-row plantings designed to prevent erosion, protect crops and roads, to harvest snow, to provide noise or visual screens or to supplement building site or livestock shelterbelts.

WINDBREAK SUITABILITY GROUPS

To determine which trees will grow satisfactorily on which soils and to determine the expected heights after 20 years, refer to Windbreak Suitability Groups by County for each soil component and Expected 20-Year Tree Heights, respectively.

WOODY PLANT STOCK

To determine which type of plant stock is appropriate for windbreak/shelterbelts refer Tree Care and Management, page 2.

STOCK STORAGE HANDLING AND CARE REQUIREMENTS

To determine proper stock storage, handling and care requirements, refer to Tree Care and Management pages 3-4.

SITE PREPARATION

To determine an appropriate method of site preparation, refer to Tree Care and Management pages 4-8.

PLANTING

To determine an appropriate planting technique for a particular stock used in a windbreak/shelterbelt system, refer to Tree Care and Management, pages 8-11.

ORIENTATION, LOCATION, SETBACKS

When designing a windbreak, consider the effects of the surrounding topography and land management on the ability of the windbreak to perform its function. Conversely, consider the positive and potentially negative impacts the windbreak may have on the surrounding land uses. A sample of the items to consider include: areas of snow drifts, water runoff from melting snow, water erosion potential, stifling of air flows during the summer, visibility hazards, ice blockage of drains, etc.

Orientation

Wherever possible the plantings should be oriented perpendicular to troublesome winds. Since winds rarely blow from the same direction all the time, base the design on the predominant wind direction during the time that the area needs protection. For snow control or harvest purposes and for winter livestock or farmstead protection in North Dakota, predominant winter winds come from the northwest, except in the Red River Valley where they generally come from the north-northwest.

However, not all damaging storms come from the predominant wind direction. Individual sites can vary considerably. Late season snowstorms could plug a road from a southeast direction or fragile crops could be blasted by a hot, dry wind from the southwest. Determine what needs protection and from where the damaging winds originate and locate the windbreak/shelterbelt accordingly.

Locations

All Windbreaks

Windbreak design is often based upon the downwind protection provided by the windbreak at 20 years of age. This distance is measured in multiples of windbreak height at 20 years and is referred to as H. H = height of tree or shrub, measured at 20 years unless otherwise noted. For certain situations H may be multiplied by values other than 10. (15-20 H for a snow spreading windbreak.)

On sloping land they should be located as near to the contour as possible to reduce erosion risks and water loss.

In western North Dakota or on droughty soils consider locating windbreaks to allow the diverting of water from adjacent areas into the windbreak for supplemental moisture.

Windbreaks to trap snow for supplemental water in stock ponds should be located in a position to dump the majority of the snow close to, or in, the stock pond or major tributaries. Avoid tree species such as cottonwood, willow etc. that are heavy water users. Windbreaks for this purpose should be as narrow and dense as possible (ex: twin-row conifer or twin-row shrub).

Windbreaks will be positioned to avoid causing visibility problems at road intersections, curves and driveway entrances. Generally speaking, the trees or shrubs at maturity should not spread into the right-of-ways of roads. Refer to Tree and Shrub Characteristics for the spread (width) of plants at maturity.

Maximum snow deposition will usually occur within a zone located 2-5 H from the most windward dense row. This relationship holds true for dense windbreaks as well as porous windbreaks. Differences in snowdrift depth are more pronounced on more dense windbreaks.

Primary Windbreaks

Windbreaks primarily for wind protection and snow control are usually located to the north and west of the area needing protection.

Windbreaks needed primarily for wind protection of crops shall be located in a manner that places them between the troublesome winds at the critical stage of the crop needing protection.

Snow traps located 50-150' upwind of the primary windbreak can increase effectiveness of the rest of the windbreak system by reducing the amount of snow needing to be stored in the primary windbreak. (MLRA 55 and 56).

Trapping of snow outside the primary windbreak in Major Land Resource Areas 53, 54, and 58 should be planned with caution, since the removal of snow moisture from the root zone of the main windbreak may adversely impact the life and effectiveness of the windbreak.

All areas needing protection should be located within the 10H - 15 H zone on the leeward side of the windbreak. Estimates of 20-year heights of trees and shrubs needed to calculate areas of protection can be found in Expected 20-Year Tree Heights.

Field windbreaks designed for snow spreading may be spaced up to 20 H apart.

Secondary Windbreaks

3-5 rows

Secondary windbreaks are located on the leeward sides, usually the south and east, of the area protected by the primary windbreak.

Secondary windbreaks usually consist of shrubs or short trees to stop the rare snowstorm from the south or east while allowing summer breezes to penetrate the protected area.

Setbacks

All Windbreaks

Windbreaks shall be located no closer than 16 feet away from any property line unless a signed agreement between both owners exists that would permit a closer planting.

According to North Dakota Century Code, no trees or shrubs may be placed within 33 feet of a section line unless written permission has first been secured from the county commissioners or township supervisors.

No trees shall be placed within the easement area of overhead transmission lines unless permission has been secured from the appropriate utility company.

As per international treaty, no trees or shrubs shall be planted in a location where the foliage, at maturity, will encroach upon the 20' wide (10' each side) line-of-site vista along the Canada-USA border.

Windbreaks that are adjacent to, or cross, legal and private drainage ways should be set back at least 100' to prevent snow and ice buildup that will restrict spring drainage.

In all cases, if local units of government have established more restrictive setback distances, then the more restrictive regulations will apply.

Primary Windbreaks

For windbreaks north and/or west of the area needing protection, the most windward row must be at least 200 feet from the area to be protected. See Figure 1.

When measuring from roadways, the measurement should begin at the edge of the road surface nearest to the proposed windbreak. See Figure 2. The most windward row of a snow trap can be used for setback measurement purposes. This setback distance also applies to the ends of windbreaks that are perpendicular

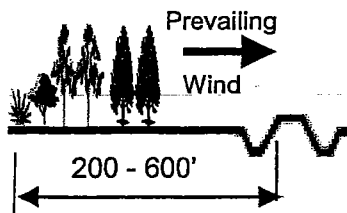


Figure 2

to roads and areas needing protection.

The setback distances may be reduced by 50 feet if topography, healthy field windbreaks upwind, reduced fetch distances, or long

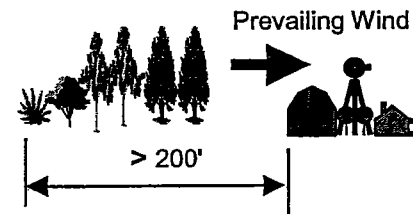


Figure 1

term crop management practices can be expected to remove 50 percent or more of the typical snow load before it reaches the main windbreak.

Leeward rows of primary windbreaks, located to the north or west of a road, even with the minimum 200-foot setback to the windward row, should be no closer than 100 feet to the nearest traveled portion of a public road. See Figure 3.

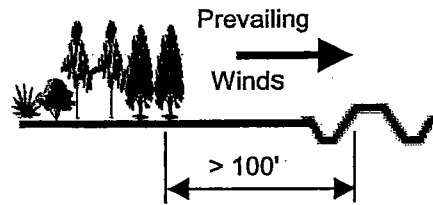


Figure 3

For snow control, windbreaks should not be placed farther from the area needing protection than 35 times the expected 20-year height of the tallest species to be planted or 600 feet, whichever is smaller.

Windbreaks planted to the south or east of roadways shall be located no closer to the road than 5 times (5H) the mature heights of the trees and/or shrubs in order to reduce upwind snow deposition and shading problems. Refer to Tree and Shrub Characteristics for mature plant heights. When measuring from roadways, measurements begin at the portion of the road surface nearest the proposed planting. See Figure 4

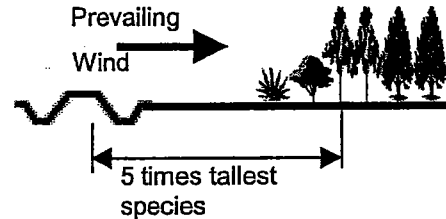


Figure 4

100' windward row

Secondary Windbreaks

In North Dakota, secondary windbreaks are usually located to the south and east of the areas needing protection. Secondary windbreaks should be located far enough away from the area needing protection to allow snow deposition where it won't be a problem and to provide year-round accessibility in and around the area protected.

The inside tree or shrub row in windbreaks on the south and east of areas needing protection shall not be any closer than 100 feet. Where solar gain during the winter is important, windbreaks on the south side of a building site shall be no closer than 3 times the mature height of the tallest plant. Exercise caution in utilizing tall trees in secondary windbreaks that may restrict summer breezes.

WINDBREAK DESIGN

General Information

Windbreak tree species shall be selected that are compatible with the soils on which they will be planted. Refer to the Expected 20-Year Tree Heights in Section II of the FOTG to determine which plants will grow on which soils. Most soil map units contain small percentages of minor soil components. See Windbreak Suitability Groups by County in Section II FOTG to determine component soils within each map unit. Ensure that the species selected are compatible with these minor components as well. Changes in soil properties within the planting site may require a species change within the row. If there is any doubt, select species appropriate for the most limiting soil condition.

Unless otherwise noted, 20-year plant heights will be used to determine setback distances and the extent of protected areas. Expected 20-year heights of trees and shrubs, under good management, can be found in Expected 20-Year Tree Heights, eFOTG Section II.

Maximum snow depth can be expected within 2-5 H from the tallest tree or shrub row, under normal winter conditions. The deepest part of the snowdrift will be closest to dense windbreaks and will be located progressively farther away from the windbreak as windbreak density decreases.

Zones of protection will vary, depending upon density and height of the windbreak. Generally the denser the windbreak the greater the wind speed reduction and the smaller the zone of protection.