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INTRODUCTION

In 2001, Highland Township conducted a review of the Hickory Ridge Road/M-59 intersection deemed the West Highland Micro Area Analysis. This document was incorporated into the Comprehensive Land Use Plan as an amendment. The focus of the document was on the commercial potential of the road intersection. This review concluded that expansion of the commercial area in western Highland Township would have a detrimental effect on the residential development in the area. Residential development would then transition in density outward from the commercial center.

Due to recent development proposals and trends, the Highland Township Planning Commission initiated a review of land use in the North Hickory Ridge Road corridor, north of M-59. There have been several rezoning requests in the area as well as a new residential development. Unlike the West Highland Micro Area Analysis, which provides land use recommendations on commercial land uses, this document provides direction for the Township on residential land uses in the area.

This document is separated into three (3) sections:

Section 1: The Existing Environment – The first section focuses on existing conditions. Zoning, existing and future land use, as well as existing utilities, available public safety and transportation infrastructure are documented. An inventory of the existing conditions will enable the Township to determine if increased densities and development can occur.

Section 2: Development Potential – The second section of the document reviews three (3) different development potential scenarios for the study area. Properties with existing development or developments that have received site plan approval and have not commenced construction were not included in the analysis.

Section 3: Conclusions/Recommendations – The final section provides conclusions and recommendations. Due to a proposal in the study area, a discussion on institutional housing is provided. In order to give the review regional context, similar communities, to Highland Township, have been reviewed for their policies regarding high density residential development. A general review of locational criteria of high density development was also conducted.

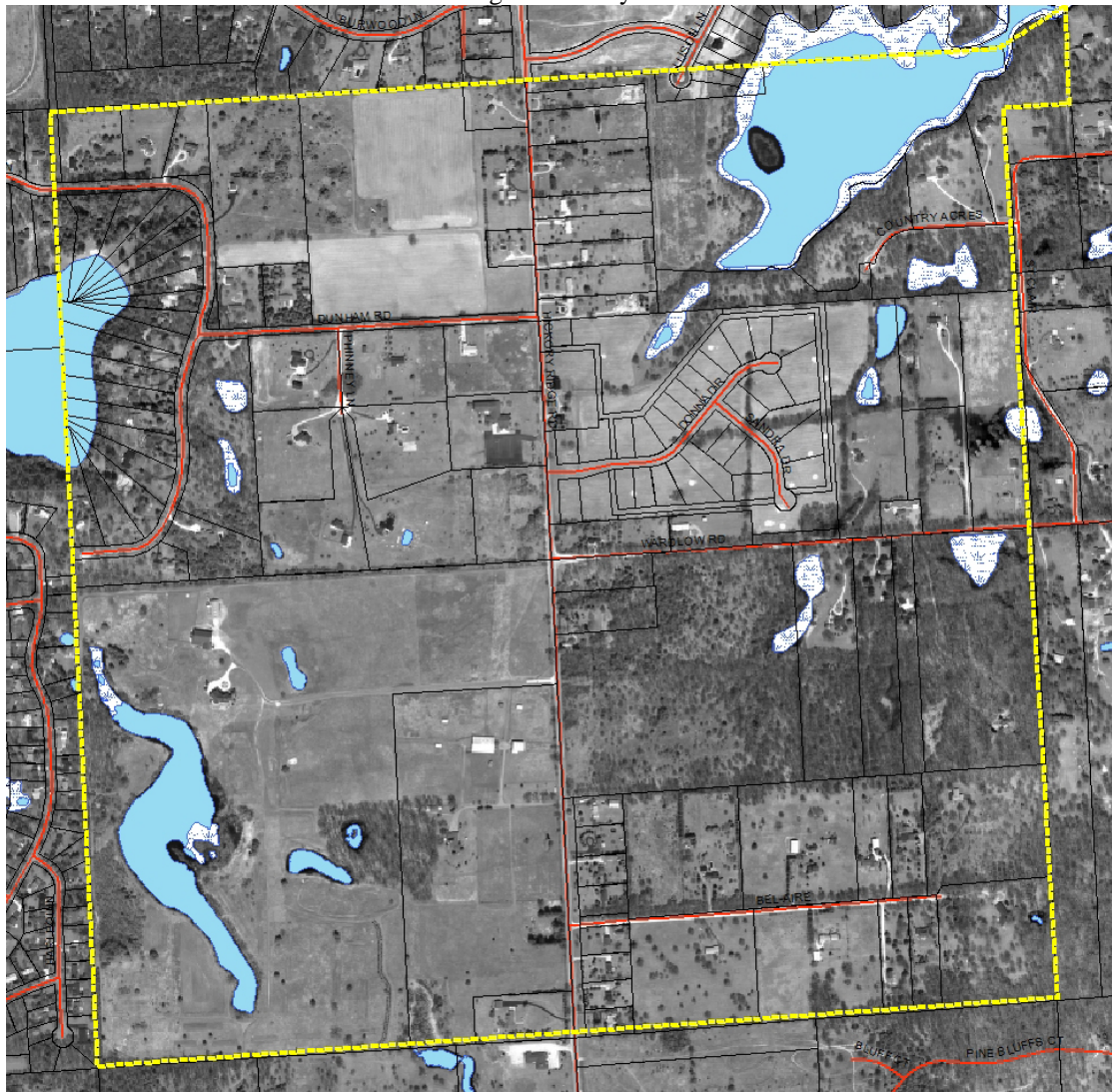
THE EXISTING ENVIRONMENT

Study Area Description

The Hickory Ridge Micro Area Analysis covers an area approximately one (1) square mile in size bounded by Burwood Lane to the north and Phase III of the Cobblestone Development to the south. There are currently one hundred twenty-eight (128) parcels located in the study area. The area encompasses approximately a quarter-section each of Sections 17-20 in Highland Township. The study area is approximately three (3) miles from Highland Station, located at the intersection of M-59 and Milford Road.

...there are 128 parcels in the study area...

Figure 1: Study Area



Based on the study area map, there are scattered wetlands/water bodies located on the properties in the study area. A large lake is located on the King property and also the northeast corner of the study area. Some possible wetlands are located closer to the eastern boundary of the study area. With the use of Geographic Information Systems (GIS), exact

acreages of water bodies are measurable. This allows a more precise measure of expected development potential.

Existing Land Uses

The entire study area consists of single family residential uses ranging in lot sizes from small to large. Just south of the study area, although not yet complete, traditional suburban development exists in the Cobblestone development. Vulaj Stone Villas, also located south of the study area, is a small residential development of five (5) homesites that was approved in the spring of 2005.

Farther to the south, some commercial activity exists at the intersection of Hickory Ridge Road and M-59. The Jay Chevrolet Dealership is located on the northwest corner of the intersection. In 2004, The Home Depot received site plan approval to develop the northeast corner of the intersection. However, the site plan has since expired.

In November 2004, the Township and American Aggregates of Michigan/Levy Corporation entered into a consent judgment on eight hundred forty-six (846) acres of land, known as the Stoneleigh development, located along Clyde Road and Hickory Ridge Road north of the study area. Some of the land continues to be mined. Through negotiation, the site will be reclaimed. A waste water treatment plant and well system will be installed for sufficient capacity to service residents in the northern portion of the Township. Water mains will run down several roads, including Hickory Ridge Road. Additionally, property will be set aside for a new fire station and school. The major use proposed for the reclamation, however, is the development of six hundred seventy-eight (678) single family residential homes. The development of the homes will add a significant burden to the road system in the Township, and more specifically, Hickory Ridge Road.

The Comprehensive Land Use Plan 2000-2020

As of the year 2000, approximately 68% of Highland Township was composed of residential land uses. Densities range from small-lot residential, to large-lot residential (5-10 acres/dwelling unit) and multiple family developments. The Southeastern Michigan Council of Governments (SEMCOG) projects that the number of households will increase by 43% before 2020. The Comprehensive Land Use Plan 2000-2020 has identified four (4) determinations based on the SEMCOG projections:

...SEMCOG projects the number of households to increase by 43% before 2020...

1. *New residential development should round out existing residential development to logical boundaries.*
2. *Sufficient acreage for each residential type should be provided to enable reasonable development alternatives while retaining the rural character of the Township.*
3. *Adequate area in all residential developments will be required to contain the potential increase of approximately 3,012 households or, say 3,200 dwelling units allowing a reasonable percentage for vacancy.*
4. *Future development patterns in the Township should respect long standing practices to the extent feasible.*

The Comprehensive Land Use Plan provides a more defined look at preserving rural character in Highland Township. It is the intent of the Township to provide for dense residential development surrounding the lakes and in an increasingly less-dense fashion, extending out from commercial centers such as Highland Station and the Duck Lake Road/M-59 area. Additionally, the Land Use Plan states that existing commercial centers should be strengthened and that commercial strip centers should be discouraged.

...commercial strip centers should be discouraged in Highland Township...

In terms of the land use designations, the Land Use Plan designates the study area as primarily Agricultural and Rural Residential. Conventional development would be appropriate at one (1) dwelling unit per five (5) to ten (10) acres with a Special Land Use approval allowing up to three (3) acres per dwelling unit. This designation is designed to preserve rural character and farm land, while allowing for appropriate use of the land.

A small portion of the west side of the study area contains Medium and Small Lot Residential land uses. These are lots developed around the eastern portion of Dunham Lake. This land use designation is common in the central portion of the Township. Development is planned at 1.5 to 3 acres per dwelling unit.

South of the study area, the West Highland Micro Area Analysis, adopted in 2001, made some minor changes to the Future Land Use Plan map west of Hickory Ridge Road, north of M-59. Open Space Residential areas were enlarged from the existing commercial area to provide a larger buffer to rural residential properties as well as providing a logical transition of land uses.

It is recognized that property to the west of this study area includes Dunham Lake Estates (which is more densely developed than our current

Open Space Residential classification would allow) and a few small compact neighborhoods along Tipsico Lake Road. Larger lot rural residential properties are located west of the study area, north of Dunham Lake Estates. These existing higher intensity, mature developments include such amenities as mature trees and lot layouts that mitigate noise, light, sound, and other impacts of commercial and multiple family developments.

We no longer recognize these more intense patterns of single family development as an appropriate transition as open green space provides a more suitable mutual buffer as well as provides environmental and other public benefits.

The Table 1 describes the number of land use designations found in the study area. A map of the Future Land Use Designations is found in the Appendix.

Table 1: Future Land Use Designations

DESIGNATION	NUMBER	ACREAGE	PERCENT
Agricultural & Rural Residential	100	460.8	72.8%
Medium & Small Lot Residential*	28	172.4	27.2%
TOTAL	128	633.2	100%

- *reflects a master land use designation of open space residential for the 120-acre parcel 11-19-200-013 in accordance with the West M-59 Microarea Analysis (update 6-25-2001) and reflected in zoning imposed under a consent judgment.*

Zoning Classifications

Below, Table 2 describes a breakdown of the zoning classifications found in the study area. R-1A and R-1AA Single Family Residential are the predominant zoning classifications in the area. A-1, A-2, R-1AAA and R-1B Districts are also found in the study area. A breakdown of the various zoning districts is shown in Table 2. These can be seen in the zoning map provided in the Appendix.

Table 2: Existing Zoning Classifications

ZONING DISTRICT	NUMBER	ACREAGE	PERCENT
A-1 Agricultural Residential (10 ac.)	2	58.1	8.6%
A-2 Agricultural Residential (5 ac.)	1	4.9	0.7%
R-1AA Single Family Residential (5 ac.)	37	231.2	34.1%
R-1AAA Single Family Residential (10 ac.)	12	106.3	15.7%
R-1A Single Family Residential (3 ac.)	37	109.9	16.2%

R-1B Single Family Residential (65,000 sq. ft.)	4	167.6	24.7%
TOTAL	93	678.0	100%

* Note: Variation in the number of zoning classifications and land use designations is due to split-zoning designations or recent parcel splits/creation.

Population Density

As of the 2000 Census, there were 19,169 residents in Highland Township. By the year 2004, that number had grown to an estimated 20,114 people. A review of the Census 2000 population data reveals that Highland Township has distinct population centers. These centers are located east of Milford Road and north of M-59. The highest population density is located in the mobile home parks, on White Lake and Duck Lake, and in the Highland Station area.

...by 2004, the number of residents increased by 945 people, a 5% increase...

Mobile Home Parks

The highest population density is in the mobile home parks located on M-59, west of Milford Road and on the southwest corner of Milford Road and Middle Road. The Highland Hills development, which is located on M-59, west of Milford Road is the largest area designated for mobile home use in the Comprehensive Land Use Plan. Four hundred five (405) units have been developed or are planned with expansion capabilities to accommodate a total of six hundred (600) to eight hundred (800) units.

The Highland Greens development, located at Milford and Middle Roads, occupies approximately one hundred fifty-six (156) acres and contains nine hundred seven (907) mobile home sites. There is no planned expansion of this development.

White Lake and Duck Lake

Due to traditional, small-lot, lakefront development, the areas located adjacent to White Lake and Duck Lake, also has high population density. These lakes are located in the northeast quadrant of the Township in Sections 11-13. Small-lot zoning (R-1D Single Family Residential) is planned around the lakes. These are lot sizes below 20,000 square feet in area.

Highland Station

The traditional town center of Highland Township is known as the Highland Station area. The center of the district is located at the intersection of Livingston Road and Milford Road. Small-lot residential and commercial development patterns exist in Highland Station. The Highland Downtown Development Authority was created to capitalize on the potential of the Highland Station area. The growth of commercial and

office uses in the Highland Station district are contingent on the build-out of the residentially-planned development near the downtown. It was identified in the South Milford Road Micro-Area Analysis that an intensification of housing density would be consistent with the goals of the Highland Downtown Development Authority.

Utilities

Highland Township has evaluated and developed sanitary sewer service areas. As it is currently proposed, sanitary sewer service will not service properties located on Hickory Ridge Road. It is expected that sewer service extensions will be through Special Assessment Districts initiated by property owners or subdivision associations.

...sanitary sewer service is not planned for the study area...

The Highland Township Master Water Feasibility plan was written and approved by the Michigan Department of Environmental Quality (MDEQ) in 1999, based on the current Comprehensive Land Use Plan. The Township is undergoing a complete re-analysis of the water system model and policies in light of development at the Levy Corporation property north of the study area. Any significant changes in land use designations requires further analysis, and might require installation of water supply wells and/or increased storage capacity.

Public Safety

The Township contracts with the Oakland County Sheriff Department to provide police protection. There are currently twenty (20) deputies assigned to Highland Township. Contracting with Oakland County allows the Township access to enhanced services including the Aviation Unit, Mounted Police and Marine Rescue Teams. As population increases, there will likely be a need to increase the amount of staff assigned to the Township.

...20 Oakland County Sheriff Deputies are assigned to Highland Township...

The Township currently has three (3) fire stations to service the Township. The fire stations are located on West Livingston in Highland Station, on Duck Lake Road and on Clyde Road. As part of the Levy Consent judgment, property is to be given to the Township to construct a fourth station. There are currently forty-two (42) firefighters and seventeen (17) fire trucks. Highland Township does not have a ladder truck. A ladder truck is needed to reach buildings taller than two (2) stories. EMS services are also provided through the Fire Department. There are currently four (4) EMS trucks owned by the Township.

...Highland Township does not own a ladder truck...

Transportation

Hickory Ridge Road is one of the few north-south paved roads in Highland Township that transverses the entire Township by connecting Rose Township to the north and Milford Township to the south. The intersection of Hickory Ridge Road and M-59 is a major intersection in Highland Township. As of January of 2004, approximately 42,715 number of cars passes through the intersection each day. South Hickory Ridge Road serves as a route for many General Motors employees who are employed at the Milford Proving Grounds. North Hickory Ridge Road is used as a truck route for mining activities in the northern part of the Township.

Based on a 2004 review of motor vehicle accidents in Highland Township, the Hickory Ridge Road/M-59 intersection ranks third in the number of accidents. Only the M-59/Duck Lake Road and M-59/Milford Road intersections have more accidents. Segments of Hickory Ridge Road, north of M-59 also rank high among other road segments in the Township. Three (3) of the top six (6) total crash counts occur on Hickory Ridge Road.

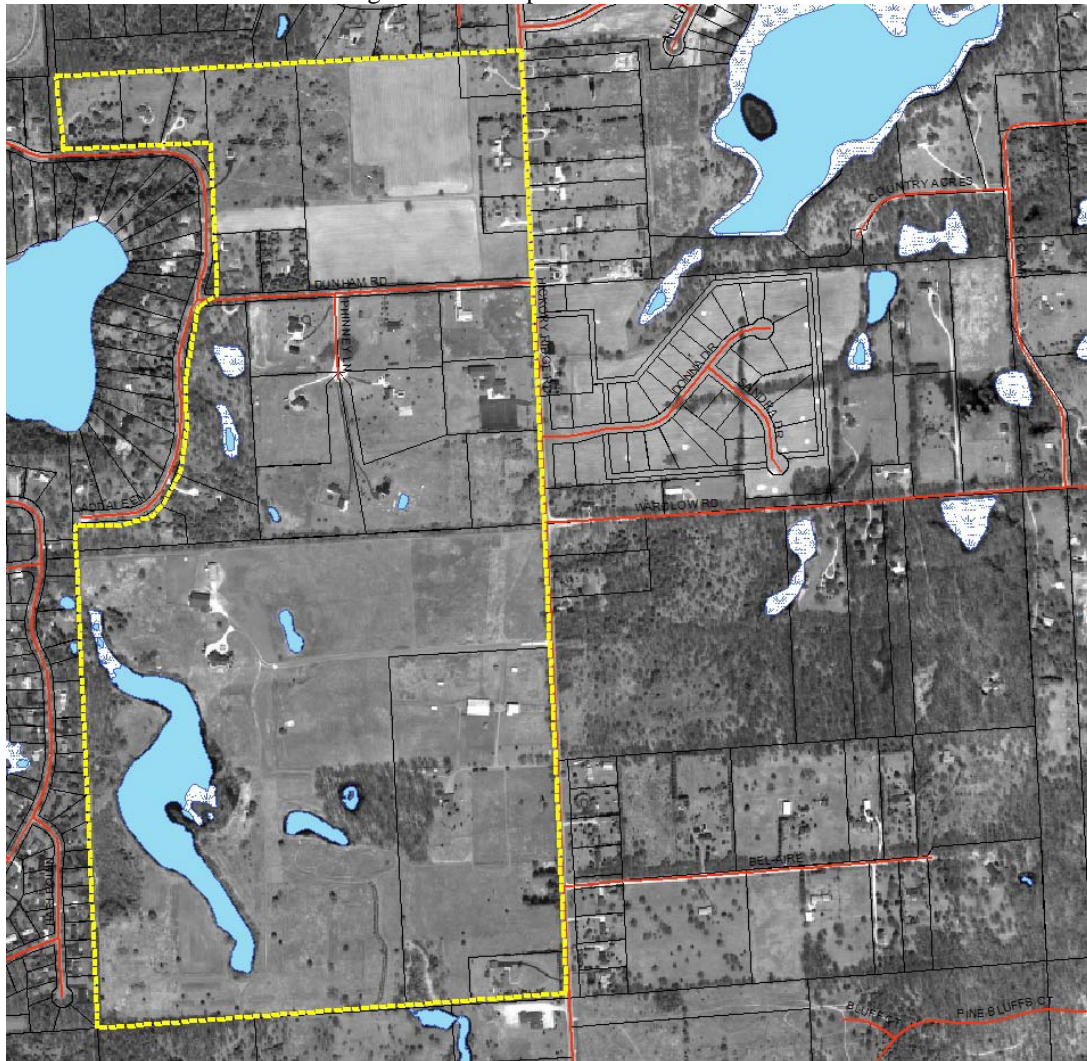
According to the Road Commission for Oakland County 2005 Strategic Plan Report, several long range roadway improvements in Highland Township have been identified. Clyde Road will be paved from Tipsico Lake Road east to Milford Road. White Lake Road will be paved from Milford Road to the eastern border of the Township. Wardlow Road will be paved from Hickory Ridge Road to Milford Road. Sight distance will be improved at the intersections of Hickory Ridge Road and Clyde Road, and Hickory Ridge Road and Middle Road. All of these improvements will allow for greater capacity and functionality of the roadways as well as open the door for more development.

DEVELOPMENT POTENTIAL

The development potential of the study area has been examined in three (3) different scenarios. The first scenario studies the expected build-out of housing units if development occurs as planned in the Comprehensive Land Use Plan. The second scenario examines the number of housing units if the properties are developed according to R-1B Single Family Residential zoning. Finally, the third scenario examines the build-out if the area is developed as a multiple family development. These scenarios should guide the Township on future land use policy in the area, based on the available infrastructure discussed in the previous section.

It should also be noted that the development potential analysis focuses on the west side of Hickory Ridge Road. The west side of the road has several large properties which may face development pressure in the future. Recent development has occurred as seen by the development north of Wardlow Road, east of Hickory Ridge Road in the figure below. Figure 2 shows the properties that have been studied:

Figure 2: Development Potential Area



It should be further noted that when considering the potential impact of future development, this analysis is focussed on overall density, and not upon the specific marketing focus that might be employed in creating a development plan. Whether a specific future project is focused on serving seniors, college students, equestrians or any other special demographic group is not necessarily relevant to discussion of land use impacts.

Scenario 1

As previously stated, the Comprehensive Land Use Plan has identified much of the area as Agricultural and Rural Residential. Portions of the study area are also designated as Medium and Small Lot Residential. The Land Use Plan also states that Open Space Development may be allowed in the Agricultural and Rural Residential areas, if a Special Land Use is granted. This would allow development of up to three (3) acres per dwelling unit.

Table 3: Development Potential according to Land Use Plan Density

PROPOSED DEVELOPMENT DENSITY	NUMBER OF DWELLING UNITS¹	TRIP GENERATION²
Agricultural & Rural Residential	14-55	133-526 trips per day
Medium & Small Lot Residential	4-11	38-105 trips per day
TOTAL	18-66	171-631 trips per day

¹ Number of dwelling units determined by subtracting submerged land and assuming 10% of land area used for roads/access.

² Trip generation determined by using a calculation of 9.57 trips per day, per unit, based on ITE Trip Generation Manuals.

Based on the calculations, if it were developed according to the Land Use Plan designations of the properties, it could be expected that eighteen (18) to sixty-six (66) single family dwellings could be constructed within the study area. The eighteen (18) units are based on the lowest density permitted and sixty-six (66) are considered the maximum. Development according to the Land Use Plan allows for a controlled growth pattern meeting the Township goals of preserving the rural atmosphere of the western side of the Township. Additionally, growth could occur that will not outpace the continuing growth and support of Township services such as police and fire protection.

Scenario 2

R-1B Single Family Residential zoning requires that minimum lot sizes be no less than 65,000 square feet. Although, approximately twenty-five (25) percent of the study area is zoned R-1B, it is only four (4) properties. As it was mentioned earlier, several other zoning classifications, such as A-1,

A-2 and R-1A are found in the study area, and more specifically the development potential area. R-1B development is occurring south of the study area in the Cobblestone Development. Based on the same assumptions on determination of the dwelling units and trip generation, one hundred fifty-four (154) single family dwelling units can be developed with an associated 1,473 trips per day.

It should be noted that under a Future Land Use Designation of Open Space Residential, the density would be established at one home per acre and a half (R-1B zoning), although the lot sizes could be considerably smaller. Amenities appropriate to the scale of the development would be permitted, and would in fact be encouraged. However, the amenities would be intended for the use of the residents of the “neighborhood”, not draw additional trips to the property.

Scenario 3

The Highland Township Planning Commission is currently reviewing possible changes to the Multiple Family section of the Zoning Ordinance. The current ordinance is considered out-dated and antiquated. The proposed language would include a maximum density amount of six (6) to eight (8) units per acre. Therefore, the development potential of this study area will be based on the proposed ordinance language of density.

Based on the assumptions of net acreage as determined in the previous development potential scenarios, it can be expected that between approximately 1,424 and 1,911 dwelling units can be constructed in the study area. According to the Institute of Transportation Engineers (ITE) Trip Generation Manual, it can be expected that approximately 6.63 trips per day per dwelling unit will occur. Based on that calculation, between 9,441 and 12,669 trips per day can be expected.

Summary

Based on the three (3) development scenarios performed, it is evident that the impacts on public services increases with more density. The single family residential densities either envisioned in the Land Use Plan or under R-1B zoning is not at all unreasonable and more compatible with the development character that is occurring along the Hickory Ridge Road corridor. The following table summarizes the findings of the development potential analysis:

Table 4: Summary of Development Potential

DEVELOPMENT SCENARIOS	NUMBER OF DWELLING UNITS	TRIP GENERATION
Scenario 1 (Land Use Plan)	18-66	171-631
Scenario 2 (R-1B Zoning)	154	1,473
Scenario 3 (Multiple Family)	1,424-1,911	9,441-12,669

CONCLUSIONS/ RECOMMENDATIONS

Institutional Housing

In considering the range of possible land uses in the study area, consideration was given to a proposal made by a landowner for development of one hundred twenty (120) acres as a senior citizen retirement complex. This proposal included high density residential units, related amenities and support services such as pharmacies and convenience stores. Since the details of this particular proposal have yet to be finalized, and since such a senior citizen retirement complex is one of several similar kinds of uses, consideration was given to more generalized issues of whether institutional housing developments of any kind would be appropriate in the study area.

Institutional housing refers to any type of residential housing which is more dense or intense than traditional single or multiple family residential developments and incorporates features, amenities and/or subsidiary uses not commonly found within such traditional residential developments. Examples of such institutional housing may include, but are not limited to, senior or retirement housing complexes, dormitories for boarding schools or colleges, and housing for members of religious communities. Given their communal nature, such uses often occupy larger structures and have considerably higher population densities. Additionally, these uses often incorporate features such as on-site medical care, convenience shopping, communal dining facilities and/or other non-residential uses, making them more or less “self-contained” communities. Because of this, there may need to be a substantial amount of support staff working at such facilities, including administrators and office employees, janitors, housekeepers and maintenance personnel, and health care staff.

Because of these issues, a number of land use concerns are raised by an institutional housing project such as:

- *A potential increase in water and sewer usage.*
- *An increased need for parking in order to accommodate a large number of employees.*
- *Increased traffic patterns, which are very different than traditional residential developments. The vehicle mix, trip generation and traffic distribution patterns are much more similar to those resulting from commercial developments due to delivery and service equipment as well as visitors.*
- *Noise and light trespass to adjacent properties.*
- *Pressure to allow ancillary commercial development around the institutional use, which further disrupts existing land use patterns*

in a manner inconsistent with the goals of the Comprehensive Land Use Plan.

Given these considerations, none of the properties in the study area appear to be suitable, either currently or in the foreseeable future, for use as an institutional housing development as was previously defined in this document. Factors which support this conclusion include, but are not limited to:

- *The properties in the study area are currently zoned and used for either agricultural or single family residential uses. Institutional land uses would not be consistent with the Master Plan, as they signify a much denser use and present obvious use conflicts.*
- *Access to such a development would be challenging. All of the properties are accessed by Hickory Ridge Road, a two-lane roadway already facing capacity and safety problems. East-west connections are also difficult due to the lack of paved roads in the study area. Wardlow Road (from Hickory Ridge to Milford Rd) is a designated Natural Beauty Road, and is to remain gravel for the foreseeable future. In addition, employee traffic flowing to and from the GM Proving Grounds at Hickory Ridge Road, south of M-59, already stress the intersection during peak hour periods.*

Typical Multiple Family Density Regulations

In order to determine if Highland Township is considering appropriate density for multiple family developments, it is necessary to review communities similar to the Township. The communities that were chosen in this comparison were selected due to their similar character, context and demographics. Similar permitted and special land uses are allowed in all of the communities. A brief summary of each community is provided below:

White Lake Township

The density regulations are found in Article 6 Schedule of Regulations, footnote 'd' of the Zoning Ordinance:

"...Where multiple dwellings are permitted, or two or more two-family dwellings are proposed, the first dwelling unit shall have a minimum lot area of ten thousand (10,000) square feet, plus the additional lot requirements per unit as listed below..."

TYPE OF UNIT	RM-2 ADDITIONAL LOT AREA (SQUARE FEET)
Efficiency Unit	2,500
One Bedroom Unit	3,500
Two Bedroom Unit	4,000
Three Bedroom Unit	4,500
Four Bedroom Unit	5,500
Each Additional Room	800

Milford Township

Milford Township's multiple family dimensional requirements are found in Section 19-526 (d) of the Code of Ordinances:

"...Where multiple dwellings are permitted, the total number of rooms (not including kitchen, dining and sanitary facilities) shall not be more than the area of the parcel in square feet, divided by 2,000. All units shall have at least one living room and one bedroom except that not more than five percent of the dwelling units may be of an efficiency apartment type (a unit consisting of not more than one room in addition to a kitchen and necessary sanitary facilities), and not more than 20 percent may be one-bedroom units."

Hartland Township

Hartland Township's dimensional requirements are found in Section 32.01 (w) of the Zoning Ordinance:

"The minimum parcel size for multiple family developments shall be five (5) acres and each dwelling unit shall have an equivalent of 5,445 square feet of land area. Density shall not exceed eight (8) dwelling units per acre. Dwelling unit density shall be computed on the basis of the total gross area of a lot or parcel less that portion of surface water and other undevelopable areas which exceed 25 percent (25%) of the total gross area of a lot or parcel of land."

Groveland Township

Groveland Township's multiple family dimensional requirements are located in Section 54-671 (e) of the Code of Ordinances:

"No multiple-family dwelling building or buildings shall be erected on property containing less than three net acres of usable land area, or which has a width at the minimum required building setback of the district that is less than 150 feet wide. For the purpose of determining site area, the applicable guidelines set forth in footnote (A) shall apply...In the RM district, the total number of rooms (excluding kitchen, dining rooms and

bathrooms) permitted in the entire development shall not exceed the net usable area of the parcel in square feet, divided by 1,500. All dwelling units shall have at least one bedroom and one living room; except, up to ten percent of the total number of dwelling units permitted may be of an efficiency type of apartment dwelling...”

Springfield Township

Springfield Township’s multiple family dimensional requirements are located in Section 7.05.1 (b) of the Zoning Ordinance:

“Multiple-family dwellings shall be subject to the density and floor area requirements in the schedule below. Land which is under water (lakes, streams, water courses, and other similar bodies of water) or wetlands shall not be included in the gross density calculation.”

TYPE OF UNIT	SITE AREA IN SQUARE FEET PER DWELLING UNIT
Efficiency Unit	4,500
One Bedroom Unit	4,500
Two Bedroom Unit	6,750
Each Bedroom over Two	2,250

Holly Township

Holly Township’s multiple family dimensional requirements are located in Section 4.8.4 (a) of the Zoning Ordinance:

“Single family detached, two (2) family, and multiple-family dwellings shall be subject to the following density requirements based on gross site acreage, not including public road rights-of-way:”

TYPE OF UNIT	SQUARE FEET OF SITE AREA PER DWELLING UNIT
Efficiency/One Bedroom	4,000
Two Bedroom	6,000
Three Bedroom	8,000
Each Additional Bedroom	2,000

Locational Criteria of Multiple Family Developments

When considering where the best location is to permit higher density housing, in particular developments more dense than two-family attached duplex condominiums, such as apartment complexes or condominium developments, there are several factors that should be contemplated. It is critical that these factors be considered when reviewing the long-range

planning goals of the Township during the Land Use Plan update process. Additionally, these factors should be considered when updating the intent section of the Multiple Family Zoning District. This will enable the Township to have clear guidelines and policies when faced with a multiple family development in the future.

Public Sewer and Water

The first factor is the lands accessibility to public sewer and water. In order to achieve multiple family density, it is essential for multiple family developments to have the ability to connect to the Township's public sewer and water system. However, if sewer and water are not available, a "community" or "package" waste water treatment plant can be constructed just to serve the development. Prior to 2004, when an owner of a proposed community system was not a government agency, the application for the permit had to be accompanied by a resolution from the local government agency having jurisdiction stating that the government would take responsibility for the continued operation of the plant should it fail or if the developer failed to maintain the facility. Refusal to provide such a resolution meant that a community waste water treatment plant could not be constructed and the resulting development would not take place. This requirement was known as MDEQ Rule #33.

...it is nearly essential for multiple family developments to connect to public sewer and water services...

Rule #33 was challenged and subsequently struck down by *Lake Isabella Development Inc. vs. Village of Lake Isabella* in 2004. The trial court ruled that Rule #33 was arbitrary and capricious. The decision was upheld by the Court of Appeals. The Court of Appeals concluded that the MDEQ was granted exclusive authority over issuance of sewerage permits and that a municipality's discretionary power over this process was fundamentally a "veto power." Further, Rule #33 imposed a new burden on municipalities; the responsibility to take control of community waste water treatment plants, even if they have no interest in ownership of the system.

While the *Lake Isabella Case* does not absolve the Township's potential responsibility, they can control their exposure to this through land use and zoning. By providing clear guidance in the Township Land Use Plan and Zoning Ordinance, the Township still is the authority that determines the appropriate use of land.

Road Functionality

Another factor in determining the best locations for multiple family developments is its relationship to roadways capable of handling traffic generated by higher density residential developments. The Land Use Plan currently has language that supports the location of multiple family land uses adjacent to or near major thoroughfares. Major roads, such as

...the Land Use Plan supports the location of multiple family developments adjacent or near major thoroughfares...

Milford Road and Duck Lake Road, are major roads that service multiple family uses in Highland Township.

Downtown/Retail Centers

Higher density developments are typically located adjacent to commercial/retail centers. They form a concentric ring around those centers in order to have orderly transition of land uses. Therefore, it is practical that multiple family developments be located in areas that encourage a pedestrian-friendly environment such as Highland Station.

...multiple family developments should be located in areas that are pedestrian friendly...

The commercial node at the intersection of Hickory Ridge Road and M-59 in intended to be restricted to the intersection only and strip commercial development is discouraged, according to the West Highland Micro Area Analysis. Based on the commercial development that has either occurred or been proposed at the intersection, we would not consider this area as not being walkable, and not suitable for multiple family development.

Education, Employment and Recreation Centers

The final factor in determining practical locations for multiple family housing is its general accessibility to employment centers, schools and recreation opportunities. In Highland Township, a majority of the employment sector is located on Milford Road and at the intersection of Duck Lake Road and M-59. Thus, the Future Land Use Plan has identified those areas as locations for multiple family housing.

Conclusions/Recommendations

The 2001 West Highland Micro Area Analysis proposed several recommendations, including the creation of a buffer zone around the commercial node at Hickory Ridge Road and M-59. While higher intensity residential development would be appropriate close to the commercial development, it is not practical farther north on Hickory Ridge Road. The Cobblestone development zoned R-1B, is an example of the density of development which would be appropriate along the road corridor.

As the development potential analysis shows, a rezoning of the remaining properties in question to R-1B Single Family Residential would not necessarily add an adverse burden to the road system or Townships ability to provide adequate services to the area. However, allowing increased density, greater than R-1B, into the area would likely pose an adverse affect on Township services and road capacity. Increased density, such as multiple family or institutional in nature, would not be appropriate in the study area due to the lack of utilities, its location in relation to Highland

...allowing density greater than R-1B zoning would likely have an adverse affect on the area...

Station and that Hickory Ridge Road would not be able to support the substantial increase in traffic. It is our opinion that the existing zoning should remain. However, the Planning Commission should consider amending the land use classifications in the study area to be Open Space Residential. There would then be consistency between the Zoning and Land Use Plan Maps. The proposed changes to the Land Use Map are shown on the following page (Figure 3).

As previously stated, the Planning Commission is currently considering amendments to the Multiple Family Zoning District language. Based on the neighboring communities outlined earlier, there are two (2) approaches to determining density. First, it can be based on an equation of the net acreage of the property divided by the number of bedrooms, based on a breakdown of the square footage of each type of room. The second is not to exceed amount of dwelling units per acre. As it was shown, both approaches are effective and can be explored. Based on the review of the other communities, a density of six (6) to eight (8) units per acre would be appropriate.

...6-8 units per acre is appropriate for Highland Township...