



**Charter Township of Bedford
Planning Commission Meeting**

March 28th, 2023, 6:30 p.m.

115 S. Uldriks Drive

Battle Creek, MI 49037-1165

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www.bedfordchartertwpmi.gov

1. Call Meeting to order
 - a. Pledge of Allegiance
2. Roll Call: Barry Beamish, Claudia Brown, Barbara Jones, Shirley Tuggle, Tawney Wolters, Kevin Villadsen, Mike Staib
 - a. Absence Report
3. Approval of March 28th, 2023 agenda
4. Approval of February 28th, 2023 meeting minutes
5. Liaison report: Trustee Beamish
6. Public Comment Time on Agenda Items Only
7. Discussion of Old Business
 - a. Final discussion of Master Plan Review
 - b. Final discussion of Solar Ordinance Review
8. Open Public Comment Time
9. Planning Commission Member Time
10. Chair to announce meeting adjourned

Next Meeting Tuesday May 23rd, 2023 at 6:30pm

CHARTER TOWNSHIP OF BEDFORD
115 S. ULDRIS DRIVE
BATTLE CREEK, MICHIGAN
PLANNING COMMISSION MEETING MINUTES
February 28, 2023

Call to Order: 6:30 pm by Chairman, Mike Staib

- **Pledge of Allegiance administered by attending body.**

Approval of a temporary secretary, Barbara Jones, for the February 28th 2023 meeting: Moved by Trustee Beamish, second by Commissioner Villadsen, voice vote all in favor; motion approved.

Roll Call: Barry Beamish, Board Trustee; Commissioners: Barbara Jones, Claudia Brown, Kevin Villadsen, Tawney Wolters, Mike Staib. Quorum was present.
Excused absence: Shirley Tuggle

Approval of February 28, 2023 Agenda: Moved by Trustee Beamish, second by Commissioner Brown; motion approved.

Approval of January 24, 2023 Minutes: Moved by Commissioner Villadsen, second by Commissioner Wolters; motion approved.

Liaison Report: Trustee Beamish stated that the Board was waiting on the updated Solar Ordinance, but did not express any urgency. A potential timeline for sending the Solar Ordinance to the board was discussed, but nothing was set in place.

Public Comment Time on Agenda Items: Open and closed at 6:36 pm, no comments.

New Business:

Review and adoption of Rules of Decorum: Moved by Trustee Beamish, second by Commissioner Jones, 6 yes; motion approved.

Review and adoption of 2022 Annual Report: Moved by Commissioner Wolters, second by Jones, 6 yes; motion approved.

Discussion of Old Business:

Chairman Staib: Presentation of Master Plan Draft-2/22/23 Update

- Raphael Kasen, Project Manager from McKenna, presented the updated and revised Master Plan for the township.

- Commissioner Jones requested a break down by ethnicity in the demographic profile.
- Commissioner Wolters requested a change to the language on page 4 of Master Plan-Draft 2/22/23 regarding the support and influences related to future growth to be more focused on Bedford rather than surrounding areas.
- Commissioner Wolters asked for clarification of future Land Use Map and potential conflicts and/or problems, specifically in regards to the extension of the Neighborhood Residential on Kirby Road. Mr. Kasen clarified the process of adoption of the Master Plan and future Land Use Map, as well as the review of the zoning ordinances and new districts. The Master Plan and future Land Use Map will be posted for public review, a public hearing for comment will be held, after it is adopted the Planning Commission will begin to review changes to districts. He also provided an explanation with examples of Legal Non-Conforming Use in relation to residents' rights under the current zoning ordinance in regards to any district changes. Trustee Beamish reminded the commission that their job is to look at the long-term goals and objectives and stated that a review in 3 to 5 years can happen, specifically for growth boundaries if robust growth is occurring.
- Commissioner Villadsen asked about clarification on page 13 of Master Plan-Draft 2/22/23 regarding functional classifications of roads. Mr. Kasen responded that the language is that of the federal classification system that the roads fall under and is correct.
- Chairman Staib cited minor changes to Master Plan Draft 2/22/23: Page 3 Battle Creek Township change to City of Battle Creek; Page 15 and 40 Calhoun County Road Commission to be changed to Calhoun County Road Department; Page 21 Gull Lake Schools to be changed to Gull Lake Community Schools. Trustee Beamish pointed out misspelling of Battle Creek Public Schools.
- Correction to future Land Use Map regarding the expansion of the Mixed Use in the village along M-37 highway; expansion is to be from Meachem Road to Banfield Road.
- The extension of Mixed Use from Morgan Road to the north side of Hubbard Road includes the parcels in their entirety.
- Commissioner Jones asked for clarification of the Enterprise Zone; it is a combination of commercial and industrial for a flexible variety of business uses.

Solar Ordinance Review and Discussion:

Solar Ordinance Review: Mr. Kasen's presentation included specifics regarding setbacks for participating and non-participating parcels. The commission requested that setbacks be changed to: Road Right of Way 300-foot setback; Participating Parcel: 50-foot setback from lot line; Non-Participating Parcel 300-foot setback from lot line; Wetland: 200-foot setback. In regards to landscape buffering, specifically evergreen plantings, Mr. Kasen, and Seth Koches

agreed that it is within the Planning Commission's right to review and attach conditions as warranted for any applications that may be submitted. Mr. Koches reviewed the ordinance and stated overall it seemed solid and non-exclusionary. He recommended the strengthening of language regarding the actual cost of decommissioning. Commissioner Villadsen requested that the language regarding the 2-foot perimeter around the structure of small-scale roof mounted solar systems state that the perimeter must extend around the entire structure.

Open Public Comment Time: 8:08 pm

John Cash: stated that Pennfield Township's ordinance on public discharge of a firearm is only permissible on agricultural land, and pointed out the importance of considering such changes when reviewing zoning and future Land Use Map changes.

Adam Heikkila: stated that the hiring of a professional planner needed to be done, and encouraged everyone to read the charter act. He also stated that it would be beneficial to have draft documents posted online.

Melissa McKay: stated concerns regarding a wind ordinance and at what point the Planning Commission was in reviewing said ordinance. She also expressed concerns regarding the enforcement of the landscape buffer requirements for commercial solar. She reiterated concern regarding use of firearms related to future Land Use changes.

Close Public Comment Time: 8:15 pm

Planning Commission Member Time:

Trustee Beamish stated he would not be in support of limiting firearm usage and recommended including agricultural to the name on the rural residential open space district.

Commissioner Wolters stated her concern regarding compliance on an annual basis for the commercial solar landscape plan.

Chairman Staib stated that he agreed with the importance of the video recording of the meetings and that he would make better effort to get documents online.

Chairman Staib adjourned Meeting at 8:22 pm

Next meeting March 28, 2023 at 6:30pm

Master Plan 2023

BEDFORD CHARTER TOWNSHIP, CALHOUN COUNTY, MICHIGAN

Adopted by the Planning Commission _____

Adopted by the Township Board by resolution _____

Prepared with the assistance of:



MCKENNA

Acknowledgments

The participation and cooperation of the numerous community leaders and residents in the preparation of the Bedford Charter Township Master Plan is greatly appreciated. In particular, we would like to acknowledge the efforts of the following individuals:

BEDFORD CHARTER TOWNSHIP BOARD AND ADMINISTRATION

BEDFORD CHARTER TOWNSHIP PLANNING COMMISSION

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Introduction and Background

This document is the culmination of the efforts of the Township Planning Commission, Township Board of Trustees, and residents of Bedford Charter Township to develop this update to the comprehensive plan for the community. The Bedford Charter Township Master Plan was developed to establish general policies to guide decision makers in the community as well as provide direction for future land use in the Township for the next ten (10) to fifteen (15) years. The intent of this Plan is to promote the high quality of life in Bedford Charter Township and build upon its history to provide for a bright future.

To accomplish this goal, the Master Plan will define the issues which are most important to the people of the community. This will be done through resident and community input, including a public hearing for the Plan. In addition, an analysis of the existing features of the Township will illustrate some of the defining characteristics within the Township. The analysis will include a survey of the existing land uses in the Township, population, economic and housing statistics, a description of the physical constraints and natural resources in the Township, and circulation patterns within the community. Based on all of the information collected and with input from residents of the community, goals and objectives will be developed to provide direction for the Township over the next ten (10) to fifteen (15) years. The goals and objectives will help create the Future Land Use Plan and Circulation Plan for Bedford Charter Township.

Regional Context

LOCATION

Bedford Charter Township is situated in the northwestern part of Calhoun County in southwestern Michigan, north of the City of Battle Creek. Bedford Charter Township is bordered on the north by Johnstown Township in Barry County, on the west by Ross Township in Kalamazoo County, on the south by the City of Battle Creek and on the east by Pennfield Township.

The Township is primarily rural suburban and residential in character. M-37, the north-south highway connecting Battle Creek, Grand Rapids and Traverse City, runs directly through the township. M-89, as well as additional roads in the township, provide direct and easy access to urban centers in the City of Battle Creek (directly south of Bedford Charter Township), City of Springfield (also directly to the south), and the City of Kalamazoo (approximately 21 miles to the southwest).

REGIONAL INFLUENCES

A range of factors influence the decisions and future developments that will impact Bedford Charter Township. The majority of these influences will be determined from within the Township itself, while others will result from the actions or decisions of those outside the community. It is important to consider those influences located outside of the Township's borders which will affect the community's future.

CITY OF BATTLE CREEK

The City of Battle Creek is directly south of Bedford Charter Township, with a population of 52,731, as of the 2020 Census. Battle Creek serves as the area's commercial and historical center of activity. The Battle Creek School District, one of four school districts serving Bedford Charter Township, maintains all of its facilities within the city. The Battle Creek Fire Department has its facilities in the city and is separate from the Bedford Charter Township Fire Department. In addition to servicing the city, the Battle Creek Police Department also provides service Bedford Charter Township. The City of Battle Creek has a viable and traditional downtown, and a significant manufacturing base. The City of Battle Creek Master Plan was adopted in 2018, and guides land use and development decisions within the limits of the City. This Bedford Charter Township Master Plan will develop a unique vision for the Township, while still supporting the goals and objectives of the City of Battle Creek Master Plan. The City shall continue to be the commercial and industrial center of the region while the Township shall strive to fulfill its potential as a local residential, economic, and recreational hub serving its residents and the local community.

CALHOUN COUNTY PLANNING COMMISSION

The Calhoun County Planning Commission reviews all new zoning ordinance amendments, master plan amendments, PA 116 agreements, and other various requests brought to it for consideration within the unincorporated areas of Calhoun County.

The Calhoun County Planning Commission will review the Bedford Charter Township Master Land Use Plan for consistency with the Calhoun County Comprehensive Plan, which was most recently updated in 2014. The Calhoun County Planning Commission will then be requested to formally approve the Bedford Charter Township Master Land Use Plan as presented.

SOUTHCENTRAL MICHIGAN PLANNING COUNCIL

The Southcentral Michigan Planning Council is one of the fourteen (14) regional planning and development agencies in the State of Michigan. These regional commissions were created by executive order in 1968 by the Governor of Michigan. The Commission is recognized as Region 3 and is responsible for the counties of Calhoun, Branch, Kalamazoo, and St. Joseph, comprising over 100 jurisdictions within the four-county region.

The primary function of the Southcentral Michigan Planning Council as the region's Metropolitan Planning Organization (MPO) is to coordinate federally funded transportation projects and facilitate federally funded economic development programs. The Commission also serves as an intergovernmental forum to address issues from a regional perspective. The Southcentral Michigan Planning Council is directed by a board of 11 commissioners, and staffed by a Director, Community Development Coordinator, and a Planner.

Demographic Profile

The comprehensive data source for Bedford Charter Township is from the U.S. Census in 2000 and 2010 and the American Community Survey (ACS) 5-Year estimates for 2020. The following information shows demographic data for Bedford Charter Township, as well as relevant comparisons to the City of Battle Creek and Calhoun County overall.

POPULATION TRENDS

Table 1: Population Comparisons

	2000	2010	2020	% Change 2000-2020
Bedford Charter Township	9,615	9,449	9,462	-1.59%
City of Battle Creek	53,251	52,762	51,084	-4.07%
Calhoun County	137,985	137,112	133,943	-2.93%

Source: U.S. Census (2000, 2010), American Community Survey 2020

AGE CHARACTERISTICS

The median age of Bedford Charter Township is estimated at 44.1 years as of the 2020 ACS. The median age for Bedford Charter has remained relatively stable, with the 2010 census median age of 44.2 years. The median ages of Battle Creek and Calhoun County were 36.5 years and 40.1 years, respectively.

Table 2: Age Characteristics

Age of Resident	Number	% of Population
Under 10 years of age	1,016	10.74%
10 to 19 years	1,133	11.97%
20 to 24 years	716	7.57%
25 to 34 years	1,116	11.79%
35 to 44 years	913	9.65%
45 to 64 years	2,960	31.28%
65 years and above	1,608	16.99%
Total	9,462	100.00%

Source: American Community Survey 2020

RACE AND ETHNICITY

The racial and ethnic composition of Bedford Charter Township is largely homogenous. Racially, White alone constituted 88% of the population in 2020. The next highest occurring race was Black or African American with 10% of the population. When considering ethnicity, 95% of the population identify as not Hispanic or Latino, while 5% identify as Hispanic or Latino according to the 2020 ACS.

Table 3: Race Characteristics

Race of Resident	Number	% of Population
White alone	8,339	88.13%
Black or African American alone	601	6.35%
American Indian and Alaska Native alone	5	0.05%
Asian alone	12	0.13%
Native Hawaiian and Other Pacific Islander alone	0	0.00%
Some Other Race alone	49	0.52%
Two or More Races	456	4.82%
Total	9,462	100.00%

Source: American Community Survey 2020

FAMILY SIZE

There are an estimated 2,377 families in Bedford Charter Township. The average family size is 2.85. This is lower than both the County average of 3.03, and the State average of 3.05. Smaller family sizes align with the shrinking population, and should be a consideration when the Township assesses future population trends.

EDUCATIONAL ATTAINMENT

The following table shows the educational attainment of Township residents 25 years of age and older.

About 91.9% of the Township's population of those over the age of twenty-five (25) have completed and graduated from high school or an equivalency. This is reflective of the fact that high school graduation rates are significantly higher in more recent decades than in previous decades, thus the percentage of the population with a high school diploma should continue to increase in the future. About 18.3% of the Township's over 25 population has completed a bachelor's degree or higher.

Table 4: Family Characteristics

Family Characteristic	2020
Total Families	2,377
Average Family Size	2.85

Source: American Community Survey 2020

Table 5: Educational Attainment

Education Level	% of Population
Less than 9th grade	2.6%
9th to 12th grade, no diploma	5.5%
High school graduate (includes equivalency)	40.8%
Some college, no degree	24.9%
Associate's degree	7.9%
Bachelor's degree	13.2%
Graduate or professional degree	5.0%
Total	100.0%

Source: American Community Survey 2020

Housing Profile

It is important to examine the housing stock in Bedford Charter Township because it serves as an indicator of the quality of life for residents living in the community. Furthermore, housing information also acts as an economic gauge for the community and the surrounding area.

YEAR STRUCTURE BUILT

The Township has experienced various levels of building construction through its history. In addition, the age of the housing stock is very evident as almost half (approximately 43%) of all dwellings in the Township were built prior to 1959 and are at least sixty years of age. Over a quarter of homes were built in the 60s and 70s; however, building decreased after 1979, leading to only 18.5% homes in the township built in the 80s and 90s. Just under 10% of housing units in the Township have been built since 2000, which correlates with the slight population decrease in the Township over this time (approximately 1.6% between 2000 and 2020, Table 1).

HOUSING VALUES

The 2020 ACS data describes housing values only rather than the value of land or other property. Much of the housing stock in Bedford Charter Township, 70.2%, has a total value of \$150,000 or less. About 6.1% of the housing stock is valued at \$300,000 or more.

Table 6: Year Structure Built

	Number of Units	Percent of Total
2014 or later	14	0.37%
2010 to 2013	60	1.59%
2000 to 2009	274	7.25%
1980 to 1999	699	18.51%
1960 to 1979	1105	29.26%
1940 to 1959	1242	32.88%
1939 or earlier	383	10.14%
Total	3,777	100.0%

Source: American Community Survey 2020

Table 7: Housing Values in Bedford Charter Township

Value	% of Total Units
Less than \$50,000	17.6%
\$50,000 to \$99,999	24.6%
\$100,000 to \$149,999	28.0%
\$150,000 to \$199,999	13.2%
\$200,000 to \$299,999	10.5%
\$300,000 to \$499,999	4.9%
\$500,000 to \$999,999	0.6%
\$1,000,000 or more	0.6%
Total	100.0%

Source: American Community Survey 2020

Economic Profile

LABOR FORCE

According to the 2020 American Community Survey 5-Year Estimates, approximately 4,054 people over the age of 16 in Bedford Charter Township were in the civilian employed population. It should be noted that because of slight decrease in population, the labor and industry statistics for the Township are very similar between 2010 U.S. Census figures and current estimates, with 4,103 people in the labor force as of the 2010 Census.

OCCUPATION SUMMARY

Table 6 provides a synopsis of the occupations for employed Bedford Charter Township residents. The highest percentages of people work in manufacturing (24.81%) and educational services, health care, and social assistance (19.78%). Reflecting the nature of Bedford Charter Township as a suburban community, approximately 35.27% of people employed work in trade, transportation, and professional services industries.

Table 8: Employment by Industry

Industry	% of Persons Employed
Agriculture, forestry, fishing and hunting, and mining	1.04%
Construction	4.59%
Manufacturing	24.81%
Wholesale trade	1.65%
Retail trade	16.77%
Transportation and warehousing, and utilities	6.91%
Information	1.01%
Finance and insurance, and real estate and rental leasing	2.66%
Professional, scientific, and management, and administrative and waste management services	9.94%
Educational services, and health care and social assistance	19.78%
Arts, entertainment, and recreation, and accommodation and food services	3.58%
Other services, except public administration	4.37%
Public administration	2.89%
Total	100.0%

Source: American Community Survey 2020

INCOME AND POVERTY

The median household income for Bedford Charter Township is \$50,639, according to 202 ACS data. This means that half of all workers earned more than this amount and half earned less. The median income for the Township was \$43,504 in 2010 according to the U.S. Census. Additionally, the poverty rate in Bedford Charter Township is 11.9%, which is moderately lower than Calhoun County (16.7%).

TRAVEL TIME TO WORK

An indication of the Township's economic position relative to the surrounding region can be illustrated in travel time to work for residents. The mean travel time to work was 20.7 minutes, according to the 2020 American Community Survey 5-Year Estimates. More than one half (57.3%) of all Township residents drive 19 minutes or less to work. This suggests that residents are driving to nearby large employment center Battle Creek for the employment opportunities but have chosen to live in Bedford Charter Township. The following table further outlines the time residents spend traveling to their place of employment.

Table 9: Travel Time to Work

Travel Time to Work	% of Population
Less than 10 minutes	12.2%
10 to 14 minutes	21.7%
15 to 19 minutes	23.4%
20 to 24 minutes	13.4%
25 to 29 minutes	2.8%
30 to 34 minutes	12.2%
35 to 44 minutes	8.0%
45 to 59 minutes	2.7%
60 or more minutes	3.6%
Total	100.0%

Source: American Community Survey 2020

Existing Land Use

Knowledge of current land uses allows the Township to consider the compatibility of new land uses and is a valuable tool when considering the day-to-day problems associated with land management and the delivery of key public services. The existing land use survey provides an inventory of land use within the community and is a key source of background information used in developing the Master Plan.

The majority of Township land is classified as agricultural. Sparse residential populations exist throughout the Township.

Agricultural/Open Space

The predominant land use in Bedford Charter Township is rural residential. Although some agricultural land has been split and developed for light industrial and residential use, it remains the prevalent land use and occupation in the Township. Approximately 21,265 acres, or about 92% percent of the total land area in Bedford Charter Township is devoted to rural residential uses or remains undeveloped open space.

A handful of small farms can be found west of M-37 and north of W. Kirby Road. The same can be said of the area east of M-37 both along and to the north of Halbert Rd. The residential subdivisions located adjacent to most of these areas make it clear that without better planning, most of these small farms are likely to transition over to residential uses over time.

The Michigan Farmland and Open Space Preservation Act, Public Act 116 of 1974, can be an important tool for preserving farmland for rural communities such as Bedford Charter Township. This Act is designed to relieve the pressures to develop agricultural land. Under this program, owners of farm land receive a credit against their state income tax liability. In return for this credit, the State of Michigan receives the development rights to the property for a specific number of years, but not less than ten (10) years. For undeveloped open space land, the Act also allows for an exemption of the development rights from ad valorem taxation.

Urban/Built Up

The following land uses comprise the “Urban/Built Up” category. Approximately 1,542 acres or 6.7% of Township land is currently developed.

LOW DENSITY RURAL RESIDENTIAL

Some single family residential low-density development has and is taking place in the township. These single-family homes are mainly being built on lots split off and created from larger agricultural parcels. They are fairly spread out throughout the Township.

COMMERCIAL AND INDUSTRIAL ACTIVITIES

Bedford Charter Township has limited industrial activity, with only about 114 acres being dedicated to industrial uses. Commercial and industrial activity is concentrated on the North side of M-89 and along M-37 and ranges from storage to agricultural solutions.

Public and Quasi-Public Land Uses

Public land uses in the Township include the Township Hall located at 115 Uldriks Dr S at the intersection with M-89 and the three Township cemeteries:

Bedford Cemetery
21962 Bedford Road North
Battle Creek, MI 49017

Harmon Halladay Cemetery
Morgan Road (between 450-500)
Battle Creek, MI 49017

Harmonia Cemetery
Brydes Road (between 75-175)
Battle Creek, MI 49017

Utilities

North of the M-89 Corridor, there are limited public water and sanitary sewer facilities in Bedford Charter Township. One exception is the waterfront residential area surrounding St. Mary’s, which has dedicated sanitary sewer service. Lake electricity and gas utilities, as well as wireless and telephone services are provided by private industries. The privatization of these industries assures adequate capital to provide increased levels to the community, as growth demands.

Recreational Land Uses

The township is home to several municipal and private recreation areas. The closest regional natural area is Fort Custer Recreation Area, located to the southwest in next door Augusta Township.

Natural Areas

The number of wetlands, surface water, range land and forested areas in the Township comprise about 21,265 acres, or 92.29% percent of the total Township land area.

These categories of various existing land cover are illustrated on Map 1.

Table 10: Existing Land Cover/Use

Existing Land Cover/Use Category	Area of Township in Acres	Area of Township in %
Agricultural/Open Space	15810	87.32%
Urban & Built Up Areas	1912	10.56%
Water	384	2.12%
Total	18,106	100.00%

Map 1: Existing Land Use

Transportation System

The transportation system provides a backbone for accessibility and helps guide how people will travel within a community. The conditions of a road, including whether it is paved or widened, will affect the amount or type of traffic on any particular road.

Township Road Network

The Michigan Department of Transportation maintains 7.5 miles of road in the Township: M-89 (Michigan Avenue) and M-37 (Bedford Road). The Calhoun County Road Department owns and maintains the remainder of the roads in the Township. Roads within the Township are generally patterned on a basic “grid” system with roads spaced every one-half mile to one mile apart. In several cases, the roads follow and serve as the definition of the individual section lines in the Township.

FEDERAL FUNCTIONAL CLASSIFICATION OF ROADS

Roads throughout the country are placed into one of seven classifications based on their function and type of traffic served. The Interstates (classification level 1), other freeways and expressways (level 2), other principal arterials (level 3), and minor arterials (level 4) all serve large volumes of traffic between regions or through urbanized areas. As a rural Township, Bedford Charter Township has mostly major collectors (level 5), minor collectors (level 6), and local roads (level 7), with several important exceptions as listed in the following table:

Table 11: Functional Classification of Roads

Road	Extent	Direction	Classification
M-89 (Michigan Ave)	Southernwidth of the township	E-W	Highway
M-37 (North Bedford Road)	Entire length of the township	N-S	Highway
West County Line Rd	Western border of township. Length of township from M-89.	N-S	Principal Arterial
Uldriks Rd (1 Mile Rd)	Length of township from M-89	N-S	Principal Arterial
Waubascon Road (4 ½ Mile Road)	Length of township from O Drive North	N-S	Principal Arterial
North Ave (6 Mile Rd)	Eastern border of township. Length of township from West Coolidge Ave to Baseline Rd	N-S	Principal Arterial
Morgan Rd (O Drive North)	Width of township from M-37 to 6 Mile Rd	E-W	Principal Arterial
Kirby Rd (R Drive North)	Width of township from W. County Line Rd to Waubascon Rd.	E-W	Minor Arterial

Halbert Rd (S Drive North)	Width of township from Collier Ave to North Ave	E-W	Minor Arterial
Meacham Rd (U Drive North)	Width of township from West County Line Rd to M-37	E-W	Principal Arterial
Hamilton Rd (V Drive North)	Width of township from West County Line Rd to M-37	E-W	Minor Arterial

Source: Calhoun County Road Commission

The State Highways in the Township are M-89 and M-37, both of which are State Trunkline Highways. County roads include West County Line Road, Uldriks Road, Collier Avenue, Waubascon Road, North Avenue, Meachum Road, Edmonds Road, and Crandall Road. The remaining roads are local roads, most of which are paved.

CIRCULATION PATTERN

The main north-south roads in the township in terms of vehicle use are M-37, 1 Mile Rd, and Collier Ave between M-89 and Meacham Rd – Meacham Rd providing access to M-37. M-37 is the major highway connecting Springfield to the south with Hastings, Grand Rapids, and areas beyond to the north.

The main east-west roads in the township are the M-89 corridor, and O Drive North which connects M-37 to State Highway 66 in neighboring Pennfield Township to the east. M-89 serves as a major roadway connecting the City of Battle Creek with points northwest including Plainwell, Ostego, and the City of Allegan.

PRIVATE ROADS

At this time, the Township has not approved any private road applications. Private, unimproved roads typically serve as access to home sites. Private roads can be problematic because of the lack of proper maintenance. If private roads are to be permitted in the future, the Township should consider requiring all private roads to meet County Road standards or other appropriate standards to protect public safety, and to require assurance of regular maintenance.

COMPLETE STREETS

Bedford Charter Township strives to make its roads safe and attractive for all users. Therefore, the Township will work with the Calhoun County Road Department to implement a rural vision of Complete Streets on key road corridors. The Complete Streets philosophy is that roadways should be safe for all legal users. Complete Streets in Bedford Charter Township would mostly consist of widened paved or unpaved shoulders, which can provide access to slow moving traffic including tractors or snowmobiles. Such upgrades are not expensive or difficult and can be achieved during any scheduled rebuilding of a roadway by the Road Commission.

COUNTY ROAD IMPROVEMENTS

The basic source of revenue for roadway maintenance and improvement is the state-collected gas and weight tax, and local general fund tax revenues through a road millage. The road millage provides a majority of the local road funding in the Township. The funds for the gas tax are paid by motorists upon purchase of gasoline and diesel fuel, and to the Secretary of State for vehicle registrations. The County Road Commission identifies and carries out the five-year plan for road improvements in the Township.

Other Modes of Transportation

PUBLIC TRANSPORTATION

Bedford Charter Township is not currently served by area public transportation. The City of Battle Creek is currently piloting an on-demand transportation program to test the feasibility of such a system for the County. Funded through a Michigan Department of Transportation grant, it is operated by Battle Creek Transit, and collaborating agencies and expected to run for a period of 12 months, at which point it will be evaluated by MDOT and the City.

RAILROADS AND AIRPORTS

There are no rail lines, passenger or freight, in the township. Township residents can access passenger rail service in the City of Battle Creek to the south. Passenger airline service is available 23 miles west at the Kalamazoo/Battle Creek International Airport and at the Gerald R. Ford International Airport in Grand Rapids, approximately 44 miles to the north.

Map 2: Roadways

Natural Features and Resources

The natural features of the Township, such as hills, rivers, soils, and woodlands are an important resource to the community. Natural resources are valuable to preserve for their aesthetic qualities and importance to human survival. A sound planning process should examine the differences in the natural environment across the landscape of the Township to ensure land uses are compatible with the nearby natural features and to preserve and protect these resources.

In considering natural resources in the planning process, the environment is evaluated for its suitability to accommodate development. Data on the natural features was assessed based on maps and surveys and is described in terms of capability and suitability for development. The community's needs, in terms of evaluation of existing land use and local goals and objectives are then used to generate the Land Use and Transportation Plan. For analytical purposes, the environment of the Township is divided into the following natural systems: surface water, ground water, agricultural land, drainage patterns, and soils.

Surface Waters

The surface waters in Bedford Charter Township consist of various creek systems, such as. As the land is mainly rural -residential and agricultural, surface waters are susceptible to absorbing runoff.

Soil Suitability

The safe and proper disposal of sanitary waste is an important factor in providing for the prosperity of Bedford Charter Township now and in the future. Because of the rural character of the Township, the disposal of sanitary waste has been provided by septic systems, which will likely continue into the future. The soils of the Township have been analyzed for their suitability for use with septic systems because:

- The safe and proper use of septic systems requires consideration in development and design
- Unsatisfactory septic performance presents public health concerns, and
- Owners of poorly performing systems can be faced with unanticipated costs

Proper provision for new septic systems and maintenance of existing systems is and will continue to be an issue for the Township in the future.

The Bedford Charter Township 2020 – 2024 Parks & Recreation Plan states that the township is comprised of two predominant types of soil.

The first is the Houghton-Osthemo-Coloma association in the southern 1/4 of the Township. This is described as nearly level to steep, very poorly drained to excessively drained, mucky soils on flood plains and loamy and sandy soils on outwash plains, moraines and stream terraces and in glacial drainage ways. The northern 3/4 of the Township contains soils in the Oshtemo – Spinks association. These are described as gently rolling to steep, well drained loamy and sandy soils on outwash plains.

Generally, well-drained, coarse-textured soils provide the most suitable foundations. Poor soil stability occurs with soils containing large concentrations of organic material, such as muck, silt, and clay. The areas of poor soil stability are concentrated in low-lying and poorly drained areas adjacent to rivers and creeks. In these low-lying areas, the presence of water in and near the surface contributes to frost heave, compression, shrinkage and swelling.

Groundwater

Bedford Charter Township depends entirely on groundwater as its water source for home and agricultural use. Therefore, it is important to plan appropriately for development to protect these water resources from possible contamination.

Contamination of water resources can happen from non-point sources of pollution including chemicals from commerce, industry, and farming; through chemicals filtering into groundwater from septic fields, oil tanks, and waste disposal sites; and through everyday activities. In many instances, these pollutants reach lakes and streams through groundwater supplies. Pollutants might also affect well water located near septic fields.

Groundwater protections must also address operational features of different land uses. Groundwater contamination is most frequently the result of leaking septic systems, improper floor drains, improper storage of hazardous substances, leaking underground storage tanks, above ground spills, overfilling of tanks, condensation from air emissions, and improper waste disposal. Many of these potential avenues of contamination can be addressed in site plan review. A site plan review should require full disclosure of locations of tanks, floor drains, and connections; and should require the best available technology to alleviate potential impact.

The Waubascon Creek flows from the northwest corner of the Township through the center until it reaches the Kalamazoo River, which traverses the southern portion of the Township. The Seven-Mile Creek bisects the western one-third of the Township and flows into the Kalamazoo River. Several drains run north to south within the Township draining the wetlands. These drains run into the creeks as well as to the river. The Township has within its boundaries many small private lakes that are mostly within the agricultural zones. There are also two large lakes: St. Mary's Lake and Waubascon Lake. Approximately one-half of St. Mary's Lake is in the Township while the other half is in Pennfield Charter Township.

An additional concern in Bedford Charter Township, because sanitary sewer service is not available in most areas north of the M-89 corridor, is locating septic systems on suitable soil. The Township will need to ensure the provision of adequate septic field reserve areas, and limit development on marginal soils to prevent future groundwater contamination.

MAP 3: Floodplain

MAP 4: Natural Features

Agricultural Land

Agriculture has played a key role in the development of Bedford Charter Township and continues to contribute to the rural character and identity of the community. The preservation of agricultural land provides environmental, aesthetic, recreational, and historic benefits to people in the community. Open farmland also assists in the replenishment and maintenance of groundwater supplies.

Bedford Charter Township has always been a predominantly rural and exurban community. The overall trend within Michigan is toward fewer acres in agricultural production. The effects of land speculation, increasing property values and taxes, and rural/urban conflicts tend to diminish active agriculture. However, the communities most at risk of losing agricultural lands in the future are located near major employment and population centers. Bedford Charter Township's location directly adjacent the City of Battle Creek and within commuting distance of the City of Kalamazoo make it particularly susceptible to such development pressures. This should make the preservation of farmland – along with open space - a top priority.

Community Facilities

Schools

Four school districts serve the residents of Bedford Charter Township: Battle Creek Public Schools, Pennfield Schools, Hastings Schools and Gull Lake Community Schools serve the vast majority of students from the Township.

Recreational Facilities

Bedford Charter Township is home to six (6) Township-owned public parks: Algonquin Park, Simmons Field, Brookside Annex, Brookside Park, Markham Park, and Skeets-Gerhman Park. Other informal facilities provide recreational opportunities for residents in the Township, such as hunting in the woods.

Residents are also able to use public school facilities provided by Gull Lake Community Schools, as well as Calhoun County parks in Battle Creek, and several urban parks and recreational facilities within the City of Battle Creek. Nearby State recreational facilities include the Fort Custer Recreational Area, Kimball Pines, Riverside Park, and Historic Bridge Park. These parks and recreation areas offer camping, fishing, swimming, and hiking among their activities. The Waubasca Lake Boat Launch is located in the northeast corner of the township and is owned and managed by the Michigan Department of Natural Resources (MDNR).

Emergency Services

Bedford Charter Township partners with the City of Battle Creek to provide police services to township residents. The Township has its own Fire Department, which maintains three (3) fire stations:

Fire Station #1---21962 N. Bedford Road

Fire Station #2---115 S. Uldriks Drive

Fire Station #3---5902 Morgan Road

Ambulance and emergency medical services are.

Collaborating with other local governments likely remains the best way to continue to provide emergency services for the Township. Intensive commercial or industrial development would likely generate the need for increased emergency services. However, this plan does not propose the necessity for these services because of the existing and continued planned agricultural and residential nature of the Township.

Other Facilities

TOWNSHIP HALL

Bedford Charter Township Hall is located on 115 Uldriks Drive South at the intersection with M-89 (Michigan Avenue).. The 2010 structure contains a meeting room and a kitchen, both of which are available to rent by the public. Primary offices for Township officials are in the Township Hall. The Township Hall is used as a polling place and for monthly board meetings.

BATTLE CREEK & AUGUSTADISTRICT LIBRARIES

While there is not a library located in the boundaries of Bedford Charter Township, the Battle Creek and Augusta District Libraries have branches located within 7 and 10 miles of the township, respectively.

CEMETERIES

There are three cemeteries located in Bedford Charter Township: Bedford Cemetery, Harmon Halladay Cemetery, and Harmonia Cemetery.

Public Participation

The Bedford Charter Township Master Plan update has been developed with the cooperation of the Bedford Charter Township Planning Commission and the Township Board as representatives of the Township residents. The public was given the opportunity to provide feedback on the future of Bedford Charter Township through a survey distributed to residents. This survey was utilized to shape the goals and objectives of this Master Plan, the results of which can be found below.

The public can also provide feedback on the Master Plan during the State-required comment period, which gives residents time to read the Plan and to contact their representatives with questions. Furthermore, all Planning Commission meetings have been published and open to residents. Anybody in attendance had opportunity to provide feedback into the planning process and the development of the Plan itself.

Finally, a public hearing will be scheduled at which the final draft of the Master Plan will be presented, discussed and recommended for adoption. This hearing will be open to the public and will provide an opportunity for the Planning Commission to present its findings and layout the proposed future of the Township as well as an excellent opportunity for the community to review the findings of the Planning Commission, ask questions, and propose changes or alternatives prior to final adoption of the Plan.

Even after the Plan is adopted, citizen input and participation is still very important and should not end. The Plan should guide the Township in its future actions, with the public providing input and suggesting changes as future circumstances and conditions warrant.

Survey Results

The survey distributed to the residents of Bedford Charter Township was separated into eight sections in order to take into consideration the current views of Township residents regarding a variety of growth and development issues. Feedback on growth management, housing, land use and the environment, economy, services, community image, demographics, and township involvement were all captured by this survey.

The full results and analysis of the survey can be found in Appendix A of the Master Plan.

Goals and Objectives

Before a community can actively plan for its future, it must first declare certain goals and objectives to define the boundaries of its needs and aspirations, and thus establish a basis for the development of a Future Land Use Plan. These goals and objectives must reflect the future vision for the community and the kind of lifestyle its residents wish to follow, given realistic economic and social constraints.

The following chapter represents the goals, objectives, and policies which should be used to guide local decision makers in reviewing future land use proposals. Goals represent the ultimate purpose or intent of the Plan, objectives are the means of obtaining those goals, and policies are specific statements used to guide the actions of the Township.

Goals

Bedford Charter Township acknowledges the strong rural and agricultural character, as well as the abundance of natural resources, that define the community. In recognizing its role, Bedford Charter Township adopts the following general community goals to guide future land use changes:

- Preserve the current rural residential and agricultural character of the Township.
- Protect the natural resources in the township as a way to preserve a high quality of life.
- Minimize the development of scattered land uses which results in inefficient land usage and ultimately increases the costs of providing public services.
- Preserve the rights of property owners while maintaining the character of the Township.
- Revitalize the M-89 corridor to encourage targeted mixed-use development and harness economic growth.

Objectives and Policies

With the primary goals in mind, the following specific objectives and policies have been formulated to guide action, programs and land use in the Township.

AGRICULTURAL

Objective: Identify, classify, and provide all possible methods of preserving those areas best suited for agricultural use. Policies to support this objective are as follows:

- Recognize agriculture and open space as the predominant economic activities in Bedford Charter Township.
- Provide means of maintaining low population densities in all agricultural and rural-residential areas to reduce the influences that encourage encroachment of other, less desirable, or conflicting land uses.
- Regulate the location and impact of wind and/or solar energy conversion facilities in order to protect and preserve agricultural activity and agricultural lands.
- Balance the need to provide resources for agricultural uses with a need to protect neighboring properties and natural resources in the Agricultural district. Respect the rights and responsibilities given to agriculture under the Michigan Right to Farm Act, especially regarding manure management, water quality, air quality, and other financial and environmental impacts.

RESIDENTIAL

Objective: Provide limited concentrations of residential land uses while preserving the character of the Township and protecting natural resources. Policies to support this objective are as follows:

- Minimize random scattered residential development in the Township.
- Provide all possible means of encouraging the rehabilitation and conservation of the existing housing stock.
- Limit future construction of residential land uses to the density and character of development laid out in the Future Land Use text.
- Preserve the rural character of the Township by discouraging growth, regardless of the land use decisions in neighboring communities.
- Do not allow new residential construction that would have adverse environmental impacts.

MIXED USE AND COMMERCIAL

Objective: Provide limited concentrations of mixed use and commercial land uses while preserving the character of the Township and protecting its natural resources. Policies to support this objective are as follows:

- Minimize random scattered commercial development in the Township.
- Target future construction of commercial and mixed use land uses to the Mixed Use and Commercial future land use areas along M-89 and by the M-37/Edmonds Rd Junction.
- Provide regulations requiring suitable buffering of commercial land uses from residential and agricultural uses.
- Preserve the rural residential character of the Township by targeting growth, regardless of the land use decisions in neighboring communities.
- Do not allow new industrial construction that would have adverse environmental impacts.

Future Land Use Plan

The Future Land Use Plan serves as a guide for the community. The Plan has been constructed to allow for flexibility if future conditions in the Township change, while still executing the goals of the Township as described above. The Future Land Use Plan describes where certain land uses are allowed, while the zoning code reflects the future land use map by regulating development aspects of individual sites.

Planning Principles

Land use planning principles are used as a guide to evaluate development alternatives and public policy. The following are general principles that should be applied to all land use categories.

CONSISTENCY

Development should be reviewed for general consistency with the intent of the Master Plan, as should sub-area or regional plans. Other governing bodies, such as the State or County, should be encouraged to use the Master Plan in considering programming for Bedford Charter Township.

SUSTAINABILITY OF NATURAL SYSTEMS

Intense scrutiny should be given to development proposed for environmentally sensitive areas.

COMPATIBILITY OF USES

Special attention should be given to any transitions between uses of greater intensity to those of lower intensity. It should also be noted that agricultural and residential uses are not always compatible land uses. Thus, specific caution should be taken to avoid allowing excessive residential encroachment into agricultural areas in order to preserve the rural character of the Township.

Land Use Categories

The land use categories, as well as the conditions under which they should exist, are defined in this section of the Plan. The elected and appointed Bedford Charter Township officials shall be responsible for the interpretation of the intent of the Future Land Use categories and text.

NATURAL PRESERVATION

General Characteristics

The purpose of the Resource Development category is to preserve the wetlands, floodplains, drainage and other environmentally sensitive areas along the North Branch of the Kalamazoo River, which runs east-west through the southern portion of the Township by M-89. In order to protect these natural features, this category discourages intensive development, with land uses limited to open space, agriculture, and very low-density housing.

Appropriate Land Uses

This category discourages any use other than natural preservation. However, agricultural and residential land uses are permitted, provided they meet the standards of the Rural Residential, Agriculture & Open Space Zoning District.

Additionally, all land uses in this category should be reviewed against the Michigan Natural Resources and Environmental Protection Act (Act 451 of 1994), and other applicable State laws to ensure they do not infringe on sensitive habitats.

Streets and Transportation

Streets should maintain a rural character, with only major thoroughfares paved. Paved shoulders or bike paths should be included where planned by the County or otherwise deemed appropriate.

Building and Site Design

Buildings- including accessory buildings - should be as small and unobtrusive as possible, and sites should be designed to preserve as much of the natural environment as possible – including going above and beyond zoning requirements and state regulations.

Appropriate Zoning Districts

RRAOS Rural Residential, Agriculture & Open Space

EXTRACTION AND RECLAMATION

General Characteristics

The purpose of the Extraction and Reclamation Land Use is to plan for the future environmental remediation of some existing industrial uses. In particular, the section of the Township which lies south of the North Branch Kalamazoo River and north of the train tracks on either side of River Road West. This area is currently home to a mixture of industrial and residential uses. The proximity of the industrial activities in this area to the North Branch Kalamazoo River make it more suitable for future open space and residential use.

Appropriate Land Uses

While historically home to quarries, mines, forestry areas and their respective accessory industrial uses, Extraction and Reclamation areas are better suited to open space and low-density residential uses, which have far less severe environmental impacts.

Additionally, all land uses in this category should be reviewed against the Michigan Natural Resources and Environmental Protection Act (Act 451 of 1994), and other applicable State laws to ensure they do not infringe on sensitive habitats.

Streets and Transportation

Streets should maintain a rural character, with only major thoroughfares paved. Paved shoulders or bike paths should be included where planned by the County or otherwise deemed appropriate.

Building and Site Design

Buildings- including accessory buildings - should be as small and unobtrusive as possible, and sites should be designed to preserve as much of the natural environment as possible – including going above and beyond zoning requirements and state regulations.

Appropriate Zoning Districts

I Industrial

RRAOS Rural Residential, Agriculture & Open Space

RURAL RESIDENTIAL, AGRICULTURE & OPEN SPACE

General Characteristics

The overall rural aesthetic of the area, combined with the close proximity to the amenities of Battle Creek, make Bedford a desirable community. In order to prevent either scatter-site or overdevelopment, the Rural Residential, Agriculture & Open Space land use category functions as a threefold means to guide future low-density development, preserve and possibly expand agricultural activity, and conserve potential future public parks and recreational areas.

Appropriate Land Uses

Appropriate uses include dwelling units at no more than 0.5 units per acre, matching the character of the surrounding uses. Non-residential uses include parks, agri-businesses, and farms including the keeping of large and small animals, such as bees, chickens, and other domesticated farm animals, as well as growing crops. Other appropriate uses may include wind and solar utilities, subject to Township zoning regulations.

Streets and Transportation

Streets in this category range from local roads to major collectors, which are typically higher in speed and can accommodate larger vehicles transporting heavy equipment needed for agricultural purposes.

Building and Site Design

New homes and accessory structures should be designed with quality materials and should be consistent with surrounding homes in terms of scale, massing, and site design.

Appropriate Zoning Districts

RRAOS Rural Residential, Agriculture & Open Space

NEIGHBORHOOD RESIDENTIAL

General Characteristics

In order to preserve rural character, residential developments with densities higher than one unit per acre should only be permitted within the Growth Boundaries. Within these boundaries, neighborhoods may be constructed to meet housing demand for the Bedford community. Some areas in this category are greenfield, agricultural, or undeveloped sites, while others are low-to-medium density neighborhoods where infill is desirable – provided neighborhood character is maintained.

Appropriate Land Uses

The appropriate land uses for Neighborhood Residential areas are single-family homes, and two-family homes up to 4 units per acre. Small apartment buildings may also be appropriate along major corridors.

Parks, schools, churches, and preserved rural/open space are also appropriate to support a high quality of life in these residential areas.

Manufactured housing should be located where permitted by existing zoning.

Streets and Transportation

In Neighborhood Residential areas, streets should be well-connected to one another to provide access to major Township arterial roads as well as to adjacent neighborhoods. These streets have lower traffic volumes and are characterized by lower speeds. The street pattern should also have sidewalk or bike path infrastructure accessible on at least one side of the street.

Building and Site Design

New homes should be consistent with existing character and should be designed with quality materials and should be consistent with surrounding homes in terms of scale, massing, and site design.

Appropriate Zoning Districts

NR Neighborhood Residential

WATER RESIDENTIAL

The Water Residential category is intended to support residential development around St. Mary's Lake and Waubascon Lake while protecting the natural character of the land and water. Development should be orderly in design to preserve the rural character and environmental quality of the lake and surrounding natural areas.

The intent of this Plan is to maintain existing densities of about 1-2 dwelling units per acre, so the quality of the development and natural features in the area can be preserved. Incentives can be provided to encourage preservation of natural features such as slightly increased densities – i.e., cluster development.

The Water Residential land use category corresponds to the area labeled as such on the Future Land Use Map, and is defined as a 150-foot wide land strip measured away from the edge of the water surface at normal pool elevation along the entire shoreline of St. Mary's Lake and Waubascon Lake. The Water Residential area also includes the entire area of some platted parcels along the lakes.

Appropriate Zoning Districts

LR Lake Residential

MANUFACTURED HOUSING DEVELOPMENT

Manufactured housing developments or mobile home parks are common in the rural areas in Michigan. Mobile home parks provide housing alternatives to residents who are unable to afford more permanent housing. From a planning perspective, they must be considered because the density in which they are built provides an economy of scale for the design and construction of on-site water and septic systems. Mobile home parks often provide their own wastewater treatment and well fields in rural areas where public utilities are not generally available, including communities like Bedford Charter Township.

While recognized as a legitimate land use, mobile home parks can significantly increase the population of a community while providing less than a corresponding amount of property tax revenue to the host community from which to provide public services to new residents. Furthermore, though a community can plan and zone appropriate locations of manufactured housing developments, they cannot regulate the internal design nor the operation of these facilities. Because Bedford Charter Township already has Manufactured Housing parks, no additional manufactured housing developments should be constructed.

Appropriate Zoning Districts

MH Manufactured Housing

MIXED USE

General Characteristics

This future land use category is designed to encompass mixed uses to promote live/work/play elements in designated parts of Bedford Charter Township, and allows for residential, professional office, and commercial uses. Mixed-use incorporates most of the aforementioned existing mix of land uses, especially along the M-89 Corridor and in Bedford Village, with the goal of encouraging walkability, livability, and economic growth. The category “mixed-use” is defined as an area that the Township anticipates will develop in the future as a residential, professional office or commercial use or some combination of those uses. It thereby eliminates the need to impose artificial lines on the map to distinguish between future residential, office and commercial zoning districts and encourages a performance-based approach to land use regulation.

Appropriate Land Uses

The Mixed Use category envisions performance-based zoning that meets the community goals as outlined in the Executive Summary and discussed in detail in the Goals, Policies, and Actions section of this Plan. As the community goals are the cornerstone of this Master Plan, key points which promote the advancement of the mixed-use category include the following:

- Promoting development that enhances the Township by discouraging “strip” development both along M-89 and the Bedford Village area.
- Reducing urban sprawl by directing development within the corresponding Growth Boundaries.
- Encouraging these areas to develop as “walkable” communities.
- Providing buffers between adjacent land uses.

The “mixed-use” category provides elements that serve to support the community goals. Development can only occur with an applicant meeting all the conditions set forth by the Township, while giving the applicant a degree of creativity in design. This is the essence of “performance-based zoning”. Final approval is retained at the discretion of the Planning Commission, based on the Master Plan, the Zoning Ordinance, and other Township governing documents, while leaving some freedom for a developer to use the architectural and state-of-the-art tools at their disposal. The Mixed Use category gives the Township more flexibility than exists with strict one-use for one area future land use maps.

Mixed Use areas can support the rezoning of a single parcel or a mixed use development proposal. A mixed-use development could be done as a Planned Unit Development (PUD), Planned Residential Development (PRD), or as a “Mixed-Use Development” (MUD).

Streets and Transportation

Streets in Mixed-Use areas should provide connections to Township principal arterials and major arterial roads. Within developments, streets should provide safe walking and biking opportunities on both sides of the street. Additionally, on-street parking should be included in development design with the absence of cul-de-sacs or dead-end roads.

Building and Site Design

Buildings should be built with high-quality materials and should be architecturally compatible with surrounding neighborhoods. Buildings with a connection to the street, including designs with attractive front facades, entrances, and porches are all highly encouraged. Open spaces should be functional and allow for recreational enjoyment and the preservation of natural features. Architectural variation is highly encouraged to create a character on long and connected facades.

Parking areas may be located in the front, side, or rear yards for buildings, but, where practical, buildings should front the street and provide parking to the rear. Large areas of parking should be broken up with landscaped islands and trees. Parking space requirements may vary based on the location of the development and availability of shared parking.

Appropriate Zoning Districts

MU Mixed Use

ENTERPRISE

General Characteristics

The Enterprise Future Land Use designation is a combination of commercial and industrial, and is intended to allow for a flexible variety of business uses, with the specific zoning district determined by the conditions of the site in question.

Enterprise is intended for office, retail, manufacturing, warehousing, logistics, research and development businesses, and creative industries/artisan facilities. Developments should be designed and operated to be respectful of their surroundings, with minimal truck traffic, noise, odor, dust, or outdoor storage/operations.

Appropriate Land Uses

Appropriate uses include office, retail, light manufacturing, artisan production, food and beverage production, creative industries, warehousing, logistics, and research and development facilities. Parking areas and loading zones must be properly buffered and landscaped when adjacent to residential and agricultural land uses.

Streets and Transportation

Streets should be designed in a pattern that allows access from abutting areas, but without encouraging cut-through traffic by employees and trucks. Within the Enterprise district, the streets should be designed to be sufficient for business traffic.

Building and Site Design

Buildings should be constructed of high-quality materials which wrap around the entire building and feature attractive signage. Robust landscaping should be installed throughout the site, especially adjacent to residential areas.

Businesses should be supported by sufficient - but not overly excessive - parking areas. Parking areas may be located in the front, side, or rear yards of buildings. Large areas of parking should be broken up with landscaped islands and trees.

Appropriate Zoning District

E Enterprise

INDUSTRIAL

General Characteristics.

This designation provides an exclusive area for medium to high intensity Industrial uses, as well as large corporate campuses, which are vital to the Township's economy. Large plants that involve manufacturing products, stamping, and machine operations are well-supported here. Industrial areas have heavy buffers and deep setbacks to minimize impacts on adjoining properties.

Appropriate Land Uses.

Examples include large plants that involve manufacturing products, stamping, and machine operations. Large institutional operations and large corporate campuses are also encouraged to locate within General Industrial districts.

Streets and Transportation.

Roads in the industrial areas should be designed to be sufficient for truck traffic, without making them unsafe for pedestrians or bicyclists. New road connections should be built as needed to connect the industrial districts with arterial roads without disturbing residential areas.

Building and Site Design.

Buildings in this district should be designed to be long-lasting and to support efficient industrial and/or business practices. High-quality appearance is encouraged; however, sites should be designed to minimize off-site impacts and reduce pollution and site contamination to the extent possible.

Parking lots should be sufficient to support employee parking and truck maneuvering, but should not be excessively large.

Appropriate Zoning Districts.

I Industrial

Community Facilities

The Township's primary community facility is its Township Hall, which was constructed in 2010 and is located at 115 Uldriks Dr S along the M-89 Corridor. The Township should continue to work to maintain this facility to serve as its primary gathering spot within the community. Not only is the Township Hall the site of various governmental functions such as elections, board meetings, and public hearings, it also

serves as the principal identifier of the Township. The majority of Township residents are familiar with where the Township Hall is located and what happens there. Therefore, as the Township Board and Planning Commission continue to increase public participation, the Township Hall must keep up with the demands of a modern gathering place.

The Township maintains three public cemeteries which are a historical record and visual reminder of the Township's long history. The Township must budget for the ongoing management and maintenance of these facilities.

Implementation Plan

Implementation Strategies

Implementation strategies are a major component of any master plan. They determine how guidelines and recommendations in the Plan become reality. The Bedford Charter Township Master Plan should be seen as a living document. If conditions in the community or the needs of the residents change, the Plan will need various adjustments or additions. The main goals and objectives in the Plan are not anticipated to require change, but as the Plan is implemented certain aspects will require periodic adjustment.

Zoning Plan

The following table defines the zoning plan for Bedford Charter Township, with each future land use category corresponding to a future zoning classification.

RRAOS Rural Residential, Agriculture & Open Space is considered the “default” zoning classification for the Township. All land should be zoned RRAOS unless and until a property owner requests a different classification, as described in the table below.

Table 12: Zoning Plan

Future Land Use Categories	Future Zoning
Rural Residential, Agriculture & Open Space	RRAOS: Rural Residential, Agriculture & Open Space
Neighborhood Residential	NR: Neighborhood Residential
Water Residential	LR: Lake Residential
Manufactured Housing Community	MH: Manufactured Housing
Mixed Use	MU: Mixed Use
Enterprise	E: Enterprise
Industrial	I: Industrial
Extraction/Reclamation	I: Industrial RRAOS: Rural Residential, Agriculture & Open Space
Natural Preservation	RRAOS: Rural Residential, Agriculture & Open Space

NEW ZONING ORDINANCE

It is the intent of this plan for the Township to re-write its Zoning Ordinance for improved clarity, and to implement the vision of this plan. The new Zoning Ordinance should have the districts described in the table above, which should have the following purpose and intents.

RRAOS – Rural Residential, Agriculture & Open Space

The dual purpose of the RRAOS district is to maintain the rural residential character present throughout most of the township while simultaneously allowing for flexibility should the Township in the future opt to purchase land for the purpose of new parks and preservation areas. The need for such flexibility in zoning is also due to the fact that – with the exception of the Waubascon Lake Boat Launch - there are currently no State or County parks located in the township. The district will allow low-density residential, agriculture, and open space as principal permitted uses.

NR – Neighborhood Residential

The NR district will include all existing residential subdivisions as well as new medium-density residential developments. Land located south of the east-west growth boundary and within a roughly 1,000 foot radius of the future Bedford Village Mixed Use district will be eligible for future medium density residential development, regardless of whether the proposed development occurs within subdivision.

LR – Lakefront Residential

The LR district is limited to existing and future residential development with frontage along either St. Mary's Lake or Waubascon Lake.

MH – Manufactured Housing

A district specific to the three existing manufactured housing developments in the township.

MU – Mixed Use

The function of the Mixed Use district is to allow for a variety of compatible commercial and residential uses with the goal of encouraging local economic development which meets the needs of current and future residents. The land use patterns which ultimately emerge as a result of the Mixed Use district regulations will vary depending on location, current neighborhood land uses, and the performance-based zoning standards as stated in this Plan and enforced and interpreted by the Township.

E – Enterprise

The purpose of the Enterprise district is to allow for a combination of commercial and light industrial uses along the M-37 corridor between R Drive North and South Street. This area is envisioned as both a regional and local economic engine, allowing for both warehousing and logistics as well as serving as a transitional zone leading into Bedford Village.

I – Industrial

This district is currently limited to two separate areas of the township, both of which are located south of the Kalamazoo River along River Road. The larger of these two areas lies north of the train tracks and is comprised of both a quarry and several raw materials storage and distribution sites. The second area lies to the west and is currently undeveloped.

LAND DIVISION REGULATIONS

Land division standards following the Michigan Land Division Act (P.A. 288 of 1967, as amended through P.A. 591 of 1996) are a tool for the implementation of this Plan. Whereas zoning is concerned with land use on a site-by-site basis and activities in selected areas, land division regulations deal with the process of dividing land and maintaining the quality of individual developments.

Subdivision standards, as permitted under the Land Division Act, can be created in a Subdivision Control Ordinance to protect the needs of citizens by providing site design controls and improvement standards. Design controls provide for the arrangement and location of streets, configuration of lots, the provision of open space, and the sufficiency of easements for utility installations. Improvement standards ensure adequate roads and other physical improvements.

All other land divisions in the Township are also regulated by the Land Division Act. The act permits the Township to establish a Land Division Ordinance with local authority and the responsibility for the legal approval of land divisions. When land is divided outside of subdivisions, this ordinance can ensure that the resulting lots are consistent with Zoning Ordinance minimum requirements. It can also require lots to maintain minimum access standards to assure availability of public or private roads for the lots.

All land division regulations described in this section were recently changed by the Michigan Legislature and Governor. The Planning Commission must remain alert to modifications in this area of regulation in order to assure the Township standards and requirements are consistent with authorizing legislation.

Over the last 15 years, Michigan condominium regulations have been modified to permit the ownership of land by a co-owners association. The Michigan Condominium Act was significantly altered in 1982 to permit condominium ownership of land. Since then, many developers have created site condominiums as a substitute for land subdivision. Site condominium development is often an attractive alternative to subdivision because the approval process can be much shorter than with subdivision development. The Condominium Act requires condominiums to comply with the local Township ordinances. The Planning Commission should consider establishing standards for site condominium development of land.

Subdivision Regulations under the State Subdivision Control Act (Act 288, P.A. of 1967, as amended) are tools for the implementation of this Plan. Whereas zoning deals with land use on a site by site basis and activities in specific areas, subdivision regulations deal with the process of dividing land and maintaining the quality of individual developments. Subdivision standards protect the needs of citizens by providing both site design controls and improvement standards. Design controls are concerned with the location and arrangement of streets, width and depth of lots, the provision of open space, and the sufficiency of easements for utilities. Improvement standards ensure adequate roads and physical improvements.

Most land divisions in Bedford Charter Township are not under the jurisdiction of the State Subdivision Control Act, but rather are regulated by the land division procedures and standards from the Zoning Ordinance sections dealing with private roads and the division of platted lots and unplatted acreage.

PLANNING COMMISSION

A stable and knowledgeable Planning Commission is essential to the success of the zoning process. The responsibilities of the Commission include long-range plan formulation and the designing of appropriate and reasonable zoning ordinance regulations to implement the goals and objectives of the Master Plan. Adoption of the zoning ordinance by the Township Board then provides the legal basis for enforcement of the zoning ordinance's provisions. The ultimate effectiveness of the various ordinance requirements, however, depends upon the quality of ordinance administration and enforcement. If procedures are lax or handled in a sporadic and inconsistent manner, the results will be unsatisfactory at best.

CONTINUOUS PLANNING

The Planning Commission has the role of providing planning recommendations for the Township Board. This planning function is a continuous process and does not terminate with the completion of this Plan. Rural areas are in constant change and planning is an ongoing process of identification, adjustment, and resolution of problems. In order to sustain the planning process and generate positive results, maintain

momentum, and respond to change, the Plan should be reviewed and updated every three to five years to maintain the validity of its data and relevance as a policy document.

Transportation Plan

CIRCULATION AND ROAD SYSTEM IMPROVEMENTS

No additional public roads are expected to be built within the foreseeable planning period. The Calhoun County Road Commission plans to concentrate on the maintenance and improvement of existing public roads. The condition of existing paved roads should be evaluated each year, and roads with high traffic volume should be considered for repaving. Maintaining existing gravel roads should be a top priority of the Township and the Calhoun County Road Commission. Gravel roads promote reduced speeds, a rural atmosphere, and discourage dense development. However, poorly maintained gravel roads result in a variety of conditions from nuisances such as dust to more dangerous conditions resulting in damage to vehicles and difficult driving conditions. The Township and County should evaluate the road conditions and traffic volumes in the Township annually and prioritize improvements based on any findings.

COMPLETE STREETS

Bedford Charter Township intends to implement a rural vision of Complete Streets with this Plan, and will work with the Calhoun County Road Commission on road projects. The Complete Streets philosophy is that the roadways should be safe for all legal users. Complete Streets within the Township will mostly consist of widened paved or unpaved shoulders, which can provide access to slow moving traffic such as tractors, horses and buggies, or snowmobiles. The highest priority for Complete Streets in the Township should be major corridors that connect Bedford Charter Township to markets in nearby communities such as Battle Creek, as well as roads that provide major connectivity throughout the Township. Major north south roadway corridors include Uldriks Rd and Collier Ave, and major east west roadway corridors such as Morgan Rd.

Action Plan

The Bedford Charter Township Master Plan and its goals, objectives, and policies recommend the future vision for the community. The Township desires to enhance its rural character, maintain agricultural viability, and protect natural resources, while accommodating some residential growth.

The goals, objectives, and policies of this Plan should be reviewed often, and should also be considered in decision-making by the Township. Successful implementation of this Plan will be the result of actions taken by elected and appointed officials, Township staff and consultants, the Planning Commission, the Township residents, public agencies, private organizations, and outside government agencies including Calhoun County and the State of Michigan.

The table on the following page presents a detailed summary for all the recommended implementation activities, who is responsible for completing the activity, and available funding sources for each activity.

Table 13: Action Plan

Project	Priority	Timeframe	Responsibility			Funding		
			Township	Other Gov.	Private	Public	Private	TIF/DDA
Planning and Zoning								
Update the Zoning Ordinance to be compatible with the Master Plan.	A	1	PC TB	TAC		•		
Civic and Transportation								
Engage with residents to determine a unified vision for the M-89 Corridor,	A	1	TB	CCRC TAC		•		
Work with the CCRD to implement a rural vision for a Complete Streets design along 1 Mile Rd.	B	2	TB	CCRC TAC		•		
Work with the CCRD to implement a rural vision for a Complete Streets design along Kirby Rd.	B	2	TB	CCRC TAC		•		
Develop a plan for the acquisition of wetlands, woodlands, and other natural areas for the purpose of long-term preservation.	C	3	TB	PC CC CM LO		•		
Work with the CCRD to implement a rural vision for a Complete Streets design along O Drive North.	C	3	TB	CCRC TAC		•		

Priority		Timeframe		Responsibility (Color)	
A	Most Important	1	Within one year		Project Lead
B	Very Important	2	1-3 years		Key Participant
C	Important	3	3+ years		Contributor

RESPONSIBILITY (ABBREVIATION)

CC	Calhoun County	PSD	Public School Districts (Battle Creek, Fowler and Pewamo-Westphalia)
CCRD	Calhoun County Road Department	SM	State of Michigan
CM	Community Members	TAC	Township Administration and Consultants
LO	Land Owners	TB	Township Board
PC	Planning Commission	TCRPC	Tri-County Regional Planning Commission

FUNDING

Public	Includes public funds from the Township operating budget, County, and State funding. May also include local government bonds and grants.
Private	Includes funds from private sources such as grants, corporate funding, or property owners.
TIF	Tax increment financing provided by an authorized body. Please refer to the summary of economic development tools.



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Bedford Charter Township Solar Ordinance

Section of the Zoning Ordinance

RECOMMENDED BY PLANNING COMMISSION:

ADOPTED BY TOWNSHIP BOARD:

EFFECTIVE:

Section Solar Energy Systems

A solar energy system as defined by this Ordinance is allowed as a Special Use when approved by the Planning Commission in accordance with the process defined herein. Large scale solar energy systems (Solar Farms) are permitted as a special use only on agricultural or industrially zoned property. Small scale (on-site) solar energy systems are permitted as a Special Use on agricultural, industrial, and residentially zoned property. In addition to the standards and requirements specified in this Ordinance, the Planning Commission shall not approve the issuance of a Special Use Permit unless the requirements in this section are met:

(A) Intent and Purpose.

- (1) **Purpose.** The most common and prevalent land uses in Bedford Charter Township are agricultural and residential, and their preservation has been an ongoing goal within the community for many years. This Ordinance is intended to protect the health, safety and welfare of the residents of the township and to encourage the safe, effective, efficient, and orderly development and operation of solar energy resources in the township while preserving and protecting the character and the stability of residential, agricultural, recreational, commercial, industrial and other areas within the township.
- (2) With advances in technology of “solar energy development” in general, specific locations within the township may support the implementation of Solar Farms. To prepare for potential solar development projects within the township, this Ordinance will require such developments to obtain a Special Use Permit to ensure Solar Farm development sites are appropriately located so as to protect the character and stability of the township’s residential, agricultural, recreational, commercial and/or industrial areas while simultaneously preserving and protecting the township’s important and sensitive environmental and ecological assets, open space, wetlands, and other ecological and environmentally sensitive areas, views and aesthetics. Accordingly, regulations are necessary to further the above goals and, equally important, to minimize the potential adverse effects of this emerging land use on neighboring properties.

(B) Definitions. The following definitions shall apply in this section:

- (1) **Agrivoltaics (APV).** The simultaneous and synergistic use of a parcel of land for both agriculture and solar photovoltaic energy generation.
- (2) **Electric Linear Actuator.** The device on a solar tracker that allows a motorized solar panel to move so as to maximize exposure to the sun.
- (3) **GIS.** Geographic Information System. A computer-based system that maps, analyzes, and presents geographically-referenced data.
- (4) **GPS.** Global Positioning System. A satellite-based navigation system used to determine the ground position of an object.
- (5) **Lease Unit Boundary.** The boundary around a property or properties leased or purchased for the purpose of operating a solar energy facility, including leased or purchased adjacent parcels to the parcel on which the solar energy facility or equipment is located. For purposes of setback, the Lease Unit Boundary shall not cross road rights-of-way.
- (6) **NEC.** National Electrical Code.

- (7) **Participating Landowner.** A landowner who has leased land to the solar energy systems Applicant, recorded the notice of lease agreement with the Calhoun County Register of Deeds, and has an active contract with the solar energy systems Applicant. A Participating Landowner may also be called a solar energy systems contract leaseholder. A Participating Landowner may or may not have solar panels or infrastructure located on their property.
- (8) **Participating Landowner, Non-.** A landowner who has not signed a contract or any legal document with the solar energy systems Applicant and has not given up rights to their owned land to the solar energy systems Applicant.
- (9) **Solar Battery.** A device that stores energy generated using a solar photovoltaic system for later use.
- (10) **Solar Grazing.** A variation of agrivoltaics where livestock graze beneath and around solar panels.
- (11) **Solar Inverter.** A device which converts the direct current (DC) power generated by a solar energy system into alternating current (AC) power which can then be fed into an electrical grid or network.
- (12) **Solar Panel.** A photovoltaic panel designed to absorb the sun's rays as a source of energy for generating electricity or heating
- (13) **Solar Panel, Bifacial.** A solar panel which can absorb light on both planes of the panel, often installed at a 90-degree angle to the ground.
- (14) **Solar Panel, Fixed.** A solar panel which is installed at a set angle in a permanent, fixed position.
- (15) **Solar Panel, Motorized.** A solar panel that changes angles throughout a 24-hour period by means of an actuator so as to maximize exposure to the sun during daylight hours.
- (16) **Solar Panel, Stilt-mounted.** A solar panel, usually fixed-angle, installed on stilts at a height greater than six (6) feet. Such panels are typically associated with agrivoltaics (APV).
- (17) **Solar Panel Height.** The height of a solar panel structure with a panel at the highest vertical point.
- (18) **Solar Tracker.** A motorized mount for solar panels that tilts the panels in order to maximize exposure to the sun during daylight hours.
- (19) **Utility Grid, Electric.** The electrical power system network comprised of the generating plant, transmission lines, substation, transformers, distribution lines, and consumers.
- (20) **Wetland.** As pertains to this Ordinance, wetland shall mean the areas defined as such by Michigan law (see Part 301 Inland Lakes and Rivers and Part 303 Wetlands Protections of the Natural Resources and Environmental Protection Act, last revised effective 3-29-19), and regulated by the Michigan Department of Natural Resources, and the Michigan Department of Environment, Great Lakes, and Energy.
- (21) **Solar Energy Systems Applicant.** The person, firm, corporation, company, limited liability corporation or other entity, as well as the Applicant's successors, assignees and/or transferees, who applies for Township approval (permit) to construct a solar energy system and/or solar energy system Testing Facility.

- (22) **Solar Energy System.** A solar photovoltaic cell, panel, or array, or series of cells, panels, or arrays, that converts solar energy to usable thermal, mechanical, chemical, or electrical energy.
- (a) **Solar Farm.** A utility-scale commercial facility that converts sunlight into electricity, whether by photovoltaics, concentrating solar thermal devices or any other various experimental or new solar technologies for the primary purpose of wholesale or retail sales of generated electric power off-site.
- (b) **Small-Scale Solar Energy System.** A single residential or small business-scale solar energy conversion system consisting of building-mounted panels, ground-mounted solar arrays, or other solar energy fixtures, and associated control or conversion electronics that will be used exclusively for private, on-site purposes and not used for any commercial resale of any energy generated, except for the sale of surplus electrical energy back to the electrical grid.
- (23) **Solar Energy System Testing Facility.** A structure and equipment such as a meteorological tower for the collection of solar data and other meteorological data and transmission to a collection source, shall not be deemed to be a communication tower.
- (C) **Small Scale Solar Energy System.** The following standards shall apply to Small Scale Solar Energy Systems in addition to the general Special Use Approval Requirements of this Ordinance:
- (1) **Zoning.** Small scale solar energy systems are permitted in all zoning districts, including on land enrolled in the Michigan Farmland Preservation Program (PA 116 of 1974). Special Use Approval shall not be required prior to the installation of a small scale solar energy system. The Zoning Administrator shall approve the small scale solar energy system and issue a zoning permit if all provisions of this section are met.
- (2) **Height.** Structures associated with a solar energy system shall have a total height of 15 feet or less. Solar panels attached to an existing structure (including those placed on rooftops) may exceed this height, but shall not cause the structure they are attached to to exceed the maximum permitted height in the Zoning District in question.
- (3) **Edge of Rooftop.** Solar panels attached to a rooftop shall be set back a minimum of 2 feet from all roof edges.
- (4) **Setbacks.** Small scale solar energy systems shall not be located in the front yard, and shall be set back at least 15 feet from all side lot lines and 25 feet from the rear lot line. These setback requirements shall supersede all other setback requirements in this Zoning Ordinance.
- (5) **Lot Coverage.** No more than 20% of the lot area, or 20 acres, whichever is less, on any lot shall be covered by a ground mounted small scale solar energy system.
- (6) **Glare.** Solar energy systems shall be designed and located to avoid glare or reflection onto adjacent lots and adjacent roadways, and shall not interfere with traffic or create a safety hazard off-site.
- (D) **Solar Farms.** Solar Energy Conversion Systems and Testing Facilities shall meet the following standards. An application for a Special Use permit shall be filed with the Township pursuant to Section 3.23 as to Special Use approvals. Supporting data and documentation must be submitted in their entirety at the time of application. Applicant shall provide to the Township updated documents throughout the duration of the Solar Farm application process upon request by the Township Board or Planning Commission.

- (1) **Zoning District.** Solar Farms are allowed only in the AG (Agricultural) zoning district and require a special land use permit and site plan review. In addition to all requirements for a special use permit under Section 3.23 of the Zoning Ordinance and site plan review and approval under Article 12 of the Zoning Ordinance, Solar Farms are also subject to the requirements of this Section.
- (2) **Glare.** Solar energy systems shall be designed and located to avoid glare or reflection onto adjacent lots and adjacent roadways, and shall not interfere with traffic or create a safety hazard off-site.
- (3) **PA 116 Exclusion.** No Solar Farm shall be allowed on any portion of a lot enrolled in the Michigan Farmland Preservation Program (PA 116 of 1974).
- (4) **Application Requirements.** The Applicant for a Solar Farm must provide the Township with all of the following:

 - (a) Application fee in an amount set by resolution of the Township Board.
 - (b) The name, address, and phone number of the Applicant, any authorized representatives of the Applicant, the proposed operator, and the owners of the property on which the Solar Farm is to be located.
 - (c) A site plan that includes all proposed structures and the location of all equipment, transformers, and substations, as well as all setbacks, panel sizes and locations, and the location of property lines, signage, fences, greenbelts and screening, drain tiles, easements, floodplains, bodies of water, lighting, proposed access routes, land elevations, structures on adjacent parcels, and road rights-of-way. The site plan must be drawn to scale and must indicate how the Solar Farm will be connected to the power grid.
 - (d) Scaled drawings depicting the location, height, elevation, and size of all components of the Solar Farm.
 - (e) A map and narrative description of the land uses of all non-participating parcels adjacent to the Solar Farm.
 - (f) A list of all parcel numbers that will be used by the Solar Farm; documentation establishing ownership of each parcel; legal descriptions for each parcel; and any lease agreements, easements, letters of intent, or purchase agreements for the subject parcels demonstrating the property owners' consent to include the parcels in the Solar Farm.
 - (g) A plan for managing erosion and sediment control.
 - (h) An operations agreement setting forth the operations parameters, the Applicant's inspection protocol, security and emergency procedures, and general safety documentation. The security and emergency procedures must describe how the Applicant or operator will prevent unauthorized access to the Solar Farm and warn and protect the public about potential dangers during the construction, operation, maintenance, repair or removal of the Solar Farm.
 - (i) Current photographs of the subject property.

- (j) A graphical demonstration (preferably computer-generated) of the Solar Farm as completed. The graphical demonstration must include, at minimum, the following:
 - (i) A depiction of the completed Solar Farm on the proposed site as seen from four (4) separate angles.
 - (ii) A real-time, visual model of the Solar Farm showing the direction and intensity of glare during daylight hours over the course of a 24-hour period. The visual model shall be repeated for each of the four seasons.
- (k) A copy of the Applicant's power purchase agreement or other written agreement with an electric utility showing approval of an interconnection with the proposed Solar Farm.
- (l) A written plan and schedule for maintaining the subject property, including a plan for maintaining and inspecting drain tiles and addressing stormwater management.
- (m) A decommissioning and land reclamation plan describing the actions to be taken following the abandonment or discontinuation of the Solar Farm, including evidence of proposed commitments with property owners to ensure proper final reclamation, repairs to roads, and other steps necessary to fully remove the Solar Farm and restore the subject parcels.
- (n) An escrow payment that meets the requirements of this Section.
- (o) Financial security that meets the requirements of this Section.
- (p) A plan for resolving complaints from the public or other property owners concerning the construction and operation of the Solar Farm.
- (q) A plan for managing any hazardous waste.
- (r) A description of any electromagnetic interference that may be generated by the Solar Farm.
- (s) A transportation plan for construction and operation phases, including any applicable agreements with the County Road Commission and Michigan Department of Transportation.
- (t) An attestation that the Applicant will indemnify and hold the Township harmless from any costs or liability arising from the approval, installation, construction, use, maintenance, repair, or removal of the Solar Farm.
- (u) A copy of the manufacturer's installation instructions.
- (v) An unredacted copy of the manufacturer's safety manual for each component of the Solar Farm without distribution restraints to be kept at the Township Hall and other locations deemed necessary by the Planning Commission or local first responders. The Manual should include standard details for an industrial site such as materials, chemicals, fire, access, safe distances during Solar Farm failure, processes in emergencies, and other relevant information.
- (w) Proof of environmental compliance, including compliance with Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act; (MCL 324.3101 et. seq.; Part 91, Soil Erosion and Sedimentation Control (MCL 324.9101 et. seq.) and any corresponding County ordinances; Part 301, Inland Lakes and Streams, (MCL 324.30101 et. seq.); Part 303, Wetlands (MCL 324.30301 et. seq.); Part 365, Endangered Species Protection (MCL 324.36501 et. seq.); and any other applicable laws and rules in force at the time the application is considered by the Township.

- (x) An environmental impact study that evaluates the environmental impact of the Solar Farm, including its impact on water resources, air quality, wildlife, floodplains, wetlands, unique farmlands or soils, areas of aesthetic or historic importance, archeological or cultural resources, neighboring properties, utilities and infrastructure, noise, and any other relevant factors.
 - (y) An estimated construction timeline.
 - (z) Any additional information or documentation requested by the Planning Commission, Township Board, or other Township representative.
- (5) **Permission of Property Owner.** An Applicant must have the legal authority to represent and bind the Participating Landowner, or lessee, who will construct, own, and operate the solar energy system or Testing Facility. The duties and obligations regarding a zoning approval for any approved solar energy system or Testing Facility shall be with the solar energy system or Testing Facility owner, and jointly and severally with the owner, operator, and lessee of the solar energy system or Testing Facility if different than the solar energy system owner.
- (6) **Permitting Costs.** An escrow account shall be set up when the Applicant applies for a Special Use Permit for a Solar Farm and/or Testing Facility. The monetary amount filed by the Applicant with the Township shall be in an amount estimated by the Township Board to cover all reasonable costs and expenses associated with the special use zoning review and approval process. Such costs can include, but are not limited to, fees of officials appointed or contracted with the Township, including the Township Attorney, Township Planner, and Township Engineer, as well as any reports or studies which the Township anticipates it may require related to the zoning review process for the particular application. The escrow amount shall include regularly established fees. The Township may require the Applicant to replenish the escrow account at any time to ensure a sufficient balance. If the escrow account needs replenishing and the Applicant refuses to do so within fourteen (14) days after receiving notice, the zoning review and approval process shall cease until and unless the Applicant makes the required escrow deposit. Any escrow amounts which are in excess of actual costs shall be returned to the Applicant within ninety (90) days of completion of the permitting process. An itemized billing of all expenses shall be provided to the Applicant. The Township shall hire qualified professionals for each and any of the technical fields associated with the Special Use Permit, such as, but not limited to, electrical, acoustics, environment, economics, wildlife, health, and land-use.
- (7) **Height.** Structures associated with a Solar Farm shall have a total height of 15 feet or less when oriented at maximum tilt. Height is measured from the natural grade at the base of the component being measured. Lightning rods may exceed 15 feet in height, but they must be limited to the height necessary to protect the Solar Farm from lightning. This height standard shall apply regardless of zoning district, and shall supersede any other height maximum in this Zoning Ordinance.
- (8) **Setback.** The following minimum setbacks, measured from the outside edge of the solar panel, or other structure accessory to a Solar Farm, shall be required. The setbacks listed below shall apply to all structures accessory to a Solar Farm. The setbacks in this section shall supersede all other setback requirements in this Zoning Ordinance.
- (a) From a lot line abutting a lot that is not participating in the solar project: 300 feet.
 - (b) From a public or private road right-of-way line: 300 feet.
 - (c) From wetland delineated by the State of Michigan, regardless of whether the wetland is regulated by the State of Michigan: 200 feet.

- (d) There shall be a 50 ft. setback requirement from the lot line of a neighboring participating parcel.

(9) Accessory Buildings, including Battery Storage and Inverters.

- (a) Inverters and battery storage buildings must be set back at least 1,000 feet from the lot line of a non-participating lot and at least 200 feet from the lot line of a participating lot.
- (b) Battery storage buildings must include secondary containment around all batteries.
- (c) Applicant must provide a safety plan for all accessory buildings and devices including, but not limited to, Solar Farm batteries, battery storage buildings, inverters, and primary and secondary containment devices.
- (d) Structures other than inverters, battery storage, and solar panels that are related to a Solar Farm shall be subject to the dimensional and locational standards of the zoning district in which they are located.
- (e) Landscaping or other screening, in addition to what is required in Section .D.10, may be required to minimize off-site visual impacts.

(10) Landscaping and Buffering. The following landscaping requirements shall apply to the site, and shall supersede the regulations of Section, and any other landscaping provisions in the Ordinance on sites containing Solar Farms.

(a) Buffering/Screening.

- (i) Along the property line adjacent to a non-participating lot containing one or more residential dwelling units, within the required setback area, the following plantings are required:
 - 1) **Evergreen trees**, at least 12 feet high at the time of planting, planted in a staggered double row no more than 10 feet on center, at least one of which must be planted on a 4-foot high berm.
 - 2) The Planning Commission shall determine at the time of approval whether the proposed plantings constitute a “dense visual screen” and may require additional plantings, or other design changes to the landscape plan, as a condition of Special Land Use Approval.
- (ii) **Existing Trees and Woodlands.** Existing trees within the required setback area shall be preserved to the greatest extent possible. The Planning Commission may modify or waive Subsection 10a above upon determining that existing foliage provides a sufficient screen from neighboring residential uses.

(b) Ground Cover. Between the solar panels, the ground must be covered by natural vegetation which may include, but is not limited to:

- (i) **Native Grasses**, including, but not limited to bluestem, sedge, and bottlebrush.
- (ii) **Grazing Grasses**, including, but not limited, to switchgrass, gamma, and Indiangrass.
- (iii) **Pollinator Habitat**, including, but not limited to, sunflower, milkweed, and black-eyed susan.

- (c) **Fence.** The Solar Farm and all accessory mechanical equipment including any structure for batteries or storage cells shall be completely enclosed by a six foot high fence with a self-locking gate, and provided with evergreen landscaping that is sufficient to buffer the equipment from view of adjacent streets and lots.
- (d) **Maintenance.** All plantings shall be installed in a manner that supports their long-term health and vitality. All plantings shall be maintained in sound health and a vigorous growing condition. The Township may require dead, diseased, damaged, or destroyed species within the required setback area to be replaced with new plantings.
- (11) **Noise.** The noise generated by a Solar Farm must not exceed the following limits. In the event of a conflict between this section and Section (or any other section of this Zoning Ordinance), the more stringent regulation shall apply.

 - (a) 40 dB(A) Leq 1 second or 50 dB(C) Leq 1 second, as measured at the property line of any adjacent non-participating parcel.
 - (b) In addition to the above limitations, a double row of evergreen trees, at least 8 feet tall at planting and spaced not less than 10 feet apart on center, must be constructed to reduce noise levels surrounding all inverters. The trees must be within 20 feet of the inverters. This requirement is in addition to the requirements of Section D.10.
- (12) **Signage.** Each Solar Farm shall have one sign per lot, located at the roadside and easily visible throughout all four seasons. Signs shall be at least two to six square feet in area. Additional signage on and around the solar panels is recommended. All signage shall meet the requirements of Section. The sign shall contain at minimum the following:

 - (a) Warning High Voltage.
 - (b) Participating Landowner's name, Solar Farm owner's name, and Operator's name.
 - (c) Emergency telephone numbers and web address (list more than one number if needed).
 - (d) Signs shall be placed on the perimeter fence at the fence entrance gate.
 - (e) Unique identification such as address of the Solar Farm.
- (13) **Safety.** The Solar Farm shall meet the following safety requirements:

 - (a) The Solar Farm shall be designed to prevent unauthorized access to electrical and mechanical components and shall have access doors that are kept securely locked at all times when service personnel are not present.
 - (b) All hazardous materials shall be properly and safely removed in a timely manner from the site of the Solar Farm.
 - (c) All collection system wiring shall comply with all applicable safety and stray voltage standards.
 - (d) An automatic fire suppression system shall be installed at each Solar Farm.

- (14) Applicant Compliance.** The Solar Farm and related equipment shall comply with any and all Federal, State, County and Township requirements, and obtain all necessary permits from all Federal, State, County, Township, or other government authority prior to the commencement of construction of the Solar Farm.
- (15) Infrastructure Wiring.** All electrical connection systems and lines from the Solar Farm to the electrical grid connection shall be located and maintained underground. Burial depth shall be at a depth that causes no known environmental, land use, or safety issues. Depth shall be a minimum of 6 feet below grade, be deeper than any existing drain tile and be in compliance with NEC 2014 or newer Code standards, whichever depth is greater. The Planning Commission may waive the burial requirement and allow above-ground structures in limited circumstances, such as when geography precludes, or where there is a demonstrated benefit to the Township. The waiver shall not be granted solely on cost savings to the Applicant. In deciding whether to waive the requirements of this section, the Planning Commission will consider aesthetics, future use of land, and the effect on nearby landowners.
- (16) Road Damage.** The Applicant and/or its contractor shall inform the Calhoun County Road Department (CCRD) and the Township of all the roads they propose to use as haul routes to each construction (including repair and decommissioning) site. This shall be done prior to beginning any construction (or decommissioning) at any site. A third-party road inspector will be retained, with mutual approval of the Township, the Applicant, and the CCRD or the Michigan Department of Transportation (MDOT) if a state highway is involved. The road inspector will determine any precautions to be taken (including videotaping and physical inspections) during the process to determine any damage that may be caused by Applicant's contractor(s), and then determine the appropriate road standards and measures to be taken to repair the damage. The cost of the third party road inspector and/or any other required third party assistance, and of all repairs necessitated to restore the roads [and related property which may be damaged by the contractor(s)], shall be the responsibility of the Applicant and/or their contractor, and shall in no case be the responsibility of the Township.

In order to assure the funds will be available to perform the work described above, the Applicant will be required to post financial security acceptable to the Township in the form of: a) a surety bond from a surety listed as acceptable on the Federal Surety Bond circular 570 of the U.S. Department of Treasury; or b) an acceptable letter of credit; or c) an escrow account established in a financial institution licensed in the State of Michigan. The amount of the security shall be determined by the CCRD and (if applicable) MDOT in consultation with the Township and the third-party consultant. The bond (or other security) shall only be released (in whole or part) when the Township Board, in consultation with CCRD and/or MDOT and the third-party inspector, determines that all required road work has been completed and approved by CCRD and/or MDOT.

- (17) Construction Codes, Towers, & Interconnection Standards.** Solar farms shall comply with all applicable state construction and electrical codes and local building permit requirements. An interconnected Solar Farm shall comply with Michigan Public Service Commission (MPSC) and Federal Energy Regulatory Commission (FERC) standards if applicable.
- (18) Liability Insurance.** The current Solar Farm owner and operator shall insure for liability for the Solar Farm in an amount of two million dollars (\$2,000,000) per occurrence, per participating lot, without interruption until removed and comply with section "Site Insurance" (See F.5) to ensure that funds are available to resolve damage/injury claims.

- (19) Protection of Adjoining Property.** In addition to the other requirements and standards contained in this section, the Planning Commission shall not approve any Solar Farm unless it finds that the Solar Farm will not pose a safety hazard or unreasonable risk of harm to the occupants of any adjoining properties or area wildlife.
- (20) Operational, Maintenance, and Issue Resolution.** Each Solar Farm and Testing Facility must be kept and maintained in good repair and condition at all times. If a Solar Farm is not maintained in operational and reasonable condition or poses a potential safety hazard, the Applicant shall take expeditious action to correct the situation, including Solar Farm removal if needed. The Applicant shall keep a maintenance log on each Solar Farm and must provide the complete log to the Township within thirty (30) days of request. To assure compliance with this requirement, an annual audit of maintenance records, conducted by a qualified third-party maintenance expert acceptable to the Township, shall be completed at the expense of the owner/operator of the Solar Farm, and a copy of this report provided as specified by the Township.
- (21) Inspection.** The Township shall have the right, upon issuing any Solar Farm special use permit, to inspect the premises on which each Solar Farm is located at any reasonable time. The Township may hire a consultant to assist with any such inspections at a reasonable cost to be charged to the operator of the Solar Farm.
- (22) Repair Documentation.** The Applicant must provide a detailed policy and process book for the repair, replacement, and removal of malfunctioning, defective, worn, or noncompliant Solar Farm equipment. Sections of the process book should consider any ordinance requirement or Solar Farm performance deficiency. The process book shall also include a detailed maintenance schedule.
- (23) General Maintenance Bond.** The Township shall require a General Maintenance Bond to guarantee that all aspects of this Ordinance are met at all times during the construction and operation of the Solar Farm. At the time of the Special Use application, the Applicant shall submit two third-party contractor bids for construction of all fencing, landscaping, and drainage improvements associated with the Solar Farm, and the bond shall be the higher of the two bids. The Township may use the bond to repair any landscaping, fencing, drainage infrastructure (including drainage tiles), and/or to correct any ongoing violation of this Ordinance in the event that the Solar Farm owner fails to adequately maintain the required site improvements or fails to make operational changes to correct an operational violation. The Township Board shall not utilize the General Maintenance Bond unless the Complaint Resolution process described in Section.D.22 has been completed and the Township Board determines that the Solar Farm owner is unlikely to make required repairs, upgrades, or operational changes.
- (24) Complaint Resolution.** It is the intent of this Ordinance to provide a mechanism to address and resolve complaints prior to the expenditure of significant funds by the Township and/or operator for investigation and resolution. Therefore, the Township shall perform an initial vetting of complaints prior to requesting funds from the operator for complaint resolution efforts. If the Township determines that the complaint has merit, the complaint shall be resolved in the following manner:

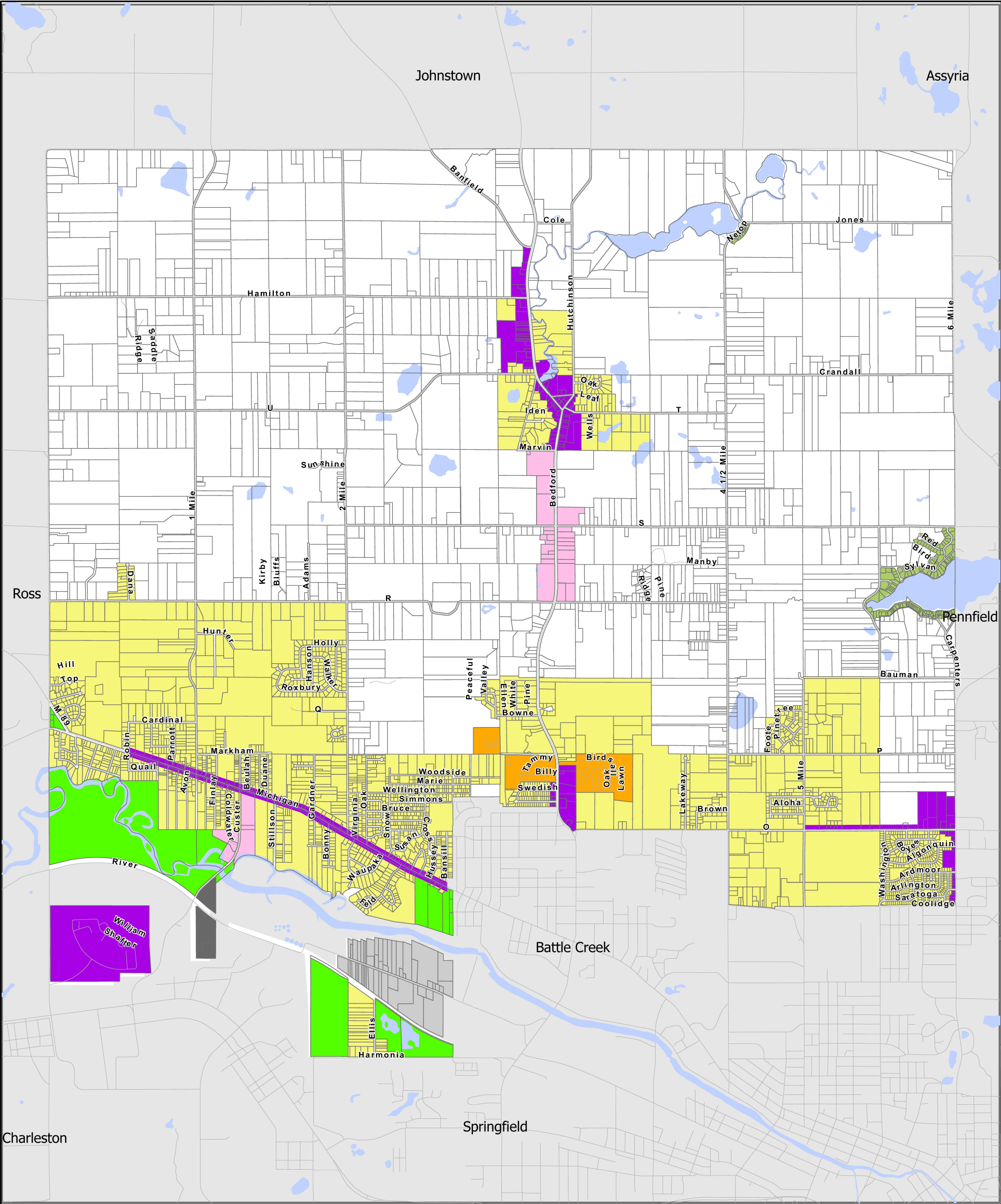
- (a) Complaints shall be submitted to the Township in writing from the affected property owner, or written designee, including name, address, contact information, and specific complaint. The complaint shall be added to the agenda of the next Township Board meeting in accordance with the procedure for setting the agenda.
- (b) The Township shall submit to the operator of record notice of all written complaints to the Township within thirty (30) days of receipt of any complaint. Complaints received by the Township and the date of any Township Board meeting where complaints may be considered shall be communicated to the owner-operator at least 10 days prior to the meeting. The notice shall state that the Township Board may determine that the Solar Farm, as well as the owner-operator, is in violation of its permit.
- (c) Upon review, if the Township Board, by an affirmative vote of the majority of the members present, deems a complaint sufficient to warrant an investigation, the Township Board shall notify the owner(s) and/or operator of the Solar Farm that an investigation has been requested by the Board.
- (d) The owner(s) and/or operator shall be required, as a condition of the operation, to fund an escrow account for investigation of complaints for, but not limited to glare, stray voltage, noise, and signal interference in the amount of \$15,000.00 to be used at the discretion of the Township Board to pay for third party investigative services, the provider of which shall be chosen by the Township. Such funds shall be deposited with the Township Treasurer, or with a third-party fiduciary, at the discretion of the Township. When the escrow account balance is below \$5,000.00, the Township shall notify the Applicant and the Applicant shall replenish the account to the amount of \$15,000.00 within 45 days.
- (e) If the Solar Farm is found to be in violation of this Ordinance, the owner(s) and/or operator shall take immediate action to bring the Solar Farm into compliance. If the owner(s) and/or operator fails to bring the operation into compliance within thirty (30) days, the Township may seek any relief at law or equity to abate the nuisance and may also issue a municipal civil infraction citation. Each violation for which the owner(s) and/or operators are deemed responsible shall result in a \$500.00 fine. Each day of non-compliance shall be deemed a separate offense.
- (f) Any Solar Farm found by the Township Board to be in violation of this Ordinance set forth herein shall be considered a nuisance and the Township Board may, following notice and a public hearing, order that the Solar Farm operations cease until such time as the Solar Farm owner/operator can demonstrate compliance with the requirements of this Ordinance.
- (g) Following the closure of the Solar Farm, the Township may opt to utilize the General Maintenance Bond (see Section D.21) to make repairs or operational improvements, in order to mitigate the violation. However, the Township shall be under no obligation to utilize the General Obligation Bond to bring the Solar Farm into compliance, and may instead notify the Solar Farm owner/operator that the Solar Farm has been determined to be irreparably out of compliance with this Ordinance, and, following notice and a public hearing, by majority vote of the Township Board, void the Special Use Permit. In the event that the Special Use permit is voided, the process for abandonment, decommissioning, removal, and site renovation shall occur as described in Sections D.23-25.

- (25) Abandonment.** Any Solar Farm, or individual solar panel that is a component of a Solar Farm, that is not used to produce energy for a period of six (6) successive months or longer shall be deemed to be abandoned and shall be promptly dismantled and removed from the property in accordance with the decommissioning regulations of this Ordinance, unless the Applicant receives a written extension of that period from the Township Board in a case involving an extended repair schedule for good cause.
- (26) Removal and Site Renovation.** A condition of every approval shall be adequate provision for the removal of the structure whenever it ceases to actively produce power for one hundred eighty (180) days or more. The Planning Commission may grant an extension of an additional one hundred eighty (180) days upon the Solar Farm owner demonstrating that the structure will be put back into use. Removal shall include the proper receipt of a demolition permit from the Building Official and proper restoration of the site, including but not limited to all participating parcels, to original condition. Removal of the structure, wiring, and its accessory use facilities shall include removing the caisson (foundation) and all other components in their entirety, to a depth of at least six (6) feet below grade. Restoration must be completed within 365 days of non-operation. If repair is allowed, the Solar Farm owner must provide data and documentation demonstrating that the repaired Solar Farm is in good operational condition and functioning at an efficiency similar to surrounding Solar Farms.
- (27) Decommissioning.** To ensure proper removal of each Solar Farm structure when it is abandoned or non-operational, application for a Special Use permit shall include a proof of the financial security in effect before permit is approved. The security shall be in a form acceptable to the Township. These should be reviewed by the Township Attorney and approved by the Planning Commission.
- (a)** The amount of each Solar Farm security guarantee shall be 125% of the average of at least two independent demolition (removal) quotes obtained by the Township. If the quantity of quotes obtained is two (2), the formula shall be (quote 1 + quote 2) divided by two (2). Quotes shall be ordered and obtained by the Township from established demolition companies. Quotes shall not include salvage values. The security guarantee shall be updated every two (2) years at the rate of 1.5 times CPI (consumer price index) for each year.
 - (b)** Such financial guarantee shall be deposited with the Township Treasurer, or with a third-party fiduciary, at the discretion of the Township, after a Special Use has been approved but before construction operations begin on the Solar Farm project. Failure to keep such financial security in full force and effect at all times while the structure exists shall constitute a material and significant violation of any Special Use approval and this Ordinance, and shall be subject to any and all remedies available to the Township, including, but not limited to, enforcement actions, fines, revocation of the Special Use approval and Solar Farm removal.
 - (c)** If the Applicant or operator fails to decommission the Solar Farm in a timely manner as required under this Ordinance, then the Township may draw from the financial security to decommission the Solar Farm and to pay any costs associated with decommissioning, including legal fees and expenses.
 - (d)** The Applicant shall be responsible for the payment of all attorney fees and other costs incurred by the Township in the event that the structure is not voluntarily removed and the Township has to enforce removal.

(28) Transfer or Sale. In the event of a transfer or sale of the Solar Farm, the Township shall be notified and the Special Use permit may be amended by the Township Board, subject to the following conditions:

- (a)** Change in ownership alone shall be considered a minor amendment to the Special Use approval and may be approved administratively without a public hearing.
- (b)** Any proposed changes to the operating procedure or approved site plan shall be amended and resubmitted for Township review according to the procedures for all Solar Farms as outlined herein, including a public hearing.
- (c)** Upon transfer or sale, the cash bond (or form of security acceptable to the Township) shall be maintained at all times, the estimated costs of decommissioning shall be resubmitted, and the security bond adjusted to account for the new estimate.

(E) Conflicting Regulations. In the event of any conflict between this Section and any other provision of the Zoning Ordinance, this Section shall govern, unless specifically stated otherwise within this Section.

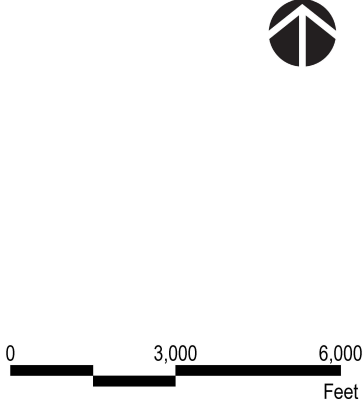


Future Land Use

Bedford Charter Township,
Calhoun County, Michigan

March 24, 2023

- Legend
- Rural Residential, Agriculture & Open Space
 - Neighborhood Residential
 - Water Residential
 - Manufactured Housing Community
 - Mixed Use
 - Enterprise
 - Extraction/Reclamation
 - Industrial
 - Natural Preservation



Basemap Source: Michigan Center for Geographic Information, v. 17a.
Calhoun County, 2022. McKenna, 2023.

