

CITY OF NEW BALTIMORE  
THOROUGHFARE PLAN

## SECTION 7.0

### INTRODUCTION

The automobile has had a dramatic impact on land use development and human settlement patterns. Improved transportation facilities are, in large part, responsible for changes in our urban landscape from a more physically compact to a dispersed development pattern. Direct evidence of this change is apparent throughout southeast Michigan. Household growth in Wayne, Oakland and Macomb County over the past 40 years would not have been possible without the automobile and the extensive network of roads serving the region.

Recognizing the direct functional relationship that exists between land use patterns and the movement of goods and people, there is an obvious need to coordinate proposed land use activities with plans to upgrade and expand the network of the local and regional thoroughfares.

Preparation of a Thoroughfare Plan has several practical applications that have important consequences for the community's theoretical capacity development pattern. Through the identification of future right-of-way locations and standards, the City establishes the system of streets and roads that will provide access to future development. Furthermore, the cost of acquiring future road right-of-way can be significantly reduced if the necessary reservation is accomplished well in advance of future road construction. By establishing right-of-way locations and standards through the Master Plan process, the community is provided with a basis for requesting right-of-way reservations during the site planning and land development process.

Designating right-of-way widths also helps a community establish uniform setback requirements, which is accomplished through planning administration of implementing regulations. This minimizes the potential of having to acquire homes or businesses when road widening or public utility installation becomes necessary.

The Thoroughfare Plan provides the City of New Baltimore with an opportunity to coordinate local transportation planning activities with those occurring on a County, regional or State-wide basis. Roads are the physical improvements that link communities together. Coordinating the planning associated with the larger geographic transportation system offers some opportunities to consider mutually compatible land use policies relating to these needs. Finally, roads make a significant contribution to the community's image and identity. Streets offer an opportunity for urban design improvements in the way of landscaping or streetscape improvements. Too often, this opportunity is neglected with streets becoming cluttered with excessive signage and overhead utility installations.

Three topics are considered in this chapter. The first of these is an identification of thoroughfare planning concepts. Broadly accepted concepts are offered as a way of providing a common basis of understanding or terminology.

The second section describes the characteristics of the City of New Baltimore's local road system. This includes road classification, traffic volumes along major roads and identification of major traffic generators, among other factors.

The report concludes with a description of the Thoroughfare Plan and how this Plan interprets and promotes the Land Use Plan. Proposals and recommendations for the future are also offered.

Orderly development and a desirable environment can only be achieved if full consideration is given to the relationship between the type and intensity of land uses and the need for proper access and the resulting traffic generation movements. Improved planning of the thoroughfare system will likely result in a better urban development pattern and, consequently, a much improved environment and efficient use of land.

## CONCEPTS AND STANDARDS

### Transportation Planning Concepts

Roads may be grouped into a number of different classifications necessary for administrative, design and planning purposes. Most classification systems make a distinction based on the intended purpose of the road and the geographic areas it is intended to serve. Common road classifications include freeways, major or secondary thoroughfares, collectors and local roads. Each classification carries with it minimum design standards.

The benefit of a classification system extends beyond providing a common understanding of transportation planning vocabulary. Such a system establishes a functional system, permitting a community to relate categories of streets to various categories of land use activities that they are best suited to serve. Classification systems should reflect the specific category and intensity of land use that they are designed to serve. In applying a classification system, the through-traffic movements and the access requirements of abutting property are considered.

A commonly accepted classification system prepared by the National Committee on Urban Transportation is on the following pages and shown in the following Road Classification System Illustration.

**Freeway** - This class of road is designed to handle large volumes of traffic on multi-lane roads at higher speeds and are frequently for longer trips. Freeways have little or no service function and are characterized by control over access with no at-grade inter-sections. I-94 is the one freeway which services the New Baltimore area.

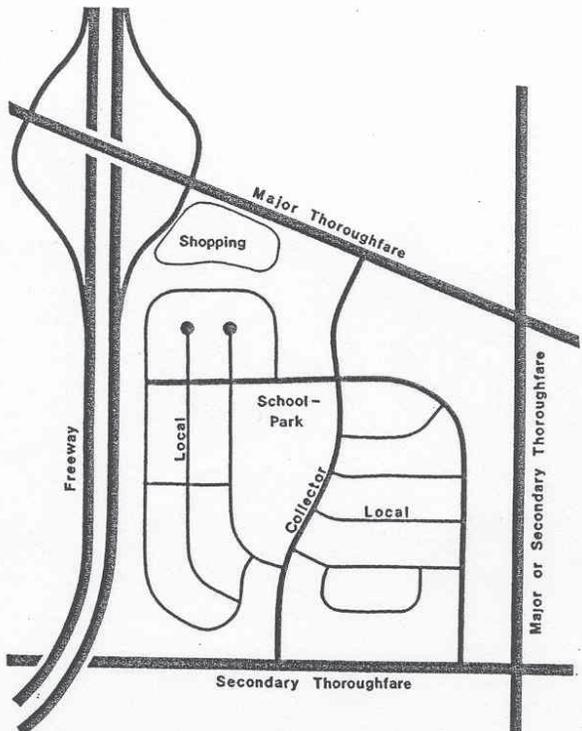
**Thoroughfare** - This class of streets brings traffic to and from the freeway and serves those major movements of traffic within or through the urban area that are not served by freeways. Thoroughfares interconnect the principal traffic generators within the community. They also handle trips between different areas of the community and should form a reasonably integrated system. The length of the typical trip on the system should exceed one mile.

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**Collector** - This class of streets serves internal traffic movements within an area of the community, such as a subdivision, and connects this area with the thoroughfare system. Collectors do not handle long through trips and are not, of necessity, continuous for any great length.

**Local** - The primary function of local streets is to provide access to adjacent land. These streets make up a large percentage of the total street mileage of the City, but carry a small proportion of the vehicle miles of travel. Local residential streets, in most cases, carry daily volumes of 1,000 or less.

ILLUSTRATION 11  
ROAD CLASSIFICATION  
SYSTEM



This classification system offers a generic description of common road types and their functions. Some local differences exist at the County or regional level relative to these classifications. In Macomb County, for example, County roads fall into two general categories: primary and local. The County classification system also distinguishes between paved and unpaved roads in each of these classes.

Primary roads provide access to higher classification roads and connect population centers within the County. Local roads consist of secondary feeder roads to the primary network and residential neighborhood streets.

### Standards

The configuration of the highway system throughout much of the nation, including southeast Michigan and to a considerable extent Macomb County, is a product of the Northwest Ordinance of 1787. This milestone legislation continues to exert a broad and lasting impact on land use and transportation patterns.

The Northwest Ordinance of 1787 divided the Country into one-mile square grids, which serve as the paths for an extensive network of major thoroughfares. The alignment of collector roads generally follows quarter section lines. In the City of New Baltimore and many of the lakefront communities, French settlers established the land patterns. The early French farms had a narrow frontage of 400 to 900 feet on the water and extended inland as much as three (3) miles. These tracts, known as French claim land divisions, are evidenced in the south and central parts of the City. The northern areas are divided into the Jeffersonian or square mile grid created by the Northwest Ordinance. The City's traffic pattern is created by the lakeshore route of Jefferson and M-29, with the radials of Washington and Base following French claim land divisions.

Road standards, including rights-of-way and pavement widths and specifications, were developed by the Inter-County Highway Commission and remain in use today by the Macomb County Road Commission. Cross-section standards and right-of-way designations recommended for various categories of road are specified in the following Table and in the Cross Section Standards Illustration.

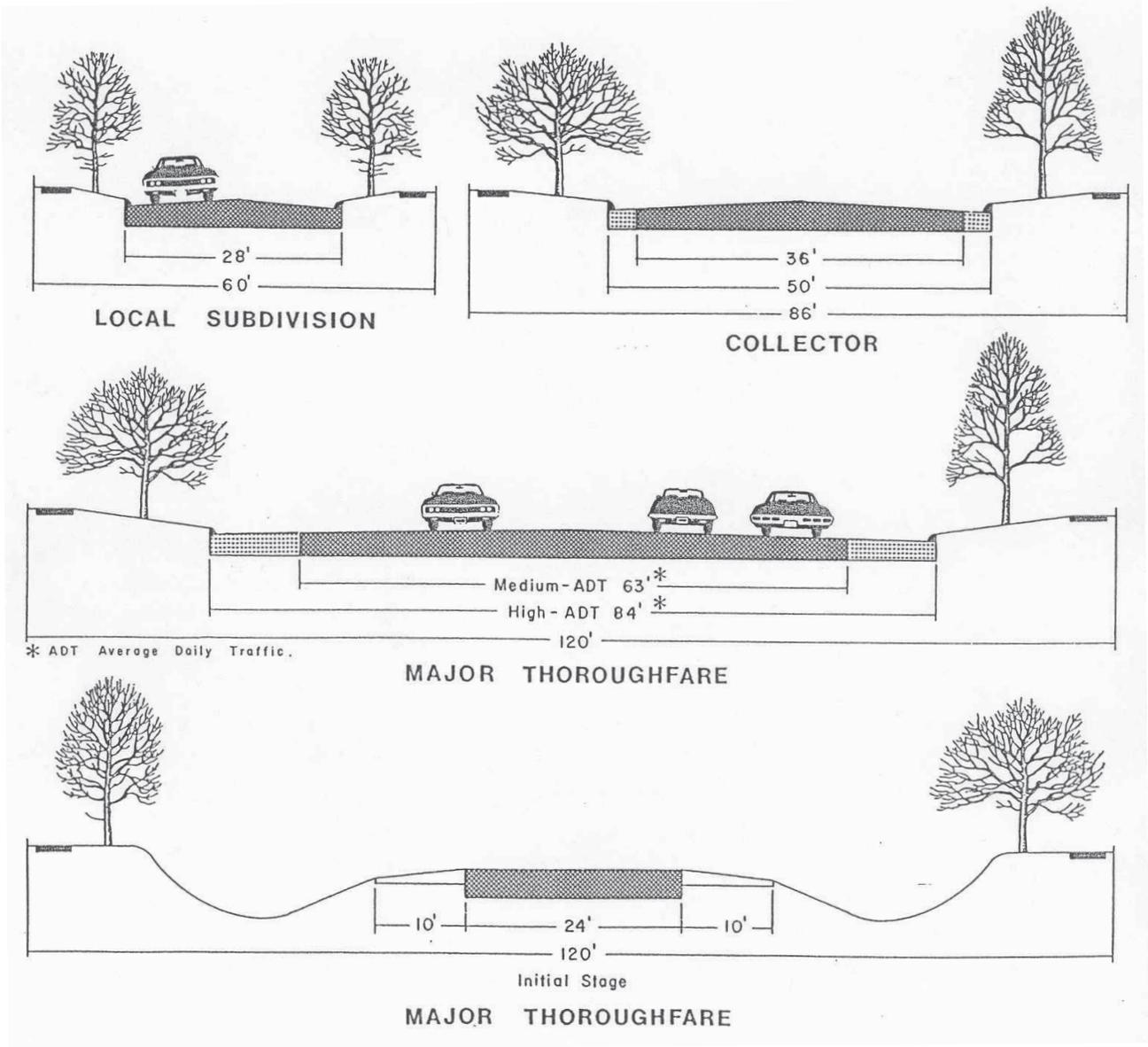
# Thoroughfare Plan

<u>Element</u>	<u>Major Thoroughfares</u>		<u>Collector</u>	<u>Local</u>
Right-of-Way	150 feet	120 feet	86 feet	60 feet
Pavement Width (initial stage)	88 feet	64-88 feet (24 feet)	36-50 feet	28 feet
Number of Lanes	7	4 or more	2-4	2
Spacing	-	1 mile	½ mile	-

Source: Road Commission of Macomb County

TABLE 37  
SUMMARY OF ROADWAY  
PLANNING STANDARDS\*

ILLUSTRATION 12  
CROSS SECTION  
STANDARDS



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## EXISTING CONDITIONS

### Street Inventory

Most of the roads in the New Baltimore area are two-lane. The exceptions are the I-94 Freeway, which contains six lanes; Gratiot Avenue, from Hall Road to 23 Mile Road, which contains four lanes; and 23 Mile Road, from Gratiot Avenue to Altman Road, which contains five lanes.

### Traffic Volumes

The following is a comparison of traffic volume counts taken in 1990 with those taken in 2000 for the New Baltimore area. The "Traffic Volumes" illustration indicates that the heaviest flow of traffic is to the southwest along I-94 Freeway and Twenty-Three Mile Road (M-29). The bulk of this traffic proceeds to destinations outside of the Township. Places of work in southern Macomb County and Detroit are the principal destinations of the commuter traffic. Of course, the reverse flow occurs in the evening as the workers return home.

### Street Capacity

A street which carries a large amount of traffic does not necessarily become a traffic problem. The relationship between the volume of traffic on a thoroughfare and its ability to handle this traffic partially determines whether or not there will be congestion and accidents. The Road Design Manual, Number 93, published by the County Road Association of Michigan, contains design standards as well as carrying capacity for various types of rural and urban roads. Due to the urbanizing nature of the City of New Baltimore, the standards for urban area roads should now be applied.

Traffic flow is not evenly distributed over a 24-hour period. There are certain times, such as morning and evening rush hours, when it is considerably heavier than at other times of the day. Streets should be designed to accommodate this peak hour traffic flow.

TABLE 38  
DAILY TRAFFIC VOLUMES

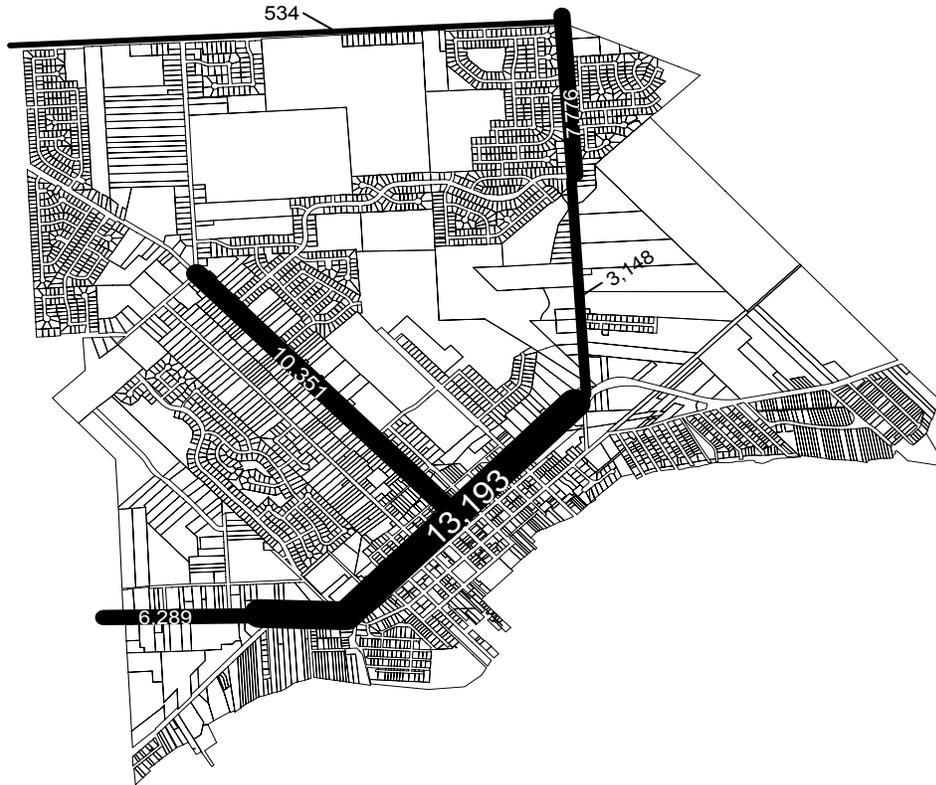
<u>Road</u>	<u>Vehicles per day - 1990</u>	<u>Vehicles per day - 2000</u>
I-94 Freeway	31,500 - 42,700	31,200 - 56,700
Gratiot Avenue	14,543 - 33,809	24,218 - 38,477
23 Mile Road	24,763 - 35,353	28,700 - 46,829

*Source: Road Commission of Macomb County*

As noted previously, the highest traffic volumes in the area occur along the I-94 Freeway and 23 Mile Road. Counts along I-94 indicate volumes of between 31,200 and 56,700 vehicles per 24-hour period. Portions of 23 Mile Road experience volumes exceeding 30,000 vehicles per day, although the volumes for M-29 within City limits are just below 30,000. Estimating the peak hour traffic at ten percent of the 24-hour total indicates a peak hour traffic count of approaching 5,600 vehicles on I-94 and 4,600 on 23 Mile Road.

The I-94 Freeway contains six lanes, while 23 Mile Road contains four lanes. With the estimated practical capacity for multi-lane roads at 1,000 vehicles per lane per hour at peak hour, the capacity of I-94 and 23 Mile Road is approaching capacity based on 2000 traffic volumes. Traffic volumes within the City are provided in Illustration 13.

ILLUSTRATION 13  
TRAFFIC VOLUMES



Source: Road Commission of Macomb County - 2000

### Adequacy of Existing System

**Major Streets** - The City's major thoroughfares include: M-29, which is also known as 23 Mile Road and Green Street; Washington Street; County Line; and Jefferson Road. These routes provide the traffic skeleton and carry the majority of the traffic. The major problem that exists with each of these routes is the lack of adequate right-of-way. As noted previously, a right-of-way of 120 feet is needed for four lanes, turning movements, utilities and sidewalks.

Adequate right-of-way exists on 23 Mile Road because, in the past few years, the State of Michigan purchased the area necessary to expand the road to five lanes. However, the right-of-way on Green Street is only 66 feet. Most of the right-of-way is needed for pavement, and the remainder is used for curbs and sidewalks. There is no safety area for pedestrians or area for utilities.

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The other routes of Jefferson, Washington and County Line are designed for 120-foot rights-of-way and, as development takes place, the right-of-way is being preserved. The Macomb County Road Commission also requires the dedication of 120 feet of right-of-way on Altman Road, Baker Road, and the section line roads of 24 Mile and 25 Mile. On County Line Road, they recommend a reservation of 150 feet of right-of-way.

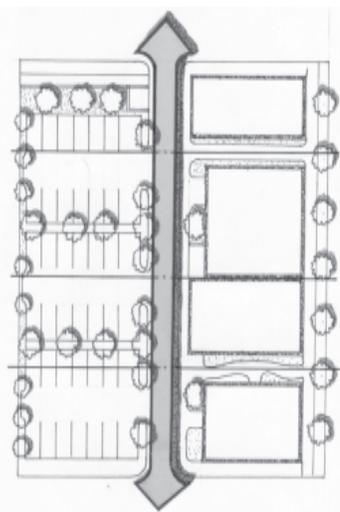
**Local Streets** - Some of the older subdivision streets in the City of New Baltimore have been constructed without attention to adequate design standards. They are too narrow or have poor drainage. Several of these roads, particularly those along the waterfront, dead-end without turnarounds. Others form acute angle intersections. Some purely local streets encourage shortcuts between major streets. Base Street extends for nearly one mile with no cross street to Washington Street.

Design standards for local streets should be aimed at facilitating access to the abutting properties, yet discouraging through traffic. Safety for both vehicular and pedestrian traffic should be stressed more than optimum circulation. Acute angle intersections and “T” intersections within 150 feet of each other should be avoided. The large number of narrow streets create a serious traffic flow problem.

### ACCESS MANAGEMENT

Access management and internal circulation are critical elements in creating a safe and efficient roadway system. The capacity of a regional or major thoroughfare can be enhanced, and its useful life extended, by careful attention to access controls and circulation between adjacent sites. This coordination and review will also reduce the total number of access drives, as well as the total number of conflict points. The City has the ability to implement access management standards which will allow for the proper planning and placement of access drives in the City. If not implemented as new development occurs, the City will be faced with the difficult task of eliminating access drives on a piecemeal basis, such as the case along 23 Mile Road traveling east from Chesterfield Township.

ILLUSTRATION 14  
JOINT ACCESS



The concept of access management is based on granting owners of property along a specified roadway, specifically those owning commercial, office or industrial, access to their property, but not unlimited access. There are many access management standards which can be implemented within the City. These include driveway spacing, limiting the number of access drives, and shared drives. As part of the Master Plan, the City has noted the following objectives for access management.

#### Joint Access Easement

One method of reducing the need for access drives onto major thoroughfares is to provide joint or cross access easements between sites. During the site planning process, consideration should be given to the alignment of parking lot maneuvering lanes which would allow for continuous and safe travel between parking lots. Joint access easements allowing for such travel should be required prior to site plan approval. These documents will need to be reviewed by the City Attorney, as well as the City Engineer.

**Maximizing Corner Clearance**

Curb cuts for properties located on a corner parcel require special attention. Access drives and curb cuts should provide the maximum amount of spacing possible from the intersection to the curb cut. Further, in most cases, the access drive should be limited to the secondary roadway rather than the primary. This will help in channeling vehicles to a common intersection rather than creating new turning areas.

**Maximize Clear Vision**

Particular attention should be given to the areas of the City where commercial access drives would be located on curves or portions of roadways with varying topographic height. Clear vision for motorists in this area should be reviewed carefully due to potential blind spots. If possible, access drives should be located in such a manner where clear vision in both directions is maximized.

**Maximize Drive Offset**

The Planning Commission, in their review of site plans, needs to pay particular attention to driveway offsets. Driveways and roadways on opposite sides of the road can increase the potential for conflict. Therefore, if drives cannot be aligned across a street, the distance between driveway centerlines should be maximized.

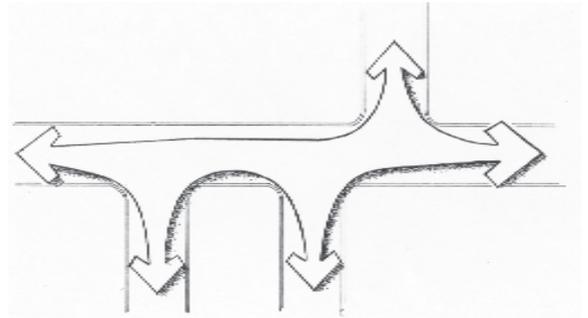
**Interior Parking Lot Review**

The Planning Commission must give attention to interior parking lot configuration. Review of parking lot efficiency and safety will allow for traffic to move onto the site quickly without generating traffic backups onto the adjacent roadway. Particular attention should be given to maneuvering lanes which cross the main access drive. This may cause conflict or the need for slowing or stopping.

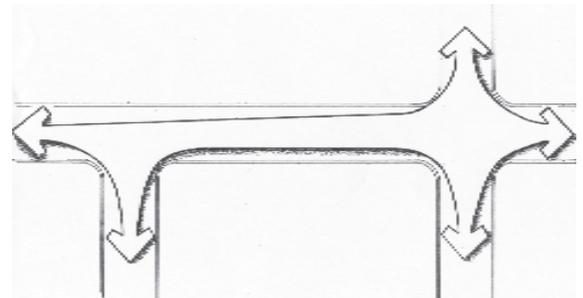
**Coordinated Review Process**

The City should establish an open line of communication between itself, the Road Commission of Macomb County and the Michigan Department of Transportation. The City does not grant driveway permits on roads that the County or the State maintains. Therefore, if particular attention is to be given to a section of roadway or area of the City, the appropriate road agency must be aware of the goals and objectives of the City.

ILLUSTRATION 15  
DRIVEWAY OFFSETS



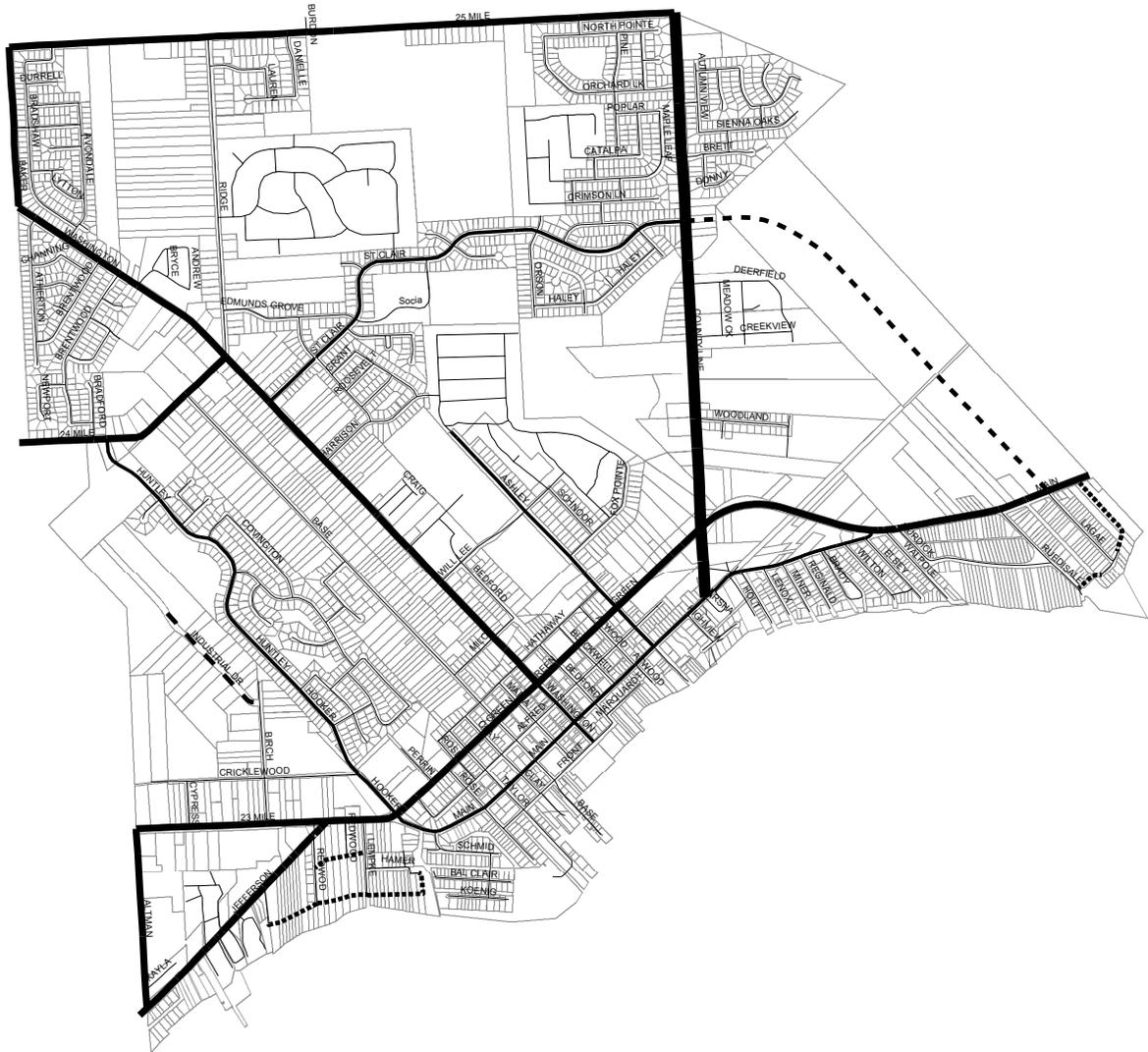
IMPROPER DRIVEWAY  
OFFSETS CREATING  
CONFLICT POINTS



PROPER DRIVEWAY  
OFFSETS MINIMIZE  
CONFLICT POINTS

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ILLUSTRATION 16  
THOROUGHFARE PLAN



- Major - 150' ROW
- Major
- Collector
- Collector - Proposed
- Collector - Industrial
- Local
- Local - Proposed

New Baltimore  
Macomb County, Michigan

Prepared By: City of New Baltimore  
Planning Commission



Community Planning & Management, P.C.  
Professional Planning Consultants

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