

**HIGHLAND TOWNSHIP
COMPREHENSIVE
LAND USE PLAN
2000-2020**



**CHARTER TOWNSHIP OF HIGHLAND
205 NORTH JOHN STREET
HIGHLAND, MICHIGAN 48357**

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The Township Planning Commission would also like to recognize past members of the Township Board and Planning Commission for their contribution to the planning process over the past several years.

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The Planning Commission would also like to thank the many residents of Highland Township who participated in the planning process, focus groups and public hearings. Their involvement has affirmed the concepts, goals and objectives presented in this document.

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Introduction to the Comprehensive Plan

This document is intended to guide development in Highland Township for at least a decade into the twenty-first century. It supersedes the Comprehensive Plan adopted on August 26, 1982 (Future Land Use Map) and January 13, 1983 (text). A key feature of the 1982/1983 Comprehensive Plan was its aim to preserve the rural character of Highland Township through a core of more intensive development surrounded by a ring of lower density agricultural, rural-residential and recreational land uses. The whole plan was calibrated to accommodate more than the projected population growth through the year 2000. Development did occur, but the population growth fell below that projected in the 1982/1983 Comprehensive Plan. Nonetheless, after nearly twenty years it was the judgment of the Highland Township Planning Commission that a re-articulation and/or refinement of the ideas of the 1982/1983 Comprehensive Plan was in order.

This Comprehensive Plan is published in a different format than the 1982/1983 Comprehensive Plan. It contains three main parts. Part I focuses on the Land Use Plan map. It is the most important part of the Comprehensive Plan and will likely be the most consulted portion. It will be consulted as the primary guide for township zoning decisions. Part II is entitled "Background and Policy Statement." It articulates salient characteristics of Highland Township, characteristics which make preserving rural character a reasonable public purpose. It also surveys some relevant history. The Planning Commission and its consultants believe that this history clearly demonstrate that preserving rural character is a worthy goal for its own sake. Therefore, Part II constitutes a kind of "manifesto" for the Comprehensive Plan. Part III is entitled "Regulatory Techniques Analysis." It sets forth some of the ways in which other communities have attempted to accomplish public purposes similar to those which Highland Township seeks to accomplish. A careful look at these approaches was deemed particularly appropriate since it seemed possible that the approaches which worked to preserve rural character over the past twenty years might have to be refined to successfully guide the township over the next ten or twenty years.

Important background material for this Comprehensive Plan can be found in the 1982/1983 Comprehensive Plan. Additional important background material also can be found in a document entitled *Highland Charter Township Comprehensive Plan: 1992 Preliminary Data and Analysis Update*. Although dated 1992, this document was published in its final form in 1996. The data and observations which appear in it date from 1992 with the exception of a few foot noted observations which reflect more recent information.

PART I: FUTURE LAND USE

The Future Land Use Map is generally considered to be the most important part of the comprehensive plan. The Future Land Use Map provides guidance for the zoning ordinance by establishing the boundaries for each land use category and by setting forth the general types of land use appropriate within each. Part I of the Comprehensive Plan incorporates the Future Land Use Map and provides text which describes and quantifies the different land use categories which appear on the Future Land Use Map. Seven sections of Part I describe and analyze the type of development envisioned for residential areas, general commercial areas, office and low intensity commercial areas, industrial areas, public and semi-public areas, and open space areas. Two of these seven sections focus on the rationale for the overall residential development pattern. Table 1 indicates the acreage allocated to the different land uses by the Future Land Use Map incorporated herein and compares that acreage with the acreage incorporated in the Future Land Use Map for the Comprehensive Plan adopted in 1992-1993. The last two sections of Part I describe the thoroughfare system and the potable water and sanitary sewer systems that will be required or desirable in the future to serve the land uses set forth on the Future Land Use Map.

Residential Development

Residential development is the predominant land use proposed by the land use plan. A total of 16,041 acres is proposed by the 2000 plan, virtually the same amount as proposed by the 1982-1983 plan. These 16,041 acres amount to 68 percent of the township. Five categories of residential development are indicated on the plan: 1) Agriculture and Rural Residential with conventional development at 5 to 10 acres per dwelling unit and with variable density open space development at up to 3 acres per dwelling unit; 2) Medium and Small Lot Residential at a density of 1.5 to 3 acres per dwelling unit except where existing R-1C and R-1D zoning permit lower densities; 3) Open Space Residential at densities of 1.5 to 3 acres per dwelling unit; 4) Mobile Home Park; and 5) Multiple-Family. These categories evolved from and they are similar to the land use categories of the 1982-1983 Comprehensive Plan. So too is the way in which they are arrayed on the Land Use Plan. They are designed to protect the rural and open space character of the township, as were the similar categories in the 1982-1983 Land Use Plan. However, there are important differences between the 2000 Land Use Plan and the 1982-1983 Land Use Plan.

Agriculture and Rural Residential Development

The Land Use Plan allocates 8,008 acres (about 35 percent of the township) to the Agriculture and Rural Residential land use category. This is nearly 1,400 fewer acres than allocated to the two Agriculture and Rural Residential categories by the 1982-1983 Plan. However, the range of development possibilities

now envisioned is significantly different from the range envisioned by the 1982-1983 Plan. The 2000 Agriculture and Rural Residential category is intended to permit conventional development at densities of 5 to 10 acres per dwelling unit, as did the two Agriculture and Rural Residential categories in the 1982-1983 Plan. However, unlike the 1982-1983 Plan, the 2000 Agriculture and Rural Residential category also permits development at densities of up to 3 acres per dwelling unit if a variable density open space development pattern is followed. The variable density open space development concept is a technique for managing or controlling the pace and character of development that may be inevitable over the long range. It will help those who have invested in property to unlock its development potential in a way which will preserve the rural and open space character of the township. It should be implemented in accordance with criteria for identifying and mitigating potential conflicts with adjacent land uses. Developers seeking approval for such development should, as part of the development approval process, accept the potential that adjacent properties will continue to be used for agricultural and/or other rural purposes, including but not limited to tree farms, bee farms, hobby farms, horse farms, cattle sheep farms, sheep farms, other livestock farms, raising fur-bearing animals and other similar uses.

There likely will be more than one way to successfully implement the Agriculture and Rural Residential land use category as now envisioned. One implementation approach is described in Exhibit 1. The kinds of development which might result are illustrated in Exhibit 2. One of the purposes of the Agricultural and Rural Residential categories in the 1982-1983 Plan was the preservation of agricultural activities, which were then observed to occur particularly north of Clyde Road and east of Hickory Ridge Road. Another purpose was to provide a range of choice for those who wished to live in an environment characterized by very low densities. Accommodating small-scale agriculture remains a purpose of the new Agriculture and Rural Residential category. However, agricultural activities have been displaced by a gravel mine on Sections 4 and 5 north of Clyde Road. This mine has an approved reclamation plan that provides for concentrated densities in some locations and perpetual preservation of open space in other locations in Sections 4, 5 and 6. Accommodating those who wish to live in a low density environment remains a purpose of the 2000 Agriculture and Rural Residential category. There are still many residents in Highland Township who own large acreage parcels and who wish to live in an area with other large acreage parcels. However, in the nearly two decades since the 1982-1983 Plan was adopted, this reasonable desire has come under increased pressure from the growing number of people who wish to live in Highland Township.

Medium- and Small-Lot Residential Development

The Land Use Plan allocates 6,930 acres (about 30 percent of the township) to the Medium and Small Lot Residential land use category. This is nearly 2,000 acres more than allocated to the Medium and Small Lot category by the 1982-

1983 Land Use Plan. The 1982-1983 Land Use Plan established a density range of 1.5 acres to 5 acres per residential unit for the Medium and Small Lot Category. The 1982-1983 Plan stated that, "A lot size of 1.5 acres is recommended for adequate septic system development." The 2000 Plan establishes a range of 1.5 to 3 acres per dwelling unit except where R-1C and R-1D zoning has been mapped already. The areas where these zoning districts have been mapped already were largely developed as of 2000. It is a policy of the 2000 Plan that the township not map additional areas in the R-1C or R-1D zoning districts. The 2000 Future Land Use Plan generally concentrates the Medium and Small Lot Category in the central core of the township where it is surrounded by the lower density land use categories, *i.e.* the Agricultural and Rural Residential category and the Open Space and Recreation category.

The 1982-1983 Land Use Plan allocated 5,033 acres to the Medium and Small Lot Residential category and noted that about 2,295 acres therein remained undeveloped at the time. Thus, about 3,345 acres were developed as of 1982-1983. As of 2000, about 900 Medium and Small Lot Residential acres that were not developed as of 1982-1983 had been developed (or otherwise rendered unavailable to future development), leaving about 888 acres of the original 1982-1983 supply of Medium and Small Lot Residential still available for development. To this can be added the additional 1,897 acres included in the Medium and Small Lot Residential category by the 2000 Plan. Thus the total supply of Medium and Small Lot Residential not yet developed and now available for development is about 2,500 acres. These areas should be able to accommodate a substantial proportion of the households anticipated for Highland Township in the future.

Open Space Residential Development

A total of 416 acres are allocated to the Open Space Residential category by the 2000 Plan, less than half the amount allocated by the 1982-1983 Plan. The areas no longer allocated to this category have, for the most part, already been developed. As in 1982-1983, the Open Space Residential areas are located to allow for the preservation of wetlands, woodlands, slopes and other environmentally and visually sensitive areas. Creative site planning in these areas can preserve the sensitive environmental features through the use of common open space. Preservation of natural features may require the placing of homes on sites of less than 1.5 acres in size, but the overall density of the open space areas should not be less than 1.5 acres to 3.0 acres per residential units. Adequate area for septic fields will still be necessary.

Multiple-Family Residential Development

A total of 94 acres are allocated to the Multiple-Family category. This is less than one percent of the township and about one half of the Multiple-Family Development area on the 1982-1983 Land Use Plan. Among the areas no

longer available for multiple family development are substantial acreage southeast of Milford Road and Reid Road and substantial acreage on Duck Lake Road south of M-59. The first of these two areas has been developed for single family use and the second has been acquired for a township park since 1982-1983.

It is the intent of the 2000 Plan (as it was the intent of the 1982-1983 Plan) to locate multiple-family development in areas which provide the greatest amenity and accessibility. This will ensure high quality developments will be an asset to the community and help maintain the desirable image of Highland Township. All of the multiple-family areas are located adjacent to or near to major thoroughfares to afford convenient access. Many of the multiple family areas are located near the Highland Recreation Area. These locations will allow residents to benefit from the natural amenities. For the most part, the multiple-family areas are close to the township's major commercial centers.

Mobile Home Park Development

The 2000 Land Use Plan designates the same three areas for mobile home park development as were designated by the 1982-1983 Plan. These are the West Highland Mobile Home Park, the Highland Hills Mobile Home Park and the Highland Greens mobile home park.

The West Highland mobile home park it is located on Hickory Ridge Road south of Alta Vista. It had 160 pads in 1982-1983. It has been expanded by about 80 developable acres plus an additional area of wetland. It is anticipated that an additional 350 mobile home units can be accommodated on the West Highland mobile home park when its full potential is reached. The Highland Hills mobile home park is located on Highland Road (M-59) one-half mile west of Milford Road. It is the largest area designated for mobile home use, as it was in 1982-1983. A total of 405 mobile home sites are developed and/or have been permitted, but it remains only partially developed. At full development it could accommodate an additional 600 to 800 units over and above the 405 that have already been developed or permitted. Extensive additional waste treatment facilities will be required to reach this potential. The Highland Greens mobile home park is located on Milford Road at Middle Road. It occupies approximately 156 acres and contains 907 pads. No substantial expansion potential is envisioned at this time.

Residential Development Boundaries

The Southeast Michigan Council of Governments (SEMCOG) projections indicate that the population of Highland Township will grow from an anticipated year 2000 figure of 20,197 to a projected year 2020 figure of 26,312. According to SEMCOG, households will grow from 6,992 in 2000 to 10,004 in 2020 for an increase of 3,012 households. These projections suggest the fol-

lowing determinants of residential development boundaries of the 2000 future Land Use Plan:

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.

Most additional households will be accommodated in areas on the Plan designated Agriculture and Rural Residential, Medium and Small Lot Residential, Open Space Residential and Mobile Home Park. The mobile home expansion potential can accommodate something in the range of 950 (or possibly more) households or just under 30 percent of the approximate total increase of 3,200 households for the entire township. Oakland County existing land use maps indicate approximately 9,000 acres of vacant land distributed between the Agriculture and Rural Residential areas, the Medium and Small Lot Residential areas and the Open Space Residential areas with about 6,100 acres in the Agriculture and Rural Residential category, 2,500 acres in the Medium and Small Lot Residential category and 400 acres in the Open Space Residential category. The 2,900 acres of vacant land in the Medium and Small Lot Residential and Open Space Residential categories could accommodate over 900 dwelling units at an average density of three acres per unit. A higher density would likely be possible. Thus, the combined potential of vacant land in the Mobile Home Park plus Medium and Small Lot Residential plus Open Space Residential categories could easily be 1,850 dwelling units. The remaining 1,350 units required for the projected 2020 household increase could easily be accommodated on vacant Agriculture and Rural Residential land. The estimated 6,100 acres of vacant Agriculture and Rural Residential land could accommodate 1,350 units at an average density of 4.5 acres per dwelling unit, a lower density than would be permitted with the proposed open space preservation option described above and in Exhibit 1.

Commercial and Office Development

The commercial and office land-use pattern has five primary objectives: 1) to strengthen the commercial sector and tax base of the township. 2) to provide adequate convenience, comparison, service and office uses within easy access

of population concentrations, 3) to prevent the proliferation of scattered strip commercial development, 4) to promote increased traffic safety by reducing points of conflict between through traffic and commercial oriented traffic, and 5) to improve the visual image of existing commercial areas.

The Land Use Plan provides two categories of commercial development for the township: Office and Low-Intensity Commercial and General Commercial. Commercial land comprises 311 acres or 1.3 percent of the total, up significantly from the 252 acres and 1.1 percent of the township allocated to commercial uses by the 1982-1983 Plan. Office and Low Intensity Commercial areas amount to 56 acres or 0.2 percent of the township, down from the allocation in the 1982-1983 Plan. General Commercial areas amount to 255 acres, significantly up from the allocation in the 1982-1983 Plan.

The most recent Commercial Base Analysis completed in 1992 indicated a projected need for 233 acres by the year 2010 for all retail facilities, local service facilities and office facilities. However, that 233 acre need was based on a year 2010 population projection of 27,154. As of 1999, the most recent SEMCOG population projection (dated 1996) anticipated a population of only 26,312 by the year 2020. The commercial base analysis completed in 1992 indicated that about 207 acres were then being used for commercial purposes, an excess over the need that would be defined by standard analytical methods. Significant parts of this land was at that time under-utilized.

Industrial Development

The industrial development configuration in the Land Use Plan has been designed to enhance the existing centralized industrial development pattern and to help diversify and increase the tax base and employment base of the township. The existing industrial corridor is primarily located along Milford Road north of Highland Road. Existing industrial development comprised approximately 93 acres as of the 1992 Industrial Base Analysis. This was a reduction from the 143 acres of existing industrial development identified in the 1982-1983 Plan. The 1992 Industrial Base Analysis projected a year 2010 need for 46 acres, or about half the existing supply. The projected decrease in need can be attributed to a number of factors which are explained in the 1992 Industrial Base Analysis. Among the most important of these factors was SEMCOG's projected *decrease* in the number of manufacturing workers in the township. Such a decrease is consistent with nation-wide trends. Since the 1992 Industrial Base Analysis was prepared, the number of manufacturing workers projected by SEMCOG has further decreased from the 437-worker year 2010 projection utilized in the 1992 Industrial Base Analysis to a 269-worker year 2010 projection which was the most current available from SEMCOG as of 1999.

The 2000 Plan's allocation of industrial land is not as constricted as the projected need. This is because the allocation of industrial land should be depend-

ent on existing patterns more than abstract quantitative projections. Also, industrial land consumption is subject to wild fluctuations from normative needs in local areas. A decision by a private firm to locate one major industrial facility can tremendously impact the total consumption of land for a relative small area such as Highland Township.

Open Space and Recreation

The Land Use Plan provides for significant open space and recreation land. The total open space area amounts to 3,956 acres or 17.1 percent of the township. Most of this acreage, approximately 16 percent of the township, is part of the Highland Recreation Area. This area is a tremendous open space and recreation asset.

Since 1982-1983, there have been several significant additions to the open space at the Highland Recreation Area and the township has added the Highland Charter Township Community Park, a facility which is scaled at approximately 63 acres on the Land Use Plan, but which is reported to be approximately 90 acres in the 1998 Highland Charter Township Recreation Plan.¹ In addition, the township has recently obtained a grant to develop another community park on Duck Lake Road south of M-59. This site may amount to approximately 45 acres. It is mapped in the Open Space and Recreation category on the Land Use Plan.

¹ Table 1 indicates that slightly fewer acres are designated as Open Space and Recreation by the 2000 Plan than by the 1982-1983 Plan. This is an anomaly which is probably explained by the greater accuracy in the 2000 land use tabulation which benefited from computer calculations of the acres in more precisely drawn sub areas. Such tools were not available when the 1982-1983 calculations were prepared.

Thoroughfares to Serve Existing and Future Land Uses

Table 2 reports on historic and projected traffic volumes and volume-capacity ratios. Table 2 includes a methodological note which explains the assumptions upon which the projections are based. The assumptions represent a possible future course of traffic growth, but only one possible course among many. The traffic growth which will result from the assumptions will dramatically alter the character of certain roads in Highland Township. Milford Road and Hickory Ridge Road will both require widening from the present two lane cross section to a four lane cross section. Milford Road and Hickory Ridge Road will be characterized by peak hour level of service F with road widening and a level of service *deep into* F without road widening. Level of service F is the lowest level of service category given by traffic engineers.² It is considered to be unsatisfactory except in urban environments which have good public transit service. Levels of service deep into F produce gridlock. Milford Road will have a peak-hour level of service E volume-capacity ratio of 2.70 between Lone Tree Road and Livingston Road and a ratio of 1.90 at Wardlow Road -- if it is not widened from its present two lanes to four lanes. Even then, its level of service will fall significantly below level E with a volume-capacity ratio of 1.35 between Lone Tree Road and Livingston Road. Conditions on Hickory Ridge Road will be almost as congested unless it is widened from two lanes to four lanes.

² The various levels of service typically used for traffic facility analysis and planning typically have the following meanings:

LOS A describes primarily free-flow operations. Average operating speeds at the free-flow speed generally prevail. Vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream. Even at the maximum density for LOS A, the average spacing between vehicles is about 528 feet, or 26 car lengths, which affords the motorist with a high level of physical and psychological comfort.

LOS B also represents reasonably free flow, and speeds at the free-flow speed are generally maintained. The lowest average spacing between vehicles is about 330 feet, or 18 car lengths. The ability to maneuver within the traffic stream is only slightly restricted, and the general level of physical and psychological comfort provided to drivers is still high.

LOS C provides for flow with speeds still at or near the free-flow speed. Freedom to maneuver within the traffic stream is noticeably restricted at LOS C, and lane changes require more vigilance on the part of the driver. Minimum average spacings are in the range of 220 feet or 11 car lengths. The driver now experiences a noticeable increase in tension because of the additional vigilance required for safe operation.

LOS D is the level at which speeds begin to decline slightly with increasing flows. In this range, density begins to deteriorate somewhat more quickly with increasing flow. Freedom to maneuver within the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort levels. At the limit, vehicles are spaced at about 165 feet, or 6 car lengths.

LOS E describes operation at roadway capacity. Operations in this level are volatile, because there are virtually no usable gaps in the traffic stream. Vehicles are spaced at approximately 6 car lengths, leaving little room to maneuver within the traffic stream at speeds that still exceed 50 mph. Any disruption to the traffic stream, such as vehicles entering from a ramp or a vehicle changing lanes, can cause following vehicles to give way to admit the vehicle. This can establish a disruption wave that propagates throughout the upstream traffic flow. At capacity, the traffic stream has no ability to dissipate even the most minor disruptions. Maneuverability within the traffic stream is extremely limited, and the level of physical and psychological comfort afforded the driver is extremely poor.

LOS F describes breakdowns in vehicular flow. Such conditions generally exist within queues forming behind breakdown points. Breakdowns occur because the number of vehicles arriving at a location is greater than the number of vehicles discharged. Breakdowns can occur as a result of 1) a traffic incident which causes a temporary reduction in the capacity of a short segment; 2) a merge area, a weaving area or another recurring point of congestion; and 3) the flow rate exceeds the estimated capacity of the location. In all cases, breakdown occurs when the ratio of arrival flow rate to actual capacity or the forecast flow rate to estimated capacity exceeds 1.00. Operations immediately downstream of such a point, however, are generally at or near capacity, and downstream operations improve (assuming that there are no additional downstream bottlenecks) as discharging vehicles move away from the bottleneck. LOS F operations observed within a queue are the result of a breakdown or bottleneck at a downstream point. LOS F is used to describe conditions at the point of the breakdown or bottleneck as well as the operations within the queue that forms behind it.

Utilities to Serve Existing and Future Land Uses

For over a decade, Highland Township has required that new developments which exceed a threshold of dwelling units include a community well system. Community well systems provide better potable water service than can be provided on individual wells on each zoning lot. They also provide an opportunity for fire hydrants.

As of the date of this Comprehensive Plan, the township had developed a preliminary water supply system plan. The plan recognizes six single family development areas and three mobile home parks with community well systems. The single family residential areas are Highland Valley, Huntwood Place, Bretton Oaks, Axford Acres/South Bay Shores and the Levy Corporation property north of Clyde Road. The Levy Corporation property is a gravel mine with an approved reclamation plan consisting primarily of single family development. A system of proposed mains and pump houses will link the existing and new community well developments throughout the township. The mains will run along all section line roads in the Township except in the southeast quadrant which is occupied primarily by the State of Michigan's Highland Recreation Area.

As part of the reclamation plan for the gravel mining operation north of Clyde Road, the original applicant³ proposed that a package sewer system be included to serve the proposed single family reclamation development plus other key development elsewhere in the township. A sewer plant was deemed necessary for reclamation of the mining site because the property will not have suitable soils for on-site septic disposal after the extraction operation is complete. The initial design called for discharge into the ground water. The portion of the mining operation property west of Hickory Ridge Road (Section 6) was designated for this purpose. It will be the only portion of the property which will have soils suitable for ground water discharge. The township engineer has suggested that the potential for surface water discharge be investigated. Greater capacity is possible when discharging into surface waters. The reclamation plan development will require a 300,000 gallon per day facility and the initial mining permit requires a plant with an ultimate capacity of 2.2 million gallons per day. Facilities as large as 8,000,000 gallons per day have been approved in Oakland County.⁴

The opportunity to obtain the right sized package treatment facility was an important benefit that mitigated the general negative impacts of the gravel mining operation. A properly sized package treatment plant provides a unique opportunity to obtain limited sewer service, without necessitating that the entire township be opened to the amount of development that would normally be required to defray the cost of a sanitary sewer treatment facility. Such

³ American Aggregates Corporation.

⁴ An 8,000,000 gallon per day facility serves Commerce Township, White Lake Township and the Village of Wolverine Lake.

Exhibit 1

Implementation of the Agricultural and Rural Residential Land Use Category

There is more than one way to implement the Agriculture and Rural Residential land use category as proposed in the 2000 Comprehensive Plan. This exhibit suggests one approach which requires the creation of two new zoning districts, a Residential Cluster Zone 10 and a Residential Cluster Zone 5.

The Residential Cluster Zone 10 would allow development at some density from one unit per 10 acres of site size to a maximum of one unit per 3 acres. The density above one unit per 10 acres would be a bonus density dependent on the degree to which the site plan for a particular development preserves open space in a way that meets specific criteria in the ordinance. Each rezoning to Residential Cluster Zone 10 would entail enactment for the subject site of a particular open space subdivision site plan that would meet the open space standards required for the level of density provided. The property owner, rather than the township, would normally be the one to initiate an application for higher density development. Development according to the enacted site plan would then be the most direct vehicle for achieving a density greater than one unit per 10 acres, but the enactment could include the right to develop a conventional subdivision at the base density of one unit per 10 acres, subject to conventional subdivision or planned residential development review processes.

The Residential Cluster Zone 5 would allow some density from one unit per 5 acres of site size to a maximum of one unit per 3 acres. The density above one unit per 5 acres would be a bonus density dependent on the degree to which the site plan for a particular development preserves open space in a way that meets specific criteria in the ordinance. Each rezoning to Residential Cluster Zone 5 would entail enactment for the subject site of a particular subdivision site plan that would meet the open space standards required for the level of density provided. The property owner, rather than the township, would normally be the one to initiate an application for higher density development. Development according to the enacted site plan would then be the most direct vehicle for achieving a density greater than one unit per 5 acres, but the enactment could include the right to develop a conventional subdivision at the base density of one unit per 5 acres, subject to conventional subdivision or planned residential development review processes.

The open space density standards for the Residential Cluster Zone 5 could be the same as those applicable to the Residential Cluster Zone 10. Thus, the same level of open space preservation would be required to develop a Residential Cluster Zone 5 site at a density of one unit per 4 acres as would be required to develop a Residential Cluster Zone 10 site at a density of one unit per 4 acres. A Residential Cluster Zone 10 site plan could be approved at a density of one unit per 5 acres only if it preserved a substantial amount of open space, whereas a Residential Cluster Zone 5 site could be developed in a conventional layout at a density of one unit per 5 acres. For property already zoned in a

conventional district that permits development at one unit per 5 acres, there might be no advantage to a Residential Cluster Zone 5 rezoning except to develop at a density greater than one unit per 5 acres. Utilizing the same open space density standards for both Residential Cluster Zone 10 and Residential Cluster Zone 5 is reasonable since the actual preservation of open space is likely to be a sounder basis for granting increased density than would be the zoning history of a particular property. The zoning history may include rezoning that would be difficult to justify on the basis of either current or recent comprehensive plan strategies adopted by the township.

Utilizing the same open space density standards for both Residential Cluster Zone 10 and Residential Cluster Zone 5 will make it impossible to "piggy-back" the open space preservation concept onto conventional downzoning; such "piggy-back" zoning, if practiced, will necessarily diminish the good that can be done with the Residential Cluster Zone districts. The township will not be able to effectively preserve open space character if it does not utilize these districts for all future density increases in the area mapped Agricultural and Rural Residential on the Future Land Use Map. Ad hoc, occasional or inconsistent utilization of the Residential Cluster Zone 10 and Residential Cluster Zone 5 districts will severely undermine the township's rural and open space preservation purpose.

Minimum eligibility criteria could be established for open space subdivisions. Minimum criteria would have to be met in order for a development to be considered as an open space subdivision, but minimum criteria would not confer a particular bonus density. Minimum eligibility requirements could be set for site size, set back of buildings from major roads, set back of buildings from adjacent development, percent of common open space and landscape volume ratio (see the Regulatory Techniques Analysis for an explanation of landscape volume ratio). Open space subdivisions could be required to have direct access to paved roads and to coordinate their open space with the open space on adjacent parcels.

Bonus densities could be awarded based on various criteria. For an individual criterion, a range of bonus points could be awarded with the number of bonus points being dependent on the degree to which the particular criterion is fulfilled. The sum of the bonus points awarded for all of the criterion could be the basis for determining the actual bonus density. The number of bonus points that are allowed for individual features of the site plan could exceed the number of points than could be used to obtain increased density. Stated another way, there could be a bonus density cap (e.g. one dwelling unit per 3.0 acres) that is less than the density that would otherwise be permitted if each of the various site features for which bonus points are awarded is maximized on any one site. When the density bonuses associated with various criteria exceed the amount of density that can be awarded

Exhibit 1 (continued)
Implementation of the Agricultural and Rural Residential Land Use Category

under the bonus cap, the township in its site plan review and rezoning function could have the authority to decide which of the various criteria should be used to approach or get to the density limit established by the cap.

The landscape volume ratio concept could be used for awarding bonus points (see the Regulatory Techniques Analysis for an explanation of landscape volume ratio). Bonus points could be awarded for a landscape volume ratio that exceeds the ratio required as the minimum for open space subdivision eligibility, if such a minimum is established.

Bonus points could be given for screening development from roads with vegetated open space. Such vegetated screening should be natural in appearance. Opacity or semi-opacity could be created by existing trees, by transplanted trees, by other vegetation or some combination thereof. Berms could be used. A bonus should not be given for screening houses with other houses. With respect to the vegetative screening criterion, the maximum number of bonus points could be awarded for total vegetative opacity configured in such a way that the entrances to the development are via access roads that disappear behind vegetation that completely screens all homes.

Berms, vegetation and other such features that are configured so as to create an "engineered" character should not be highly rewarded with bonus points, if rewarded at all. Bonus points should not be awarded for stockade fences, masonry walls, and the like. Berms with undulations or other topographic characteristics that would be unlikely to result from natural processes should not be awarded bonus points.

Bonus points should only be awarded for open space, screening and the like if there is a deed restriction or some other mechanism to ensure that the subject open space remains open space in perpetuity and that its vegetative character is retained in perpetuity.

Bonus points could be given for golf courses and other such "developed" open space. However, golf courses and other such "developed" open space could be awarded fewer bonus points than natural or apparently natural open space.

Bonus points could be awarded if all development is setback in excess of the otherwise required minimum setback, which could be substantial. The magnitude of the required minimum setback could be based on the width and/or depth of the site, i.e. deeper setbacks could be mandatory for wider and/or deeper sites.

Farming and gardening could be allowed on open fields created by mandatory or bonus-generating setbacks. Open space that consists of fields and croplands could be awarded more bonus points than open space that

consists of woods, open fields or the like.

Bonus points could be awarded for developments that are entered from major roads such as M-59 and Hickory Ridge Road. Either no bonus or only a reduced bonus should be awarded for developments that have major access points on unpaved roads; such a limit should be employed particularly to protect Natural Beauty Roads, such as Wardlow Road (east of Hickory Ridge Road), and roads that might be eligible for a Natural Beauty Road designation, such as Lone Tree Road and Tipsico Lake Road. Access criteria should be a top priority. The future land use map designates areas along Tipsico Lake Road and Lone Tree Road (east of Hickory Ridge Road) in the Agricultural and Rural Residential category, which permits conventional development at 5 to 10 acres per dwelling unit and open space development at up to 3 acres per dwelling unit. This combination of mapping and regulatory intent might be inappropriate unless no bonuses or only very restricted bonuses are available for properties which are accessed via unpaved and/or natural beauty roads and the like.

The bonus awarded for preserving open space could be awarded in an ascending scale. For example, one "bonus point" could be awarded for developments which preserve 30 percent of their total site as open space; two "bonus points" could be awarded for 40 percent; three bonus points could be awarded for 50 percent; and so forth.

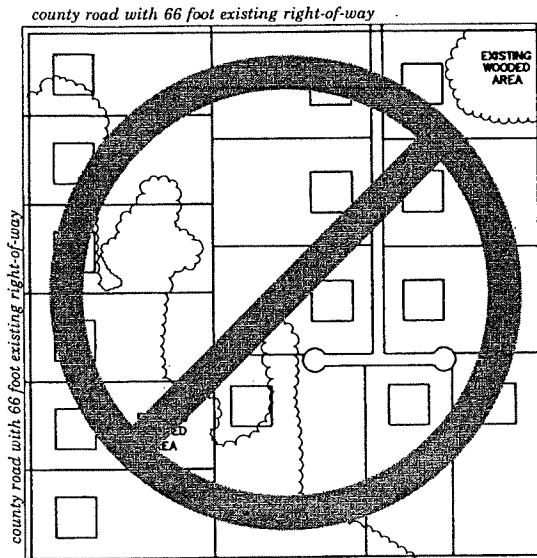
Open space that consists of greenways designated on an adopted Highland Township greenway plan or on an adopted Oakland County greenway plan could be given more bonus points than open space which does not include such greenways. As a corollary or as an alternative, if land so designated is present on a site, the failure to preserve it as open space could be the cause of deducting bonus points.

Open space that consists of hills, valleys and other natural topographic features could be given more points than open space that does not have such topographic assets.

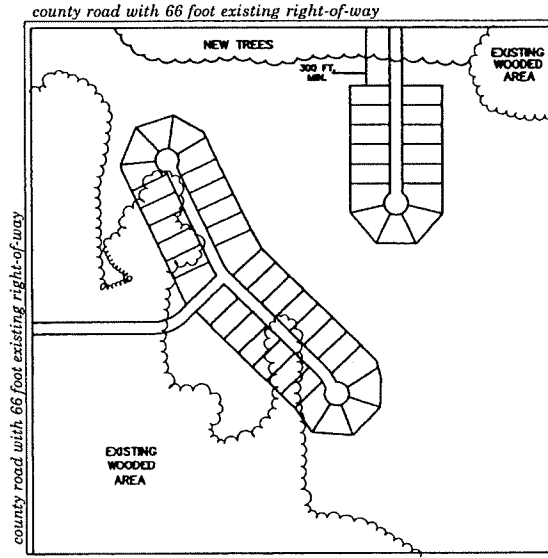
Bonus points could be denied for land that is not buildable under the current Highland Township zoning ordinance. Such land includes water bodies and water ways, wetlands, steep slopes, septic fields and well isolation areas.

Bonus points could be denied for site characteristics which are not directly related to preserving rural character. For example, bonus points could be denied for the provision of sewer service or other urban amenities. Bonus points could be awarded for desirable site features other than open space preservation, but if such awards are substantial they could diminish the effectiveness of the system to protect open space and open space character. One site feature for which bonus points might be awarded is the establishment of road linkages with adjacent development in instances where such linkages are not otherwise required by Oakland County.

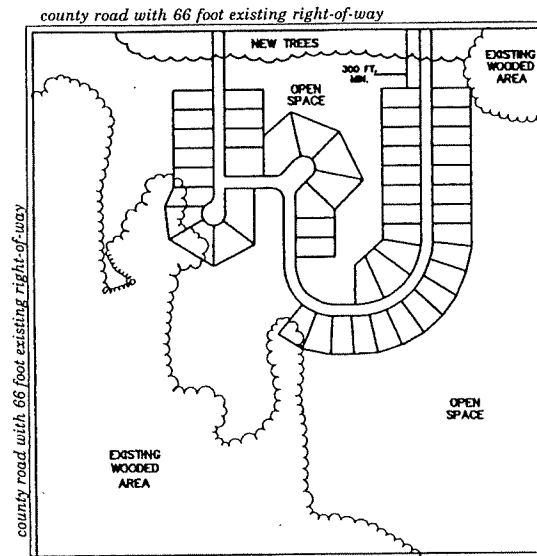
Exhibit 2: Open Space Site Plan Do's and Don'ts



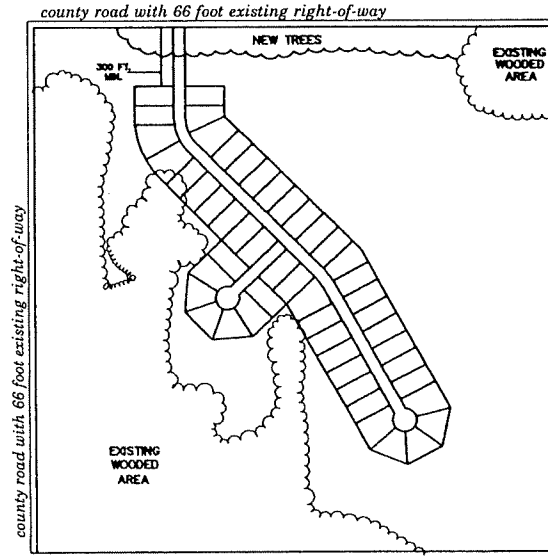
Conventional Development Pattern
150 acres, 15 lots



Open Space Concept I
150 acres, 50 lots



Open Space Concept II
150 acres, 50 lots



Open Space Concept III
150 acres, 50 lots

Conventional development is not permitted under the variable density open space system. Open space concepts are permitted and encouraged. Open space Concepts I through III above are not "recommended" designs *per se*; they are presented to show that many different open space layouts are possible under the variable density open space system. Developers should work with the Township Planning Commission to achieve the best particular open space design for each unique site.

Table 1
Highland Township Land Use Plan
Tabular Summary of Land Uses

	1999 Acres	1999 Percent	1982 Acres	1982 Percent
RESIDENTIAL	16,041	67.6%	16,014	69.3%
Agriculture & Rural Residential	8,008	34.7%	9,381	40.6%
Medium & Small Lot Residential	6,930	30.0%	5,033	21.8%
Open Space Residential	416	1.8%	1,042	4.5%
Mobile Home Park	594	2.6%	383	1.7%
Multifamily	94	0.4%	175	0.8%
COMMERCIAL	311	1.3%	252	1.1%
Office & Low Intensity Commercial	56	0.2%	110	0.5%
General Commercial	255	1.1%	142	0.6%
INDUSTRIAL	297	1.3%	362	1.6%
PUBLIC & SEMI-PUBLIC	279	1.2%	249	1.1%
OPEN SPACE & RECREATION	3,956	17.1%	4,097	17.7%
SURFACE WATER	1,546	6.7%	1,454	6.3%
TRANSPORTATION	683	3.0%	683	3.0%
Total	23,111	100.0%	23,111	100.0%

**Table 2
Projected Traffic Volumes and Roadway Capacities**

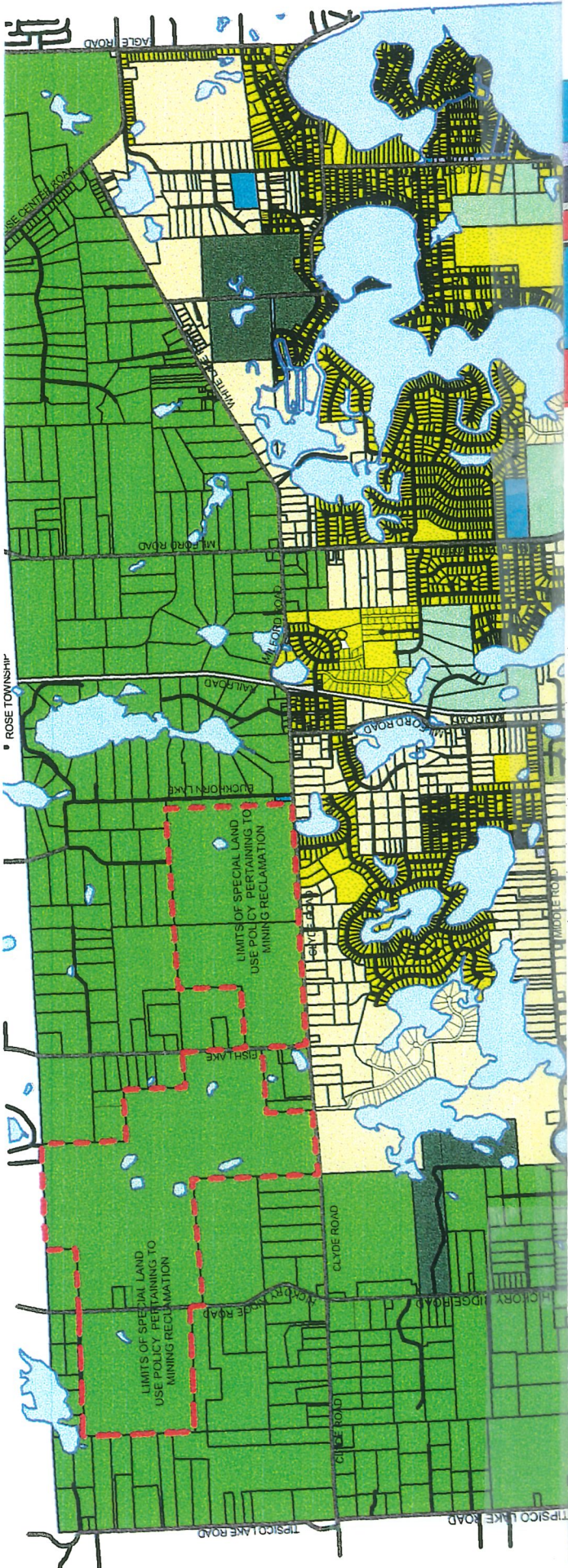
	daily traffic counts 1992	daily traffic counts 1997	daily counts 1998	annual percent change 1992-1998	projected background traffic 2010	projected background traffic 2020	projected background peak hour traffic 2020	household peak hour assignment proportion 2020	projected household peak hour traffic 2020	projected total peak hour traffic 2020	existing lanes	peak hour capacity for existing lanes at LOS E	2020 V/C ratio for existing lanes at proposed lanes	2020 capacity for proposed lanes at LOS E	2020 V/C ratio for existing lanes at proposed lanes at LOS E	1992 V/C ratio for existing lanes at E capacity	1998 V/C ratio for existing lanes at E capacity
M-59																	
tipico - hickory ridge 1	22,000	na	na	na	22,000	4,500	5,076	15%	576	5,076	4/D	6,510	0.78	6,250	0.81	0.36	na
hickory ridge - milford 2	18,000	na	na	na	22,000	3,690	4,266	15%	576	4,266	4/D	6,510	0.66	6,250	0.68	0.29	na
milford - rr 3	22,000	na	na	na	28,000	5,000	5,076	15%	576	5,076	4/D	6,510	0.78	6,250	0.81	0.36	na
rr - harvey lake 4	26,000	na	na	na	28,000	5,310	5,886	15%	576	5,886	4/D	6,510	0.90	6,250	0.94	0.40	na
harvey lake - waterbury 5	27,000	na	na	na	28,000	5,580	6,156	15%	576	6,156	4/D	6,510	0.95	9,770	0.63	0.41	na
Clyde																	
hickory ridge - fishlake 6	na	na	na	na	9,000	1,080	1,272	5%	192	1,272	2	1,580	0.81	1,580	0.81	na	na
fishlake - buckhorn lake 7	3,000	na	na	na	7,000	810	1,002	5%	192	1,002	2	1,580	0.63	1,580	0.63	0.19	na
buckhorn - milford 8	3,000	na	2,896	na	8,000	990	1,182	5%	192	1,182	2	1,580	0.75	1,580	0.75	0.19	0.18
Hickory Ridge																	
honeywell lake - lone tree 9	10,000	12,235	12,902	4.30%	14,000	2,700	3,660	25%	960	3,660	2	1,580	2.82	3,163	1.16	0.63	0.82
lone tree - bigland 10	9,000	12,222	12,551	5.70%	13,000	2,430	3,390	25%	960	3,390	2	1,440	2.85	3,163	1.07	0.57	0.79
wardlaw - middle 11	8,000	6,382	6,740	na	10,000	2,160	2,560	25%	960	2,560	2	1,580	1.97	3,163	0.99	0.51	0.43
middle - clyde 12	na	na	na	na	8,000	1,620	2,560	25%	960	2,560	2	1,580	1.63	3,163	0.82	na	na
Milford																	
lone tree - livingston 13	18,000	na	18,394	0.40%	14,000	3,690	4,266	15%	576	4,266	2	1,580	2.70	3,163	1.35	1.14	1.16
wardlaw - wardlaw 14	12,000	6,366	14,398	3.80%	10,000	2,430	3,006	15%	576	3,006	2	1,580	1.90	3,163	0.95	0.76	0.91
middle - clyde 15	5,000	na	7,498	6.99%	2,000	990	1,566	15%	576	1,566	2	1,580	0.99	1,580	0.99	0.32	0.47









Note: The "daily traffic counts for 1992" are the counts reported in the Highland Charter Township Comprehensive Plan 1992 Preliminary Data and Analysis Update as published in 1996. The "projected daily traffic for 2010" are the SEMCOG projected volumes reported in that same document. The Highland Charter Township Comprehensive Plan 1992 Preliminary Data and Analysis Update noted that the 2010 projections included some anomalies, particularly low projections for Milford Road. The "daily traffic counts for 1997" and the "daily traffic counts for 1998" were obtained from SEMCOG in 1999. The "projected background daily traffic for 2020" are derived by increasing the 1992 volumes by 3 percent compounded per year from 1992 for all roads except Hickory Ridge Road. For Hickory Ridge Road the average annual increase for background traffic was assumed to be 4 percent, a rate more reflective of the rapid 1992-1998 rate of increase for this road. The "projected background peak

hour traffic for 2020" is 9 percent of the daily traffic, a standard conversion factor. The "projected household peak hour traffic for 2020" was derived by assigning a percentage of the peak hour trips that might be generated by the 3,839 increase in households anticipated for the period 1992-2020. The household increase will have a much smaller impact on total number of future trips than the 3 percent annual increase for background traffic. The "projected total peak hour traffic for 2020" is approximately in line with, but not identical to, growth percentage projections supplied by SEMCOG in 1999. The SEMCOG percentage projections produce a lower 2020 projection for M-59, a lower projection for Milford Road and higher projection for Hickory Ridge Road than indicated above.

Capacity deficiencies are shown in bold type. Road segments with level of service E volume/capacity ratios greater than 1.0

are very congested, at least during the peak hour of travel. Volumes in 1998 on Milford Road between Livingston and Lone Tree suggest that it was already experiencing such congestion. The projections suggest that all segments of Hickory Ridge will experience such congestion by 2020 unless its capacity is increased by widening to 4 lanes; even with widening, Hickory Ridge between Honeywell Lake Road and Lone Tree Road will be just into level of service F. One segment of Milford Road between Lone Tree and Livingston will be deep into grid lock unless widened to four lanes. Level of service F will continue at Milford Road between Lone Tree and Livingston even with widening. All these comments pertaining to the consequences unless Hickory Ridge and Milford Roads are widened assume that there will not be a bottleneck to the south, an assumption that is not necessarily true with respect to Milford Road.



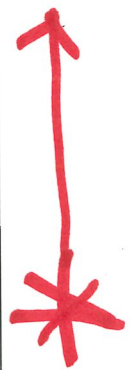
-  MOBILE HOME PARK
-  MULTIPLE-FAMILY RESIDENTIAL
-  OFFICE & LOW INTENSITY COMMERCIAL
-  GENERAL COMMERCIAL
-  INDUSTRIAL
-  INSTITUTIONAL
-  PARKS AND RECREATION
-  RAILROAD



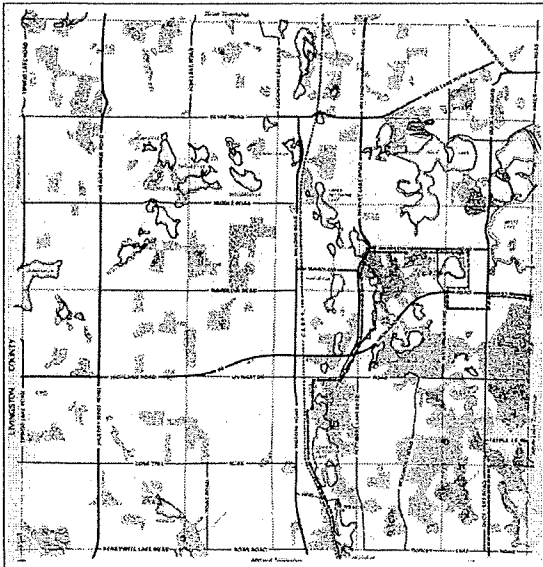
DONNELSON • SWARTHOUT • ASSOCIATES • INC.
 ARCHITECTS AND PLANNERS

5181 LIVERDUS, RTE 300
 PHONE (248) 344-9900
 TROY, MI 48065-1041
 FAX (248) 344-9892

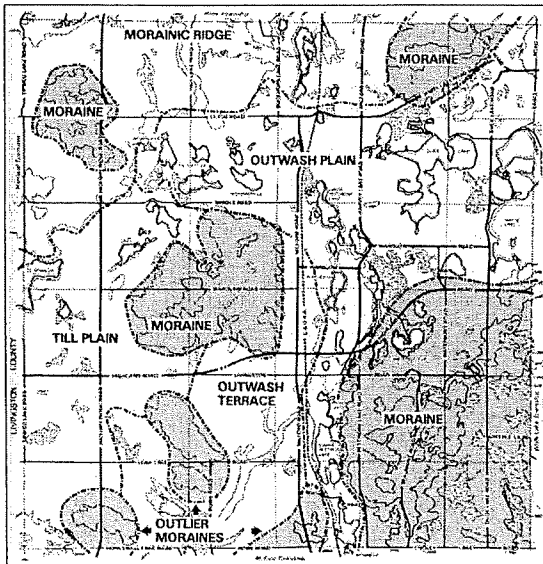
See updated map @ Highland-Twp.net
5/19/23 gca



PART II BACKGROUND and POLICY STATEMENT



1. Wooded Areas in Highland Township



2. Geological Formations in Highland Township

Background

Natural Land Cover

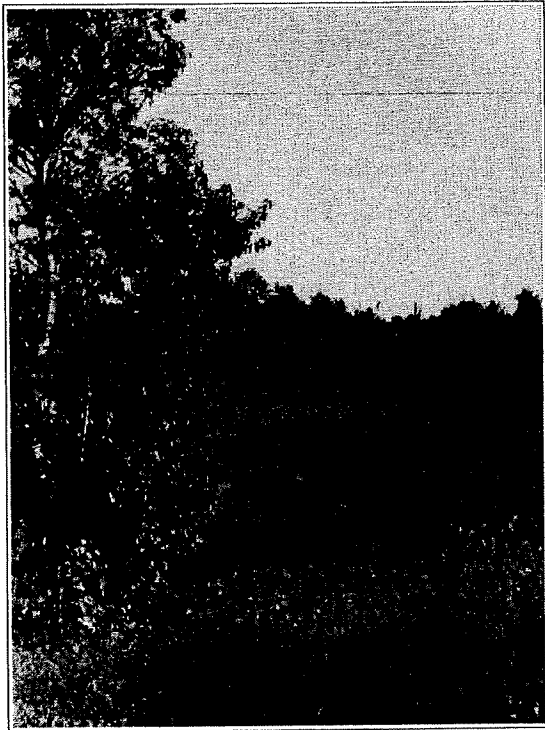
Highland Township is replete with lakes, forested wetlands, non-forested wetlands and other open space. The other open space includes (or has included in the recent past) cropland, prairie land, grassland, shrubland, broad-leaved forest land (central hardwood and lowland hardwood), and coniferous forest land (pine). Lakes are concentrated in the northeast and north central portions of the township. The land around them has been developed with summer cottages and subdivisions. Most structures that were once summer cottages have been upgraded and are now year-round homes. The largest areas of forest land is in the southeast part of the township where it is within the protective boundaries of the Highland Recreation Area, which consists of 3,696 acres owned by the State of Michigan. However, other forest land is located throughout the township. Cropland, prairie land and grassland is spread throughout the township.

Natural Topography

The topography of Highland Township is distinctive. It was created during the Ice Age through glacial activity which transported rocks and soils from their place of origin. These rocks and soils were re-deposited so as to create various new land forms, including moraines, till plains, and outwash terraces and plains.

Moraines are generally perceived as hills or ridges. They typically exceed the mean elevation of the township by 100 feet. The highest moraine is at elevation 1,190 or nearly 190 feet above the township mean; this moraine is located along Clyde Road west of Hickory Ridge Road. Other moraines are located in the central and southeast portions of the township. Moraines are highly attractive land forms, particularly when they are in a forested state. Their ridges provide prominent vantage points from which to enjoy broad vistas, but their steep slopes are vulnerable to clearing. Moraine ridges can be seen prominently from roads in certain locations. Particularly these moraines, but also the less prominent moraines, help make Highland Township a highly desirable place to live.

A till plain is located in the western portion of the township where it is traversed by Hickory Ridge Road and Highland Road. It is generally occupied by



3. Wetlands in Highland Township



4. Wooded Areas in Highland Township

cropland and prairie land and grass land. It is characterized by its flat to slightly undulating topography and lack of well-defined, integrated drainage. The till plain is largely dotted with a few historic or near historic farm structures, and fenced in ways indicative of its present or former agricultural use. Some experts in agricultural economics believe that agricultural use of the till plain is no longer economically viable. The 1982/83⁵ Highland Township Comprehensive Plan stated that "The openness of the [till plain] landscape will make any substantial development, even low-density single-family development, very visually imposing." In general, this sentence remains true with respect to conventional forms of low-density single family development. However, it may be possible to develop in a cluster pattern which preserves key open space areas.

The outwash plain is dotted with lakes and strung with natural drainage features. It affords interesting views from thoroughfares. However, a very limited amount of improperly sited development can destroy its visual richness.

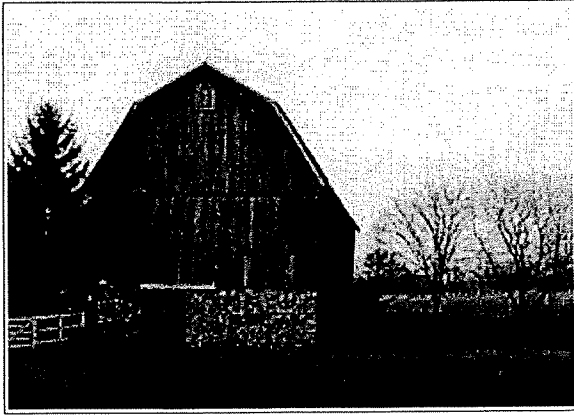
Development

The 1982/83 Highland Township Comprehensive Plan stated, "The existing land-use pattern in Highland Township consists of an emerging residential community in an area still primarily containing agricultural, non-urban and undeveloped land." At that time, land classified as agriculture, vacant, surface water and public recreation amounted to nearly sixty percent of the township's total of 23,111 acres. The 1982/83 plan also stated,

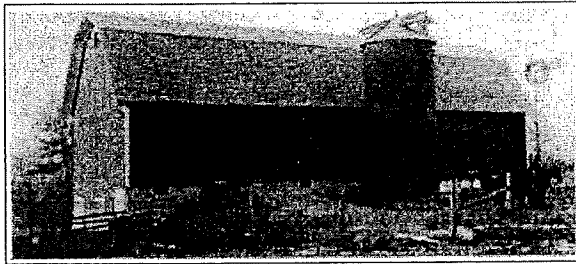
A pattern of residential development has been established in Highland Township over the past century. The lake areas and central village area have been developed at relatively high densities while other areas contain lower residential densities and agricultural uses.

What was said in 1983 is largely true in 1998. The development that has occurred since 1983 is consistent with the land use pattern that existed in 1982/83 and with the land use plan adopted in 1982/83. Some development has been approved which is not strictly consistent with the 1982/83 plan, but which could well be justified on sound planning principles and which in no way consisted of an

⁵ The Future Land Use Map (Figure 7.1) of the plan was unanimously adopted by the Planning Commission on August 26, 1982 and the balance of the plan was unanimously adopted on January 13, 1983. Residential Development Policy 19 pertaining to the area north of Clyde Road was adopted on _____.



5. Historical Rural Architecture in Highland Township



6. Barn on the Ruggles farm on Rowe Road

arbitrary deviation from the 1982/83 comprehensive plan.

Past Planning for Highland Township

The 1982/83 Highland Township Comprehensive Plan contains many provisions. Some of the most important are as follows,

Agriculture and rural single-family areas provide a non-urban "ring" around the township in conjunction with the Highland Recreation Area... This low-density "ring" consists of approximately 14 square miles. These areas generally follow Clyde Road to the north, Hickory Ridge Road to the west and Lone Tree Road to the south.

If all residential areas are 100 percent developed, they could contain approximately 4,498 additional residential units. These additional units would provide a surplus of 1,692 units over and above the year 2000 needs [based on the projected population].

The design of new residential developments should provide for the preservation of existing trees, scenic features and environmentally sensitive areas.

New residential subdivisions developed in visually important areas along major thoroughfares should provide adequate open space to help maintain the rural character of the township.

A range of housing types and parcel sizes should be provided to accommodate different income and age groups, household sizes, locational and style preferences.

Relevant Development Trends from Ancient to Modern Times

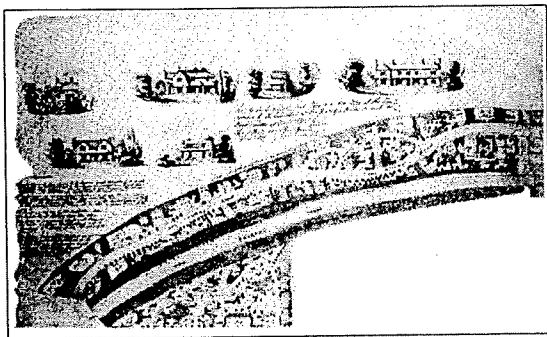
People able to do so have been moving from places of higher density to places of lower density for centuries. They have done so to enjoy greater access to light, air and greenery. They have done so to escape certain physical and social features of the city. They have done so to protect their investments.

Hadrian⁶ built a villa outside ancient Rome near a place now called Tivoli. According to Professor Frank

⁶ Hadrian was Emperor of Rome 117-138, AD. He is remembered both as one of the most accomplished and honorable men to hold that title and also as an gifted architect to whom is credited his own villa at Tivoli and the Pantheon in Rome.



7. Fragonard's drawing of cypress in the garden of the Villa d'Este



8. Nash's Plan for Park Village, London

E. Brown,⁷ it was located where "the emperor could just barely not see the [eternal] city."⁸ According to Vincent Scully the villa was the "ultimate suburban refuge" and a place where "the individual, the emperor, could meditate in peace."⁹ During the late Renaissance, Tivoli became the site of another villa, the Villa d'Este, built for Cardinal Ippolito II d'Este, son of Lucrezia Borgia. It became a favorite retreat for Michaelangelo and many other prominent visitors.

The modern concept of the ideal suburb may have had its birth among the upper bourgeois of London and the Village of Clapham, five miles from London, may be one of its first examples. In 1724, Daniel Defoe¹⁰ noted the presence of numerous opulent merchants' villas in this former agricultural village. The prosperous William Wilberforce¹¹ made his home there as did many of his closest colleagues. Their Evangelical movement was sometimes known as the Clapham Sect. According to Robert Fishman, "The Evangelicals never tired of repeating that, if all urban social life must be rejected, the truly godly recreations were family life and *direct contact with nature* [emphasis added]."¹²

Following the spontaneous "suburbanization" of Clapham, designers sought to create planned suburbs. An early example was John Nash's Park Village, built at Regent's Park in London in the 1820's. According to Fishman,

The name Park Village has become a favorite cliché, but for Nash it had a precise meaning in delineating the two major influences that went into the design. It was a synthesis of the picturesque

⁷ Frank E. Brown is the author of books on the history of classical architecture including *Roman Architecture* (George Braziller:New York) 1961. He served as a professor in the Classics Department at Yale University and at the American Academy in Rome.

⁸ Quoted in Vincent Scully, *Architecture: The Natural and the Manmade* (New York:St. Martin's Press), 1991, page 116.

⁹ Vincent Scully, *Architecture: The Natural and the Manmade* (New York:St. Martin's Press), 1991, page 116. Vincent Scully served as Professor of Architectural History at Yale University for decades. He is the author of numerous books on architecture.

¹⁰ Daniel Defoe (1659-1731) was an English businessman, Nonconformist and author. His writings include essays on various political topics and several novels, including *The Life and Strange Suprizing Adventures of Robinson Crusoe* (1759).

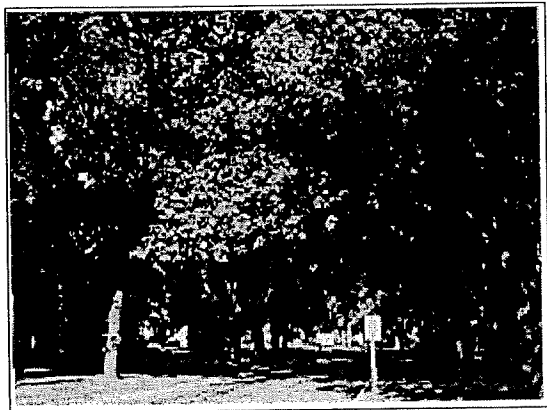
¹¹ William Wilberforce (1759-1833) was an English philanthropist and member of Parliament whose name is chiefly associated with the campaign to abolish the slave trade, a cause he adopted following his conversion to Evangelical Christianity in 1784 and to which he was assigned by William Pitt. At Clapham, Wilberforce was one of the leaders of the "Clapham Sect" of Evangelicals.

¹² Robert Fishman, *Bourgeois Utopias* (New York:Basic Books), 1987, page 53. In 1987 when *Bourgeois Utopias* was published, Robert Fishman was Associate Professor of History at Rutgers University.

landscaped park with the picturesque village. Nash had grasped the basic idea of Clapham and the other early suburbs: they were houses in a park.¹³



9. Olmsted's Plan for Riverside, Illinois



10. Riverside, Illinois

The idea of the rural suburb has a venerable pedigree in the United States. After working for the union cause during the Civil War, Frederick Law Olmsted turned his efforts to becoming the first great American landscape architect. One of his early projects was Riverside just outside of Chicago. This development remains today one of the outstanding accomplishments of American suburban design. Walter Creese calls it "the greatest American suburb."¹⁴ Olmsted accomplished this great suburb on a site that was barren and flat, *i.e.* with less natural interest than the till plain portions of Highland Township. A remarkable feature of Olmsted's plan is its mixture of regularly spaced trees along the rights-of-way in front of home sites and the more naturalistic planting in common open space areas. Olmsted explained the use of curvilinear streets in a report to the developers,

...[As] the ordinary directness of line in town-streets, with its resultant regularity of plan would suggest eagerness to press forward, without looking to the right hand or the left, we should recommend the general adoption, in the design of your roads, of gracefully-curved lines, generous spaces, and the absence of sharp corners, the idea being to suggest and imply leisure, contemplativeness and happy tranquillity.

Without turf, and foliage, and birds, the character of the highways, whatever their ground plan, would differ from those of the town chiefly in the quality of desolation and dreariness. Turf and trees should abound then, and this implies much space in the highways, besides that which is requisite for the passage of vehicles and people on foot.¹⁵

In the United States during the post World War II era, suburbanization in the spirit of Olmsted spread over the countryside. Unfortunately, many of the designers lacked Olmsted's talent. The result was a pattern of development that is without distinction and that preserves precious little of the natural

¹³ Robert Fishman, *Bourgeois Utopias* (New York:Basic Books), 1987, page 66.

¹⁴ Walter L. Creese, *The Crowning of the American Landscape: Eight Great Spaces and Their Buildings* (Princeton:Princeton University Press), 1985, page 219.

¹⁵ S.B. Sutton, Editor, *Civilizing American Cities, Selection of Frederick Law Olmsted's Writings on City Landscapes* (Cambridge: Massachusetts Institute of Technology), 1971, page 300.

environment important to the rich visual character of such locales as Park Village and Riverside. It also preserves precious little of the flora and fauna important to a stable natural ecology. The City of Los Angeles presents one of the most widely criticized examples of such development.

Recent Planning Trends

Zoning to enhance community character has long been a legitimate and desirable goal of city planning. Norman Williams in *American Land Planning Law* at Section 1.08 notes "...[an] alteration in the public image of the community..."¹⁶ as one of six factors that may be affected by a decision on how a particular parcel of land is to be used. He does so in the context of a discussion of the rationale for planning. At Section 1.35, Williams credits the rationale he describes to Alfred Bettman, one of the originators of the idea and practice of modern city planning in America.¹⁷ Leading design authorities support the importance of community character as a planning consideration. The work of Kevin Lynch stands out on this point. His *Image of the City*¹⁸ is wholly devoted to this topic and is universally considered a classic work in the planning field. Many of his shorter commentaries in *City Sense and City Design*¹⁹ also address the issue of community character and image from various perspectives.

Recent planning literature contains examples of communities articulating the desire to preserve a *rural* community character. One example is the Livingston County program intended to "protect environment, agriculture and rural landscape." The acronym for this program is PEARL. One of the PEARL publications includes the following statement,

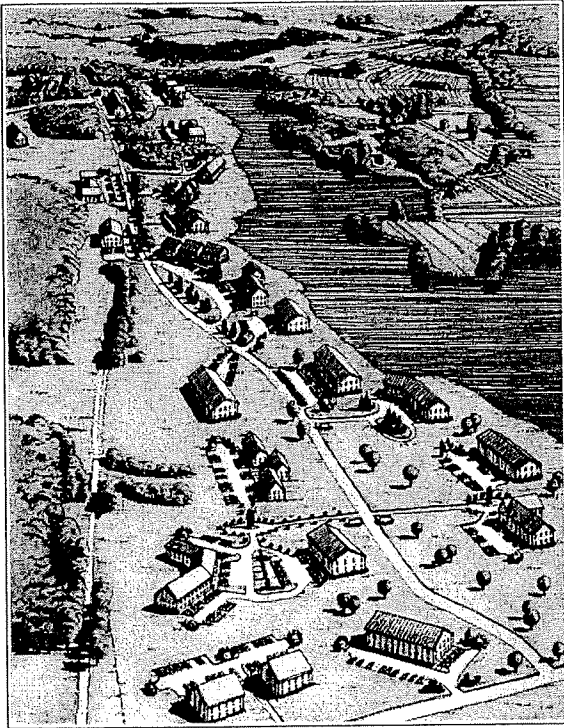
In 1990, the Livingston County Planning Department began to investigate the possibility that rural housing clusters, if linked with permanently dedicated open space, could provide an alternative to conventionally designed suburban subdivisions. Livingston County is rapidly growing and is losing its rural character to an onslaught of large lot residential development. Could a rural

¹⁶ Norman Williams, Jr., *American Land Planning Law: Land Use and the Police Power, Vol. 1* (Deerfield, Illinois: Callaghan & Company), 1988 as revised through 1997, page 17.

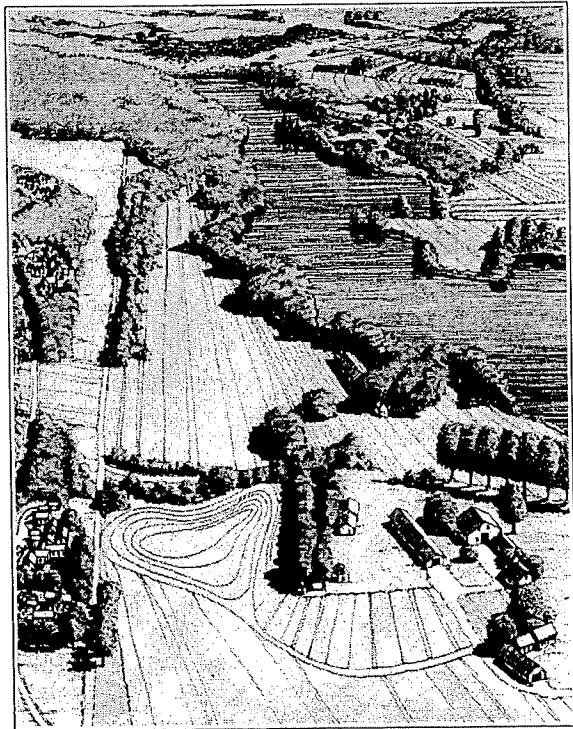
¹⁷ Norman Williams, Jr., *American Land Planning Law: Land Use and the Police Power, Vol. 1* (Deerfield, Illinois: Callaghan & Company), 1988 as revised through 1997, page 63.

¹⁸ Kevin Lynch, *The Image of the City* (Cambridge: Massachusetts Institute of Technology and the President and Fellows of Harvard College), 1960.

¹⁹ Kevin Lynch, *City Sense and City Design* (Cambridge: Massachusetts Institute of Technology), 1990.



11. Conventional Development Pattern Applied to the Connecticut River Valley



12. Rural Preservation Development Pattern Applied to the Connecticut River Valley

cluster design approach help maintain the rural character that is drawing new residents to the County?

Review of existing source materials convinced the staff that a rural open space/cluster approach is a practical, viable option for Livingston County communities. It is not the only alternative for maintaining the rural landscape, but it is one of the most promising.

Another example is the work of the Massachusetts Department of Environmental Management and the Center for Rural Massachusetts. These agencies produced *Dealing with Change in the Connecticut River Valley: A Design Manual for Conservation and Development*. This document includes the following statement,

Clearly, the development design process (for both the public and private sectors) needs to encompass the total landscape of an area. In order to create quality landscapes for our new ways of living, we must deliberately design new settings to suit our new land-uses--such as residential subdivisions and shopping centers. And that deliberate design is what the Center for Rural Massachusetts set out to achieve in its Connecticut River Valley Landscape Planning Project.

For this design manual, eight sites were selected to portray the different characteristics of a variety of basic landscape types within the Valley (e.g., flat bottomland, riverscapes, lakefront situations, undulating terrain, steep embankments, hilltowns, etc.). For each of the eight sites, three aerial perspectives were sketched and three site plans prepared. These three-dimensional perspectives and two-dimensional plans depict the pre-existing landscape and land-use situations, and contrast them with two alternative development scenarios. Each scenario contains the same overall amount of new development, but they graphically illustrate the enormously different impacts that occur when land is developed conventionally (following standard zoning and subdivision practices), as opposed to being developed imaginatively (using innovative techniques to help conserve the essential rural character of the region). In addition, ground-level perspective sketches are provided for four of the sites, to show the visual contrast as seen from the road by the traveling public.

Community Character Policy Statement for the Future

Highland Township's rural open space character helps make the township a particularly desirable place to live. Significant aspects of the township's rural open space character include lakes, wetlands, wooded areas and prairie land. Other significant aspects include the township's moraine, outwash and till plain topography. All of these types of open space should be preserved to the maximum extent feasible, but particularly in visually prominent locations.

For the past two decades or more, a planned development pattern which envisions a core of comparatively high density development surrounded by a ring of comparatively low density development has been the technique used by Highland Township to maintain its rural open space character. Very low density development may continue to be employed in certain parts of the township in the future. Other techniques will also be needed.

One of the other techniques may be a cluster development form that concentrates housing on portions of a subdivided site and retains common open space on other portions of the same subdivided site. The common open space should

include land that has prominent topographic forms and/or vegetative mass. It should also include wetlands and other environmentally sensitive land. Also, it could be former prairie land that is replanted at the time of development with significant vegetative mass. This approach could be particularly appropriate for the till plain in the west-central part of Highland Township. The site plans for all new development should be consistent with the highest historical tradition of landscape design.

Another appropriate and necessary technique for preserving Highland Township open space may be the acquisition by public entities of conservation easements.

Still other techniques may be employed. A continuous search for effective and practical ways to preserve open space features should be part of the ongoing planning process in Highland Township.

Finally, the preservation of Highland Township's open space character should be done in such a way that allows development of a range of housing types and parcel sizes to accommodate households of different incomes, ages, sizes and style preferences.

Exhibit II-1 Preserving Rural Character

Single-Family Development Landform-Farm Fields

Minimize Visual Impact

1. Structures should not be placed in open fields.
2. Residences should be located adjacent to tree lines and wooded field edges.
3. Residences should not front directly on off-site streets.
4. Where clustering will yield open space that can remain in active agriculture, its use should be explored and possibly required.

Retain Rural Features

1. Existing farm roads should be incorporated into subdivision design.
2. Stone rows and tree lines should be preserved.
3. Existing agricultural structures such as barns and silos should be preserved where feasible.

Minimize Site Disturbance

1. Roads should follow existing contours.
2. Disturbance for the construction of roads, basins and other improvements should be kept at a minimum.
3. Disturbance on individual lots should be limited.

Single-Family Development Landform-Lakefront Development

Minimize Visual Impact

1. A minimum setback from lakes or ponds should be consistently maintained.
2. The maximum linear disturbance per lot should be limited. Disturbances include docks, bulkheads, decks, walkways and beach areas.

Retain Water Quality

1. A lake management plan should be prepared to control chemical pollutants, such as hydrocarbons and fertilizers.
2. High-quality waters should be identified and monitored to maintain and enhance water quality.
3. On-site wastewater treatment facilities should be designed to effectively protect surface water and groundwater.

Minimize Site Disturbance

1. Total disturbance, especially within buffer areas, should be limited.
2. Roads should follow existing contours.
3. Disturbance for the construction of roads, basins and other improvements should be kept to a minimum.
4. Disturbance on individual lots should be limited.

Single-Family Development Landform-Wooded Slopes

Minimize Visual Impact of Development

1. Structures should not be placed on ridge lines.
2. Trees on ridges should not be removed.
3. Water towers should not be placed on top of ridge lines.
4. The height of water towers should be limited to an elevation below the crown line of mature on-site trees.

Retain Woodland Features

1. Stone rows and tree lines should be preserved.
2. Treed areas between the principal structure and the drive or roadway should be retained.
3. The creation of extensive lawn areas should be discouraged.

Minimize Site Disturbance

1. Roads should follow existing contours.
2. Disturbance for the construction of roads, basins and other improvements should be kept to a minimum.
3. Disturbance on individual lots should be limited.
4. Building envelopes should be limited and located in the most suitable areas for development.
5. Areas beyond reduced envelopes should be restricted against development.
6. Building envelopes should not be drawn into steep slope areas.
7. The maximum amount of natural vegetation on each site should be preserved.

PART III: REGULATORY TECHNIQUES ANALYSIS

Introduction

Part III constitutes an issue paper dealing with various regulatory approaches which were worth consideration and study as the new Comprehensive Plan was being prepared. It is an attempt to document various regulatory techniques and their efficacy for various purposes which may be appropriate to Highland Township. Preservation of open space and enhancement of property values are included among the public purposes likely to be appropriate to Highland Township. The issue paper is based on a survey of the published professional literature and other sources. Regulatory mechanisms considered include conventional Euclidean zoning, planned residential development zoning (in the form existing in Highland Township in 2000 and in other possible forms), overlay zoning (as proposed for Highland Township during the mid 1990s and as might be modified to better achieve desired objectives), transfer of development rights and public acquisition of development rights. Specific consideration is given to approaches which make cluster development and/or other open space preservation techniques the "by-right development pattern" and more conventional development the "special approval development pattern." This issue paper was prepared early in the planning process. It was discussed with the Planning Commission and it served as a resource for other comprehensive planning work.

The "Euclidean zoning" mentioned above is the kind Highland Township employs today. It is the kind envisioned in the 1981 Comprehensive Plan. It has served the township well over the past fifteen years. As the analysis below indicates, it may continue to do so in the future. This may be particular so if it is combined in the future, as it has been in the past, with special approaches to protect environmental assets. Such approaches surely should include provisions like Section 1714 of the current Highland Township Zoning Ordinance. The experience of Hamburg Township and West Bloomfield Township suggests formal open space protection and entrance measures that might be used to argument Section 1714. One of the main changes inherent in the above task description is to consider approaches that will make cluster development with open space preservation mandatory and conventional development available only subject to special approval. This approach is rare although not without

precedent according to Randall Arendt, a specialist in the field of open space development. However, of the dozen or so communities that have adopted open space regulations and that were identified in the course of preparing this document, none have adopted mandatory provisions. The research that went into this issue paper has indicated another approach, the bonus density approach, that may be almost as effective. The bonus density approach as employed in nearby Hamburg Township is described herein.

Planned unit development (PUD) and transfer of development rights (TDR) approaches are described herein. Highland Township now employs a simplified or quasi planned development approach in its planned residential development regulations. These have worked quite well for the purpose of tailoring developments to specific sites while maintaining basic public policy standards pertaining to density. They could be easily adjusted to incorporate a bonus density approach. The general description of the planned unit development approach reflects that technique's problematic aspects. On this point a leading authority, Norman Williams, is quoted extensively. The analysis of the transfer of development rights approach suggests that this technique will not be appropriate for Highland Township.

The potential is great for public or private acquisition of development rights in order to preserve open space. The key statutes in Michigan are described herein. As promising as this technique may be, it will not be an effective substitute for regulation of development rights.

Euclidean Zoning Approach as Applied in Highland Township

The Highland Township Comprehensive Plan incorporates two "Agricultural and Rural Residential" land use categories; one calls for a 10-acre minimum lot size and the other calls for a 5-acre minimum lot size. These land use categories are distributed around the north, west and some southern sections of the township forming a low density ring around the more intensive portions of the township. This pattern of a higher density core and a lower density periphery facilitates efficient provision of both government and retail services, but that is not the only justification for

the low density ring. The low density ring is well justified by the fact that it is desired by a sizable body of opinion in Highland Township. It is desired by those who like owning 10-acre or larger parcels in an area where there are other such parcels. It is desired by those who do not want such large parcels for themselves but like living near large parcels. It is a perfectly legitimate public purpose to create an environment characterized by low density development if such is desired by a significant portion of the population. It would be wrong for a community such as Highland Township to attempt to create such an environment to the exclusion of other higher density environments, but this Highland Township has clearly not done. A key aspect of the plan is the fact that the low density ring coupled with other development authorized in the core of the township provided far more development opportunity than would be needed for the foreseeable future. This is demonstrated by Table 7.2 of the Comprehensive Plan.²⁰

The relevant case law provides some foundation for expecting that 10-acre zoning and/or 5-acre zoning as employed in Highland Township might be sustained in court if challenged. An article which appeared in the February 1993 issue of *Planning and Zoning News* summarized important case law on lot size regulations from Michigan and other jurisdictions. The authors, attorneys James R. Brown and James F. Scales of Grand Rapids, cited a variety of cases, some approving large lot zoning and some disapproving large lot zoning. The particular circumstances of each case are the most important determinants of whether or not a given application of large lot zoning is appropriate. There were no cases reported that exactly match the circumstances in Highland Township. One particularly relevant statement by Brown and Scales follows:²¹

²⁰ The concept of this low density ring with 10-acre minimum lot sizes obviously had the professional approval of Robert K. Swarthout, PCP, AICP who prepared the plan and who's name appears on the plan. It also had the approval of Gerald H. Luedtke, PCP, AICP for whom Mr. Swarthout worked until the plan was nearly completed and who's name also appears on the plan. Finally, it had the approval of Mr. Tim Howlett who served as one of the Township's attorneys at the time the plan was prepared and who provided consultation to Mr. Swarthout.

²¹ Something which is not done by Highland Township because of the variety of development opportunities in the core area.

It is more difficult to generalize whether the goal of preserving "rural character" alone supports larger lot sizes than strictly necessary to address sewage disposal, traffic, public utility, and like concerns. There is a fine line between a regulation which properly protects rural and open spaces, and one which improperly restricts development and excludes low and middle income housing opportunities. Courts of other jurisdictions [outside Michigan] have upheld large residential lot zoning for the express purpose of maintaining open space and existing rural character. However, until this issue has been considered by Michigan Courts in a number of different contexts [such as that in Highland Township], the extent to which Michigan law supports large residential lot requirements for the sole or primary purpose of preserving rural or open spaces will remain unclear.

Brown and Scales also called attention to *Arsdel v Addison Township*, 37 Mich App 613 (1972), which upheld a zoning ordinance requiring 10-acre lots. The court based its decision in part on the absence of public utilities (except electrical and telephone) and poor roads. Public utilities are absent from most large lot areas, but this deficiency might be partially overcome by a package sewage facility at one or more. Poor roads are not an issue because Hickory Ridge Road, which is very well improved, serves many large lot areas. In rendering its decision, the Michigan Appellate Court also made the following observations which are relevant to Highland Township where attractive homes have been built on large lots in the rural ring:

[T]his court observed an open and rolling terrain interspersed with woodland, quite in contrast with the commercial and industrial activities in Oxford Township. New and attractive homes have been built or are in the course of construction close by the plaintiff's land . . . All in all, one gets the impression of a quiet, restful countryside occupied by people who work in other communities and come home to the comfort of homes set in attractive wooded sites... Those who have recently come into the community have built their homes on parcels of 10 acres or more.

From this and other case law reported by Brown and Scales, it might be that, if challenged in court, the township would have a chance of sustaining 10-acre zoning around the periphery of the township. However, not all commentators

have evaluated the Michigan case law as have Brown and Scales. Norman Williams, for example, focusing on some of the older cases emphasizes the volatility of the Michigan courts on the subject of lot size. Williams is the author of *American Land Planning Law*, one of the leading multi volume published authorities widely used throughout the United States. Williams writes:

The law of Michigan is a law unto itself on lot-size requirements, as in so many other areas of zoning law; decisions on . . . [minimum lot size] . . . requirements have played a major role in the evolution of Michigan zoning law. Requirements for minimum lot sizes in the outer Detroit suburbs were consistently held invalid for many years, and then were suddenly held valid in 1965.

In the first decision on the point (from Troy), the court held that the zoning enabling act authorized regulation of minimum lot sizes, and more specifically

“. . . reasonable regulations designed to insure the proper use of land and natural resources and to encourage such use by suitable restrictions.”

After adopting the test of reasonableness, the court said that the aim of the three-acre requirement was to preserve the rural nature of the countryside, and it was conceded that such zoning would be “desirable for the construction and maintenance of residences by people of the requisite financial ability.” However, the court held that in this instance there was enough evidence to indicate that smaller lots would be sufficient to provide for health, safety and welfare, and so the restriction was held void. There was no further analysis, and no discussion of more specific criteria. The next two cases came ten years later, both from the outer suburb of Troy (between Detroit and Pontiac), and followed a similar philosophy. In the first of these a half-acre requirement was held void, as having no relation to the public welfare, by applying the test (frequently invoked in Michigan) that zoning should be judged by existing conditions and not by what might exist in the future.

However, a few years later, in a case from Farmington, the Michigan court made a complete turn-around and upheld a requirement

for half-acre lots, based upon a neighborhood-unit plan.

Four opinions on the case left the situation rather confused. The larger lot-size requirement was upheld by a majority of the Michigan court, with four opinions, as follows:

Opinion 1 (printed second)--by Judge Adams, with Judges Souris and Smith concurring.

Opinion 2 (printed third)--by Judge Smith, with Judges Adams and O'Hara concurring.

Opinion 3 (printed last)--by Judge Black, concurring.

Opinion 4 (printed first)-- by Judge Kelly, dissenting, with Judge Dethmers.

Judge Kavanagh concurred in the result, without opinion. In this situation, it is a little hard to know what is “the law.”

These few important Michigan cases thus played a major role in the change of attitude in Michigan in the mid-1950's. The Farmington decision marked a major turning point in Michigan zoning law; with this, for a decade, the Michigan courts generally joined the modern world and upheld zoning restrictions.

However, the Michigan court turned a couple of more somersaults in the mid-1970's--so that, in order to know the period a Michigan zoning opinion is in, one now has to know not only the half-decade, but the month and year. What happened is spelled out in Section 6.08.²²

A recent case, *Frericks v Highland Township*, invalidated three-acre zoning in a portion of Highland Township designated by the Comprehensive Plan as “Medium and Small Lot Residential.” This case may be of little significance to the question of 5-acre and 10-acre planning in Highland Township. The Michigan Court of Appeals agreed with and upheld the following trial court findings:

The trial court upheld the validity of certain sections of the Highland Township zoning or-

²² Volume 2, pages 72-80.

dinance on water distribution systems, setback requirements and buildable areas. The only basis for relief determined by the trial court was that the minimum lot size of three acres pursuant to the zoning classification of R-1-A was unreasonable and arbitrary because this lot size was not necessary to protect Highland Township's legitimate concerns about pollution, septic systems, increased traffic, the threat of inadequate fire protection, and conformance to the master plan. At the same time, the trial court found that plaintiffs' proposed development of 106 lots was unreasonable and upheld the validity of the amendment to the Highland Township zoning ordinance that prohibited the creation of new R-1-C lots. The trial court also declared that the township Board was free to rezone plaintiffs' property.

Hamburg Township Open Space Approach

Hamburg Township has adopted "open space" zoning as an option not a mandate for developers. However, developers who select the option earn a density bonus, a bonus that allows development at the same density that would have been possible prior to enactment of the open space provisions. The open space bonus provisions were enacted in tandem or near tandem with a substantial down zoning for conventional development. Sites zoned for one dwelling unit per acre with conventional development can be developed at up to one unit per 30,000 square feet if open space development is elected. Sites zoned for one dwelling unit per two acres can be developed at up to one unit per 50,000 square feet if open space is elected. The 30,000 and 50,000 square feet per lot standards are based on historical precedents. In the late 1980s, they applied to conventional development throughout the township. About 1989 the areas where the minimum lot allowed was 30,000 square feet were rezoned to 1-acre minimum lot size for conventional with a 30,000 square foot minimum for the cluster option. Rezoning of the 50,000 square feet areas to require 2-acre minimums for conventional development was twice tried unsuccessfully. Opposition was led by two realtors. In the mid 1990s, the rezoning from 50,000 to 2-acre minimum was successfully put through.

In order to exercise the cluster option, a minimum of 40 percent of a site must be reserved for open space. Density is not automatically authorized at the maximum end of the cluster option range (up

to 30,000 square feet for areas with a one-acre conventional development minimum and up to 50,000 square feet for areas with a two-acre conventional development minimum). Sometimes the planning commission allows less. For example, a property recently approved for development could have had 12 units if developed conventionally and a maximum of 17 units at the high end of the open space option range; the planning commission approved 16 units. In general, there must be a "recognizable" benefit to the property, to the community (subdivision) and to the township from the open space design. Meadows, wetlands and lakes must be preserved. Meadows are deemed important because they support a particular ecological community. A recently approved development kept all lots off the lake but allowed all to have lake access. Motor boats were prohibited. Eight canoes are kept at the common access point.

There is nothing about the current open space ordinance with which the Hamburg Township planning staff is dissatisfied. The planning director recently stated, "I do not believe I will ever again see a conventional plat, unless it comes from an old timer who does not want private roads." It is working just about perfectly, as is evidenced by the fact that 26 of the most recent 28 development applications have been open space developments. There have been only two changes since the ordinance was enacted. First, the old PUD language has been deleted because it is now seen as either superfluous or a contradiction to the open space objectives. Second, the language that allows the density bonus has been clarified so that there is no longer any doubt that the planning commission has full discretion to decide the magnitude of the bonus.

For those prospective developers who choose the optional open space rather than the conventional approach, the ordinance requires both a conventional site plan and an open space site plan. In addition, the planning commission has, on its own initiative, required that two or three open space plans to be submitted. They then walk the site, make their own suggestions and on the basis of these suggestions they may require the developer to submit another, revised open space plan for the public hearing. The product is outstanding in the opinion of the Hamburg Township planning staff.

Hamburg Township's open space development approval procedures tend to increase the cost of housing because of the time value of money. The

average new house in Hamburg Township costs over \$200,000 because the market values the product. There is not much in the way of "affordable" housing being generated from this process. "Affordable housing" is a term of art which means housing that does not exceed in cost 25 or 30 percent of the income of very low income, low income and moderate income households. Very low income households are households with up to 50 percent of standard metropolitan statistical area median income. Low income households have income between 50 and up to 80 percent of median. Moderate income households have income between 80 and up to 120 percent of median. Some states require by statute that local jurisdictions take positive steps to *help* ensure the availability of "affordable housing." Florida is one such state. All states by statutory and/or case law prohibit local jurisdictions from enacting regulations that would have the effect of excluding households of any particular income category.

In the opinion of the Hamburg Township planning staff, the Whispering Pines development at McGregor Road and M-36 is an outstanding example of open space development. The roads are in, but no homes have been built.

Hamburg Township is the originator of open space zoning in Livingston County. The township's open space program is the foundation of the PEARL program (Protect Environment, Agriculture and Rural Landscape) now promoted by the County. A recent publication of Livingston County is entitled Open Space Planning (1996); this is almost entirely based on the experience of Hamburg Township. Livingston County did bring Randall Arendt to the township. Mr. Arendt made an inspirational presentation.

Hamburg Township is very much like Highland Township. Both have extensive state land and many lakes. However, there is no historic town center in Hamburg Township. In 1995, Hamburg Township started working on the creation of a new town. Many developers will be involved in this process.

West Bloomfield Township Open Space Approach

West Bloomfield Township regulates various natural features which constitute open space when protected from development. Chapter 12 of the West Bloomfield Township code provides for

floodplain, floodway, watercourse and wetland protection. Chapter 26 of the code provides zoning regulations. Chapter 26, Sections 26 through 47 provide for woodland conservation.

West Bloomfield Township regulates the same *wetlands* that the State of Michigan regulates, but the township also regulates wetlands that the state does not regulate. The state statute specifies that such local wetland regulations can be more stringent with respect to properties that the state regulates. The state statute also allows local units of government to regulate wetlands that the state does not regulate, provided that the local regulations follow certain specifications set forth in the state statute.¹

West Bloomfield Township requires mitigation for filled wetlands. This is accomplished via ordinance administration although the ordinance itself does not explicitly require mitigation. West Bloomfield Township also requires that wetlands not be part of a platted lot. This also is done administratively; there is no language in the ordinance which explicitly supports this requirement.

West Bloomfield Township began regulating wetlands prior to the Goemaere-Anderson Act. Consequently, the township had to modify its process to bring it into line with Goemaere-Anderson, which requires that the protection of wetlands at the local level not generate a separate review. Accordingly, West Bloomfield Township now has its Wetlands Board sit jointly with the Planning Commission on [site plan and plat] reviews; the Wetlands Board makes a recommendation to the Planning Commission on the spot.

The *woodlands* ordinance creates an official woodlands map as a special overlay zoning map and establishes a woodlands board to interpret the map and ordinance. The map identifies areas with at least three contiguous acres that have either canopy coverage over half the tree area or have an average tree density of thirty square feet of trunk area per acre (basal area). Development plans may be approved if they preserve 75 percent or more of the woodlands mapped on the site. Development plans may be approved with up to 40 percent of the woodland area cut if such clearance is needed to achieved the otherwise allowed density of development.

The woodlands ordinance has been substantially revised over the twenty-plus years that it has been in place. One of the biggest objections to its

earlier form was that it placed too much discretion in the woodlands board. That discretion has been curbed. Another objection was that it confiscated property by limiting the allowed density. One key modification incorporated the language that allows cutting up to 40 percent of regulated woodlands if necessary to achieve the maximum allowed density. This formula works very well for single family development, which has a maximum allowed density of 1.5 dwelling units per acre. It works less well for multiple family development. In order to preserve reasonable property rights for multifamily development, the township board, acting as an appeal agency, but not as a variance appeal agency, may allow more cutting. The township board has approved cutting up to 46 percent.

The West Bloomfield Township zoning ordinance includes optional mechanisms that allow preservation of open space over and above that which is preserved by Chapter 12 (wetlands) and Chapter 26, Sections 26-47 (woodlands). These include the "subdivision open space plan" (Section 26-79), the "one-family clustering option" (Section 26-81), and the "planned subdivision option" (Section 26-82). The "subdivision open space plan" option allowed lots to be reduced by ten percent with the reduction going to open space. Numerous restrictions controlled the nature of the open space required. The "subdivision open space plan" option has not been employed recently having been superseded by the "one-family clustering option" and the "planned subdivision option." The "one-family clustering option" establishes minimum building separations and maximum densities but not minimum lot sizes. The "planned subdivision option" establishes minimum lot sizes and maximum densities. Densities are restricted to those which could be achieved with conventional development subject to the usual wetland and woodland protections. Seventeen percent of the site must be set aside to protect wetlands or woodlands that would not otherwise be preserved by the standard wetland and woodland regulations. Numerous other restrictions must be met in order to develop pursuant to these provisions. In general, West Bloomfield Township prefers not to grant approval for small lots.

A clustering option is used for site condominiums. It allows smaller lots. In order to "cluster" lots, it is required that the applicant submit a plan showing how many lots could be got on the site under conventional area and width regulations. Cluster option plans for more lots than would be

possible under conventional zoning are not to be approved.²³

Connecticut River Valley Open Space Approach

A publication entitled *Dealing with Change in the Connecticut River Valley* was prepared by the Center for Rural Massachusetts. This report has been well commented upon in the professional literature. The report observes,

It is ironic that the traditionally tightly-knit village pattern so typical of rural New England is illegal to reproduce or emulate in many, if not most, rural Massachusetts communities today. Developers are required to set each house on its own separate one or two-acre house lot; more creative layouts involving more flexible siting (such as "cluster" or "open space subdivisions") are often prohibited by well-intentioned but misguided by-laws. Such regulations inadvertently destroy rural character at a rapid pace.

In their place, we are recommending by-law amendments which would require all new developments proposed on open fields or pastures to be laid out so that no more than 50% of the farmland is consumed by streets and lots. Lots would be reduced in size by (typically) 50%, and the resultant open space would be permanently protected by conservation restrictions for future agricultural use.

²³ This feature is objected to by Fred Heyer. In *Preserving Rural Character*, Heyer wrote:

Many communities have attempted to mitigate this impact by adopting cluster option ordinances that allow individual lots to be smaller than the minimum allowed under conventional subdivision requirements; however, the total number of lots remains the same. For example, in a three-acre zone, individual lots may be permitted to be one acre or less, yielding common open space. However, the siting of homes on the lots, the roadway design, and the stormwater management systems are virtually indistinguishable from those that are obviously suburban.

Additionally, many cluster ordinances base a tract's density on the submission of a qualifying conventional plan. This provision frequently causes prolonged debate over the number of lots permissible. The applicant winds up completely engineering a conventional plan before the lot yield is agreed upon. Any site development savings are often lost because of the increased time it takes to get a cluster approval. While there is agreement that clustering is a good thing, the complexities involved often discourage its use, creating a "cluster if you dare" attitude.

Buildings would either be located in a woodland fringe at the edge of the fields, or screened from the fields by a newly planted shelter belt of trees. Although individual septic systems could be built from each house, joint systems shared by several houses would become possible, allowing siting on the most suitable soils in the tract, and at the greatest distance from any wells.²⁴

Recommendations in *Dealing with Change* include:

Enact farmland/open space conservation zoning that requires special permit approval for development of more than three homes or creation of three lots. The special permit standards should require that: 1) 50 percent of the land be set aside for open space or for farmland; and 2) development and open space be sited according to specific standards. The recommended siting standards call for development areas to be located in descending area of priority: a) on [or near] soil suitable for septic tank systems if no public sanitary service is available; b) on the least fertile soils; c) ***within woodlands or at the edge of woodlands*** so as to reduce the impact on agriculture, provide shade in summer and wind protection in winter and to conceal; d) in locations least likely to interfere with scenic vistas; e) other criteria in the conventional site plan review laws. Six acres is recommended as the minimum land area for creating 3 or more lots, thus two acres per lot. It is recommended that wetlands as defined by state statute and flood prone areas as defined by local bylaw be excluded from the area calculation. It is also recommended that a number of very small lots be permitted in order to achieve 75 percent farmland or open space proportion, when desired by the developer. At Section 4.2.3 the draft ordinance states, "The total area of residual farmland or open space within the development shall be at least 50 percent of the total area of buildable land in the proposed development, excluding from this computation all wetlands, as defined under M.G.L.A. CH. 131, S. 40."²⁵ At Section 5.1 the draft ordinance states, "Dwelling units shall be grouped so that, on average, they consume no more than one acre of land per

dwelling, including roads, so that at least 50 percent of the parcel may remain open." (page 171) The farmland or open space must be protected by: 1) deeding its entirety jointly or in common to the owners of the individual lots; 2) deeding its entirety to the Town, if the Town wants it; 3) deeding its development rights jointly or in common to the owners of the individual lots and deeding its farming rights separately, for example to the original owner. The "Purpose" and "Establishment" sections of the recommended draft ordinance include the following language:

The purposes of this bylaw are to maintain the rural, natural, and scenic qualities of the Town ... by preserving farmland and significant open lands while allowing landowners a reasonable return on their holdings. Toward this end, the creation of three (3) or more lots for residential use, whether or not constituting a subdivision, or construction of three (3) or more dwelling units within a five-year period from or on a property or set of contiguous properties in common ownership as of _____, within or partially within the Farmland/Open Space Protection District, shall be allowed only on Special Permit by the Planning Board, in accordance with the criteria set forth below.

The Farmland/Open Space Protection Districts are herein established as ***overlay*** districts. The Farmland/Open Space Protection Districts are described on a map, entitled "Farmland/Open Space Protection Districts," a copy of which is on file with the Town Clerk. The Farmland/Open Space Protection Districts include ***farmland of state or local significance***, said determination based upon a combination of factors, including soil type, historic use of the land in question, size of the parcels used for farming or agricultural purposes, and character of the surrounding area. Significant Open Space of more than ___ acres is also included in the District. ["Open Space" is not defined.]

Enact a Village Zoning District designed to accommodate development in the form of the new England Village, i.e. with narrow and deep lots and houses close together.

²⁴ Pages 13-14.

²⁵ Page 171.

Among the provisions which such regulations might incorporate are:

Residential

Require residential development above a certain threshold (three units within five years) to occur with 50 percent open space preservation.

Require residential buildings to be located in woods or at the edge of woods to minimize its appearance.

Require residential structures to be designed in "vernacular" architecture styles.

Require multi-family structures to be designed in the form of traditional farm steads with "rambling, attached houses and barns."

Restrict lighting to the relatively low levels appropriate to (or typical of) rural rather than urban areas.

Require utilities to be placed underground.

Require moderate rather than wide road widths.

Commercial

Require commercial buildings to be sited close to the road with parking behind the buildings and screened by trees and landscaping.

Require commercial buildings to be sited in woods, at the edge of woods or at intersections rather than in farm fields.

Require commercial architecture to be consistent with historical models in scale and facades. In the Connecticut River Valley this means buildings of a few thousand square feet in area, or at least buildings segmented into distinct parts that are articulated by changes in the number of floors or the roof line. It means steep pitched roofs rather than flat roofs. It means brick rather than cement block. It means windows sized and placed in accordance with historical models.

Require signs to be small in size so that their visual impact is as small as possible. Signs should be designed in accordance with historic village and rural models.

Restrict lighting to the relatively low levels appropriate to (or typical of) rural rather than urban areas.

Require utilities to be placed underground.

Require moderate rather than wide road widths.

Mr. Randall Arendt was Associate Director of the Center for Rural Massachusetts at the time *Dealing with Change in the Connecticut River Valley* was prepared.² According to Arendt, *Dealing with Change* was not implemented. The Connecticut River Valley had been "studied to death" because it is close to the University of Massachusetts. This and its six inches of top soil were the only reasons for the *Dealing with Change* report. According to Arendt, the study area is full of "farmers" of a particular ethnic background; they are antithetical to planning and their eyes "glaze over" when they hear someone from the University of Massachusetts talk to them.

The recommendation that development occur *within* treed areas was appropriate for the study area because of the very high percentage of woodland in the Connecticut River Valley. Cleared land may amount to no more than 10 percent in some cases. The opposite is true in many other parts of the country. In such areas, it would be inappropriate to place the houses in the trees and thereby lose some of the few remaining trees.

According to Arendt, there are places that have implemented the concepts in *Dealing with Change*. The first mandatory clustering ordinance known to Arendt was enacted within the jurisdiction of the Pioneer Valley [Regional] Planning Commission, located in West Springfield.³ Another such place is Lower Makefield Township in Bucks County, Pennsylvania.⁴ That community has saved 500 acres of farmland in five years with mandatory cluster space zoning. However, Lower Makefield does not call it "mandatory cluster zoning" which "sounds too much like something Kafka would dream up." Lower Makefield calls it "Conservation Design." Hamburg Township in Livingston County has also preserved a lot of open space.⁵

Rural by Design Open Space Approach

Rural by Design by Randall Arendt is an excellent guide book for preserving open space. It has case

studies. According to Arendt, it was chosen by the American Planning Association as one of the 100 most important books about planning. It addresses the problem of farming. Of course large scale farming cannot take place on the urban fringe. However, Arendt believes that certain kinds of specialty farming can. Belgium Endive can be grown. Other high cash value crops can be grown. Even these will not be economically feasible if the land cost is \$10,000 per acre. However, if the development rights are sold leaving only the farming rights then the farmed land is found money.⁶ Arendt's designs are informed by the New England tradition of a village laid out on a cow path rather than the grid tradition that evolves from the Northwest Territory Ordinance. It may be that the design for Stonelea incorporates open space in a way more appropriate for Highland Township.

Conventional Open Space Preservation Approaches

Fred Heyer, AICP has written Planning Advisory Service Research Report Number 429. This 1990 report is entitled *Preserving Rural Character*. Heyer is described as a planning consultant who serves rural communities in New Jersey. Heyer leaves aside "innovative regulatory techniques" such as transfer of development rights, impact fees and performance standards. He instead focuses on what he calls

the "conventional arsenal" of planning tools. These include the master plan, the land development ordinance, and, perhaps most important, the development review process itself.²⁶

Many comprehensive plans state as a goal "the preservation of rural character." Many state related goals such as "the preservation of natural features" and "the preservation of the visual environment." Heyer opines that large lot zoning fails to achieve these goals. Heyer does not say why he thinks that large lot zoning is inadequate, but he does imply that it results in frontage lot subdivisions and cul-de-sac subdivisions, forms which he thinks are not consistent with rural character. It is self-evident that frontage lot subdivisions are not compatible with rural character. However, it is not self-evident that frontage lot subdivisions are more likely to arise

in the context of large lot zoning than in the context of small lot zoning. Heyer offers no evidence to support the proposition that large lot zoning will be more likely to result in frontage subdivisions. It may be that Heyer's objection to large lot zoning arises from a general prejudice against such zoning in the planning profession. Large lot zoning is scorned by some in the planning profession because it is thought to "consume" more land than higher density zoning. Such "consumption" is viewed in a negative light. However, many people like to live in a low density environment.

Heyer also notes that,

The first step in the community planning process is to acknowledge that some development is inevitable. Like it or not, as development pressures rise, all developing communities will be confronted by a steady stream of medium-sized projects as well as the occasional "whopper." While we would all like to pull up the drawbridge behind us, the fundamental question is not development versus no development but rather How much? Where? and How?²⁷

Heyer calls for the identification of specific features which give an area rural character. He says that such features might include:

distant views,
rolling topography,
country roads,
open space,
stone rows,
tree lines,
barns and silos,
ponds, and
other specific attributes.

Heyer also advises that the list of important rural features used in any one community should be identified by members of that community. He advises that those making the determination visit specific development areas to identify specific features that they consider desirable and undesirable. Heyer also notes that the natural topography will play a part in determining what can be preserved. If undeveloped lands are largely wooded slopes, it will be possible to preserve wooded slopes. If there are no wooded slopes, but only gently rolling till plains, then it

²⁶ Page 1.

²⁷ Page 1.

will not be possible to preserve wooded slopes. Also, he notes,

In agricultural communities, a distinction should be made between the preservation of agriculture and of agricultural character. The former requires that agriculture continue as a viable economic activity; the latter implies an effort to retain the appearance or feeling of agriculture. Both are distinct and desirable goals; however, preserving farming as a way of life is considerably more difficult to achieve.²⁸

Heyer recommends that use, density, land coverage and certain critical setbacks should be fixed. Other provisions should be subject to modification pursuant to the site plan review process upon a finding that the modification "would result in superior design."²⁷

Heyer notes that density can be determined based on environmental carrying capacity as suggested by Pizor and Nieswand in *A Quantitative Approach to Determining Land Use Densities*.²⁹ However, Heyer observes that the density that could be "carried" by a former farm field might be greater than the "appropriate planning capacity."³⁰

The generally accepted and appropriate approach to rural zoning is to create higher-density centers that may include nonresidential uses. These are then surrounded by assorted large-lot residential "block zones," typically ranging from one to five acres in size.

Regardless of the methodology used to establish density, there appears to be a consensus that permissible rural densities outside central places should be kept relatively low.

²⁸ Page 2-3.

²⁹ Pizor, Peter and Nieswand, George H. *A Quantitative Approach to Determining Land Use Densities* (Rutgers University), 1983.

³⁰ Page 4.

*Donation of Open Space to Public and Private Entities*³¹

Michigan, like the majority of states, has adopted legislation which recognizes conservation easements and provides for their enforcement. Michigan law provides for landowner donation of conservation easements to local or state governments or to private entities. The Farmland and Open Space Preservation Act (FOSPA), enacted in 1974, first authorized easement donations to local government or to the state. In 1980, the state legislature provided for enforcement of donations between private entities with passage of the Conservation and Historic Preservation Easement Act (CEA).

Farmland and Open Space Preservation Act: As the title indicates, FOSPA provides preservation tools both for working farmlands and for non-working open space and natural areas.

To encourage preservation of working farmlands, FOSPA provides for the execution of a "development rights agreement" by the landowner. Once executed, the agreement will entitle a farming family to certain state income tax, single business tax and inheritance tax credits.

For owners of non-working open space and natural area lands, FOSPA encourages donation of conservation easements by either of two methods:

First, an easement affecting property designated as an historic site under federal or state law or regulated under either the Natural Rivers Act or the Shoreland Protection and Management Act may be donated directly to the State of Michigan under FOSPA. Both the Michigan Department of Natural Resources (DNR) and the state legislature must review and approve such a donation. If the state accepts the gift, it will conduct an appraisal to determine the value of the easement (typically the difference between the market value of the land before and after easement donation), and that value of the land is then exempted from local property taxes.

Second, landowners not eligible to donate an easement to the State within the guidelines

³¹ The material in this section comes almost verbatim from an article by Highland Township legal counsel Charles Harris. The article appeared in the Winter 1992 issue of *Michigan Probate and Estate Planning Journal*.

above may still donate an easement to local government under FOSPA if preservation of the affected property in its present condition "would conserve natural or scenic resources." If the local unit of government accepts the easement, it must conduct an appraisal of the easement's value, and that amount is thereafter exempted from local property taxes. If local government rejects the easement, the landowner can still apply directly to the State of Michigan, which may accept the easement by following the procedures discussed above.

Conservation easements donated to either local or state governments under FOSPA must have a minimum duration of ten years and can be perpetual. Lands subject to such conservation easements may be transferred, but the lands remain subject to the easements in the hands of successors.

A conservation easement donated to a governmental unit pursuant to FOSPA for a term of years can renew automatically at the end of a term. If the landowner decides to terminate the easement at the end of the term, a lien attaches to the property requiring that the last seven years' worth of property taxes - previously exempted because of the easement - be repaid either when the property is sold or developed. The landowner can also petition the government entity to relinquish the easement before the end of the term. If the entity agrees to early termination, a similar lien will attach to the property equal to the amount of *all* property taxes formerly exempted under the easement *plus* an interest penalty, payable when the property is sold or developed. The governmental donee may relinquish an easement on its own initiative and if so, the landowner will not be required to pay a penalty or interest.

While FOSPA permits donations to government for a *term of years*, federal tax laws require that donations be *permanent* in order to qualify for a charitable deduction.

Conservation and Historic Preservation Easement Act: The CEA supplements FOSPA by providing for enforcement of conservation easements donated to private entities, typically charitable land trusts or conservancies. The CEA defines a conservation easement as an interest in real estate which can limit the use of land or a body of water in a manner appropriate to maintaining it predominately in its natural, scenic or open condition." Beyond its enforcement power, the

CEA does not restrict the structure of the easement. Unlike FOSPA, CEA does not identify procedures for the transfer or termination of the easement. It also does not set a minimum or maximum term for the easement. Under the CEA, these matters are left to the discretion of the individual donors and donees.

Implications of Statutory Donations - FOSPA or CEA: A surge of conservation easement donations has occurred largely between private parties, i.e. between landowners and private land conservancies, under the auspices of the CEA. It is a far simpler and more flexible statute than FOSPA, and will most likely facilitate more donations in the future.

Planned Residential Development Regulations Enacted by Highland Township

The Highland Township zoning ordinance incorporates planned residential development regulations. These regulations are a form of special land use regulation. A public hearing is held by the planning commission. The planning commission makes a recommendation to the township board. The township board also holds a public hearing before approving a proposed planned residential development. The statement of purpose for the planned residential procedures includes the following:

The planned residential development designation is designed to preserve the township's rural character and sense of spaciousness through the preservation of open space and spots of natural beauty, to provide visual variety to the township's development pattern, to offer recreation opportunities close to home, to promote harmonious architecture between adjacent dwellings, to encourage the placement of structures in proper relationship to the natural characteristics of the site and to encourage cooperative relationships between neighbors and participation by all age groups in the use of local open space tracts in new residential subdivisions. Planned residential development applications shall be approved for developments which accomplish these purposes and shall not be used under any circumstances merely to avoid the imposition of standards and requirements of other zoning classifications.

The planned residential development regulations are available for application only to properties 20 acres or larger in area. Except at the periphery of a development, the planned residential development provisions allow almost total flexibility to modify yard, setback and even building type regulations from those which apply under conventional zoning. The density of development that may be authorized by the Highland Township planned development regulations varies little from that which is permitted under conventional zoning. The relevant provision reads as follows:

That the maximum number of dwelling units permitted shall be determined by dividing the net development area by the minimum lot area per dwelling unit required by the district or districts in which the area is located. Net development area shall be determined by taking the total area of the development and subtracting the area required for streets as set forth in the site plan. In no event shall the area for streets be computed at less than 10 percent of the gross development area. The area of land set aside for common open space or recreation use may be included in determining the number of dwelling units permitted. No development shall have a total buildable area less than 80 percent of that which would be required if the site were developed under conventional zoning regulations.

The portion of the above language that allows "total buildable area" to be reduced by up to 20 percent is not significant as it would apply to most sites, but it can be significant when it applies to sites which have extensive waterbodies, wetlands and steep slopes, features which are by definition excluded from "total buildable area."

Open Space Cluster/Residential Overlay Concept Considered by Highland Township

In the early 1990's, the Highland Township planning commission considered an open space cluster/residential overlay concept. The concept was designed to encourage early development of large tracts of land in the hope that such development would incorporate desirable features, including the preservation of open space particularly in proximity to major public thoroughfares. One suggested draft of the intent statement read as follows:

The large areas of open space in certain areas of Highland Township establish a community character which is valuable to the citizens of Highland Township. The open space cluster residential development option is intended to encourage the early and creative development of the land in a way which preserves the existing open space character, particularly along important thoroughfares and adjacent to other residential development. The township recognizes that creative and unique approaches to the development of land to fulfill this intent will require a close professional working relationship between property owners, land developers and the township. Such a relationship is encouraged by the policies and procedures set forth in the administrative procedures set forth herein.

The open space cluster/residential overlay concept permitted development of up to two dwelling units per acre, a substantial increase in otherwise permitted density since it was designed to apply to areas zoned for ten-acre and five-acre minimum lot sizes. One draft of its proposed density limits language read as follows:

Density Limits: Residential densities may exceed the intensity permitted by the underlying residential district. The maximum density permitted shall be one dwelling unit per two acres, but the township may elect to approve an open space cluster residential development with a lower density than one unit per two acres. The factors that shall be taken into consideration in determining the permitted density shall be as follows: 1) the underlying density of the zoning district in which the development is located; 2) development economics; 3) the preservation of the wetlands, wooded areas, natural sloping areas and other natural and environmental assets; 4) the creation of permanent conservation easements; and 5) how well the proposed development fulfills the intent statement set forth above. This last factor shall be the most important and no open space cluster residential development shall be approved unless it substantially advances the intent as stated in Section 1107-1.

The concept was intended to be restricted to properties of at least 100 acres with a minimum phase size of 40 acres. Developments with at least 200 acres were to be eligible to include, with township approval, retail and/or office development.

The Planned Unit Development Approach in General

Planned Development Defined: The term "planned development" (also known as planned unit development) covers a broad range of development regulations. Planned development regulations are typically free of one or more of the controls associated with normal zoning regulations, but they provide for community review and approval of detailed development plans which must be executed as approved by the local review agency. The combination of freedom from typical development controls with the requirement for community approval of detailed plans make the planned development process a process of negotiation between the developer and the review agency. Among the development controls which may be relaxed by planned development regulations are: 1) Lot-by-lot area and yard requirements; 2) Restrictions against mixing different types of residential structures; 3) Restrictions against mixing office, commercial and industrial uses with residential uses; 4) Prohibitions of residential uses in nonresidential districts; and 5) Density restrictions. In theory, planned development regulations should spell out the general type and intensity of development they are intended to permit, but they should not be too specific about the precise constraints which will apply to individual planned developments. The precise constraints which are to apply to individual planned developments are worked out in ad hoc negotiations between the review authority and the developer.

Regulating Planned Developments with Special Use Requirements: Since the planned development approval process is a discretionary process, the review authority must be guided by standards when determining where to approve specific planned developments and what conditions to impose. Furthermore, the standards applied in the review of planned developments are subject to the same legal requirements applicable to special land uses. For this reason, the mechanics of planned development approval usually involve some sort of special use approval, as is the case with the current Highland Township Planned Residential Development regulations.

Planned Developments and Floating Zones: The mechanics of planned development review sometimes involve rezoning to a planned devel-

opment district. The planned development district is a floating zone, that is a zone which is not fixed on the zoning map in advance, but which is delineated where appropriate when needed. To a certain extent, all zones float since it is possible to enlarge the area mapped for any given zone or even map it at a new location. Floating zones per se are those which are intended primarily for ad hoc mapping. Courts around the country view floating zones differently. In some states the courts have approved floating zones; in other states the courts have found them unconstitutional. Crawford opines that in Michigan the floating zone concept "...has, at least indirectly, been recognized as a legitimate means of making provision for land uses that will be needed in the future but which do not yet exist in the municipality." The floating zone concept could be used in tandem with the special use approach as a method to regulate planned developments. The floating zone concept also could be used by itself to regulate planned developments.

Regulating Planned Developments with Floating Zones in Tandem with Special Use Requirements:

Use of a planned development floating zone in tandem with the special use approach is an approach often used to provide a community with more control over where and when to approve planned developments than is possible with just special use controls. If just special use controls apply, then denial of a planned development request which meets all ordinance standards will not be upheld in court. If, however, planned development district zoning is a prerequisite or co-requisite to a planned development special use application, then a planned development may be blocked by denying the proper zoning. It may be possible to overturn such an action in court only by showing that the zoning which applied to the subject property was unreasonable. A California appeals court has approved this approach.³² However, Crawford has opined that in Michigan,

Where a municipality repeatedly turns down applications for rezoning to the floating district, it runs the risk of a successful accusation of illegal exclusionary zoning.

A municipality desiring to use this technique should probably protect itself, if it turns down a rezoning application, by promptly selecting

³² "Wood v. City Planning Commission," 130 Cal. App. 2d 356, 279 P.2d 95, 1955).

a suitable site and rezoning it, thus bringing the floating zone into port and blunting any charge of exclusion.

Regulating Planned Developments with Conditional Floating Zones: Planned developments can be regulated with conditional floating zones. Under this approach, approval of a planned development requires rezoning to a planned development district. Such rezoning is only granted in accordance with standards spelled out in the zoning ordinance and subject to conditions set down by the local legislative body. Because the standards and conditions are incorporated into the rezoning procedure, the special exception mechanism is not needed.

Legal Problems with Floating and Conditional Zoning: As noted above, the courts of some jurisdictions approve floating zones while the courts of other jurisdictions do not. Michigan courts have had little to say about Michigan courts could approve floating zones in general, but not approve them for use in conjunction with planned developments or other types of special uses. Another possibility is for the Michigan courts to approve a floating zone, but hold that it must be mapped pursuant to specific standards contained in either the zoning ordinance or the land use plan. In effect, the floating zone would actually be treated just like a special use. The Pennsylvania Supreme Court has taken this position (see "Doran Investments v. Muhlenberg Twp. Board of Commissioners," 10 Pa Commw. 143, 309 A.2d 450, 1973 and "Colonial Park for Mobile Homes, Inc. v. New Britain Twp.," 408 A.2d 1160, 1979). Drafting conditional zoning provisions which would be upheld by Michigan courts would be a tricky business since both contract and conditional zoning is considered suspect in Michigan. Crawford describes the situation as follows,

Where a municipality enters into a contract to zone property in a certain manner for a valuable consideration, it has generally been held that (1) the agreement is invalid as against public policy, (2) the zoning action is likewise invalid, (3) the zoning action can be changed or repealed at will since a municipality cannot by contract deprive itself of its police power, (4) a rezoning in pursuance of a contract is *prima facie* not in accordance with a general plan, and (5) if the contract involves placing restrictions on the development or use of the property which are different from the requirements pertaining to other land in the same

district, it amounts to an unlawful evasion of the requirement that regulations within a given district be uniform throughout the district.

Negative Views on the Planned Unit development Approach

Norman Williams is the author of *American Land Planning Law*, one of the leading multi volume published authorities. Williams takes a dim view of the planned unit development approach. He notes that there are four techniques which can accomplish most of the desirable results which are usually thought to be major benefits of the PUD approach. He notes that the PUD approach has some major negative potentials. Mr. Williams is quoted liberally below because his observations are highly apt:

Popular and even professional thinking about planning matters is notoriously subject to changing fads; there are many planners and "urban experts" who would do anything rather than be caught promulgating last year's bright new ideas. As cluster zoning was the leading fad a few years ago, so planned unit development regulations were perhaps the next example of the latest thing. One important court (in Pennsylvania) has not only explicitly upheld the validity of such regulations, but has taken to recommending the use of this technique to towns within that state, as an alternative to large-lot zoning. A special statute to authorize such a procedure was passed in Pennsylvania and New Jersey, and subsequently in other states. Moreover, a large and increasing body of literature has been emphasizing the virtues of planned unit development, often arguing quite seriously that such regulations represent a major advance in land use control, vastly superior to "conventional zoning;" and there is no doubt that the practice is spreading rapidly in some areas.

The most distinctive feature of planned unit development is the frequent inclusion of residential and nonresidential (usually commercial) development within the same zoning district. However, since planned unit developments are often advocated--and sometimes used--to provide a mixture of residential building types, that aspect of such developments will be considered first.

The principal substantive devices used in . . . [PUD] . . . regulations are taken directly from among the better modern zoning techniques. [T]he special feature of the third period of American residential zoning has been a shift to general residence districts, with a general level of density defined by the basic district regulations but with no specification of building types. Such a system of zoning has been adopted in some of the larger cities. Moreover, the use of zoning to encourage clustering has been spreading in recent years, . . . [Other t]echniques are available to regulate the rate and the sequence of development at the suburban fringe, . . . Finally, it is now standard practice in most modern zoning ordinances to provide for site-plan review, normally by the planning board, in order to regulate the impact of a proposed development on the surrounding area. All four of these techniques--general residence districts, clustering, regulating the timing of development, and site plan review--are among the standard provisions in the modern zoning ordinance; any one of them, or any combination of them, can be used without adopting planned unit development regulations. As compared with a zoning ordinance containing such provisions, . . . [PUD] . . . regulations for residential development normally provide nothing new and different--except an impressive new label, planned unit development.

There is one feature, however, which is in fact peculiar to planned unit developments. Under such arrangements, major land use distinctions--the specific location of commercial, industrial, and/or more intensive residential development--usually appears not on the zoning map but on a separate map somewhere in the municipal files. If someone interested in the area wishes to live near (or far from) such development, he has to chase down the correct file in order to find out where it will be located. Why this is regarded as an advantage is somewhat of a mystery.

Despite all the publicity about planned unit development regulations as a new system of land use controls, their chief advantage in this residential type of situation may be something quite different. Some experience suggests that, even in towns which would resist vigorously any zoning district specifically authorizing multiple dwellings (or other more intensive residential building types), it may nevertheless be possible to obtain approval of

a planned unit development including such housing. So considered, planned unit development is not a new planning technique at all, but merely a public relations gimmick, to put over something desirable on an unsuspecting and otherwise balky public.

Genuine (though not new) advantages are thus available in planned unit development regulations, deriving from the use of several of the standard techniques of modern zoning. The trouble is that such techniques are normally combined with procedural arrangements which are much more dubious. Under such arrangements, the actual decisions on land use and building forms in the district, and perhaps also on density, are explicitly to be made, not by a general public policy adopted in advance, but by negotiation between the municipality and the developer. Those who take a rosy view of the capacities of local government will naturally applaud this; those who tend to have reservations on the subject, particularly about the parochial outlook and the level of competence in most local governments, will take a more skeptical view. It is, however, possible to foresee some of the probable results, particularly on the type of housing to be provided. In the present world, there are major and obvious public advantages in providing for a mixture of residential building types, primarily to provide an opportunity for some low- and moderate-cost housing. Yet for the present local taxation is expected to support major public services; and under these conditions it does seem unbelievably naive to assume that, when the major determinations on land use are explicitly to be made by a deal between the developer and the municipality, the result will be any relaxation of local opposition to such housing. On the contrary, under present conditions everything points to the probability that towns will use this opportunity to make doubly sure of their protection against any such development. In other words, planned unit development may simply be a way to get into a town some new housing which is both more intensive and almost equally expensive. True, under such a system cooperation between the developer and the municipality is likely; both stand to profit from the result. *Some observers will regard such cooperation [between developer and municipality] as an indication that the system is working well; others will interpret it as a sure signal that someone had better keep an eye out*

for the larger public interest [emphasis added].

When the process of bargaining is institutionalized as the formal way to make major decisions on land use and development, other problems are likely to result. Such informal negotiations of course often occur under the usual arrangements in modern zoning, but in that context are generally regarded with some suspicion. Once such bargaining is institutionalized as the normal process, there is less reason for public scrutiny and criticism. Moreover, the great need for housing in the coming years will place many municipalities under heavy pressure to take difficult and unpopular decisions on their future development; and many of these will be looking for ways to stall and evade. The existence of such a bargaining system may prove to be a heaven sent opportunity for a municipality to evade judicial strictures against exclusionary zoning, and to strike a cooperative pose, always ready to do something about critical needs--if only the perfect proposal would come along--but always in fact retaining a veto, and so always able to avoid any real action. After all, improved subdivision design is a highly respectable criterion for approval of projects; and, once this factor is introduced, a large element of discretion is necessarily available. Moreover, with no definite allocations on land use, it is much more difficult to find out whether land is in fact available to fulfill specific needs; the answer is always "maybe." If such a mechanism is used, not to promote improved design but to make sure that the poor are excluded (or perhaps for both purposes), a pattern along these lines will eventually emerge, and can be proved in court. Meanwhile the exclusionary pattern may in fact get a new lease on life, perhaps for another decade.

Where Planned Unit Development (PUD) projects combine residential and nonresidential (usually commercial) land use, different issues are raised, both on planning policy and legality.

On the policy question, large residential developers frequently provide shopping centers to serve their developments, since such centers tend to be more profitable; and, when an elaborate system is set up specifically to make provision for such centers, they are more likely to do so. It is therefore reasonable to assume that a large number of PUD projects

will include at least shopping centers. In townships where PUD projects cover less than the entire township, which is presumably the normal situation, the probable result is a pattern of multiple shopping centers per township--and with that the destruction of any opportunity to develop a coherent township form, with a clearly defined focal point which is "downtown." This may happen anyway, under conventional zoning, at least as now dominated by fiscal considerations; but there is no great advantage in giving an assist to the trend, in effect to institutionalizing a bad planning policy.

In such combined projects, a technical problem arises on mapping. It is of course possible by changing a regular zoning map to indicate a specific new area for commercial facilities; and so such facilities may be provided for new residential projects, either by conventional zoning or through a PUD approval. There is only one difference between the two: under conventional zoning the area to be used for commercial purposes appears on the zoning map, giving notice of the zoning to anyone who might want to move into that area--whereas under PUD it either does not appear on the map at all, or appears only on papers on file in municipal offices. It is difficult to understand why the latter is regarded as an advantage.

On density, some PUD ordinances provide that the residential density of the total project should be fixed, either at the level previously mapped in the area or (more likely) at a higher figure specified in the ordinances. If some density level for the entire project is specified in the ordinance, to that extent the town has set down one major element of policy in advance, and as a result, some advance planning may be done for public facilities in the area. To the extent that the ordinance does not do this, the whole future of the area is open for bargaining.

As for legal issues, the combination of residential and nonresidential land use in one district presents no serious problem. After all, commercial district regulations usually permit residential use, and no argument can seriously be made that the legal situation is different because the name is changed from commercial to "PUD" or even "residential" district.

Under the Standard Act, zoning regulations are required to be uniform for each class of buildings within a district; in this connection the question always is, what is a reasonable classification of buildings for this purpose? Under a PUD ordinance, a separate deal is worked out for each project, normally varying as to the percentages of land devoted to various building types (or to commercial land use where that is permitted), the yards and other bulk regulations, and so on. Within any municipality where more than one PUD project is approved, it cannot be seriously argued that such arrangements conform to the uniformity requirement. For this reason, deviations from the uniformity clause were expressly permitted in the model act for PUD projects, as clearly indicated in the commentary explaining the various provisions in Babcock, Krasnowiecki and McBride, *The Model State Statute*, 114 U Pa L Rev 140 (1965).

The final objection to the PUD approach is simply that the basic principle is wrong. Along with the obvious possibilities for favoritism and/or corruption, the establishment of such a system is a step away from government by rule of law, and back to the system of government by deal. From this viewpoint, planned unit development regulations are not a new idea; they are an invitation to regress, under rather stylish auspices, to the worst abuses of the past.³³

Transfer of Development Rights (TDR)

The concept underlying any system of transferable development rights is that the right to develop land is a severable incident of ownership which has a value of its own and can be shifted from one parcel of land to another. Development rights are viewed as comparable to mineral rights in that an owner can sell either while retaining title to the land.

There is no rigid format for a transferable development rights system; many variations are possible. One extreme could be a private-market TDR system. Such a system could allow the voluntary transfer of development rights with supply and demand setting the value and little or no government intervention in the process. At the other extreme could be a public TDR system. In a

public system, a public agency would act as both the buyer and seller in all transfers of development rights. A given transferable development rights system may also be either voluntary or mandatory. The legal due process standards and the practical problems in establishing and administering a TDR program will vary based on the TDR system selected. Crawford cites no Michigan cases involving transfer of development rights. Some of the issues associated with various TDR approaches are illustrated by court decisions that have been rendered in New York State which has enabling statutes and a case law history similar to Michigan.

In what has become known as the Tudor City case, the City of New York rezoned two private parks in the Tudor City development to public parks. The city also provided that the property owners could transfer the development rights to any lot of over 30,000 square feet in a 22 by 5 block area. The property owner brought an action to declare the rezoning unconstitutional. In effect, the city was attempting to use TDR's to compensate the property owner for the designation of his property as "public park." The New York Court of Appeals ruled for the property owner, declaring that:

In the instant case, the city has, despite the severance of above-surface development rights, by rezoning private parks exclusively as parks open to the public, deprived the owners of the reasonable income productive or other private use of their property. The attempted severance of the development rights with uncertain and contingent market value did not adequately preserve those rights.³⁴

The court pointed out that the property immediately became a public park but the development rights that had been severed were unusable until they were attached to sane receiving property. The property owner was compelled by the ordinance to enter a very unpredictable real estate market in order to find an appropriate receiving lot or purchaser. Thus, the system failed "to assure preservation of the very real economic value of the development rights as they existed when still attached to the underlying property." The lesson to be learned from this case is that any *mandatory* TDR system which prohibits private use of property while allowing the develop-

³³ Volume 2, pages 269-276.

³⁴ *Fred F. French Investing Company, Inc. V. City of New York*, 350 N.E.2d 381, 383 (N.Y. 1976).

ment rights to be transferred must provide a *guaranteed* market for the development rights. One alternative suggested by the court was that government buy the transferable rights, thus immediately compensating the landowner. The government could recoup its expenditures when it sold the rights. The obvious drawback to such an approach is that elected officials may find it desirable to "create" development rights by rezoning to higher intensities. Such rezoning could create competition for government purchased development rights.

A second and more famous New York case involved transferable development rights over Grand Central Station. The city's landmark preservation statute prohibited construction of an office building on top of the terminal but provided that the development (air) rights could be transferred to other parcels of land in the immediate vicinity. In evaluating this ordinance, the New York Court of Appeals held the test was whether the owner was assured of a continued reasonable return on the property.³⁵ Unlike the Tudor City case, the property owner here was able to retain the use of the property as a train station. Further, the court found that in this case the property owner was not wholly deprived of the development rights above the terminal since there were at least eight available receiving parcels in common ownership with the terminal site on which some of the development rights could be used. The court also pointed out that the "regulation permitted splitting of the development rights among several parcels, to allow optimal use of the rights." Summarizing, the court stated:

Land use regulation often diminishes the value of the property to the landowner. Constitutional standards, however, are offended only when that diminution leaves the owner with no reasonable use of the property. The situation with transferable development rights is analogous. If the substitute rights received provide reasonable compensation for a landowner forced to relinquish development rights on a landmark site, there has been no deprivation of due process.

The court then compared the Fred F. French case to the Penn Central case.

The case at bar, like the French case, *supra*, fits neatly into this analysis. In French the development rights and the original site were quite valuable. The regulations deprived the original site of any possibility of producing a reasonable return, since only park uses were permitted on the land. And, the transferable development rights were left in legal limbo, not readily attachable to any other property, due to a lack of common ownership of the rights and a suitable site for using them. Hence, plaintiffs were deprived of property without due process of law. The regulation of Grand Central Terminal, by contrast, permitted productive use of the terminal site as it had been used for more than half a century, as a railroad terminal. In addition, the development rights were made transferable to numerous sites in the vicinity of the terminal, several owned by Penn Central, and at least one or two suitable for construction of office buildings. Since this regulation and substitution was reasonable, no due process violation resulted.

In upholding the New York Court of Appeals, the U.S. Supreme Court recognized TDR's as a mitigating factor in evaluating the impact of the regulation.³⁶

From the French and Penn Central cases it is clear that a key element of a defensible TDR program would be the establishment of a firm market for the development rights. This is especially critical in a mandatory program. Some practical problems arise in creating and implementing a TDR system with a viable market. Where a TDR program exists, the permitted level of development in the community is determined by existing zoning and the number of development rights issued. These factors determine the market value of the development rights. The only way a TDR system can work is if developers will pay a premium to buy the rights to allow them to build beyond the limits of the standard land use controls. If the demand for TDR's is low because existing zoning permits the level of private development demanded by the market place, the TDR system will not preserve the economic value of the development rights severed from the regulated land. At least in a mandatory TDR system, the Tudor City case has told us that this is not acceptable. This would almost certainly present a problem for Highland Township since

³⁵ Penn Central Transportation Company V. City of New York, 366 N.E.2d 1271, 1275 (N.Y. 1977).

³⁶ Penn Central Transportation Co. V. City of New York, 98 S.Ct.2646 (1978).

the vacant land available for development far exceeds the demand even at low densities. Indeed, this fact was a key foundation on which the 1981-82 Highland Township predicated its reasonableness.

If an acceptable market is not initially created or maintained, local government would have to adjust the supply of development rights. This could be accomplished by changing the zoning laws to either decrease or increase the level of land development permitted without buying development rights. Problems exist with this approach. To retire development rights, they would have to be bought at some cost to the taxpayers. Issuing new development rights would depress the price and value of existing development rights. Yet the government must protect the value of the transferable rights, especially in a mandatory system where TDR's are used as compensation. Another alternative is to guaran-

tee the value of the rights by having the township purchase them at some fixed price. This system may be essential in a mandatory system, but does involve costs to the taxpayers. A related problem is the initial distribution of development rights, especially in a large scale private-market TDR system. The development rights must be issued before there has been a chance to establish their true value in the private market.

No TDR system should be considered without a thorough economic analysis of the sending and receiving parcels and the economics of development in the jurisdiction. No TDR system should be established until these factors are favorably resolved. It is far from certain that the TDR approach offers Highland Township sufficient promise to justify the cost of carefully designing a TDR program that would be custom tailored for the township.