Van Dyke Corridor Access Management Strategy

Shelby Township, Michigan

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Preface

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The Shelby Township Downtown Development Authority (DDA) is a public corporate body whose primary purpose is to correct and prevent deterioration and promote economic growth within Shelby Township's principal business district—Van Dyke Avenue. To carry out this effort, the DDA is charged with preparing and implementing plans that will improve the economic climate of its district.

In 2006, the DDA prepared the Van Dyke Development Plan (2006) to guide public and private investment within the district. This plan notes the issues related to traffic on Van Dyke Avenue and the amount of crashes occurring within this corridor. The development of an access management plan was identified as an important strategy to guide future development and roadway improvements.

There are many components associated with the revitalization of a business district. However, safety is one of the most essential for any district. Access management tools used within the Van Dyke Corridor may also be applied throughout the Township, resulting in a community-wide improvement in vehicular and pedestrian safety.

The DDA is pleased to have the opportunity to provide this document to Shelby Township and will pursue implementation of its recommendations. Until formally adopted by Shelby Township, this document will be referred to as the "Van Dyke Corridor Access Management Strategy."

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1 Introduction

Background

In November, 2008, the Shelby Township Downtown Development Authority approved the development of an access management strategy for the Van Dyke Corridor. The intent of the DDA in creating this document and the recommendations within it was to provide Shelby Township, the Road Commission of Macomb County, property-owners, and developers with a tool that would play a vital role in realizing the DDA's "Vision for the Van Dyke Corridor":

> *Shelby Township's Downtown is the destination for shopping, entertainment and business, dinning, civic functions, culture and the arts. Downtown Shelby is a place where you can find easy access to civic institutions, unique retail, dining, and entertainment establishments, in an interconnected, pedestrian-friendly environment. The Downtown serves its many surrounding neighborhoods, providing connection to the larger Shelby Township community. Our Downtown is an emerging, dynamic, and engaging place the gives the community a sense of identity.* (From the *Van Dyke Development Plan*, December 2006)

Introduction

- Background
- Access Management Overview
- Benefits of Access Management
- Overview of Van Dyke Corridor
- Relationship to Township Master Plan and DDA Development Plan
- History of Road Improvements to Van Dyke Corridor
- Process Followed to Create Access Management Strategy

Access Management Overview

What is Access Management?[1]

Access Management is a set of proven techniques that help improve traffic safety, reduce traffic congestion, preserve the flow of traffic, prevent crashes, preserve existing road capacity and preserve investment in roads by managing the location, design and type of access to property.

Access management extends the function of a roadway while assuring safe and reasonable access to adjacent land uses. Poor access management is obvious along major arterials that are lined with narrow lots and closely spaced driveways. These roads often have relatively high traffic volumes and higher crash rates (see Chapter 4). Neither the land development nor the traffic problems on roadways such as Van Dyke occurred overnight. But over time, the traffic problems grow and create a need for very expensive remedial improvements, that may only mitigate, rather than solve, the growth problems. Access management can not only help where remediation is the only option, but is most effective in preventing future problems where intensive land development is planned along arterial roads.

Access management focuses on the number, location and design of driveways as they relate to the following elements within the road right-of-way: travel lanes,

[1] Adapted from *The Access Management Guidebook*, Michigan Department of Transportation, October 2001, Pages 1-13

medians, by-pass lanes, dedicated turn lanes and signal operations. On the land use side of the road right-of-way, driveway location considerations can include: internal site design and circulation, shared driveways, connected parking areas, frontage and/or rear access roads, building setback, and sign design and placement. Special consideration must also be given to meeting the needs of pedestrians, bicyclists, the handicapped and bus riders.

Decisions within the Van Dyke right-of-way and connections to that right-of-way are the responsibility of the Road Commission of Macomb County and their Highway Engineering Department. Decisions regarding land use abutting that road right-of-way are made by private land owners in conformance with the applicable land use regulations of Shelby Township, as applied by the Township Planning Department and Planning Commission.

Successful access management requires cooperation between property owners, local land use authorities, and transportation agencies in order to permit safe access to private property and protect the public's investment in roads.

A planning process that links access management principles with land use and corridor planning is the best way to look at the big picture and ensure appropriate relationships between present and future needs. Access management is implemented through review of development proposals under local zoning and subdivision regulations, as well as during the driveway permit process administered by local, county or state road authorities. It is also implemented through improvements to roadway design and specific capital improvement projects on targeted corridors with adopted access management or corridor improvement plans.

What is an Access Management Strategy?

An access management strategy is an evaluation of the existing roadway and the land uses it serves, and a series of recommendations to realize the benefits of sound access management. Elements of the road itself are analyzed (traffic volumes, crash rates, planned improvements), but the bulk of the analysis is determining what improvements could be made to existing conditions with respect to driveway location, design, and quantity, as well as internal site layout and design. The primary focus of this analysis is to identify opportunities for eliminating, consolidating, redesigning, and/or relocating existing driveways in order to achieve optimal driveway spacing and alignment. The analysis within an access management strategy includes recommendations for the location and design of future driveways on undeveloped or underdeveloped properties, as well as the possible location of future public roads.

Typically this analysis is illustrated utilizing a series of aerial photos of the entire length of the road being evaluated, divided into segments. A map is created for each segment, and site-specific recommendations for changes to be made are presented on each of those maps. For the Van Dyke Access Management Strategy, the 4.5-mile study area was divided into nine half-mile segments, resulting in nine maps (Maps 8-1 through 8-9 within Chapter 8 of this report). Every existing driveway, intersection, and site (both developed and undeveloped) within the study area was evaluated to determine what access management techniques could be applied.

Finally, following identification of all the recommended improvements, an access management strategy will offer recommendations for implementation of those improvements. These implementation strategies may include new or amended standards for driveway spacing and design within the Township's Zoning

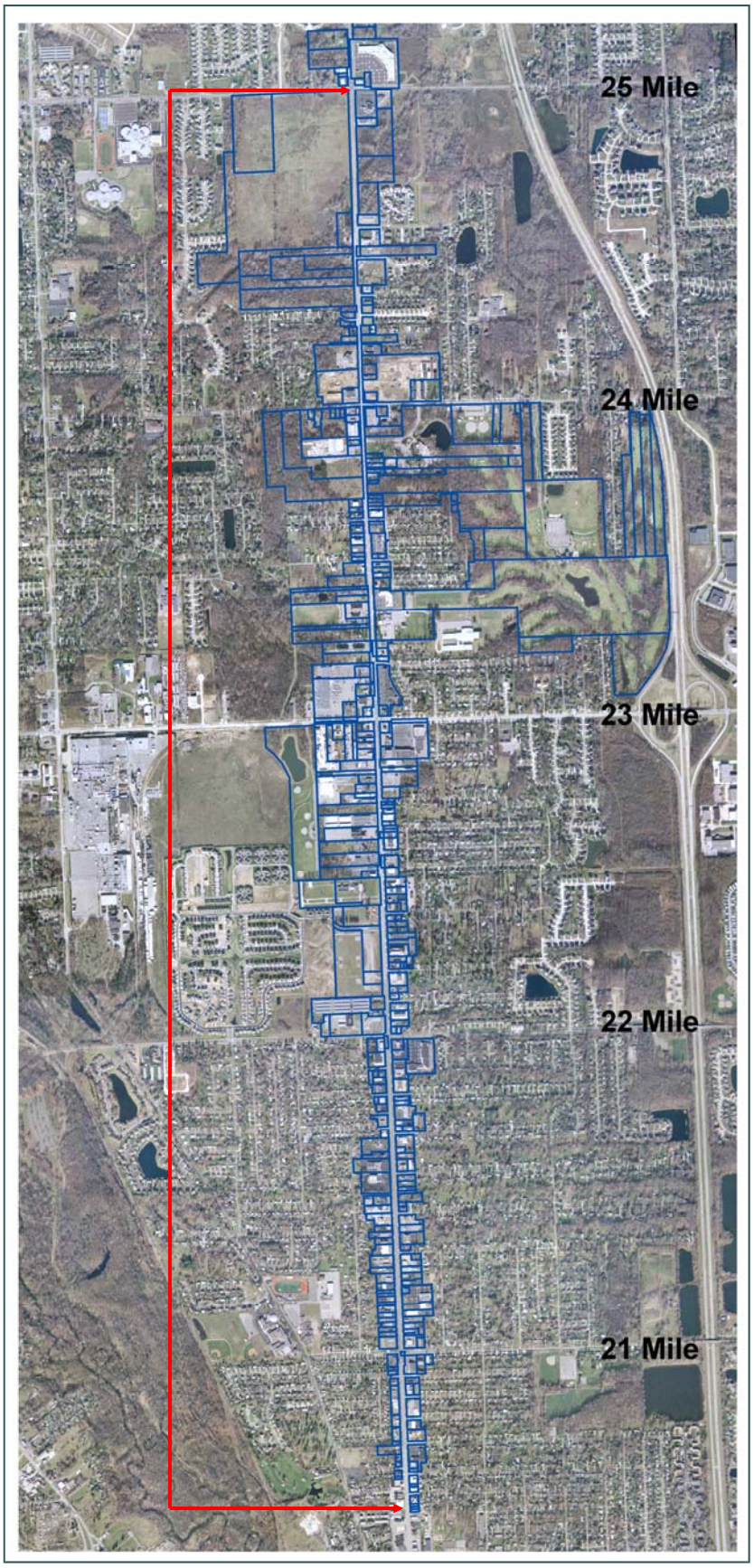

Figure 1-1. Access Management Strategy Study Area

Ordinance, a process for reviewing new developments and/or site improvements to ensure the recommendations of the access management strategy are followed, as well as possible funding opportunities for property-owners to make the recommended improvements.

A quality access management strategy requires involvement and input from local planning staff, the road authority, stakeholders, the public, and an advisory committee. A finalized access management strategy is ideally reviewed by the local planning commission and adopted by the local unit of government, as well as incorporated into that community's master plan.

Benefits of Access Management

The MDOT's *Access Management Guidebook* and the Shelby Township Downtown Development Authority have identified the following major benefits of implementation of the recommendations within the Van Dyke Corridor Access Management Strategy:

- Improved traffic safety and reduction in vehicular crashes
- Promotion of business by creation of safe and efficient access
- Shorter travel times and reduced motorist costs
- Expansion of business market area due to reduced travel times
- Extension of the function and capacity of Van Dyke Avenue
- Improved access to property
- Enhanced value of properties within the Van Dyke Corridor
- Creation of a safer, more inviting, more desirable community

Overview of Van Dyke Corridor

The study area of the Van Dyke Corridor Access Management Strategy is defined by the boundaries of the Shelby Township Downtown Development Authority (DDA) District. The DDA District encompasses a 4.5-mile stretch of Van Dyke Avenue, extending from the Township's southern boundary with the City of Utica at Nancy Street (approximately one-half mile south of 21 Mile Road) to the northern boundary at 25 Mile Road. See Figure 1-1 for an aerial map of the study area and the DDA District.

There is a varied mix of zoning districts and land uses along Van Dyke's 4.5 miles within the DDA district. The development pattern and mix of uses along the Corridor transitions from the District's southern end at the Utica City limits to its northern end at 25 Mile Road. The southern "half" of the District (south of 23 Mile Road) features a high concentration of development on small, narrow, and/or shallow lots. As discussed in the Study Area Profile chapter (Chapter 3) of this report, these are often the older businesses and uses within the District. The northern "half" (north of 23 Mile Road) features more large-scale developments on larger lots, and most of the remaining undeveloped or underdeveloped land within the DDA District.

Van Dyke Avenue is under the jurisdiction of the Road Commission of Macomb County, and is designated as a Rural or Urban Minor Arterial in the Road Commission's Functional Classification Map. The Road Commission has the authority to review driveway permit applications and issue driveway permits, while

the Shelby Township Planning Commission has the authority to review and approve site plans along Van Dyke, including driveway location and design.

Relationship to Shelby Township Master Plan and DDA's Van Dyke Development Plan

A safe and efficient transportation network is a vital component of any viable community. Land uses and roadways are interdependent; the roads provide access to the land uses, while the development pattern of those land uses impacts the efficiency of the road network. A road network which safely and efficiently distributes traffic benefits not only the individual land uses but the overall quality of life in a community. Evaluation of that road network is therefore a critical element of any community's long-range planning.

Shelby Township's approved 2003 Master Plan includes a Transportation Plan (Chapter 18), the goal of which is to "Achieve a network of major thoroughfares that are capable of accommodating anticipated traffic at an acceptable level of service, and in a safe and efficient manner." (The pending revisions to the 2003 Master Plan continue to support this concept.) Within the Transportation Plan is an "Access Management Recommendations" section. Three main guidelines are discussed within that section, including: (1) Restricting the number and spacing of access points; (2) Access/driveway design; and (3) Encouraging shared access.

The Visions & Goals chapter of the DDA's 2006 Van Dyke Development Plan included, as one of its potential Corridor-Wide Projects, an Access Management Plan for the Van Dyke Corridor. The conceptual model for the future plan included standards and recommendations for driveway spacing, driveway offset, shared driveways, and rear service drives. The Van Dyke Corridor Access Management Strategy is intended to serve as that plan; all of the components outlined in the conceptual model within the DDA's 2006 Development Plan have been discussed in detail in the following chapters.

The Van Dyke Corridor Access Management Strategy provides a detailed framework for achieving one of the major goals of both the 2003 Township Master Plan and the 2006 Van Dyke Development Plan. Both of those plans identified the need for an access management plan along the Van Dyke Corridor as a tool for achieving a safe efficient roadway as well as for promotion of economic development.

History of Road Improvements along Van Dyke Corridor

Van Dyke Avenue from Shelby Township's southern boundary to 23 Mile Road has been a five-lane cross-section for decades. The intersection with 23 Mile Road was widened in recent years to include designated right-turn only lanes at all four approaches. This widening project included improvements to the intersection's traffic signal, including a right-turn overlap at each approach corresponding to the intersecting road's protected left-turn phase. 23 Mile Road was recently widened to a continuous five-lane cross-section from the M-53 interchange west to Mound Road.

The most recent major road improvement within the Van Dyke Corridor was the 2007 widening of Van Dyke at 24 Mile Road from three lanes to five lanes. There was also some recent widening of Van Dyke at 25 Mile Road to include right-turn only lanes at the northbound and southbound approaches. The Scheduled Transportation Improvements section of this report (Chapter 4) discusses the pending Van Dyke widening projects scheduled by the Road Commission of Macomb County.

Process Followed to Create the Access Management Strategy

(Note: This section to be completed upon Final Draft of this report.)

Through the efforts of the Shelby Township Downtown Development Authority, the process of creating the Van Dyke Corridor Access Management Strategy began with the preparation of an inventory and analysis of existing corridor conditions as they relate to access. Existing land use, zoning, driveway locations, traffic volumes, approved site plans, and traffic crash data within the Corridor were collected and reviewed. Driveway spacing deficiencies, inter-site grade differences, and opportunities for shared drives were identified.

Based on the analysis of the Van Dyke Corridor's existing conditions and input from the Access Management Advisory Committee (made up of DDA members, the Township Planning Director, and Road Commission of Macomb County Engineering staff), a conceptual Access Management Strategy was drafted. That conceptual draft was thoroughly reviewed by the RCMC, the Township Planning Director, and members of the Advisory Committee, and revised per their comments to create a final draft.

The final draft of the Access Management Strategy was presented to the DDA Board during their regular meeting on June 25, 2009.

The intent is for the Access Management Strategy to be reviewed and approved via the following process:

- DDA approves final Access Management Strategy in July or August 2009.
- DDA presents the approved document to the Planning Commission in (September/October, 2009), with the intent of seeking the Planning Commission's endorsement.
- DDA holds a public workshop to present the approved document to the business/property owners within the DDA District, stakeholders, and the public (October/November, 2009).
- DDA presents the approved document to the Township Board, with the intent of seeking their endorsement (November/December, 2009).

2 Goals and Objectives

Goals and Objectives

The MDOT's *Access Management Guidebook* identifies many access management techniques and the goals and objectives of each. The Van Dyke Corridor Access Management Strategy was drafted to achieve the primary goal of developing a guide for land development within the Shelby Township DDA District and implementing a successful access management program that results in the following:

- Increased vehicle and pedestrian safety and a decrease in crash rate
- A coherent framework for access planning along Van Dyke Avenue
- Intergovernmental consistency and coordination on access decisions (Shelby Township, the DDA, and the Road Commission of Macomb County)
- Development of an identifiable character for the DDA District and Shelby Township
- Prevention of future access-related congestion problems and costly future road improvements
- Maintenance of traffic flow and reduction in average travel time
- Promotion of business and expansion of market area
- Preservation of public investment in roadway
- Optimal emergency response times
- Easier, quicker, and safer multi-stop shopping by providing direct connections between adjoining sites
- Enhancement of property values
- Improved quality of life

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3 Study Area Profile

Study Area Profile

- Development History and Trends
- Economic and Demographic Profile

Development History and Trends

Settlement in the Shelby Township area began in the 1800's. A rural community through the 1940's, Shelby Township experienced suburban growth along its north-south corridors, mainly Van Dyke Avenue. Mile roads were built along a grid system, as seen throughout southeast Michigan. Now known simply by their mile number, the section-line roads in Shelby Township originally had more interesting names:

- 21 Mile-Shoemaker
- 22 Mile-Waldenburg
- 23 Mile-Coldwater
- 24 Mile-French
- 25 Mile-Runyon
- 26 Mile-Marine City Highway

Shelby Township experienced most of its development during the1960's and 1970's. The development pattern primarily included single family residential homes, retail and industrial uses. Through its developing years, Van Dyke Avenue continued its role as the traditional "core" of the township, dividing it roughly in half.

In recent years, the majority of development along the Van Dyke corridor has been infill and included a growing number of professional office buildings and automobile-related uses, such as automobile repair/maintenance establishments. Other uses, including banks, pharmacies and fast-food restaurants, also are automobile-focused, most of which offer drive-through service.

Development in the northern part of the corridor has occurred consistent with the 1999 Shelby Center Plan in the area of Van Dyke Avenue and 24 Mile Road. Other growth in the area is due to the availability of sanitary sewer systems north of 23 Mile Road. Properties without sanitary sewer service, notably south of 22 Mile Road to the Utica city limits, tend to be smaller buildings that lack the ability to expand. Significant re-investment in this area will likely be hampered by property-owners' reluctance to make improvements without adequate infrastructure.

Recognizing the need to prevent deterioration of the corridor, in 2006 the Shelby Township created a downtown development authority that is charged with revitalizing the Van Dyke Corridor. The Van Dyke Development Plan (2006) projects that the Township will likely remain a stable community in the future, despite the changing economy. Van Dyke Avenue contains a wide variety of uses including shopping, personal and business services, entertainment and civic uses. Growth in this corridor will continue to come from infill development as there are few vacant parcels remaining. There may be some property assemblage leading to more significant development in

the corridor, particularly as smaller properties decline in value, limiting their individual potential for investment and development.

Nationally, and particularly in the Southeast Michigan region, the economy has caused a slowdown in development. The region has experienced an extended recession that is not forecasted to improve significantly for years. Within the Shelby DDA District, there is currently considerable vacant existing retail space available, primarily south of 23 Mile Road. When the economy stabilizes and improves, these properties can be expected to fill. Ongoing efforts of the DDA are aimed at retaining existing businesses in the corridor and recruiting new businesses.

Economic & Demographic Profile

Economy

The 2000 Census reports that there were 16,783 jobs in Shelby Township. Nearly 75% of those employed in Shelby Township live outside the Township. Only 16% of Shelby Township residents are employed within the Township. Nearly 90% of Shelby Township residents drive to work alone and have an average commute time of 25 minutes.

While the current economy locally and in the region continues to struggle, job security in and around Shelby Township is increasingly uncertain. Significant downsizing within the manufacturing industry is taking an economic toll in the area, and the ripple effect is impacting other industries as well. According to the 2009 Economic Forecast for Macomb County report by economist Dr. James Jacobs, manufacturing jobs are expected to continue to decline, but the County will see increases in the education and information industries. Despite the economy, household income is estimated to have risen slightly from the 2000 census report of $65,291 to $66,700 (US Census estimate for 2005-2007).

Housing

The 2000 Census reports that the majority of housing is single family residential (68%) and that all housing is 76% owner-occupied. The median value of owner-occupied housing is estimated at $230,000 (2005-2007 Census), up from $195,000 in 2000.

Population

The Southeast Michigan Council of Governments (SEMCOG) estimates the current population of Shelby Township at 72,265 people, an increase from the 2000 census population of 65,159. There are an estimated 28,530 households, up from the 2000 count of 24,486. Average household size is estimated to have declined from 2.65 to 2.52 between 2000 and 2009.

SEMCOG projects that the population in Shelby Township will increase to 85,177 and that households will continue to grow (to 34,127), while the average household size will continue to decrease (to 2.48).

As is the case throughout Michigan, the population of seniors (65+) is increasing in Shelby Township. In 2000, seniors comprised 10% of the population. By 2035, it is estimated that over 22% of the population will be seniors. On the other hand, the youth population (18 and younger) was almost 25% in 2000 and is projected to drop to 21% by 2035.

4 Corridor Analysis

Corridor Analysis

- Roadway Description by Segment
- Functional Classifications
- Traffic Volumes
- Environmental Features and Conditions
- Historic Resources
- Scenic Resources
- Traffic and Safety Analysis
- Physical Constraints to Access Management Strategies
- Existing Deficiencies
- Scheduled Transportation Improvements

Roadway Description by Segment

Van Dyke Avenue is classified in the Transportation Plan chapter of the 2003 Shelby Township Master Plan as an Arterial, a road that carries trips of shorter length than do Principal Arterials or Major Arterials. (As a comparison, Hall Road east of Van Dyke Avenue is classified as a Major Arterial, as is 26 Mile Road east of Van Dyke.) Arterial roads are designed to provide routes for through traffic while providing access to abutting properties and intersecting streets. Arterials are planned for a right-of-way width of 120 feet, and are intended to carry up to 30,000 vehicles per day (assuming two lanes of traffic in both directions). The Road Commission of Macomb County's Functional Classification Map classifies Van Dyke Avenue as a Rural or Urban Minor Arterial. Van Dyke Avenue has a posted speed limit of 45 mph through the DDA District.

The road capacity of Van Dyke varies within the boundaries of the DDA District. From the southern boundary at the Utica city limits to approximately ¼ mile north of 23 Mile Road, Van Dyke is five lanes; two through-lanes in each direction and a center left-turn lane. Just north of 23 Mile Road, Van Dyke narrows to one through-lane in each direction, with a center left-turn lane extending from south of Southfield Drive to north of Smiley Avenue. A widening project completed in 2007 expanded Van Dyke to five lanes at its intersection with 24 Mile Road. However, between 24 and 25 Mile Roads, Van Dyke is mostly two lanes wide. The northbound and southbound approaches to 25 Mile Road both feature a center left-turn lane and right-turn only lanes. Van Dyke's two-lane sections have wide, paved, uncurbed shoulders for the most part.

The following is a summary of the layout of each segment of Van Dyke within the DDA District, as well as for each of the intersecting section-line roads:

- Van Dyke Ave., between Nancy Avenue and 21 Mile Road
  Five lanes, including two lanes in each direction and a center left-turn lane.
- Van Dyke Ave., between 21 Mile and 22 Mile Roads
  Five lanes, including two lanes in each direction and a center left-turn lane.
- Van Dyke Ave., between 22 Mile and 23 Mile Roads
  Five lanes, including two lanes in each direction and a center left-turn lane. Designated right-turn only lanes (northbound and southbound) at intersection of 23 Mile Road. Right-turn only lane (southbound) at Central Park Boulevard.
- Van Dyke Ave., between 23 Mile and 24 Mile Roads
  Southern quarter (approximately) is five lanes, with a right-turn only lane (southbound) at 23 Mile Road intersection. Road narrows to two lanes, with a center left-turn lane extending from south of Southfield Drive to north of

Smiley Avenue. Recent expansion in 2007 widened the road to five lanes at 24 Mile Road intersection. SEMCOG's Transportation Improvement Plan (TIP) calls for expansion to five lanes for the entire segment in 2009, although the RCMC has scheduled this project for 2010.

- Van Dyke Ave., between 24 Mile and 25 Mile Roads

  Two lanes, with a five-lane segment at the intersection with 24 Mile Road. At the intersection with 25 Mile Road, Van Dyke has a center left-turn lane, one through-lane in each direction, and right-turn only lanes at the northbound and southbound approaches. Transportation Improvement Plan calls for expansion to five lanes for entire segment in 2010, although the RCMC has not yet scheduled for this project (possibly 2011).
- 21 Mile Road at Van Dyke Avenue
  - Eastbound approach – Center left-turn lane, shared through/right-turn lane
  - Westbound approach – Center left-turn lane, through lane, right-turn only lane
- 22 Mile Road at Van Dyke Avenue

  Five lanes, including a center left-turn lane on both eastbound and westbound approaches.
- 23 Mile Road at Van Dyke Avenue

  Two through lanes, a center left-turn lane, and right-turn only lanes on both eastbound and westbound approaches. Interchange with M-53 is approximately one mile to the east. The intersection of 23 Mile Road and Van Dyke is the busiest in Shelby Township, and the twelfth busiest in Macomb County.
- 24 Mile Road at Van Dyke Avenue
  - Eastbound approach – Center left-turn lane, through lane, right-turn only lane
  - Westbound approach – Center left-turn lane, through lane, right-turn only lane.
- 25 Mile Road at Van Dyke Avenue
  - Eastbound approach – Center left-turn lane, shared through/right-turn lane.
  - Westbound approach – Center left-turn lane, through lane, right-turn only lane.

Functional Classifications

To set funding priorities for roads that carry the highest volumes, transportation planners established a functional classification system for public roadways. Roadways are typically divided into those that carry through traffic and those that carry local traffic. Table 4-1 below displays the functional classifications for the major roadways within the DDA district boundaries as defined within the Thoroughfare Plan of the Township's approved 2003 Master Plan.

Table 4-1. Functional Classifications of Roads in DDA District

Road Name	Functional Class	Functional Class Planned Right-Of-Way (feet)	Functional Class Intended Maximum Daily Traffic Volumes (vehicles)
Van Dyke Avenue	Arterial	120	30,000[1]
21 Mile Road	Minor Arterial	120	15,000[2]
22 Mile Road	Minor Arterial	120	15,000[2]
23 Mile Road	Arterial	120	30,000[1]
24 Mile Road	Minor Arterial	120	15,000[2]
25 Mile Road	Minor Arterial	120	15,000[2]

[1] Assuming two through-lanes in each direction
[2] Assuming one through-lane in each direction

Traffic Volumes

Traffic volumes along the 4.5-mile Van Dyke Corridor are heaviest at the southern end (between M-59 and 21 Mile Road) and steadily decrease as one moves north. Between 21 Mile and 22 Mile Roads, Van Dyke carries over 31,000 vehicles during an average 24-hour weekday. Just south of 25 Mile Road, Van Dyke carries less than 13,000 vehicles in a 24-hour period. Table 4-2 below displays the most recent 24-hour traffic volumes available from SEMCOG. These volumes, along with the traffic volumes on each of the intersecting mile roads, are also displayed in Figure 4-1 (next page).

Table 4-2. 24-Hour Weekday Traffic Counts on Van Dyke Avenue

Segment	Traffic Count Date	Northbound Volume (vehicles)	Southbound Volume (vehicles)	Total Daily Traffic (vehicles)
Hall (M-59) to 21 Mile	December 27, 2005	16,219	16,561	32,780
21 Mile to 22 Mile	March 28, 2007	15,892	15,468	31,360
22 Mile to 23 Mile	November 21, 2005	13,876	13,331	27,207
23 Mile to 24 Mile	June 26, 2005	10,706	10,575	21,281
24 Mile to 25 Mile	March 5, 2005	6,569	6,267	12,836

Environmental Features and Conditions

Access management strategies typically have to take environmental features into account when making recommendations for driveway locations, parking lot connections, new public roads, etc. There are limited notable environmental features along the Van Dyke Corridor. Van Dyke Avenue passes through a 100-year floodplain just south of 25 Mile Road, a product of the Clinton River Middle Branch. There are some scattered woodlands and wetlands along the fringes of the DDA district, but none actually adjacent to the Van Dyke Corridor (based on the Township's Woodlands and Wetlands maps).

Historic Resources

The Packard Proving Grounds, a State of Michigan Registered Historic Site, includes such notable features as the Albert Kahn-designed Lodge building, the elevated water tower, and the Grand Entrance Gates. A portion of the original test track oval, along with several buildings, have been preserved by the non-profit Packard Motor Car Foundation. The facility hosts several events throughout the year, including Packard-related shows and a summer farmers' market.

Other historic resources can be found on Shelby Township's Municipal Grounds. The Hope Chapel was built in the 1890's on the west side of Van Dyke just north of 24 Mile Rd, and was moved to the Municipal Grounds and renovated in 2001. Andrews School is a one-room school house built around 1871. Originally located at 25 Mile Rd and Mound, it was moved to the Municipal Grounds and restored in 1975. The Historic Locomotive, Coal Car, and Caboose were relocated next to Andrews School in the 1970's, and are believed to be from the 1860's.

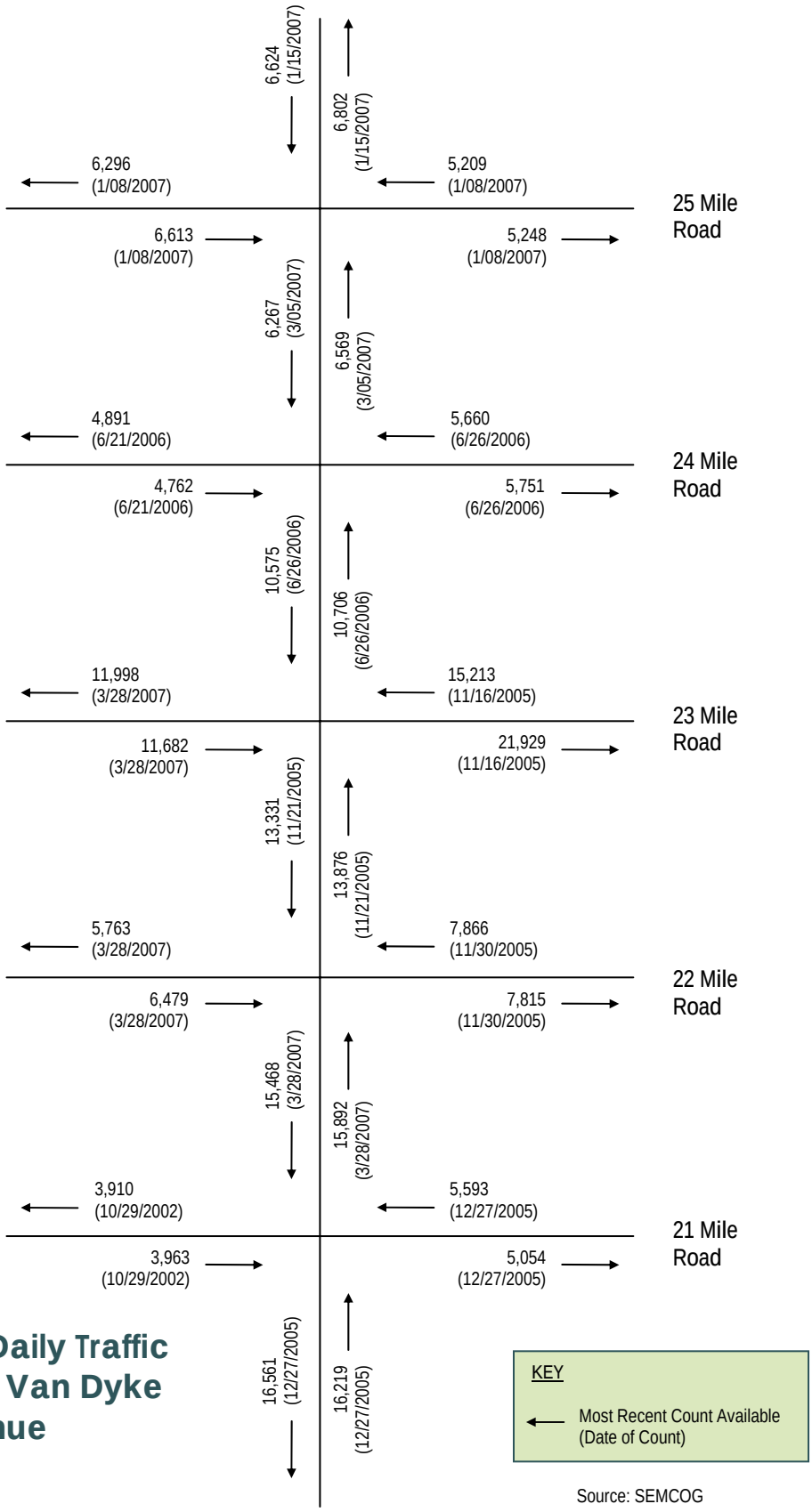


Figure 4-1. Daily Traffic Volumes on Van Dyke Avenue

Scenic Resources

Scenic Views

Although there are scenic amenities which are accessible from Van Dyke and/or the section line roads which intersect it within the DDA boundaries (Heritage Gardens, Cherry Creek golf course), the views along the Corridor itself are for the most part limited to commercial buildings, offices, and undeveloped land. The Packard Proving Grounds and its historic amenities are visible along the west side of Van Dyke between 22 and 23 Mile Roads. The public open space on the Township's Municipal Grounds, including the community band shell and mature woodlands around it, are visible on the east side of Van Dyke south of 24 Mile Road.

Entryway Issues

Both the 2003 Township Master Plan and the DDA's 2006 Van Dyke Development Plan call for gateway features at the major points of entry into Shelby Township. The DDA specifically calls for such a feature on Van Dyke at the boundary between Shelby Township and the City of Utica. Successful implementation of the recommendations of the Access Management Strategy would provide visual cues of the transition from the City of Utica into Shelby Township, because there would be less driveways, more greenspace, and a more uniform access pattern along the roadway. Eliminating a driveway on the east side of Van Dyke just north of Nancy (as recommended on Map 8-1 in Chapter 8) could potentially create the space necessary for a gateway sign and/or entry feature.

Aesthetic Concerns

Excessive driveways and curb-cuts, inconsistent driveway design and spacing, poor driveway/parking lot maintenance, and a lack of a consistent access pattern create a cluttered and piecemeal appearance that ultimately can be detrimental to business. By consolidating and eliminating drives, more greenspace can be created, allowing for greater opportunities for beautification measures such as landscaping, lighting, street furniture, decorative features, and sidewalks. Consistent driveway design and spacing will create a more uniform and more aesthetically desirable appearance for the Township's main commercial corridor.

Traffic and Safety Analysis

Of all the goals of access management, the most critical is increasing safety by reducing crashes. Every driveway along a roadway increases the chances for traffic crashes, whether it be rear-end collisions resulting from a vehicles slowing down to turn into a driveway, or side impacts from vehicles entering the road. Driveways located too closely together, or aligned improperly from those on the opposite side of the road, further increase the likelihood of crashes. More driveways equal more crashes; data collected nationwide proves that crash rates are directly correlated with driveway density. This same correlation applies to Van Dyke Avenue, as demonstrated in the following analysis.

Traffic Crash Analysis

The history of intersection-related and mid-block crashes along the Van Dyke Corridor was analyzed for the years 2005 to 2007, the most recent three-year period for which data was available. Table 4-3 displays the history of crashes that occurred within 150 feet of each of the five major intersections along the Van Dyke Corridor. All other crashes that occurred on Van Dyke over that time are considered mid-block crashes, and are displayed in Table 4-4. Mid-block crashes were divided among each of the one-

Table 4-3. Van Dyke Intersection Crash History

Intersection	Total Entering Vehicles (per 24-Hour Weekday)	Number of Crashes (2005-2007)	Crash Frequency (Per Year)	Intersection Crash Rate (Per MEV)[1]
21 Mile Road	41,332	103	34.33	2.28
22 Mile Road	43,246	67	22.33	1.41
23 Mile Road	54,655	140	46.66	2.34
24 Mile Road	27,591	68	22.66	2.25
25 Mile Road	24,816	61	20.33	2.24

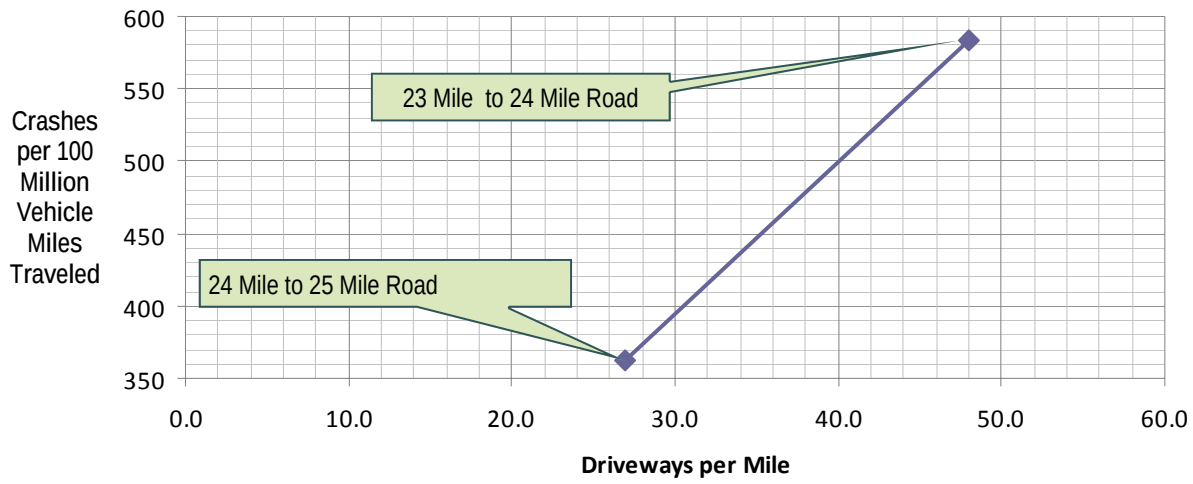
[1] Intersection Crash Rate per Million Entering Vehicles (MEV) = [(Crash Frequency/365)/Total Entering Vehicles] * 10^6

Table 4-4. Van Dyke Mid-Block Crash History

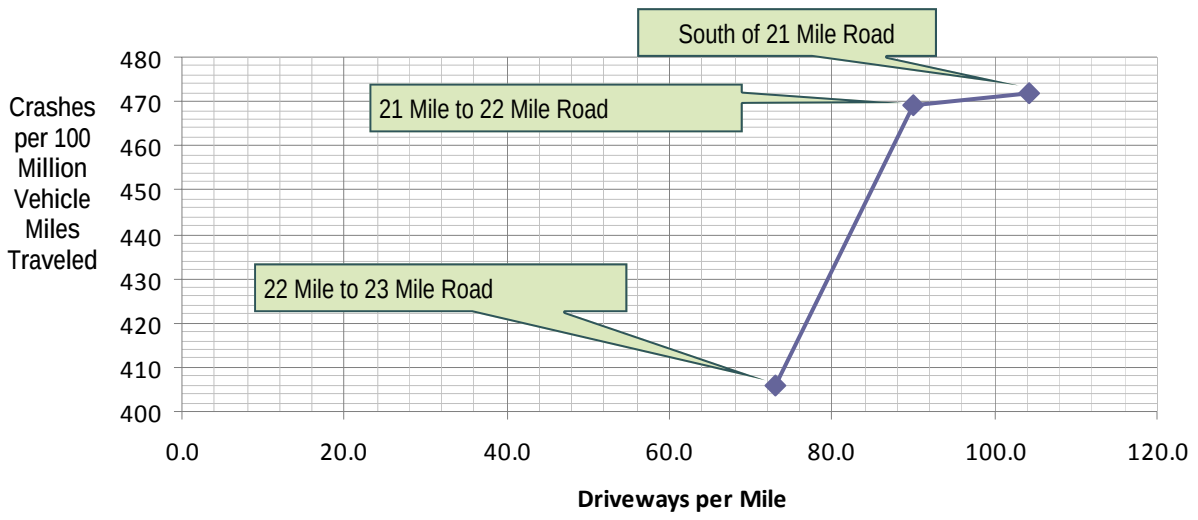
Segment	ADT	Driveway Density (Access Points per Mile)	Number of Mid-Block Crashes (2005, 2006, 2007)	Crash Frequency (per mile, per year)	Crash Rate (per 100 million VMT)[1]
Hall (M-59) to 21 Mile	32,780	104.3	166 (58,50,58)	55.9	472
21 Mile to 22 Mile	31,360	90.0	161 (58,54,49)	53.7	469
22 Mile to 23 Mile	27,207	73.0	121 (44,42,35)	40.3	406
23 Mile to 24 Mile	21,281	48.0	136 (44,50,42)	45.3	584
24 Mile to 25 Mile	12,836	27.0	51 (17,16,18)	17.0	362

[1] Crash Rate per 100 Million Vehicle Miles Traveled (VMT) = [(Crash Frequency/365) / ADT] * 10^8

Graph 4-1. Crash Rates Versus Driveway Density on Segments of Van Dyke Less Than 5 Lanes



Graph 4-2. Crash Rates Versus Driveway Density on 5-Lane Segments of Van Dyke



mile segments between the five major intersections. For both mid-block and intersection-related crashes, a crash rate was calculated based on the average daily traffic volumes on Van Dyke and the intersecting roadways (refer to Figure 4-1). The best and most current available crash and average daily traffic volume data were obtained from the Southeast Michigan Council of Governments (SEMCOG).

The intersection of Van Dyke and 23 Mile Road has the highest number of crashes in Shelby Township, and the 12th highest volume of crashes in all of Macomb County (based on total crashes between 2003 and 2007). Of the top twenty intersections in Shelby Township in terms of total crashes between 2003 and 2007, five of them are the intersections of Van Dyke and the section-line roads (21 Mile through 25 Mile Roads).

Table 4-4, and Graphs 4-1 and 4-2, demonstrate that there is a direct correlation between the density of driveways along the Van Dyke Corridor and the rate of crashes. In other words, the more driveways per mile, the higher the crash rate. This correlation between driveways and crashes is one of the primary motivations for developing an Access Management Strategy – to reduce crashes and increase safety by reducing the number of driveways along the Van Dyke Corridor.

Constraints to Access Management Techniques

The recommendations of an access management strategy are often impeded by "real world" challenges. The following are some of those challenges to implementing effective access management recommendations:

Grade Differences

While the land traversed by the Van Dyke Corridor is relatively flat, there are several instances of grade differences between individual sites. These grade differences, which arte often identified by retaining walls, present challenges to development of internal connections between adjacent sites.

Utility Structures

Utility structures, and particularly utility poles, are sometimes installed within the desirable path of a shared driveway or a parking lot connection. Relocation of these structures requires coordination between multiple agencies and can be costly. The ITC transmission corridor near 25 Mile Road is an example of a major utility structure that has to be considered when considering potential driveway locations and parking lot connections.

Variable Building Setbacks

Because the older portions of the corridor did not develop with uniform building setbacks, it is in many instances challenging to create parking lot connections and/or shared driveways between sites.

Shallow Lot Depths

Particularly along the older developed portions south of 22 Mile Road, the commercial lots along Van Dyke do not have sufficient depth to allow for desirable features such as parking lot connections, frontage roads, and/or backage roads.

Resistance from Property Owners

Without proper education on the benefits of access management, commercial property owners and their tenants often assume that more points of direct access equals more business, and therefore will resist any attempts by local officials to close, consolidate, or relocate their existing or planned driveways. At the same time, property owners often object to the concept of parking lot connections with neighboring sites due to the prospect of drivers from other sites "cutting through" their site.

Existing Deficiencies Along the Van Dyke Corridor

Deficient Same-Side Driveway Spacing

For a 45-mph road such as Van Dyke, the Federal Highway Administration recommends a minimum near-curb to near-curb driveway spacing of 230 feet, and the Michigan Department of Transportation recommends a minimum center-to-center spacing of 350 feet.

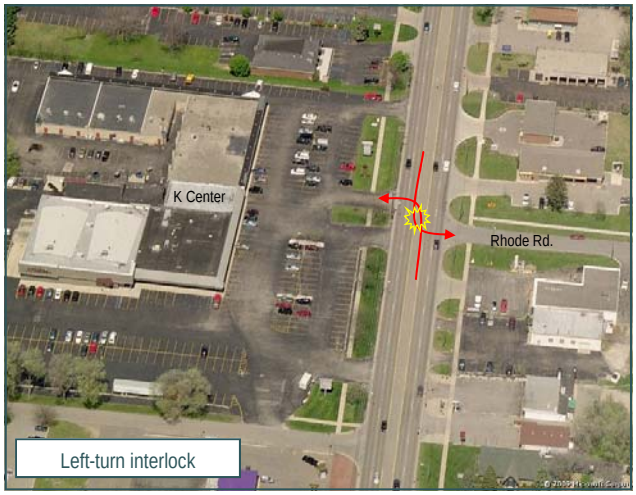
In the example shown on the left, there are five driveways along the east side of Van Dyke within the first 260 feet north of Millis Road. Along the west side, there are two bank driveways and another side street within the first 250 feet north of Powers Court. Such closely spaced driveways require through-drivers to watch for potential traffic conflicts with the users of several driveways at once, thus increasing the likelihood that more conflicts and crashes will occur. Also, drivers simultaneously waiting to exit two closely spaced driveways may find that each is limiting the other's view, thus further increasing the crash potential. Note, for instance, that vehicles exiting Huntington Bank's drive-through could obscure the

southbound traffic important to drivers trying to turn right out of Powers Court. Similarly, vehicles exiting Flickinger Drive could obscure the southbound traffic important to drivers trying to turn right out of the bank's north drive.

Deficient Opposite-Side Driveway Spacing (Left-Turn Interlock)

When a road is equipped with a two-way left-turn lane and driveways across the road from each other are offset in an adverse direction by an inadequate distance, drivers approaching from opposite directions and attempting to turn left into the opposing driveways may find themselves in a head-on conflict within the left-turn lane. This can result in unsafe evasive maneuvers, such as a sudden change back to the inner through lane, or a hurried left turn from too far in advance of the destination drive. The size of the minimum adverse offset providing a reasonable level of traffic safety largely depends on the competing driveway volumes and prevailing speeds on the main road.

As can be seen in the aerial to the right, the K Center has a driveway on Van Dyke a short distance north of Rhode Road. A northbound driver intending to turn left into the K Center could find themselves in head-on conflict in the center left-turn lane with a southbound driver intending to turn left onto eastbound Rhode.



To avoid or at least mitigate the above problem of so-called "entering left-turn interlock," a driveway should be either aligned with or offset a minimum distance from a pre-existing opposite-side driveway or street. The size of the minimum offset providing a reasonable level of traffic safety largely depends on the competing driveway volumes and prevailing speeds on the main road. MDOT recommends an opposite-side driveway spacing along a 45-mph road of at least 630 feet, but this guideline is of limited practicality along a heavily-developed corridor such as Van Dyke. Experience has shown that a minimum offset of 200 feet will often suffice when the expected peak-hour left-turn volume into one or both drives is relatively light.

Lack of shared driveways

There are very few examples along the Van Dyke Corridor of individual sites sharing a driveway. Nearly every development along the Corridor has at least one driveway, and in many cases two driveways or more. Similar to deficiently-spaced driveways, sites with multiple driveways increase crash potential by increasing the number of potential conflict points and causing exiting vehicles to block on another's view.

Lack of internal cross-connections and shared service drives

Connections between individual parking lots – even parking lots of comparable land uses like office buildings – are rare within the Van Dyke Corridor. Every time drivers are forced to exit a site onto Van Dyke merely to access an adjacent site, they are creating the potential for traffic conflict and crashes. These shared connections are beneficial to businesses, because customers are more likely to visit other businesses in the vicinity if they are able to access them without having to re-enter traffic on Van Dyke.

Deficient Driveway Spacing from Signalized Intersections

Where driveways are located too close to a signalized intersection, the problems created include conflicts in the center left turn lane between vehicles turning in and vehicles queuing to turn at the intersection, as well as vehicles exiting a commercial site and crossing multiple lanes of traffic to access the left-turn lane at the intersection.

Driveways too close to signalized intersection

Most problematic are driveways on the approach to the signal. As shown on the aerial to the left, the Prospect Place Shopping Center driveway on the west side of Van Dyke just north of 21 Mile Road is too close to 21 Mile Road. Northbound drivers intending to turn left into that driveway a short distance north of the signal at 21 Mile likely violate the "dedicated left-turn lane," which is legally available only to southbound drivers *approaching* the signal (and therefore moving in the opposite direction). The only obvious alternative, of course, is stopping in the higher-speed inner northbound through-lane and waiting for a gap in opposing southbound through-traffic to complete the turn. Drivers attempting to exit this driveway may also be taking significant risks during periods of heavy traffic flow, in that they may not be able to clearly see the traffic stream with which they will have to merge, given the density of vehicles slowing or stopped for a signal change.

To avoid the improper, unsafe use of left-turn lanes near signalized intersections, driveways on the main road approaches should be either (1) located at least 100 feet upstream of the point at which the two-way left-turn lane is first available, or (2) be effectively limited only to right turns in and right turns out (a raised/ curbed triangular island in the driveway is typically needed to ensure compliance). Driveways on the departing leg of signalized intersections can also be problematic if they are relatively close to the intersection and traffic slowing or stopped on the main road impedes safe exiting left turns. On a case-by-case basis, it may be advisable to prohibit such exiting left turns.

Side-Street Drives Too Close to Main Roads

A special case of deficient same-side driveway spacing occurs along many of the corridor's side streets, where the first driveway off Van Dyke is too close to Van Dyke itself. Examples in the aerial photo to the right include the first shopping center driveway on Mary Ann, and the All Tune & Lube driveway on Millis. In the latter case, drivers turning off Van Dyke with the intention of entering the Tune & Lube driveway could find their way blocked by Millis traffic waiting to turn onto Van Dyke; this could impede following traffic and risk rear-end collisions. At both locations, drivers attempting to exit the driveway toward Van Dyke could find their way blocked by side-street traffic

Side-street driveways too close to Van Dyke

approaching Van Dyke. If this were to occur at the Mary Ann location, a driver attempting to exit the shopping center toward Van Dyke could find him or herself forced to stop part way through their turn, in a way that impedes traffic turning off Van Dyke onto eastbound Mary Ann. On a busy side street, this could cause blocked traffic to spill back onto Van Dyke, potentially blocking a lane of through-traffic.

To avoid the types of problems discussed above, the MDOT recommends that the first driveway on the side street be at least 115 feet from the main road (near-curb to near-curb). For a five-lane (64-foot-wide) road like Van Dyke and a typical 30-foot wide commercial driveway, this guideline is equivalent to a center-to-center spacing of 162 feet.

Open curb-cuts

Non-delineated driveways increase crash potential because drivers have no reference for where to enter and exit, creating the potential for additional points of conflict. Examples of this along the Van Dyke Corridor include the northeast corner of Van Dyke and Messmore, as well as the northeast corner of Van Dyke and 22 Mile Road.

Lack of restricted-movement driveways (e.g. right-in/right-out)

Few if any commercial driveways along the Van Dyke Corridor have turn restrictions. There are multiple examples of driveways where left turns in and/or out should be prohibited, often for driveways close to signalized intersections. Vehicles stacking in the center left-turn lane to turn from Van Dyke onto one of the intersecting mile-roads often block access to commercial driveways, and conflicts are created when vehicles attempt to make a left-turn into or out of a driveway which is blocked by the left-turn queue at the signal. Turn prohibitions can be enforced by appropriate signage, and by raised islands within driveways designed to impede prohibited movements. The Road Commission for Macomb County often recommends 3-way driveway approaches, where inbound left turns are prohibited via a raised island.

Limited spacing or design standards within the Township Zoning Ordinance

The Shelby Township Zoning Ordinance appears to only regulate driveway spacing for developments within the C-3 Shopping Center Business zoning district. There are more than 10 different zoning districts within the DDA district boundaries, so the majority of development within the Van Dyke Corridor is not regulated by any driveway spacing or design standards beyond what is approved by the Road Commission. Many communities have adopted Access Management standards as part of their Zoning Ordinance.

Scheduled Transportation Improvements

Transportation Improvement Program (TIP)

Based on SEMGOG's Transportation Improvement Program (TIP) for Southeast Michigan 2008-2011, there are two major projects scheduled for the Van Dyke corridor. The first project is a widening of Van Dyke from (mostly) two lanes to five lanes between 23 and 24 Mile Roads, which the Road Commission of Macomb County anticipates will be constructed in 2010. The second project is widening Van Dyke from two to five lanes between 24 and 25 Mile Roads, a project the Road Commission has not yet scheduled.

2030 Long Range Plan

SEMCOG's 2030 Regional Transportation Plan for Southeast Michigan does not appear to offer any specific recommendations pertaining to Van Dyke Avenue.

Other Scheduled Improvements Which Could Affect Van Dyke

Nine miles of M-53, from 18 Mile Road to 27 Mile Road, will be resurfaced starting in March 2009. The freeway is to remain open during the project, albeit with intermittent lane closures. The 26 Mile Road overpass on M-53 will be closed and completely reconstructed starting in March 2009. At the 23 Mile Road interchange at M-53, a new onramp will be constructed, an off-ramp will be removed and relocated, and a new traffic signal will be installed on 23 Mile west of the freeway starting in March 2009. The 23 Mile Road overpass is expected to remain open during the duration of the project. All of these projects will create some diversion of traffic that could potentially affect traffic volumes and distribution patterns on Van Dyke Avenue.

Shelby Township Thoroughfare Plan

Shelby Township's 2003 Master Plan included a Transportation Plan (Chapter 18), one component of which was a Thoroughfare Plan. The Thoroughfare Plan proposed several changes to the Township's functional classification system and road cross-sections, several of which are relevant to the Van Dyke Corridor. Those proposed changes include:

- Reclassify 25 Mile Road from Minor Arterial to Arterial, due to increase in traffic volumes since its connection to Runyon and Tienken
- Reclassify 21 Mile Road east of Van Dyke from Minor Arterial to Arterial, due to commercial development along Hall Road
- Widen 25 Mile Road to five lanes, with a four-lane boulevard east of Dequindre
- Widen the Minor Arterial portion of 24 Mile Road (east of Van Dyke) to curbed three lanes with a continuous center left-turn lane
- Widen 21 Mile Road to five lanes through Shelby Township, consistent with Macomb Township to the east

5 Existing Land Use and Zoning

Existing Land Use and Zoning

- Figure 5-1 Zoning Map
- Figure 5-2 Existing Land Use Map

There is a varied mix of zoning districts and land uses along Van Dyke's 4.5 miles within the DDA District. The development pattern and mix of land uses along the Van Dyke Corridor transitions from the District's southern end at the Utica City limits to its northern end at 25 Mile Road. The southern "half" of the District (south of 23 Mile Road) features a high concentration of development on small, narrow and/or shallow lots. As discussed in the Study Area Profile section of this report, these are often the older business and uses within the District. The northern "half" features more large-scale developments on larger lots, and most of the undeveloped or underdeveloped land within the DDA District.

Figure 5-1 shows the existing zoning within the DDA district. As many as sixteen different zoning classifications are represented within the District, from single-family residential (R-1-B) to heavy manufacturing (HM) to recreation (REC).

Figure 5-2 shows the Township's Existing Land Use map within the DDA district. The individual land uses and/or businesses on each of the parcels within the DDA District (as of early 2009) are also identified on Maps 8-1 through 8-9 of this report.

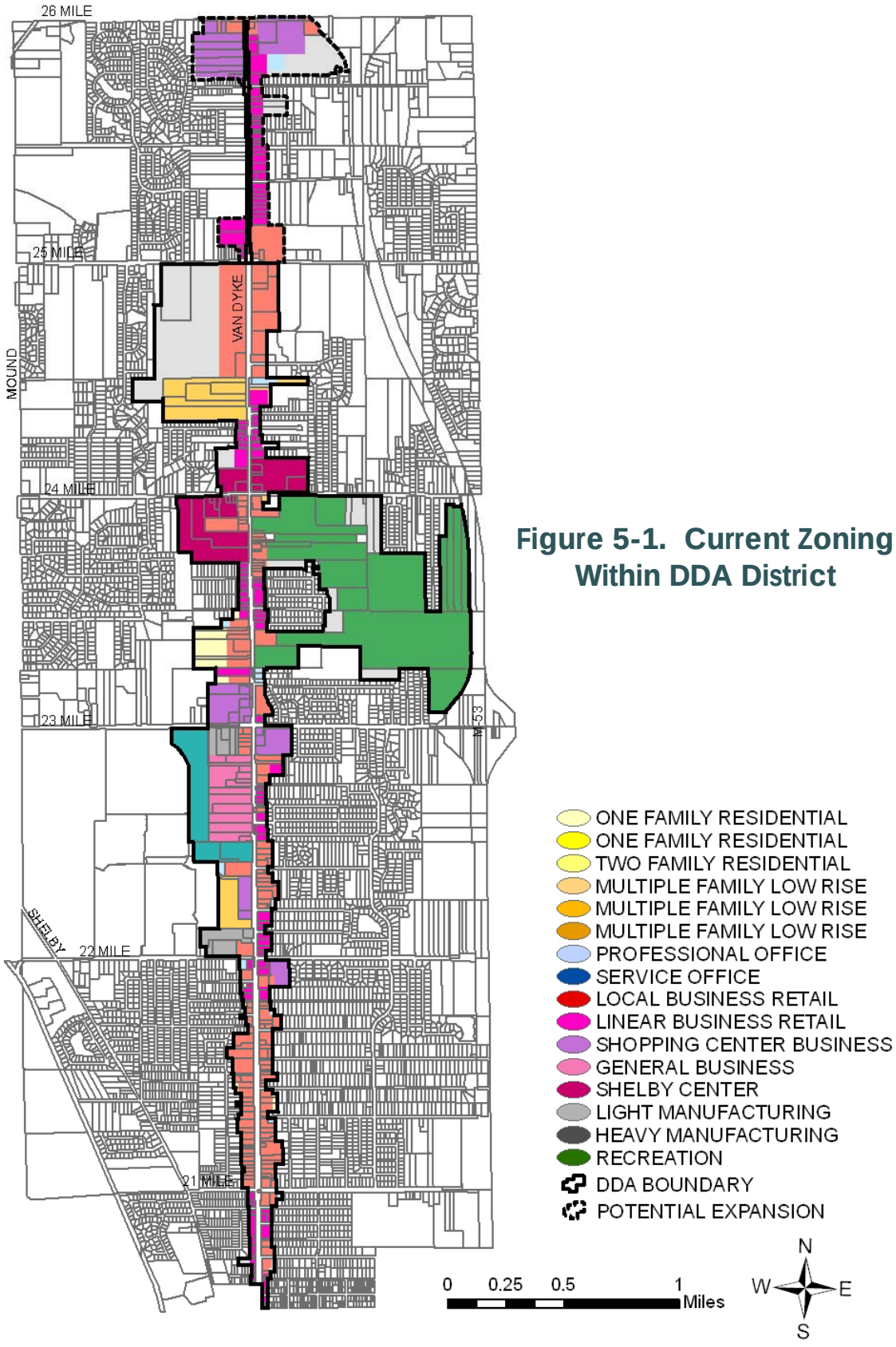


Figure 5-1. Current Zoning Within DDA District

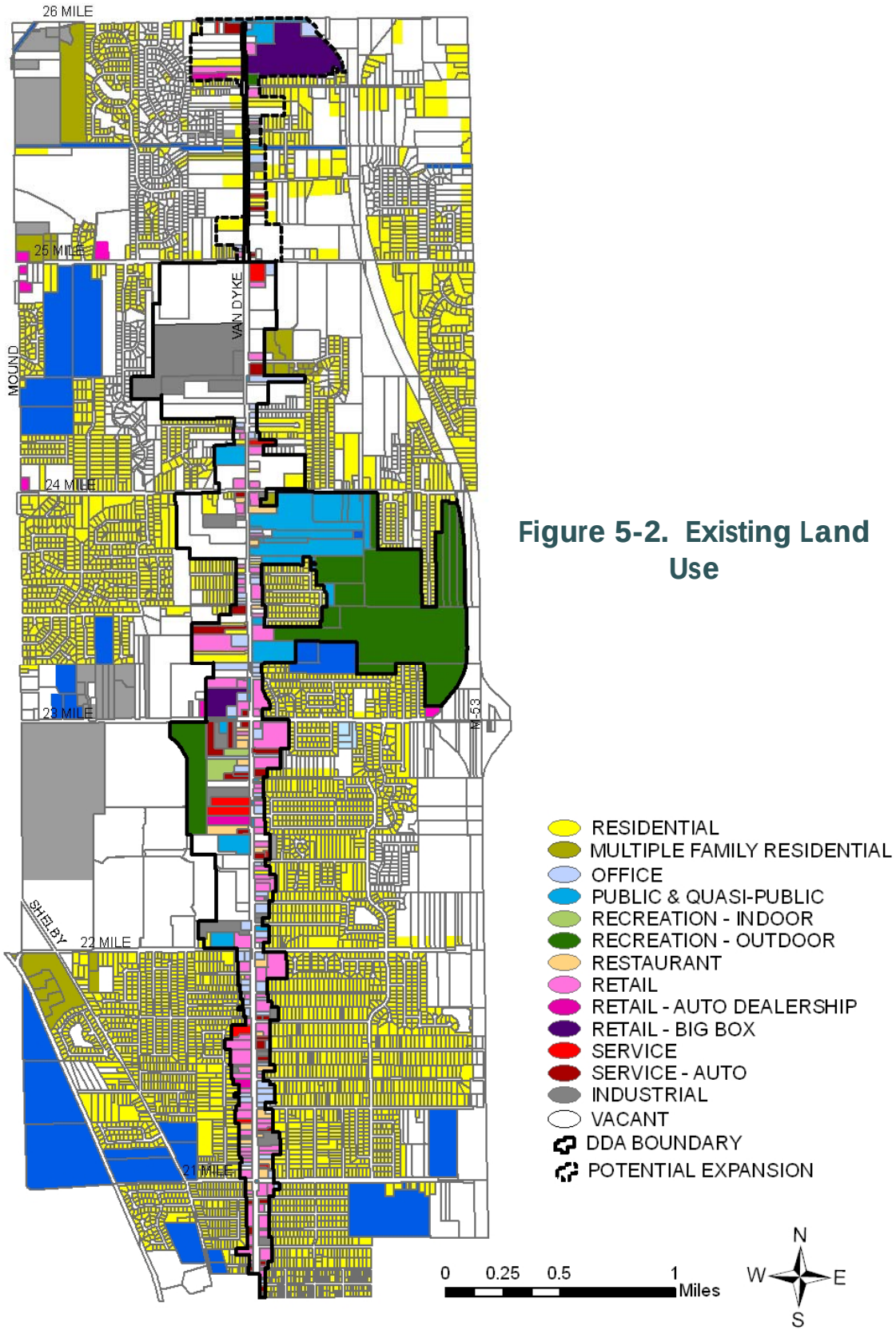


Figure 5-2. Existing Land Use

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6 Future Land Use / Transportation Demand Trends

Future Land Use / Transportation Demand Trends

- Future Land Use
- Transportation Demand Trends

Future Land Use

Any major decisions related to access management, particularly the location of new driveways, new public roads, and new traffic signals, should take into account the Future Land Use Plan within Shelby Township's Master Plan. The 2003 Shelby Township Master Plan divides the 4.5-mile DDA District into three areas:

- North Van Dyke Corridor (north of Shelby Center, Annsbury to 26 Mile))
  Planned for residential uses complimented by low intensity businesses and services. Intended to avoid the unplanned commercial development typical of Van Dyke south of 23 Mile Road.

- Shelby Center Area (approx. 1/2 mile north and south of 24 Mile Road)
  Planned to create a center of business, entertainment, and government activities, surrounded by residential neighborhoods. Intended to serve as Shelby Township's downtown and central business district.

- Van Dyke Redevelopment Corridor (southern Township limits to Shelby Center)
  Planned for redevelopment and reorientation of the most densely developed portions of Van Dyke. Intended to move away from the unplanned mix of business uses toward a planned corridor of functionally-grouped businesses and services.

Figure 6-1 shows the Future Land Use Map from the Downtown Development Authority's *Van Dyke Development Plan* (December 2006).

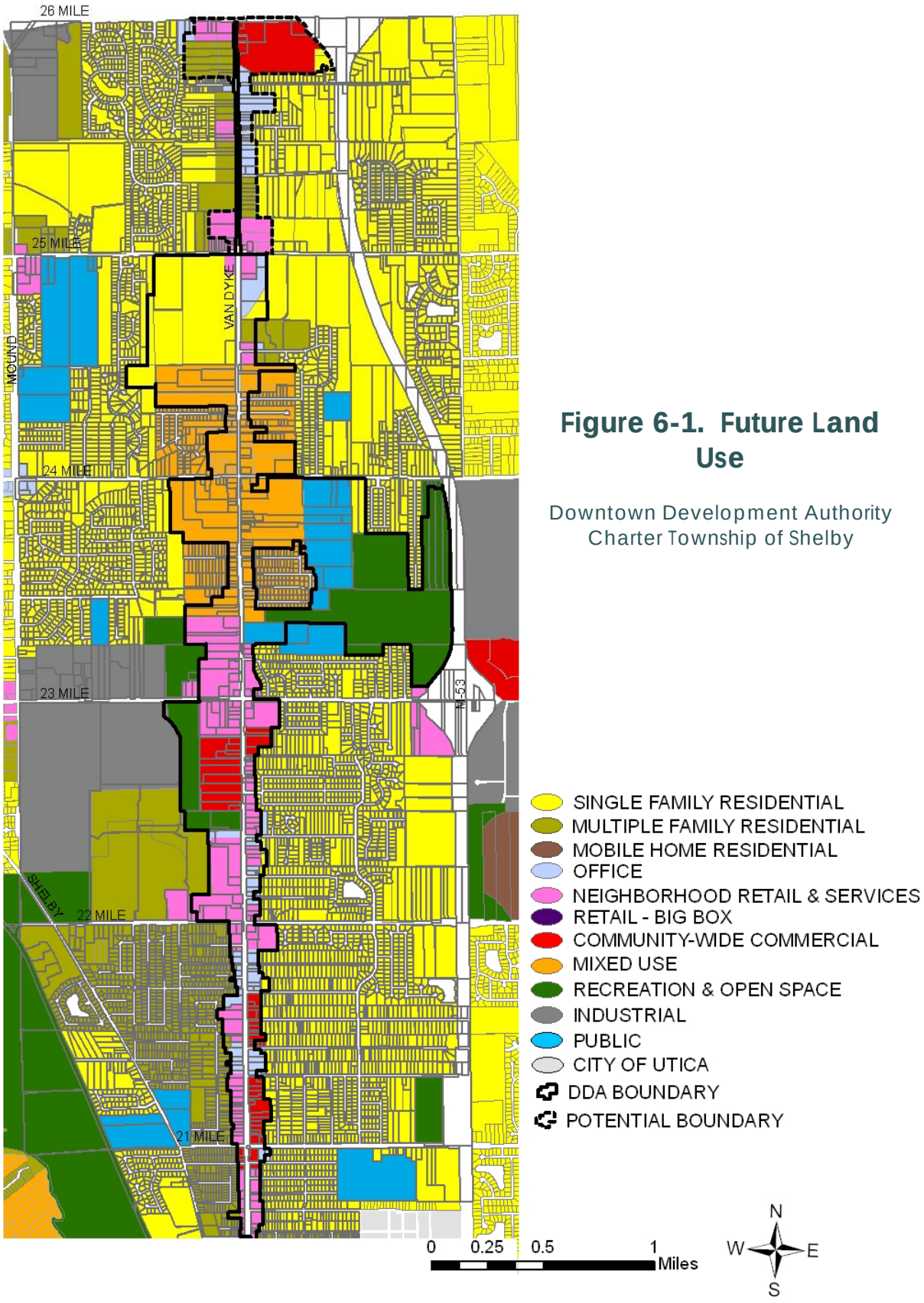

Figure 6-1. Future Land Use

Downtown Development Authority
Charter Township of Shelby

Transportation Demand Trends

Based on a comparison between 1990 and 2000 US Census data, two relevant transportation trends are most significant:

1. The percent of Shelby Township residents who drove to work alone increased, from 88.6% in 1990 to 89.8% in 2000.
2. The average commute time for residents working outside their home also increased, from 24.8 minutes to 27.4 minutes.

This data shows that Shelby Township's commuters during that 10-years span spent an increasing amount of time in their vehicles, and almost 90% of them drove to work alone (as opposed to carpooling, taking public transit, walking, biking, etc.) Van Dyke Avenue carries some of the highest volumes of traffic of any surface road within Shelby Township, so it is reasonable to assume that a significant percentage of those drivers utilize Van Dyke for at least some portion of their daily commute. It will be interesting to evaluate how that data may change in the 2010 Census, given the stagnation in the development of new housing in recent years, increasing rates of unemployment throughout Southeast Michigan, and fluctuations in energy costs. Traffic volumes throughout Southeast Michigan have declined in recent years for a variety of reasons, and it is possible that forthcoming traffic counts may show in overall decline in daily traffic along the Van Dyke Corridor. The most recent traffic volume data available from SEMCOG and the RCMC for Van Dyke within the study area of the Access Management Plan is from between 2005 and 2007. This data may not be recent enough to draw any conclusions with respect to how the recent economic downturn has effected local traffic volumes.

Most of the planned large-scale development within the DDA District is located between 23 Mile Road and 25 Mile Road. It is reasonable to assume that the northerly two miles of the Van Dyke within that District can expect the highest rates of traffic growth within the next ten years. Current traffic volumes along Van Dyke drop off significantly north of 23 Mile Road when compared to those south of 23 Mile. Given the proposed and approved developments pending along Van Dyke north of 23 Mile Road, that portion of the Corridor will see a higher proportion of increases in traffic volumes compared to Van Dyke south of 23 Mile.

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7 Identification of Needed Right-of-Way

Identification of Needed Right-Of-Way

The Road Commission of Macomb County has approved plans to widen Van Dyke Avenue to five lanes between 23 Mile and 24 Mile Roads in 2010. The RCMC's detailed plans for that project include existing and proposed right-of-way. For the most part, proposed right-of-way within the project area is 120 feet (60-foot half right-of-way), however there are some segments where the RCMC proposes only an 86-foot right-of-way (43-foot half right-of-way). It appears the RCMC has acquired much of the proposed right-of-way, but there are still portions where the existing right-of-way is shown on the plans as 66 feet (33-foot half right-of-way). Depending on whether the proposed right-of-way is shown as either 86 of 120 feet, the half right-of-way still to be dedicated to the RCMC varies between 10 feet and 27 feet for certain sections.

Road Commission Highway Engineering staff have stated that they will follow the recommendations of a Township-adopted Access Management Strategy to the extent possible as they reconstruct this section of Van Dyke and rebuild and/or replace existing driveways. Having the Access Management Strategy in place prior to the start of this project should help ensure that the rebuilt roadway will serve as a model of sound access management principals that could be followed as individual sites elsewhere within the Van Dyke Corridor develop and/or redevelop. An approved Access Management Strategy can assist the RCMC in their acquisition of right-of-way for the 2010 widening project between 23 and 24 Mile Road, as well as the future widening of Van Dyke between 24 and 25 Mile Roads.

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8 Access Management Strategy

Access Management Strategy

- Access Management Standards and Methods
- Access Management Strategy Recommendations
- Access Management Strategy Highlights
- Disclaimer
- Access Management Strategy Maps 8-1 through 8-9

Access Management Standards and Methods

Objective The objective of access management is to reduce driveway-related conflicts, crashes, and congestion while maintaining safe and reasonable access to adjoining properties. To achieve this objective:

- Access drives should be minimized in number and maximized in separation.
- Left-turn conflicts (i.e. left-turn interlock) should be avoided by either aligning or sufficiently offsetting driveways on opposite sides of the road.
- Access drives should be shared, and internal cross-access achieved via parking lot connections, frontage roads, backage roads, and shared service drives.
- It must be recognized that reasonable access is not necessarily the same as direct access.

General Methods Consistent with *The Access Management Guidebook* published by the MDOT as well as the Objective above, the following general methods were applied in developing the Van Dyke Corridor Access Management Strategy presented in the next section:

- Wherever possible, same-side driveway spacing was maximized in an attempt to meet the intent of MDOT guidelines. *The Access Management Guidebook* recommends same-side driveway spacing for a 45-mph roadway to be a minimum of 350 feet, measured center-to-center. Meeting this guideline along the most heavily-developed portions of Van Dyke would be virtually impossible, given existing lot sizes and development patterns.
- Driveway spacing relative to major intersections has been maximized. In some cases, access to a side-street is recommended in lieu of a direct connection to Van Dyke. In others, a right-in/right-out only driveway is recommended, to avoid conflicts between vehicles making left turns into or out of a driveway and those stacking in the center left-turn lane to turn from Van Dyke onto a section-line road (21 Mile, 22 Mile, etc.)

- The spacing between driveways on opposite sides of Van Dyke has either been maximized per MDOT guidelines, or offset driveways have been relocated such that they align. This is done primarily to avoid left-turn interlock within the center left-turn lane.

- Neighboring parcels are often shown with cross-access rights and/or shared driveways, particularly where necessary to achieve adequate driveway spacing.

- Within some of the larger tracks of still undeveloped land, a block structure is simulated with rear service drives or new streets connecting to Van Dyke at strategically appropriate locations (e.g, via signalized side-streets).

- Frontage roads are generally limited to areas where rear-access drives are infeasible or in need of supplementing. Frontage roads are operationally as well as aesthetically less desirable than rear-access drives.

- When the opportunity arises, such as upon development or redevelopment of a site, shared driveways should be encouraged.

- All driveways to be constructed or reconstructed should intersect Van Dyke at ninety degrees to enhance visibility for drivers about to enter the road.

Van Dyke Corridor Access Management Strategy Recommendations

Access Management Strategy Implementation

This Strategy is conceptual in nature in order to provide appropriate flexibility in its implementation. It is anticipated that numerous opportunities will present themselves for implementing parts of the Strategy over an extended period of time, no doubt resulting in revisions and refinements at various stages. Throughout the implementation process, it will remain important to adhere to the extent possible to the access management principles and methods outlined in the preceding section. Most implementation opportunities will be one of the following three types:

- *During widening of Van Dyke to five lanes between 23 Mile Road and 25 Mile Road*. Although detailed plans for the portion between 23 Mile and 24 Mile Roads have been completed, the Road Commission staff has stated that the RCMC will incorporate this Access Management Strategy into the construction plans so that future curb cuts will be suitably located. Construction plans for the widening between 24 Mile and 25 Mile Roads have not been developed as of June 2009, but they too should incorporate the recommendations of the Access Management Strategy where feasible. Some of the recommendations of the Access Management Strategy may only be feasible as part of road widening and reconstruction projects.

- *As conceptual site plans are created, reviewed, and approved for the development or redevelopment of property along the Van Dyke Corridor.* The participation of the Downtown Development Authority, Road Commission of Macomb County, Township Planning Department, and Township planning consultants in the development of this Access Management Strategy should help ensure that developers are adequately informed and guided in planning site improvements consistent with this

plan. The participation and cooperation of the Road Commission of Macomb County should encourage the issuance of driveway permits only for applications consistent with this Strategy.

- *As minor improvements are made to individual sites*. As individual property owners within the DDA District become more aware of the various advantages of access management in general and this plan in particular, it is hoped that small steps can be taken to implement the Strategy during site upgrades and maintenance activities. For example, if a parking lot is to be re-paved, that would be an appropriate time to extend a stub to a neighboring property line where a future cross-access connection is planned.

Access Management Strategy Recommendations (Maps 8-1 through 8-9)

Maps 8-1 through 8-9 present the recommendations of the Access Management Strategy graphically. Each map covers approximately a half-mile section of the 4.5-mile DDA District. The nine maps are intended to illustrate recommendations for every existing and approved driveway along Van Dyke Avenue within the study area, proposed locations for new and/or relocated driveways, proposed locations for parking lot connections and service drives, proposed locations for new public roads, and recommendations for non-residential driveways along the intersecting streets within the DDA District. Certain recommendations require additional explanation, and those are indicated on the maps with a numbered box. The number within the box corresponds with a detailed comment on the side of the map.

The symbols shown within Maps 8-1 through 8-9 are defined below:

⟷	Either an existing two-way driveway to remain in its existing location, or the recommended location for a new driveway, service drive, cross-access connection between parking lots, frontage road, or backage road.
X	Existing or approved driveway recommended to be closed.
→	Either an existing one-way driveway, or a recommended one-way driveway. These symbols often include a description such as "IN ONLY".
⇢	Approved (but not-yet constructed) driveway.
3	Number within the box corresponds with a detailed recommendation on the side of the map.
3	Comments shown in blue represent observations (and not recommendations) which will require further study.
	Recommended divided driveway with only permitted turns illustrated; in this example, left-turns in are to be prohibited. (Note: Such illustrations are not intended to be to-scale.)
	Potential traffic signal.
	Existing mid-block traffic signal. (Note: All mile roads are signalized.)

Access Management Strategy Highlights

There are hundreds of recommendations contained within the following nine maps, but some of the more significant recommendations warrant additional discussion. Highlights worthy of elaboration (in no particular order) are as follows:

- At the south end of the Corridor, the lots tend to be both narrower and shallower. This has resulted in excessive driveways, and it also tends to limit the potential for ambitious access management. To mitigate the sight-distance problems associated with simultaneous exiting from closely spaced driveways – while serving merchants' interest in expediting site ingress – the plan recommends converting some driveways to IN-only operation, while facilitating egress via cross-access connections to existing side streets. See, for example, the recommended treatments along the east side of Van Dyke between Nancy and Messmore Road (south of 21 Mile Road).

- Due to greater lot depth and other factors, the east side of Van Dyke between 21 Mile and 22 Mile is well-suited to the provision of backage roads. Note, for example, the recommended connections over an extended distance between 21 Mile and Arby's (passing through the middle of the shopping center with Aldi's grocery). In contrast, the lots along the west side of the road in this area are both shallower and of irregular depth, making backage roads less practical and limited-distance frontage roads more practical.

- At Van Dyke's intersections with both 21 Mile and 22 Mile Roads, it is recommended that most of the nearest commercial driveways on both the north- and southbound approaches be channelized with raised islands to deter entering and exiting left turns near or through signal-related traffic backups. This treatment is also recommended in a few other locations to avoid entering left-turn interlock in the center lane of Van Dyke; in some cases, the channelized island is designed to only prohibit inbound left turns.

- The number of direct-access driveways along an arterial can be reduced not only by maximizing cross access between sites, but also by providing driveway connections to side streets that are (or will likely in the future be) signalized. A good example of this concept is found at Van Dyke and Central Park Boulevard North. The traffic impact study for Central Park found that this intersection will likely need a traffic signal in the future. The effectiveness of that signal would be maximized if all of the commercial outlots along the west side of Van Dyke are well-connected with each other and with the boulevard. Also, adding a fourth (east) leg to this future signalized intersection, along with cross-access connections, would improve access for already-developed properties along the east side of the road (e.g., Old Towne Plaza).

- This plan recommends a fairly extensive network of frontage and backage roads to serve the large commercial area along the west side of Van Dyke just south of 23 Mile Road. Also recommended are cross-access connections between this area and the long dead-end driveway serving the adjacent Township play fields. Given the location of the fire station on 23 Mile just west of this area, these rear access drives should significantly reduce response times and improve public safety for such facilities as the Maxx Play Fun Center and Club Monte Carlo.

- Another good example of maximizing the utility of mid-section traffic signals occurs between 23 Mile and 24 Mile Roads, where the plan recommends connecting numerous properties on both sides of

Van Dyke to the existing signal serving Shelby Junior High School and the Township's south campus. Egress from the neighborhood north of the school would be significantly improved by extending Cameo Drive south to the school driveway. Along the west side of Van Dyke, the recommended network of frontage and backage roads would allow business employees and guests access to both main roads: to Van Dyke via the Stone Ridge Professional Village driveway at the school signal, or to 23 Mile Road via the Kmart shopping center.

- Just south of 24 Mile Road, the plan recommends an updated version of the 1999 Township-approved conceptual road plan for Shelby Center. The newly constructed south municipal driveway would be extended north and west to connect to 24 Mile opposite Ruann Drive. As previously planned and subsequently acknowledged, the intersection of this loop road with Van Dyke is a likely future signal location. To make this signal as effective as possible in limiting the number of direct-access driveways in the area, the current plan recommends backage roads on both side of Van Dyke, with the one on the east side serving outlots from Smiley to the front yard of the municipal campus, and the one on the west side serving all businesses between Smiley and 24 Mile Road. Two east-west local streets are also proposed, one extending the driveway for John's Lumber west to the Ruann extension, and one extending from Hellebuyck's west to the Ruann extension (along the south edge of the approved Shire of Shelby).

- Pine Creek Drive is a residential cul de sac on the east side of Van Dyke about midway between 24 Mile and 25 Mile Roads. The subdivision itself has a very short frontage on Van Dyke, sandwiched between commercial properties to both the north and south. The frontage commercial lot to the south has significant Van Dyke frontage of its own, but the one to the north is only about 200 feet wide and occupied by the Shelby Professional Village (SPV). Unfortunately, the sole driveway for SPV is very close to Pine Creek Drive, likely creating several operational and safety problems; for example, drivers attempting to exit simultaneously would have difficulty seeing past each other. The plan recommends providing shared access for the SPV and Liberty Auto wash directly north of it and closing the existing SPV driveway, an action that should benefit drivers entering as well as exiting both the Pine Creek subdivision and the SPV. Both the SPV and the undeveloped lot south of Pine Creek Drive could have gated emergency access onto Pine Creek.

- Another excellent example of a win-win situation relative to cross access is illustrated in the southeast corner of Van Dyke and 25 Mile Road, home to three relatively recently constructed, complementary uses: a funeral home, a florist, and a banquet hall. The plan recommends cross access between all three uses (as well as the English Gardens office building), allowing visitors and delivery vehicles to travel between sites without having to wait to exit onto Van Dyke, travel a short distance to one of the other uses, and potentially wait again to turn left into that other use. Removing such local travel from Van Dyke would also reduce interference with through traffic, thereby benefiting the general motoring public as well.

- Across Van Dyke from the above uses is the planned Eagle Creek Village. A main access road for that large mixed-use development will be Village Boulevard. Plans indicate that the entering side of that boulevard will be about 77 feet north of the south driveway for Palazzo Grande Banquet Center, creating an entering left-turn interlock in the center of Van Dyke. Mitigating the interlock by prohibiting left turns into the existing banquet hall driveway would be impractical, since vehicles from the north wanting to drop off or pick up visitors at the hall's front door would naturally want to use that driveway

(most vehicle passenger doors being on the right side, requiring a counterclockwise circulation pattern on-site).

Disclaimer

All recommendations shown on Maps 8-1 through 8-9 have been carefully developed by an experienced Transportation Engineer through a process of on-site evaluation and review of recent, high-resolution aerial photography. The recommendations have been thoroughly reviewed by staff of the Road Commission of Macomb County's Highway Engineering Department, as well as the Shelby Township Planning Director, and their comments and suggestions have been incorporated wherever possible. While the following represent the ideal or optimal improvements for the purpose of realizing the goals of access management, it must be recognized that each will have to be re-evaluated at a site-specific level upon their implementation, and adjustments may be necessary upon the development or re-development of specific sites. The following recommendations are meant to serve as a guide, and are not necessarily intended as a mandate for site-specific development along the Van Dyke Corridor.

9 Design Guidelines

Design Guidelines

- Proposed Road Improvements
- Bus, Bicycle, and Pedestrian
- Visual Character and Landscape

Proposed Road Improvements

The Access Management Strategy has detailed the Road Commission's plans for widening Van Dyke to five lanes between 23 and 24 Mile Roads in 2010, and between 24 and 25 Mile Roads when funding becomes available. The Van Dyke Corridor Streetscape Concept Plan provided detailed recommendations for improvements to the visual character of the Corridor. The Visual Character and Landscape portion of this section provides a summary of those recommendations.

Bus, Bicycle, and Pedestrian

Implementing the recommendations of the Access Management Strategy will not only create a safer environment for motorists along the Van Dyke Corridor, but for pedestrians and cyclists as well. Reducing the number of driveways along Van Dyke reduces the number of potential conflict points between vehicles turning in and out of driveways and the pedestrians/cyclists utilizing the non-motorized pathways along Van Dyke. Reducing the number of driveways also increases the amount of potential greenspace along Van Dyke; that greenspace can be utilized for amenities such as trees, landscaping, street furniture, and other traffic-calming features which create a buffer between the road and the non-motorized pathways.

Reducing the number of driveways along Van Dyke and increasing the amount of potential greenspace also creates opportunities for enhanced public transportation infrastructure. In lieu of a driveway, a covered bus shelter and/or bus turnout could be provided. The regional SMART Ride bus service currently has a regular route which travels along Van Dyke as far north as 23 Mile Road. The Downtown Development Authority and Shelby Township could explore opportunities for cooperating with SMART to fund such public transit infrastructure improvements.

Visual Character and Landscape

In 2008, the Downtown Development Authority created the Van Dyke Corridor Streetscape Concept Plan to create an image for the corridor and begin defining it as a "place." The design standards contained in the study call for simple, repetitive pedestrian-scaled elements that will be easy to install and maintain within the Van Dyke Avenue right-of-way and at the front edge of properties along the corridor. The report notes that future standards will be needed for site-specific issues including building design, business signage and parking areas. A corridor-wide access management plan was also suggested to improve the appearance and function of the corridor by illustrating district-wide improvements to traffic and property access.

A site inventory conducted along the 4.5-mile stretch of Van Dyke Avenue in the DDA district reveals the variety of right-of-way width and setbacks along the corridor. In some cases, there is limited space with which to make improvements. Analysis of the corridor suggests numerous enhancement opportunities: improving pedestrian sidewalks, providing safe crosswalks, adding appropriate right-of-way landscaping, and streetscape amenities. Three specific schemes serve as conceptual guides for the variety of right-of-way conditions.

Pedestrian Sidewalks

The analysis of existing conditions finds that there are many segments of missing sidewalk, or sidewalk in poor repair along the corridor. The plan recommends a minimum of 6 ft.-wide sidewalks throughout the corridor. Parking buffers are needed to prevent car overhang onto the public sidewalks and protect pedestrians.

Crosswalks

The plan notes that crosswalks are needed throughout the corridor to provide safety for pedestrians at driveway entries and street intersections. Brick pavers and colored materials are common strategies used to draw attention to these areas of safety.

Landscaping

Simple, well-maintained landscaping enhances the appearance of buildings and the corridor. Throughout the corridor, unnecessary paving can be replaced with appropriate landscaping that will provide shade, reduce water runoff and buffer parking. Preliminary plant lists include recommendations for easy-to-maintain deciduous trees, ornamental trees, hedges, vines, shrubs and perennials.

Streetscape Amenities

- Street lighting is recommended along the corridor. The plan identifies a simple, classic street lamp that is able to support banners and provide electrical outlets for decorative lighting options.
- Benches and trash receptacles were selected for their timeless appearance and ease of maintenance. These amenities should be located throughout the corridor.
- Sidewalk material should be natural-colored concrete with a brushed finish and picture-frame border
- Parking buffers should generally be masonry screenwalls with additional landscaping added. Natural buffers will be considered where appropriate.
- Public art, drinking fountains and wayfinding signage enhance the pedestrian experience and will be added where appropriate. Bike racks were also noted as an amenity for the corridor.

Maintenance

High-quality maintenance of any streetscape is a vital element in protecting the investment expenditures for public improvements. The plan recommends the development of maintenance standards for sidewalks, lighting, street furniture, landscaping. Landscaping maintenance should address irrigation, mulching, pest control, pruning and weeding.

10 Implementation Plan

Implementation Plan

- Road Improvements
- Access Management Regulations
- Intergovernmental Cooperation
- DDA Involvement

Road Improvements

The Road Commission of Macomb County has sole jurisdiction over Van Dyke Avenue within Macomb County, including all road improvement projects. The RCMC has developed detailed plans to widen Van Dyke to five lanes from 23 to 24 Mile Roads, and is scheduled to begin that project in early 2010. The SEMCOG's Transportation Improvement Plan for Southeast Michigan 2008-2011 calls for the widening of Van Dyke between 24 and 25 Mile Roads; based on our conversations with the RCMC, that project would not start until 2011 at the earliest.

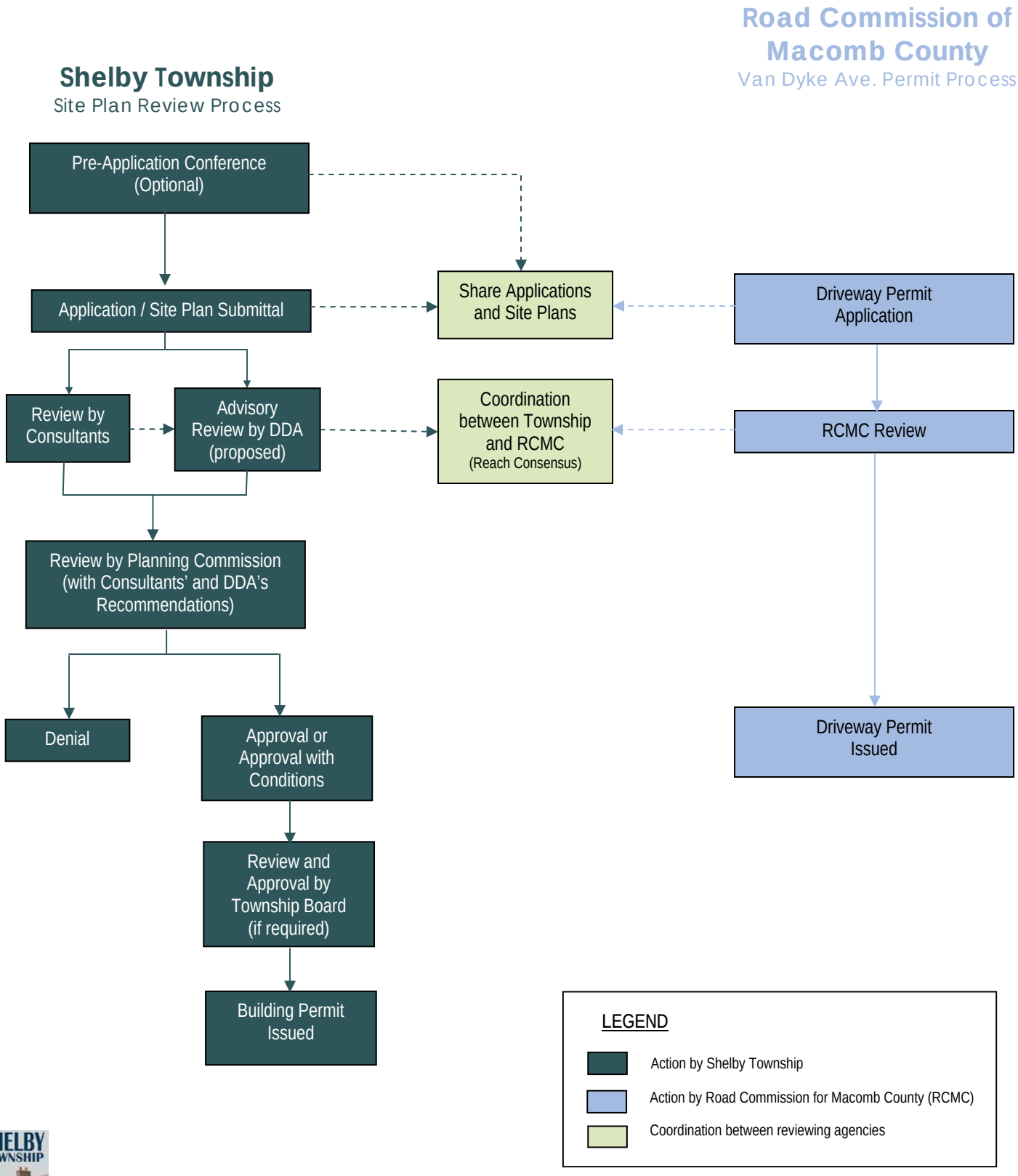
The RCMC embraces the concepts and strategies of the MDOT's *Access Management Guidebook*, and has expressed a commitment to cooperate with Shelby Township in realizing the vision of an adopted Van Dyke Corridor Access Management Strategy. While the design of the road expansion between 23 and 24 Mile Roads has been completed, the location and design of the driveways to be replaced and/or reconstructed has yet to be finalized. The RCMC has stated that they would utilize the recommendations of an adopted Van Dyke Corridor Access Management Strategy inasmuch as possible in their right-of-way acquisitions and plans for replacing existing commercial driveways within that segment. Once completed, that portion of Van Dyke can serve as a model for the remainder of the Corridor in terms of the strategies of sound access management and the positive results which can be obtained.

Access Management Regulations

The most effective tool to implement the recommendations of the Access Management Strategy on a site-by-site basis is the Shelby Township Zoning Ordinance. Access Management standards within the Zoning Ordinance will result in the application of the most up-to-date access management standards for the Van Dyke Corridor. Many communities comparable to Shelby Township have adopted an Access Management section within their Zoning Ordinance. A specific tool which could help the Township to implement the Access Management Strategy is an overlay zone, which could be used to place regulations on property within the Van Dyke Corridor in order to control driveway spacing, design, and location. New Access Management standards which could be adopted into the Shelby Township Zoning Ordinance as part of a new overlay zone include:

- Same-side driveway spacing standards
- Opposite-side driveway spacing standards
- Spacing standards relative to intersections
- Driveway design standards (width, length, radii, grade, angle of intersection, etc.)
- Boulevard driveway design standards (alignment, median design, etc.)

Figure 10-1. Interagency Site Plan Review Process



- Road improvement standards (right-turn lanes, deceleration tapers, passing lanes, etc.)
- Standards for number and design of exiting lanes for a commercial driveway
- Traffic control devices standards (signs, pavement markings, pavement striping)
- Cross-access design standards
- Cross-access easement requirements
- Parking lot design standards
- Service drive/alley/backage road/frontage road design standards

A model overlay zone included in MDOT's *Access Management Guidebook* may be adaptable to the unique characteristics of the Van Dyke Corridor.

Intergovernmental Cooperation

To better coordinate the review and approval of driveway permits, cross access agreements, and shared service drives, the interagency site plan review process illustrated by Figure 10-1 has been developed. The intent of this review process is to encourage cooperation, coordination, and information sharing between the DDA, Shelby Township, and the Road Commission of Macomb County as development and redevelopment occurs within the Van Dyke Corridor. The goal of such a coordinated review effort is more efficient and effective implementation of the Van Dyke Corridor Access Management Strategy's recommendations. The Township and the Road Commission could each enter into an agreement via a Memorandum of Understanding, whereby the two bodies agree to voluntarily coordinate planning, land use, driveway permit, and road improvement decisions to implement the Van Dyke Corridor Access Management Strategy.

DDA Involvement

Effectively managing access along the Van Dyke Corridor is a central element in the DDA's vision for an identifiable commercial core for Shelby Township. Along with the Road Commission of Macomb County, the Township Planning Department, and the Township Planning Commission, the DDA could play a leading role in realizing the goals and objectives of the Access Management Strategy. The DDA, based on its funding mechanism, is able to focus on projects and activities that improve the District, thereby increasing property values and raising additional tax capture that again can be spent within the District. Efforts to assist the Township with implementation of an Access Management Strategy may include a combination of education, awareness, and incentives:

- Education - Opportunities exist to educate property owners on access management and share ideas found within the Access Management Strategy at a wide variety of DDA meetings, including Board meetings, committee meetings, public forums and workshops. It should be made clear that while access management improvements are often implemented as properties are redeveloped, that is not the only time improvements can take place. Meetings and workshops will emphasize the goals of access management, the existing deficiencies and how those deficiencies affect both individual property owners as well as the entire district. Strategies for improvement will be stressed, particularly by empowering individual property owners with the knowledge they need to see how improving their sites, along with their neighbors' improvements will enhance the corridor.

- Promotion - The DDA is able to develop clear, professional, informative literature that can be distributed directly to business-owners, included on the website, and available at educational workshops as well as within the Shelby Township Planning Department. Again, emphasis will be placed on how individual property owners might work with their neighbors to positively impact their portion of Van Dyke.

- Cost-sharing - The DDA has the authority to offer matching grants to encourage improvements within the district that are based on identified goals and certain guidelines. In this case, an Access Management Improvement Grant might be developed to encourage property owners to make individual or joint improvements to access that also include landscaping and other front yard enhancements. Such grants are typically 50-50 matching grants, up to a certain dollar amount.

- Financing - Another DDA tool to encourage access management within the district is the creation of financing programs that are tied to specific types of improvements as noted above with the grant program. For example, the DDA might consider creating a revolving loan fund and/or low-interest loans to property-owners for access management improvements. Such loans may be administered by the DDA or in partnership with local lending institutions.

- Model Agreements - To facilitate the development of shared easements and he DDA may consider developing a toolkit of model agreements that make it easier for property owners to understand how they can legally share access or easements with adjoining property owners. Such agreements may include easement agreements, shared access agreements and joint maintenance agreements and would save time and money for property owners who might then be more willing to make improvements while protecting their interests.

- Model Demonstration Project—The DDA and Shelby Township might consider how working together on a joint project could demonstrate some of the strategies outlined. A potential site has been identified near the Municipal Offices that would provide an interesting opportunity for education, promotion, and development of a public-private partnership.

- Administrative review - Given the DDA's interest and growing experience with developing goals, objectives and strategies to revitalize the Van Dyke Corridor, their input in the development review process is valuable. The Township and Planning Commission may wish to consider how best to facilitate DDA review while not slowing down the overall turnaround time. The already-established DDA Design Committee may be the ideal fit for this type of review and comment and perhaps could be added into the period for consultants' review.

11 Monitoring and Enforcement Program

Monitoring and Enforcement Program

The Downtown Development Authority and Shelby Township could coordinate efforts to develop an Access Management Strategy Monitoring and Enforcement Program. This program could include a number of components, including the following:

- An advisory review by the DDA Board of site plans within the DDA district prior review by the Planning Commission.

- An annual review by the Access Management Advisory Committee, Township staff, and the Road Commission of driveway permits issued relative to the recommendations of the Access Management Strategy to ensure that the recommendations of the Strategy are being followed. This annual review could be an opportunity to update the recommendations of the Strategy (if necessary) as situations evolve within the DDA District.

- Site inspection by Township authorities specific to access management prior to a final Certificate of Occupancy. This inspection could include verification that proper traffic control signage (Right Turn Only, One Way), pavement marking and striping, and wayfinding signs have been installed in their approved locations at the correct height and orientation.

Should the Access Management Strategy be adopted by the Township and access management standards be added to the Township Zoning Ordinance, the DDA could also cooperate with Shelby Township - particularly the Code Enforcement Office - in ensuring that the recommendations of the Access Management Strategy are maintained and enforced once they are constructed. This enforcement program could potentially include:

- Inspection of cross-access drives and shared service drives to ensure that they remain open and unencumbered by snow-piles, parked vehicles, debris, etc.

- Repercussions for property-owners that purposefully close approved cross-connections (via chains, gates, bollards, etc.) This might involve a forum for resolving the disputes between neighboring property-owners before those disputes lead to closures.

- Inspection of traffic-control signs on private property (Right Turn Only, One-Way, etc.) to ensure that they remain visible and properly maintained. Over time,

these signs can be removed by property owners or knocked down and never replaced unless there is an enforcement mechanism.

- Periodic inspection of signage, striping, and pavement markings within the public right-of-way that were required as part of an approved site plan. Such improvements, which are usually made by the developer's private contractor with permission from the Road Commission, are often times not maintained by the Road Commission once installed.

- Cooperation with law enforcement authorities (Shelby Township Police Dept., Macomb County Sheriff, etc.) to ensure enforcement of traffic control signage installed within the public right-of-way. This could include signs and pavement striping prohibiting left-turns into commercial driveways.

- Review of access management implementation to determine whether it is achieving its desired objective and if certain situations can be improved.

Appendix

The appendix material will include model zoning ordinance amendments pertaining to access management if doing so is seemed appropriate by the Advisory Committee.