City of Hilliard
Thoroughfare Plan

Prepared by
Trans Associates Engineering Consultants, Inc., and
Stantec Consulting Services Inc.

October 2011

Thoroughfare Plan Table of Contents

Thoroughfare Plan

Hilliard's Thoroughfare Plan is comprised of a map (Figure 1, page 2) and corresponding Roadway Characteristics Table (Table 1, pages 3 through 6). These elements, particularly Table 1, detail the characteristics of thoroughfares within the study area of the Comprehensive Plan and Hilliard's Thoroughfare Plan. Items referenced include, among other specifications, specific design designations (Figure 2, pages 7 through 9) and access management standards defined in the Access Management Plan Technical Appendix of this document.

For more information about specifics of the Thoroughfare Plan, reference Technical Appendix: Thoroughfare Plan section of this document.

For more information about the specifics of the Access Management Plan, reference Technical Appendix: Access Management Plan section of this document.

Figure 1: Thoroughfare Plan Map

(Note: The exhibit referenced above is provided on the following page)

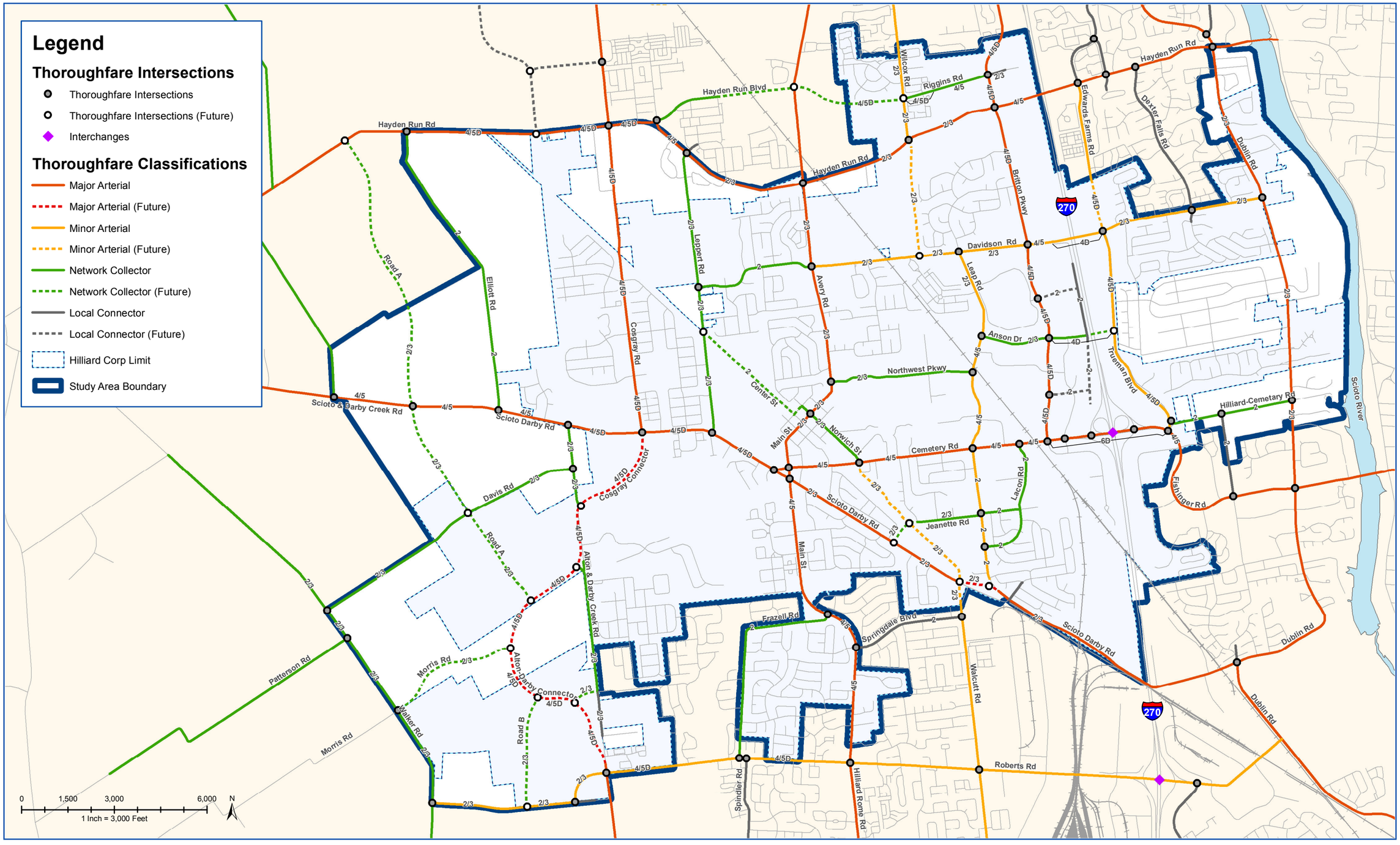

Legend
Thoroughfare Intersections
Thoroughfare Intersections
Thoroughfare Intersections (Future)
Interchanges
Thoroughfare Classifications
Major Arterial
Major Arterial (Future)
Minor Arterial
Minor Arterial (Future)
Network Collector
Network Collector (Future)
Local Connector
Local Connector (Future)
Hilliard Corp Limit
Study Area Boundary
Hayden Run Rd
Hayden Run Blvd
Wilcox Rd
Riggins Rd
Edwards Farms Rd
Dexter Falls Rd
Dublin Rd
Britton Pkwy
270
Davidson Rd
Leap Rd
Avery Rd
Leppert Rd
Cosgray Rd
Elliot Rd
Road A
Scioto & Darby Creek Rd
Scioto Darby Rd
Center St
Main St
Norwich St
Northwest Pkwy
Anson Dr
Trueman Blvd
Cemetery Rd
Hilliard-Cemetary Rd
Lacon Rd
Fishinger Rd
Scioto River
Jeanette Rd
Cosgray Connector
Davis Rd
Allen & Darby Creek Rd
Allen Darby Connector
Road B
Morris Rd
Patterson Rd
Walker Rd
Frazell Rd
Springdale Blvd
Walcutt Rd
Roberts Rd
Spindler Rd
Hilliard Rome Rd
0
1,500
3,000
6,000
N
1 Inch = 3,000 Feet

Table 1: Roadway Characteristics Table

(Note: The exhibit referenced above is provided on the following page)

Table 1: Roadway Characteristics Table

Hilliard Throroughfare Plan -- Hilliard Comprehensive Plan

Roadway	Limits	Current Jurisdiction	Present Condition		Thoroughfare Plan						Comments
			Number of Vehicular Lanes	Ped./Bike Facilities	Functional Classification	Number of Vehicular Lanes	Ped./Bike Facilities	Design Designation	Access Control	R-O-W (Minimum)	
Alton & Darby Creek Road	Cosgray-Alton Connector to Scioto Darby Creek Road	Hilliard	2/3	N/A	Network Collector	2/3	2 M.U.P.'s & On-Road Facility	4	E	80'	
Alton & Darby Creek Road	Cosgray-Alton Connector to Cosgray-Alton Connector	Hilliard	2/3	N/A	Network Collector	2/3	2 M.U.P.'s & On-Road Facility	4	F	80'	
Anson Drive	Leap Road to Britton Parkway	Hilliard	2/3	2 M.U.P. and Sharrows	Network Collector	2/3	2 M.U.P.'s & On-Road Facility	4	C	80'	
Anson Drive Extension	Lyman Drive to Trueman Boulevard	Hilliard	N/A	N/A	Network Collector	4D	2 M.U.P.'s & On-Road Facility	2	A	120'-160'	Up to 160' for embankment closest to I-270
Anson Drive Extension	Britton Parkway to Lyman Drive	Hilliard	N/A	N/A	Network Collector	4D	2 M.U.P.'s & On-Road Facility	2	C	100'-160'	Up to 160' for embank-ment closest to I-270
Avery Road	Hayden Run Road to Davidson Road	Hilliard/County	2/3	Walk(west)/ M.U.P.(east)	Major Arterial	2/3	2 M.U.P.'s & On-Road Facility	4	E	80'	
Avery Road/Main Street	Davidson Road to Cemetery Road	Hilliard	2/3	2 Walks	Major Arterial	2/3	2 M.U.P.'s & On-Road Facility	4	G	80'	
Britton Parkway	Hilliard Corp Line to Hayden Run Road	Hilliard	4/5D	Walk (east)/ M.U.P.(west)	Major Arterial	4/5D	2 M.U.P.'s & On-Road Facility	2	B	120'	
Britton Parkway	Hayden Run Road to Davidson Road	Hilliard	2/3	M.U.P.(west)	Major Arterial	4/5D	2 M.U.P.'s & On-Road Facility	2	B	120'	
Britton Parkway	Davidson Road to Anson Drive	Hilliard	4/5D	Walk (east)/ M.U.P. (west) & Sharrows	Major Arterial	4/5D	2 M.U.P.'s & On-Road Facility	2	B	120'	
Britton Parkway	Anson Drive to Cemetery Road	Hilliard	4/5D	Walk (east)/ M.U.P.(west)	Major Arterial	4/5D	2 M.U.P.'s & On-Road Facility	2	B	120'	If land use utilizes 0' setback, should be Urban Streetscape
Cemetery Road	Britton Parkway to I-270	Hilliard	4/5	2 Walk (to Lyman)	Major Arterial	6D	2 M.U.P.'s & On-Road Facility	1	A	130'	
Cemetery Road	I-270 to Trueman Boulevard	Hilliard	4D	N/A	Major Arterial	6D	2 M.U.P.'s & On-Road Facility	1	A	130'	
Cemetery Road	Scioto Darby Road to Norwich Street	Hilliard	2/3	Walks	Major Arterial	4/5	2 M.U.P.'s & On-Road Facility	3	C	100'	
Cemetery Road	Norwich Street to Leap Road	Hilliard	4/5	Walks	Major Arterial	4/5	2 M.U.P.'s & On-Road Facility	3	C	100'	
Cemetery Road	Leap Road to Britton Parkway	Hilliard	4/5	Walks	Major Arterial	4/5	2 M.U.P.'s & On-Road Facility	3	C	100'	
Center Street (including Extension)	Leppert Road to Main Street	Hilliard	2	N/A	Network Collector	2	2 Walks / On-Road Facility (Heritage Trail)	10	F	60'	
Cosgray - Alton Connector	Scioto Darby Road to Roberts Road	N/A	N/A	N/A	Major Arterial	4/5D	2 M.U.P.'s & On-Road Facility	9	D	200'	
Cosgray Road	Hayden Run Road to Scioto Darby Road	County/Hilliard	2	M.U.P. (partial	Major Arterial	4/5D	2 M.U.P.'s & On-Road Facility	3	D	120'	

Table 1: Roadway Characteristics Table

Hilliard Throroughfare Plan -- Hilliard Comprehensive Plan

Roadway	Limits	Current Jurisdiction	Present Condition		Thoroughfare Plan						Comments
			Number of Vehicular Lanes	Ped./Bike Facilities	Functional Classification	Number of Vehicular Lanes	Ped./Bike Facilities	Design Designation	Access Control	R-O-W (Minimum)	
Davidson Road	Lyman Drive to Trueman Boulevard	Hilliard	2/3	Walk (south)	Minor Arterial	4D	2 M.U.P.'s & On-Road Facility	2	A	120'	
Davidson Road	Britton Parkway to Lyman Drive	Hilliard	2/3	Walk (south)	Minor Arterial	4/5	2 M.U.P.'s & On-Road Facility	3	C	100	
Davidson Road	Avery Road to Britton Parkway	Hilliard	2/3	Walk (south)/ M.U.P(north)	Minor Arterial	2/3	2 M.U.P.'s & On-Road Facility	4	E	80'	
Davidson Road	Trueman Boulevard to Dublin Road	Hilliard	2/3	Walk (south)	Minor Arterial	2/3	2 M.U.P.'s & On-Road Facility	4	E	80'	
Davidson Road	Leppert Road to Avery Road	Hilliard	2	2 Walks	Network Collector	2	2 Walks	5	F	60'	
Davis Road	Walker Road to Alton & Darby Creek Road	Hilliard/County	2	N/A	Network Collector	2/3	2 M.U.P.'s & On-Road Facility	7	E	100'	
Dublin Road	Fishinger Road to Hayden Run Road	Hilliard/County	2/3	N/A	Minor Arterial	2/3	Bike Lanes/ Paved Shoulders	4	E	100'	
Edgewyn Avenue	Leap Road to Lacon Road	Hilliard	2	Walk (south)	Network Collector	2	2 Walks	5	F	60'	
Edward Farms Drive Extension	Hilliard Corp Line to Davidson Road	Hilliard	N/A	N/A	Minor Arterial	4/5D	2 M.U.P.'s & On-Road Facility	2	B	120	
Elliot Road	Scioto & Darby Creek Road to Hayden Run Road	Hilliard/County	2	N/A	Network Collector	2/3	2 M.U.P.'s & On-Road Facility	7	E	100'	
Fishinger Boulevard	Cemetery Road/Trueman Boulevard to Smiley Road	Hilliard/Columbus/ County	4/5D	Walk (partial)	Major Arterial	4/5D	2 M.U.P.'s & On-Road Facility	2	B	120'	
Frazell Road	Tinapple Road to Roberts Road	Hilliard	2	N/A	Network Collector	2	2 M.U.P.'s & On-Road Facility	6	F	80'	
Hayden Run Boulevard	Avery Road to Wilcox Road	Hilliard/Columbus	N/A	N/A	Network Collector	4/5D	2 M.U.P.'s & On-Road Facility	3	D	120'	
Hayden Run Road	Britton Parkway to Dublin Road	Hilliard/Columbus/ County	2/3	N/A	Major Arterial	4/5	2 M.U.P.'s & On-Road Facility	3	C	100'	
Hayden Run Road	Elliot Road to Cosgray Road	Hilliard/Columbus/ County	N/A	N/A	Network Collector	4/5D	2 M.U.P.'s & On-Road Facility	3	D	120'	
Hayden Run Road	Avery Road to Britton Parkway	Hilliard/ County	2	N/A	Major Arterial	2/3	2 M.U.P.'s & On-Road Facility	7	E	100'	
Hilliard Cemetery Road	Trueman Boulevard to Dublin Road	Hilliard/ County	2	N/A	Network Collector	2	2 M.U.P.'s & On-Road Facility	9	F	60'	
Jeanette Road	Scioto Darby Road to Leap Road	Hilliard	2	2 Walks (partial)	Network Collector	2/3	2 M.U.P.'s & On-Road Facility	4	G	80'	
Lacon Road	Cemetery Road to Leap Road	Hilliard	2	2 Walks (partial)	Network Collector	2	2 Walks / On-Road Facility	5	F	60'	

Table 1: Roadway Characteristics Table

Hilliard Throroughfare Plan -- Hilliard Comprehensive Plan

Roadway	Limits	Current Jurisdiction	Present Condition		Thoroughfare Plan						Comments
			Number of Vehicular Lanes	Ped./Bike Facilities	Functional Classification	Number of Vehicular Lanes	Ped./Bike Facilities	Design Designation	Access Control	R-O-W (Minimum)	
Leap Road	Anson Drive to Cemetery Road	Hilliard	4/5	Walk (east)/ M.U.P.(west)	Minor Arterial	4/5	2 M.U.P.'s & On-Road Facility	3	C	100'	
Leap Road	Davidson Road to Anson Drive	Hilliard	2/3	Walk(east)/ M.U.P(west)& Sharrows	Minor Arterial	2/3	2 M.U.P.'s & On-Road Facility	4	E	80'	
Leap Road	Cemetery Road to Scioto Darby Road	Hilliard	2	Walk (east)	Minor Arterial	2/3	2 M.U.P.'s & On-Road Facility	4	F	80'	
Leppert Road	Hayden Run Road to Scioto Darby Road	County/Hilliard	2	N/A	Network Collector	2/3	2 M.U.P.'s & On-Road Facility	4	D	80'	
Main Street/Hilliard-Rome Road	Cemetery Road to Roberts Road	Hilliard/County	4/5	2 Walks / Sharrows	Major Arterial	4/5	2 M.U.P.'s & On-Road Facility	3	E	100'	
Morris Road	Walker Road to Alton - Darby Connector	Hilliard/County	N/A	N/A	Network Collector	2/3	2 M.U.P.'s & On-Road Facility	7	E	100'	
Northwest Parkway	Avery Road to Leap Road	Hilliard	2/3	Walk / M.U.P. & Sharrows	Network Collector	2/3	Walk / M.U.P. & On-Road Facility	4	E	80'	
Norwich Street	Main Street to Cemetery Road	Hilliard	2/3	2 Walks	Network Collector	2	2 Walks / On-Road Facility	10	F	60'	
Norwich Street Extension	Cemetery Road to Scioto Darby Road	Hilliard/County	N/A	N/A	Network Collector	2	2 Walks/ M.U.P (Heritage Trail) & On-Road Facility	10	G	60'	
Riggins Road	Wilcox Road to Britton Parkway	Hilliard	4/5	Walk(north)/ M.U.P(south)	Network Collector	4/5D	2 M.U.P.'s & On-Road Facility	3	D	120'	
Road A (New Collector Road in Darby Focus Area)	Hayden Run Road to Cosgray-Alton Connector	N/A	N/A	N/A	Network Collector	2/3	2 M.U.P.'s & On-Road Facility	7	E	100'	
Road B (New Collector Road in Darby Focus Area)	Cosgray-Alton Connector to Roberts Road	N/A	N/A	N/A	Network Collector	2/3	2 M.U.P.'s & On-Road Facility	7	E	100'	
Roberts Road	Alton & Darby Creek Road to Hilliard Rome Road	Hilliard/ Columbus/ County	2	N/A	Minor Arterial	4/5D	2 Walks/On-Road Facility	3	D	100'	
Roberts Road	Walker Road to Alton & Darby Creek Road	Hilliard/County	2	Bike Lanes	Network Collector	2/3	Bike Lanes/ Paved Shoulders	7	E	100'	
Scioto Darby Road	Alton & Darby Creek Road to Main Street	Hilliard	2/3	Walk (partial)	Major Arterial	4/5D	2 M.U.P.'s & On-Road Facility	3	D	120'	
Scioto Darby Road	Langton Road to Alton & Darby Creek Road	Hilliard/ County	2/3	N/A	Major Arterial	4/5	2 M.U.P.'s & On-Road Facility	3	E	120'	
Scioto Darby Road	Main Street to Leap	Hilliard	2	N/A	Minor Arterial	2/3	2 M.U.P.'s & On-Road Facility	4	F	80'	
Scioto Darby Road	Leap to I-270	Hilliard/Columbus	2	N/A	Minor Arterial	2/3	2 M.U.P.'s & On-Road Facility	7	F	100'	
Smiley Road	Hilliard-Cemetery Road to Fishinger Road	County	2	N/A	Network Collector	2	2 M.U.P.'s & On-Road Facility	9	F	60'	

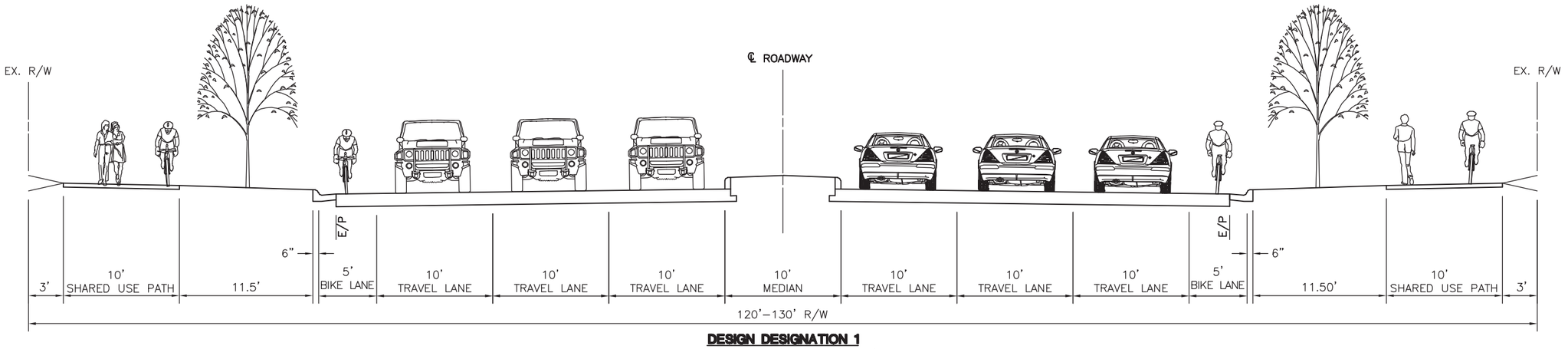
Table 1: Roadway Characteristics Table

Hilliard Throroughfare Plan -- Hilliard Comprehensive Plan

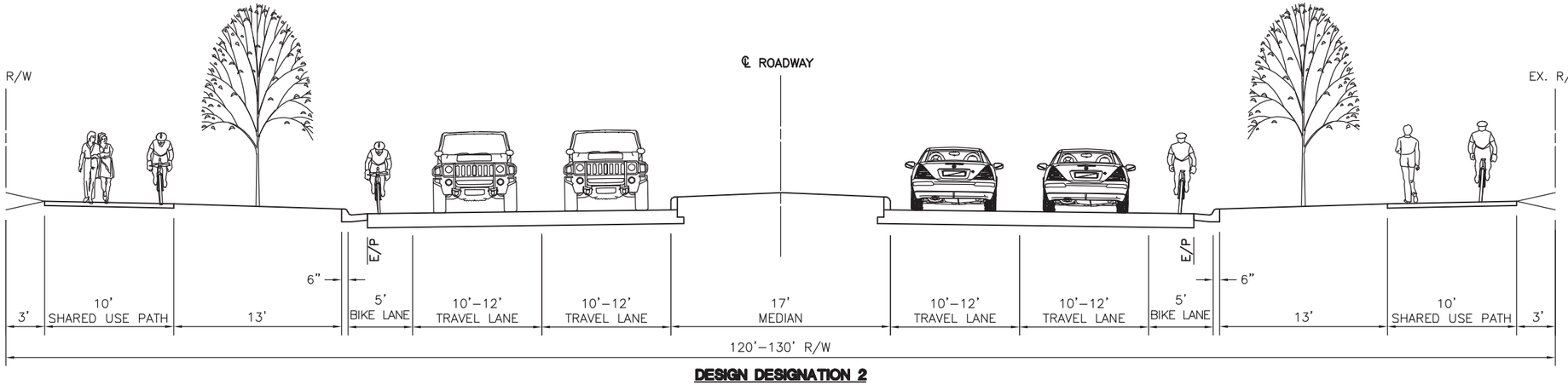
Roadway	Limits	Current Jurisdiction	Present Condition		Thoroughfare Plan						Comments
			Number of Vehicular Lanes	Ped./Bike Facilities	Functional Classification	Number of Vehicular Lanes	Ped./Bike Facilities	Design Designation	Access Control	R-O-W (Minimum)	
Tinapple Road	Frazell Road to Main Street	Hilliard	2	Walk (south)	Network Collector	2	2 M.U.P.'s & On-Road Facility	6	E	80'	
Trueman Boulevard	Davidson Road to Cemetery Road	Hilliard	4/5D	Walk(west)/ M.U.P.(east)	Minor Arterial	4/5D	2 M.U.P.'s & On-Road Facility	2	B	120	
Walker Road	Davis Road to Roberts Road	Hilliard/County	2	N/A	Network Collector	2/3	Bike Lanes/ Paved Shoulders	7	E	100'	
Wilcox Road	Tuttle Crossing Boulevard to Riggins Road	Dublin/Columbus/ Hilliard	2/3	N/A	Minor Arterial	2/3	2 M.U.P.'s & On-Road Facility	4	E	80'	
Wilcox Road	Hayden Run Road to Riggins Road	Hilliard	2/3	N/A	Minor Arterial	2/3	2 M.U.P.'s & On-Road Facility	4	E	80'	
Wilcox Road Extension	Hayden Run Road to Davidson Road	Hilliard	N/A	N/A	Minor Arterial	2/3	2 M.U.P.'s & On-Road Facility	7	E	100	

Figure 2: Design Designation Typical Sections

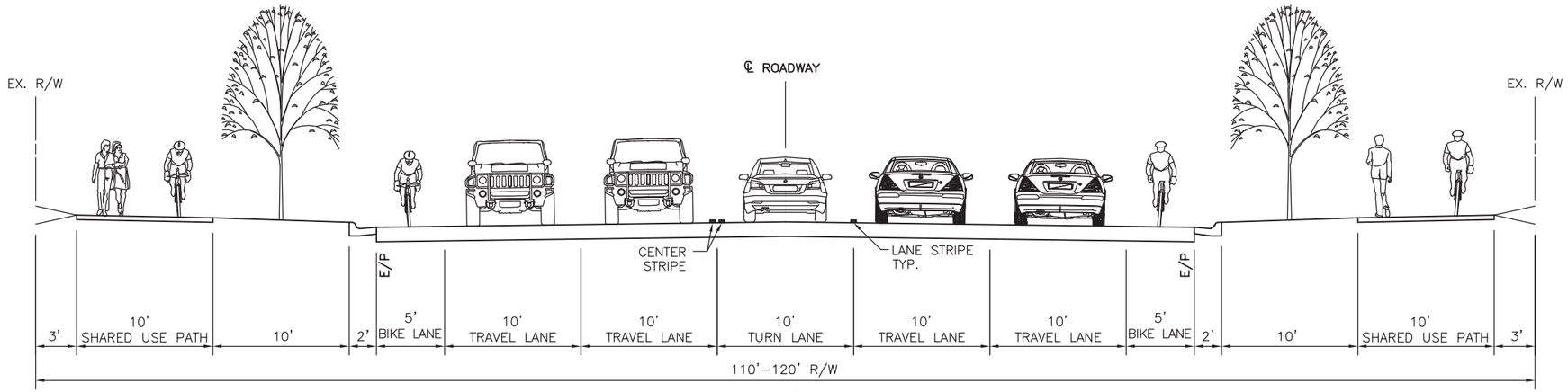
(Note: The exhibit referenced above is provided on the following page)



DESIGN DESIGNATION 1
6–LANE BLVD. (120'–130' ROW)



DESIGN DESIGNATION 2
4–LANE BLVD. (120'–130' ROW)

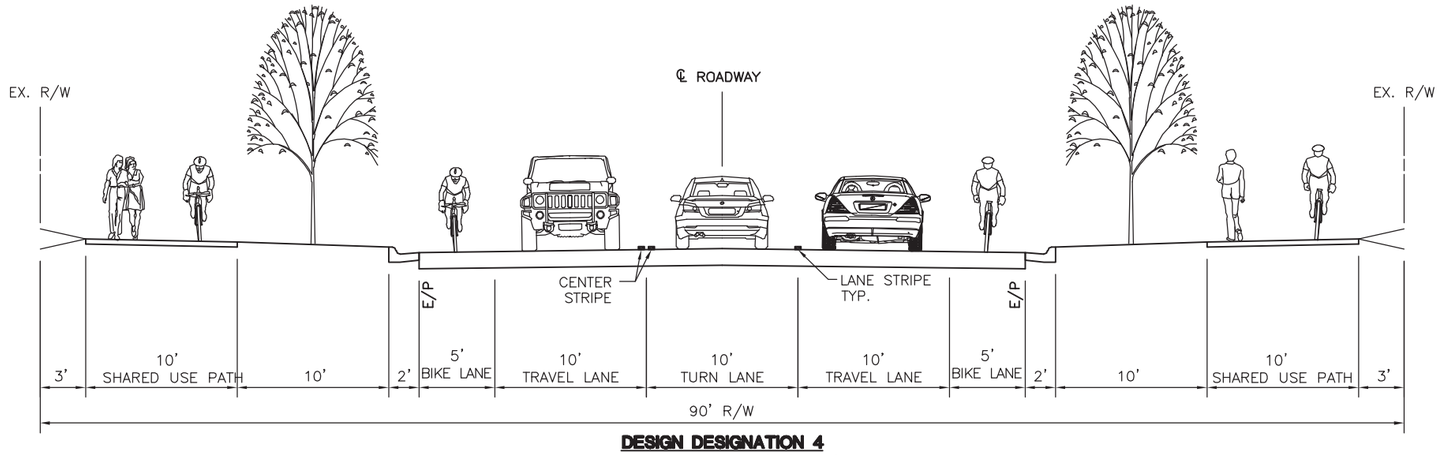


DESIGN DESIGNATION 3
5–LANE ARTERIAL (110'–120' ROW)

FIGURE 2
SHEET 1/3

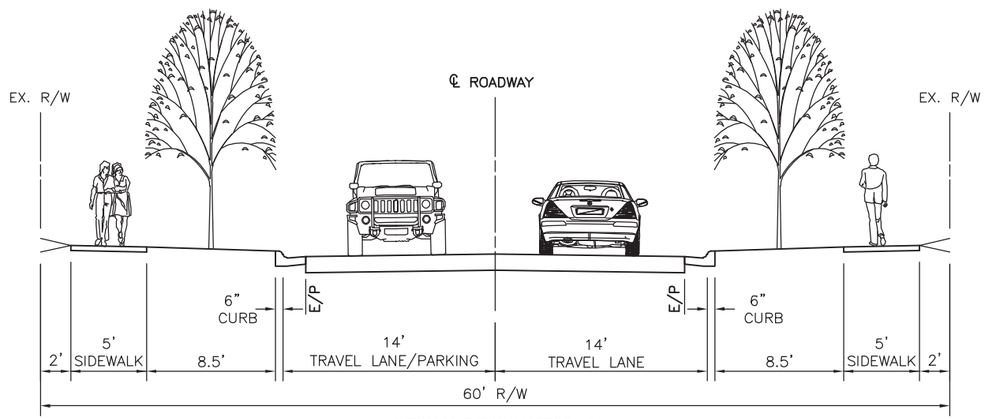
HILLIARD THOROUGHFARE PLAN

0 5 10
SCALE IN FEET



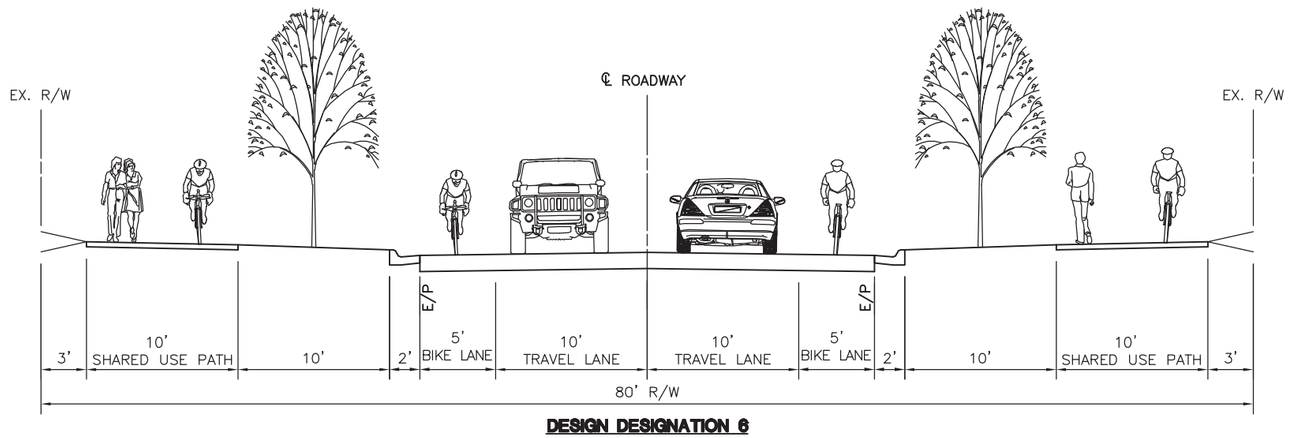
DESIGN DESIGNATION 4

3–LANE COLLECTOR (90' ROW)



DESIGN DESIGNATION 5

RESIDENTIAL 2–LANE (60' ROW)



DESIGN DESIGNATION 6

RESIDENTIAL 2–LANE (80' ROW)

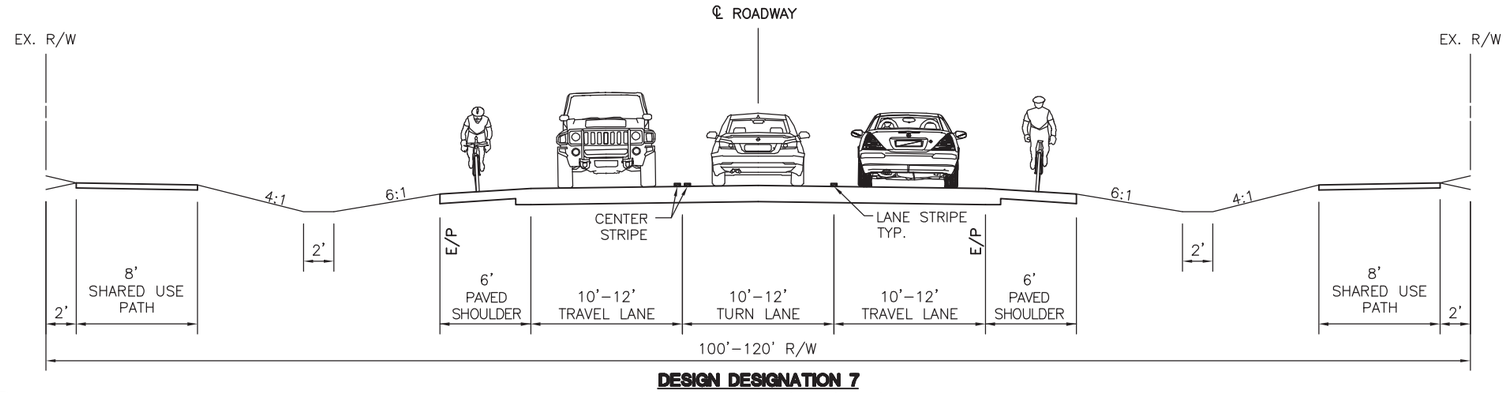
FIGURE 2

SHEET 2/3

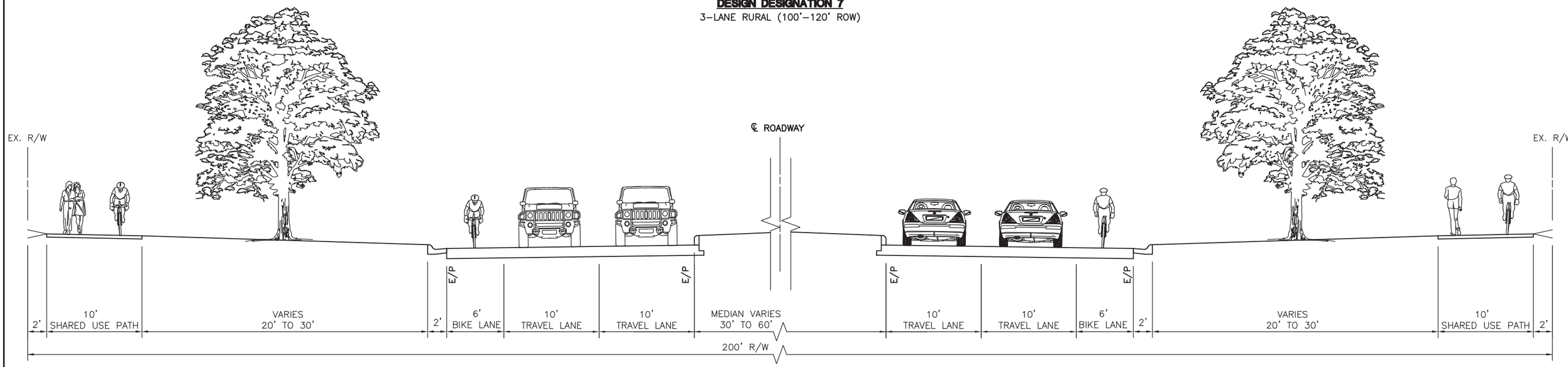
HILLIARD THOROUGHFARE PLAN

0 5 10

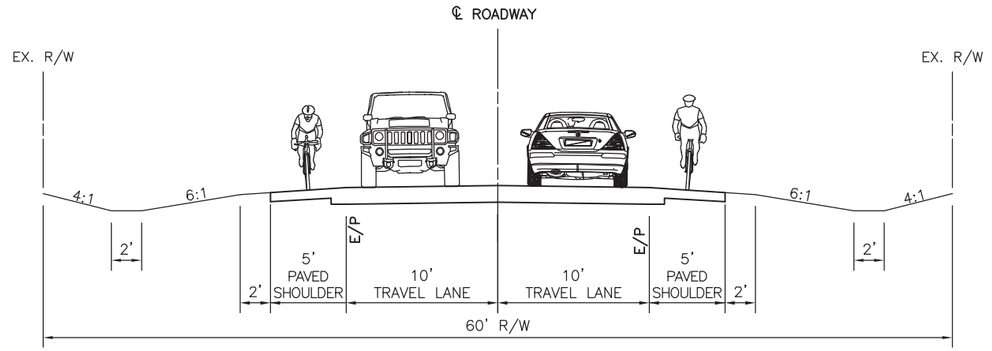
SCALE IN FEET



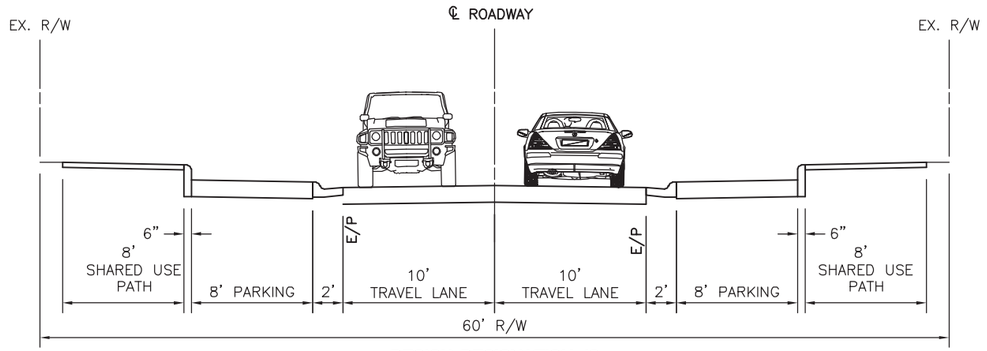
DESIGN DESIGNATION 7
3–LANE RURAL (100'–120' ROW)



DESIGN DESIGNATION 8
CONSERVATION BLVD. (200' ROW)



DESIGN DESIGNATION 9
RESIDENTIAL 2–LANE (80' ROW)



DESIGN DESIGNATION 10
RESIDENTIAL 2–LANE (80' ROW)

FIGURE 2
SHEET 3/3

HILLIARD THOROUGHFARE PLAN

0 5 10
SCALE IN FEET

City of Hilliard
Thoroughfare Plan

Technical Appendix:
Thoroughfare Plan Development

Prepared by
Trans Associates Engineering Consultants, Inc.

October 2011

Overview

The Comprehensive Plan is the key policy document for decision making about Hilliard's built and natural environments. The Comprehensive Plan text and related maps contain detailed recommendations for future development including the appropriate location and density/intensity of residential and commercial uses; the general location and character of roads; and, the general location of parks and open space. Throughout the plan, recommendations are based upon a review of existing conditions and evaluation of future development scenarios for their impact on infrastructure and roads. The transportation plan and the land use plan are significant components of the Hilliard Comprehensive Plan.

The goal of Hilliard's Transportation Plan is "*to develop a safe, efficient, and balanced transportation network that provides all users with mobility choices, connects land uses, enhances the environment, and improves the quality of life for those who live and work in Hilliard."*

The *thoroughfare plan* is the primary reference tool within the transportation plan, while the future land use map is the primary planning instrument within the land use plan. Both of these primary planning elements provide the foundation to guide decision-making regarding the appropriateness of development proposals and infrastructure improvements necessary to support future development.

Thoroughfare Plan Structure

The basic structure of a thoroughfare plan is a functional classification system of roadways that designates the role of each major route within the local and regional transportation network. These functional classifications are combined with recommendations for future new roads and improvements/modifications to the existing system to meet projected transportation needs.

A thoroughfare plan identifies a hierarchy of streets and highways to serve long-term needs of the community. The plan consists of a map of existing and planned highways, streets, interchanges, and grade separations. Existing roads are classified by usage (i.e. arterial, collector, and local) and carrying capacity. Once the current conditions are fully understood, projected development is assessed according to the land-use component of the community's comprehensive plan. Roadway system enhancements are planned accordingly to properly accommodate projected travel demands. When the land-use and transportation components of the comprehensive plan are developed concurrently, transportation system constraints can be acknowledged and thus influence land-use plan decisions.

The transportation plan should respect the area's needs and establish a solution to provide safe and efficient travel into, out of, and within the community for the next 20 to 25 years.

It is important to note that road locations and layouts are not completely established in a thoroughfare plan. Proposed upgrades, new roads, and additional services are recommendations for local officials and transportation departments to follow as development

occurs. As the need for roadway upgrades and additions arise, additional site-specific planning will be necessary.

Functional Classification System

The functional classification of a road typically guides decisions including potential lane requirements, appropriate design standards, cross-section elements, right-of way requirements, and access management components. Functional classifications are defined in the context of the overall roadway network to provide a balanced system that meets both travel and access needs. Failure to provide a well-planned network of streets in a variety of functional classifications can result in congested streets that were not designed for high-volumes, cut-through traffic on neighborhood streets, high crash rates, and other operational problems.

Four typical classifications are used in thoroughfare plans: freeways, arterials, collectors, and local streets. With the exception of fully-controlled access freeway facilities, all roadways serve some combination of through travel and access to property. Roadways that are primarily intended for traffic service (typically for longer trips) are referred to as arterials. Collector roadways make a link between arterials and local streets. Local streets are those intended primarily for access to abutting land parcels. In many ways, the functional classification system for a network of roadways is analogous to a tree – with the arterials serving as the trunk, the collectors serving as the branches, the local streets serving as the twigs that tie directly with the leaves (representing individual land parcels).

All roadways within the Hilliard area were mapped and identified. Based upon the following descriptions, each roadway was assigned a functional classification.

- Major Arterial: Roadways that serve the major activity centers, the highest traffic volume corridors, and the longest trips. Service to abutting land should be subordinate to travel service. This system carries the major portion of trips entering and leaving an urban area – as well as the majority of through movements desiring to bypass the area. Major arterials range from interstates/freeways to principal streets and highways.
- Minor Arterial: Streets and highways interconnecting with and augmenting the major arterial system – and providing service to trips of moderate length at a somewhat lower level of travel mobility. This system places more emphasis on land access and distributes travel to geographic areas smaller than those identified with the higher system.
- Network Collector: Streets penetrating development sub-areas and neighborhoods, collecting traffic from local streets, and channeling it into the arterial systems. A minor amount of through traffic may be carried on collector streets, but the system primarily provides land access service and carries local traffic movements within residential, commercial, and industrial areas.
- Local Street: Streets not classified in a higher system, primarily providing direct access to abutting land and access to the higher systems. They offer the lowest level of mobility and service to through traffic should be deliberately discouraged.

The framework of the Hilliard Thoroughfare Plan is composed of major arterials, minor arterials, and network collectors.

Traffic Volume Projections

In transportation planning, models are commonly used to imitate the travel patterns of people. Commonly called travel demand models, these tools are based upon the practical relationships between socioeconomic characteristics, land-uses, and travel patterns. By approximating future travel patterns, models make it possible to assess the implications of growth, to compare alternative transportation solutions, and to provide a testing ground for changes in transportation and land-use policies.

The roadway network, as described in the preceding section, is critical for modeling of travel within the designated area. The other critical component is the traffic analysis zone structure. A Traffic Analysis Zone (TAZ) is the unit of geography most commonly used in conventional transportation planning models. The size of a zone varies and it ranges from very large (in the external and fringe areas of the modeled area) to small (in major activity areas). Land-use and socioeconomic data are entered into the model at the TAZ level.

Traditional travel demand modeling uses a four-step process. The steps are: trip generation, trip distribution, mode split, and traffic assignment. The trip generation step produces estimates of the trip productions and trip attractions for each TAZ in the planning area. The trip distribution step links the trip productions and attractions for each pair of TAZs in the planning area. The mode choice step splits the trips by available transportation modes between each TAZ pair. The assignment step loads trips onto the transportation networks. In other words, the trip assignment step selects paths from origins to destinations and loads trips onto the corresponding selected paths. Vehicle-trips are loaded onto the transportation network using route choice principles.

A travel demand model was created for the Hilliard planning area to produce traffic volume projections for AM and PM commuter peak hours on a typical weekday. Land use data were developed by TAZ for three scenarios: current conditions, build-out conditions, and expected conditions in 2030, which is less than the “build-out” condition. Model validation was accomplished by comparing the trip assignments related to current (occupied) land uses with counted traffic volumes on existing roadway links and at existing intersections. Modeling was performed using the “build-out” land use scenario to define roadway system needs in the long-term – with the objective of reserving sufficient right-of-way to permit capacity enhancement when necessary and if desired. The final modeling runs were performed to define roadway system needs for the planning horizon based upon anticipated land use development levels in 2030.

Roadway Characteristics

Each roadway within the Hilliard Thoroughfare Plan was identified by functional classification (as previously discussed) – as well as by number of lanes, design designation, pedestrian and bicycle facilities, access control (where applicable), and right-of-way.

Travel Lanes on Roadway Segments

The following is a description of the number of lanes on roadway links of the Hilliard Thoroughfare Plan:

- 2 L – Basic two-lane roadway with one travel lane in each direction.

- 2/3 L – Two-lane roadway (one through lane in each direction) with either a center left turn lane or separate left turn lanes at driveways and intersections.

- 4/5 L -- Four-lane roadway (two through lanes in each direction) with either a center left turn lane or separate left turn lanes at driveways and intersections.

- 4/5 D -- Four-lane roadway (two through lanes in each direction) with a barrier center median and with separate left turn lanes at driveways and intersections.

Design Descriptions

The purpose of defining a physical design characteristic for a street or roadway is to provide a set of standards for pavement widths and right-of-way requirements to properly accommodate the needed number of vehicular travel lanes and desired conditions beyond the travel way. These conditions can include open ditch versus curb and gutter drainage, median, on-street parking, sidewalks and bikeways, and tree lawns. The applicable right-of-way width must then accommodate the travel way for all users and the desired adjacent conditions. Table 1, page 4 of the Thoroughfare Plan (this document), lists typical pavement and right-of-way widths for roadways shown on Figure 1 (page 2).

The table reflects typical minimum dimensions for each type of roadway. The City may adjust these dimensions, as needed, to best fit unique situations and conditions, such as but not limited to the need for turn lanes, intersections, roundabouts, or grade separation embankments.

The right-of-way widths given in the table are based on typical cross-section needs beyond the actual travel way. For “rural” design, 18 to 23 feet is designated for drainage and paths on each side of the road. For “urban” design, about 15 to 20 feet designated for features behind the face of curb. In general, such features would include a 7 to 10 foot tree lawn, and either 5 to 6 foot sidewalk or 8 to 10 foot multi-use path. The right-of-ways have been rounded to the nearest 10 feet.

Access Management

Through access management, the City seeks to provide access to land development in ways that preserve the capacity, safety, and flow of traffic on the roadway network. A well-designed access management program can provide benefits, such as maintaining efficient movement of

people and goods, reducing accidents, preserving public investment in the transportation infrastructure, reducing the need for more new roadways (or the need to widen existing roadways), protecting the value of private investment in the adjacent properties, and enhancing the environmental and economic vitality of the City.

The traveling public benefits from more efficient and safer travel. Businesses and property owners benefit through the avoidance of the congestion and resultant reduced accessibility that may otherwise result from uncontrolled and poorly planned access. Taxpayers benefit through more efficient use of existing roadways.

Access management is intended to reduce the conflict points between traffic traveling through an area and the traffic turning into or exiting from land developments. A comprehensive access management program limits the number of conflict points at driveway locations, provides adequate separation between conflict areas, reduces the interference of turning traffic with through traffic, provides adequate circulation and storage for traffic on adjacent properties, and provides sufficient spacing between traffic signals. Access management techniques include consolidation of driveways, proper driveway design, provision of turn lanes, installation of medians, and use of frontage or backage roads.

As discussed previously, roadways are classified into categories relative to each roadway's function in: (1) serving the mobility needs of vehicles traveling through and area, and (2) providing access to properties along the roadway. The access management standards and guidelines will differ between these functional types of roadways – as will other geometric design standards. Roadway segments within the Hilliard area have been categorized according to their operational intent as related to access management. The categories are based on maintaining the roadway's operational characteristics in terms of capacity, traffic flow, property access, and safety. The Thoroughfare Plan identifies the desired access control for each highway corridor and roadway link. The applicable guidelines and standards are contained in *Hilliard's Access Management Plan*.

Resultant Thoroughfare Plan

As the Comprehensive Plan was being developed, various roadway systems were tested and evaluated in terms of their ability to accommodate projected traffic volumes at acceptable service levels. The results of these analyses were presented in a series of workshops with City staff and members of the project's designated Task Force. In several cases, the land use plan was adjusted to better relate to the transportation infrastructure capacities. Even with these adjustments, some sections of the roadway system were projected to experience traffic demands beyond technical capacities. Through an iterative process, new roadways were added to the highway network and several roadway links and intersections were "improved" to add carrying capacities. However, capacity enhancements were made only where deemed acceptable by the Task Force. The resultant plan thus reflects a highway system that balances capacities to carry traffic generated by 2030 land uses with desired physical and aesthetic design characteristics of each street and highway within Hilliard.

Figure 1 (page 2) of the Hilliard Thoroughfare Plan (this document) is a map of thoroughfares within the Comprehensive Plan study area, labeled by their functional designations. Table 1 (page 4) provides a detailed summary of each roadway link covered by the Thoroughfare Plan. This table also defines the physical characteristics of each link in terms of basic design, access control, and desired right-of-way width. Figure 2, page 9, is comprised of the 10 typical roadway sections called out by Table 1.

The following sections provide the supporting documentation for the thoroughfare plan development and present the results of traffic operations analyses associated with projected future conditions.

Current Conditions

At the outset of the project, the characteristics of the current roadway system were recorded. This included documentation of the number of lanes on each roadway link, lane usages at intersections, the type of traffic control at each intersection, and posted speed limits. Figure 3 (page 24) illustrates the basic characteristics of the existing roadway network as it was when the Thoroughfare Plan was initially developed in 2009.

A compressive traffic count program was undertaken to establish traffic volumes on the existing (2009) roadway network. Machine counts were performed on roadway links and manual turning movement counts were performed at intersections. Figure 4 (page 25) shows the locations of the machine counts and Figure 5 (page 26) shows the locations of the turning movement counts.

Figure 6 (page 27) provides a summary of current 24-hour traffic volumes on the area roadway system and Table 2 (pages 28 through 31) lists the peak hour volumes on roadway links by direction.

Travel Demand Model Development and Application

Using base data and information from the Mid-Ohio Regional Planning Commission (MORPC) regional travel demand model, a local travel demand model was created for the City of Hilliard. The creation of the model (in VISUM) involved the following processes:

- Run the MORPC model in its native software platform (Cube) for 2005 and 2030 travel demand conditions with 2005 base roadway network conditions. (Note: this step was completed by MORPC.)
- Extract sub-area origin-destination matrices representative of the Hilliard Thoroughfare Plan study area from the 2005 and 2030 loaded MORPC networks. (Note: this step was completed by MORPC.)
- Transfer the extracted subarea MORPC model into the VISUM 11 software platform.
- Add roadway links and disaggregate the MORPC traffic analysis zones to the VISUM 11 network to provide required level of detail necessary for the Hilliard Thoroughfare Plan.

- Summarize the turning movement and ATR traffic counts and code the AM/PM peak hour traffic volumes into the VISUM network by turn movement, link, and direction of traffic flow.
- Finalize the traffic analysis zone structure for the VISUM model and reference the existing land-use inventory to disaggregate the MORPC land use data to the detailed VISUM traffic analysis zone structure.
- Calibrate the existing conditions sub-area origin-destination matrix from the MORPC model to approximate current traffic levels and traffic analysis zone activity levels with the VISUM origin-destination matrix estimating procedures; assign the resulting matrix to the VISUM network with the user equilibrium procedure and the volume-capacity-speed parameters suggested by MORPC; compare resulting traffic assignment to the available count data and identify relevant statistics (percent root mean squared error and coefficient of correlation); and, end the calibration process when the desired degree of precision is achieved. The final result of this step is a calibrated year 2009 baseline origin-destination matrix.
- Project the 2009 baseline origin-destination matrix to future conditions based on land use projections by development type for each traffic analysis zone, and based on factors contained in the ITE Trip Generation Manual.
- Incorporate growth in regional travel demand based on a comparison of through trips in the baseline and year 2030 MORPC sub-area matrices.
- Assign the year 2030 and build-out origin-destination matrices to the baseline VISUM network. Identify level-of-service based upon the volume/capacity thresholds established by MORPC by road type and speed.
- Rerun the model with required thoroughfare improvements to achieve the desired level-of-performance. Continue to add thoroughfare improvements to the VISUM network until the performance standard is satisfied at all locations.
- Report the results of the final modeling efforts in graphical form.

Existing and Projected Land Use

As stated previously, the MORPC regional travel demand model formed the foundation for the model developed for Hilliard. A fundamental element of the MORPC model is the division of the region into Traffic Analysis Zones (TAZs). A TAZ is the unit of geography and the size of a zone varies. It ranges from very large (in the external and fringe areas of the modeled area) to small (in major activity areas). Land-use and socioeconomic data are entered into the model at the TAZ level.

The MORPC TAZ structure was adopted for the Hilliard model; however, many of the zones were sub-divided in order to increase the accuracy of the travel demand modeling process. The resultant zone structure is shown in Figure 7 on page 32.

As an input to the Hilliard travel demand model, land use information was provided for each of the traffic analysis zones contained within the sub-area model. Such information was provided

for the existing, 2030, and build-out scenarios. Tables 3, 4, and 5 (on pages 33 through 38) provide summaries of this information.

Traffic Volume Assignments

The Hilliard Travel Demand Model was employed for three basic scenarios: (1) trips generated by current (occupied) land uses as assigned to the existing roadway system, (2) trips generated by 2030 land uses as assigned to the Thoroughfare Plan network, and (3) trips generated by the build-out of the area (as depicted in the Land Use Plan) as assigned to the Thoroughfare Plan network. Assignments were made for both the AM and PM weekday peak commuter hours.

Figures 8 through 13 (on pages 39 through 44) show the resultant volumes for the three base scenarios.

Operations Analyses

The VISUM model assesses the ability of the coded roadway system to accommodate the assigned traffic volumes. The results of these "capacity analyses" are identified in terms of "level of service". Level of service (LOS) is a standard criterion used to define quality of traffic flow and it identifies operational definitions for driving conditions that motorists routinely experience and recognize. The individual LOS is characterized by factors such as speed and travel time, freedom to maneuver, traffic interruptions, and driver comfort and convenience.

Six LOS categories are commonly defined. Each is given a letter designation from "A" to "F", with LOS "A" representing the best operating conditions and LOS "F" depicting the worst. For the purpose of future planning, it is desired that the roadway system operate at LOS D or better. The six level of service categories are defined below:

- "A" represents the best operating condition flow in which there is little or no restriction on speed and maneuverability. At intersections, there is little or no delay.
- "B" represents a condition of stable traffic flow, but operating speeds are beginning to be restricted. Short traffic delays occur at intersections.
- "C" is a condition of a stable flow, but most drivers are becoming restricted in their freedom to select speed, change lanes or pass other vehicles. Intersections experience average traffic delay.
- "D" represents unstable flow. Operating speeds are tolerable by the driver, but are subject to considerable and sudden variation. Freedom to maneuver is limited and driving comfort is low, as the probability of accidents has increased. Long traffic delays are experienced at intersections.
- "E" relates to maximum roadway capacity for carrying vehicles. Operations in this zone are unstable, speeds and flow rates fluctuate, and there is little independence of speed selection or maneuverability. Accident potential is high and driving comfort is low. The distance between vehicles is short. Very long delays are experienced at intersections.

- "F" is the worst operating condition and traffic demand exceeds capacity. Speeds and rate of traffic flow may drop to zero for short time periods. Extreme delays are experienced at intersections. This may cause severe congestion, affecting other adjacent roadways.

Volume-to-capacity (v/c) ratios were used to define the level of service on the Thoroughfare Plan roadway network links. These ratios were calculated by dividing the modeled traffic volume on the link by the defined capacity of the link. The MORPC v/c thresholds for LOS were used which vary based on roadway class and speed. In general the v/c ratios relate to LOS as follows:

- LOS "A" through "D": v/c is less than 90 percent; the roadway has capacity to carry additional traffic.
- LOS "E": v/c ranges from 90 percent to 99 percent; the roadway is nearing capacity and is being utilized to its maximum design.
- LOS "F": v/c is equal to or greater than 100 percent; traffic now exceeds the roadway capacity.

Delays were also computed for each network intersection. The analyses took into consideration the number of lanes, lane usages, and type of traffic control device as illustrated in Figure 3 (existing network conditions), and an assumed future network shown by Figure 14 (page 45). The delays at intersections were used during the assignment process and they were also generated as post-assignments statistics. The resultant levels of service conform to standards set forth in the Highway Capacity Manual.

Figures 15 through 20 (on pages 46 through 51) show the calculated levels of service at intersections and on the roadway links for the AM and PM peak hours of each of the three modeling scenarios. The levels of service are distinguished by colors, as follows:

- LOS "A" through "D" -- represented by green
- LOS "E" -- represented by orange
- LOS "F" -- represented by red

(While volume-to-capacity ratios were calculated for each direction on a network link, the graphics display the lowest (worst) directional service level.)

Table 6 (on pages 52 through 56) summarizes link volume-to-capacity ratios for the 2030 and build-out scenarios. The values shown in the table are the highest value calculated on a link in either direction and in either peak hour.

Key Hilliard roadways projected to be at or above capacity for the design year of 2030 include the following:

- Anson Drive between Leap Road and Britton Parkway
- Avery Road/Main Street between Hayden Run Road and Cemetery Road
- Cemetery Road east of I-270
- Davidson Road between Wilcox Road Extension and Leap Road
- Davidson Road east of Trueman Boulevard
- Fishinger Boulevard east of Trueman Boulevard

- Leppert Road north of Scioto Darby Road
- Scioto Darby Road between Cosgray Road and Dublin Road

Intersections projected to experience E or F service levels during the AM/PM peak hours in 2030 include:

- Cosgray Road at Scioto Darby Road
- Avery Road at Hayden Run Road
- Britton Parkway at Cemetery Road

Many more roadway links and intersections fall into these categories when vehicle-trips generated by the build-out of all land uses are assigned to the Thoroughfare Plan.

While these links and intersections show potential congestion and undesirable service levels, it must be recognized that the traffic assignments associated with future land use conditions are based on current trip generating characteristics. In other words, trip generation factors reflect high auto usage during concentrated peak hours and the regional trip distribution patterns are extrapolated from those observed today.

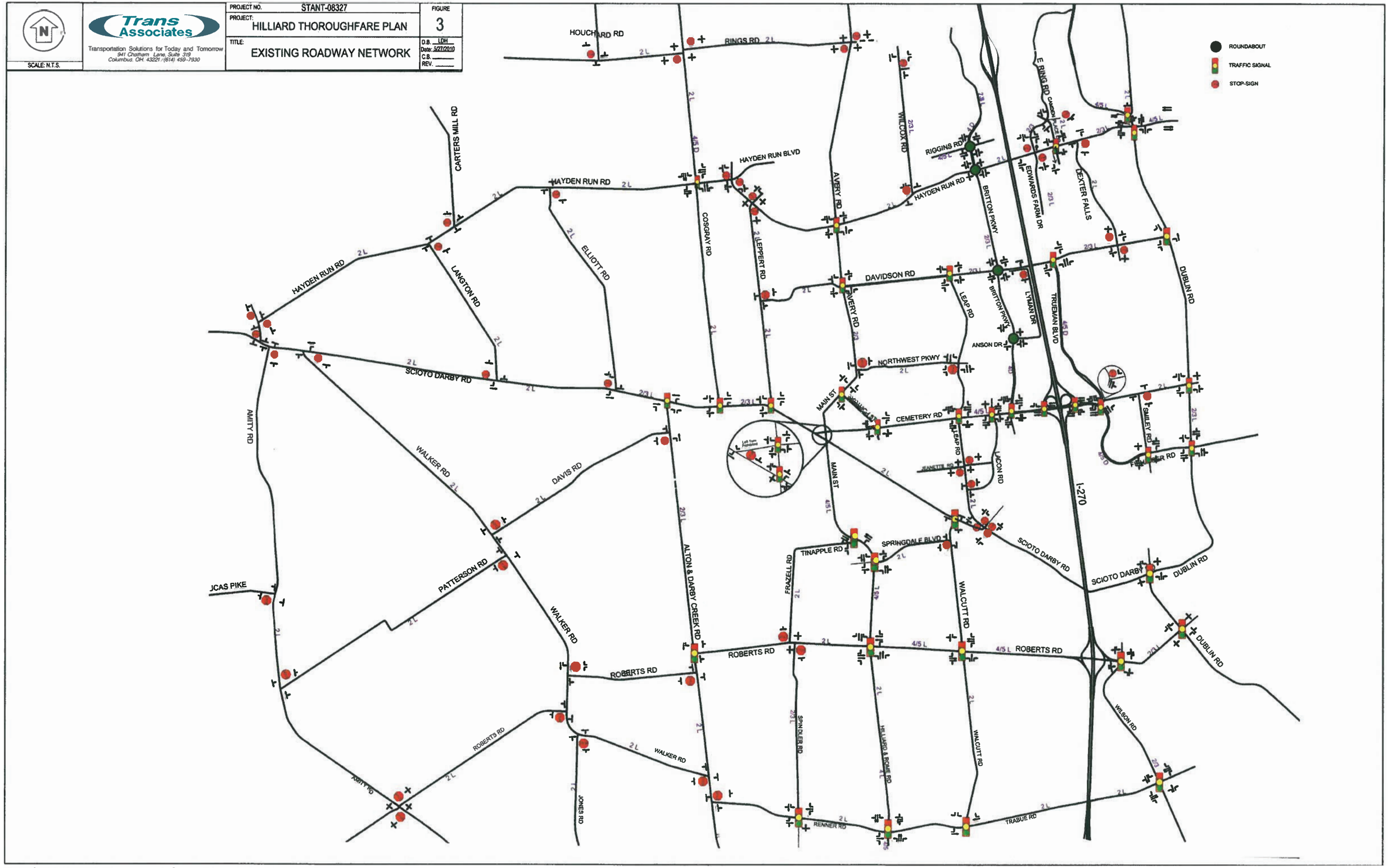
Given a fixed highway system (i.e. the established Thoroughfare Plan), travel demands must be "managed" to realize acceptable operating conditions. Managing demand should not stop at encouraging travelers to change their travel mode from driving alone to choosing carpool, vanpool, public transit vehicle, bicycling, or other transport alternative. It should also provide travelers, regardless of whether they drive alone, with choices of location, route, and time. Real-time information systems can let travelers make better decisions about how they travel (mode), when they travel (time), where and whether they travel (location), and which route they travel (path). Such strategies will need to be fully explored by the City since they are more critical to transportation system operations than strategies to increase capacities.

In order to preserve the character of the Hilliard community and to create a sense of "place" along city streets, City leaders have emphasized the need and desire to encourage travel demand management in lieu of continuing to expand roadways and intersections to serve the motorists at the expense of the people within Hilliard.

SCALE: N.T.S.

Trans Associates
Transportation Solutions for Today and Tomorrow
941 Chatham Lane, Suite 319
Columbus, OH 43221 / (614) 459-7930

PROJECT NO. STANT-08327
PROJECT: HILLIARD THOROUGHFARE PLAN
TITLE: EXISTING ROADWAY NETWORK
FIGURE 3
D.B. LDH
Date: 5/27/2010
C.B. ____
REV. ____



LEGEND

TRAFFIC COUNT LOCATIONS FOR THOROUGHFARE PLAN

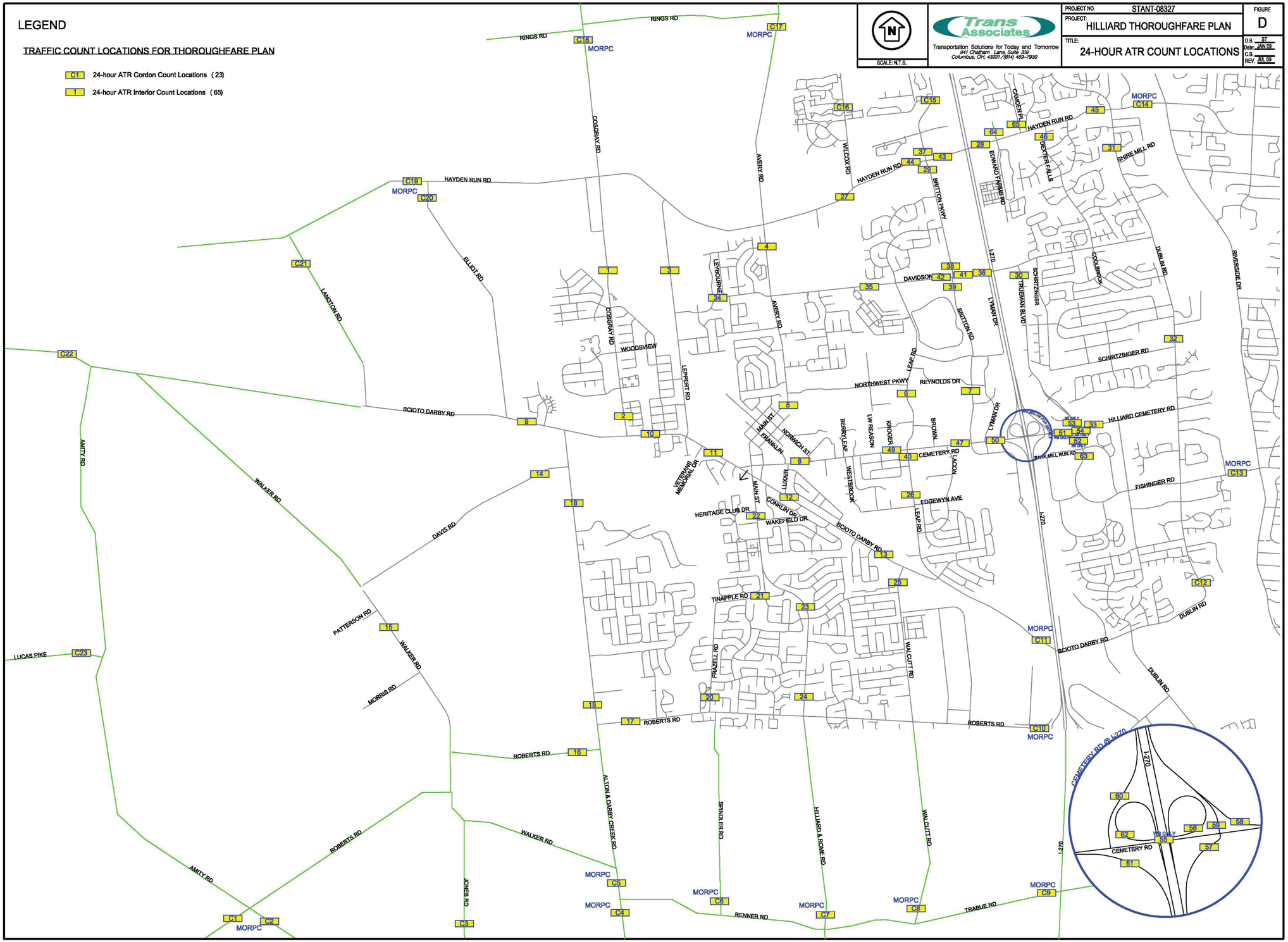
C1 24-hour ATR Cordon Count Locations (23)

1 24-hour ATR Interior Count Locations (65)

SCALE: N.T.S.

Trans Associates
Transportation Solutions for Today and Tomorrow
941 Chatham Lane, Suite 319
Columbus, OH, 43221,(614) 459--7930

PROJECT NO. STANT-08327
PROJECT: HILLIARD THOROUGHFARE PLAN
TITLE: 24-HOUR ATR COUNT LOCATIONS
FIGURE D
D.B. ST
Date: JAN 09
C.B.
REV. JUL 09



LEGEND

TRAFFIC COUNT LOCATIONS FOR THOROUGHFARE PLAN

(1) Intersection Turning Movement Count Locations (35)

(4) Signal Warrant Count Locations (9)

[8] Cemetery Road SIgnals Count Locations (13)

SCALE: N.T.S.

Trans Associates
Transportation Solutions for Today and Tomorrow
941 Chatham Lane, Suite 319
Columbus, OH, 43221 (614) 459-7930

PROJECT NO. STANT-08327
PROJECT: HILLIARD THOROUGHFARE PLAN
TITLE: INTERSECTION TURNING MOVEMENT COUNT LOCATIONS
FIGURE E
D.R. ST
Date: JAN 09
C.B.
REV. JUL 09

LEGEND

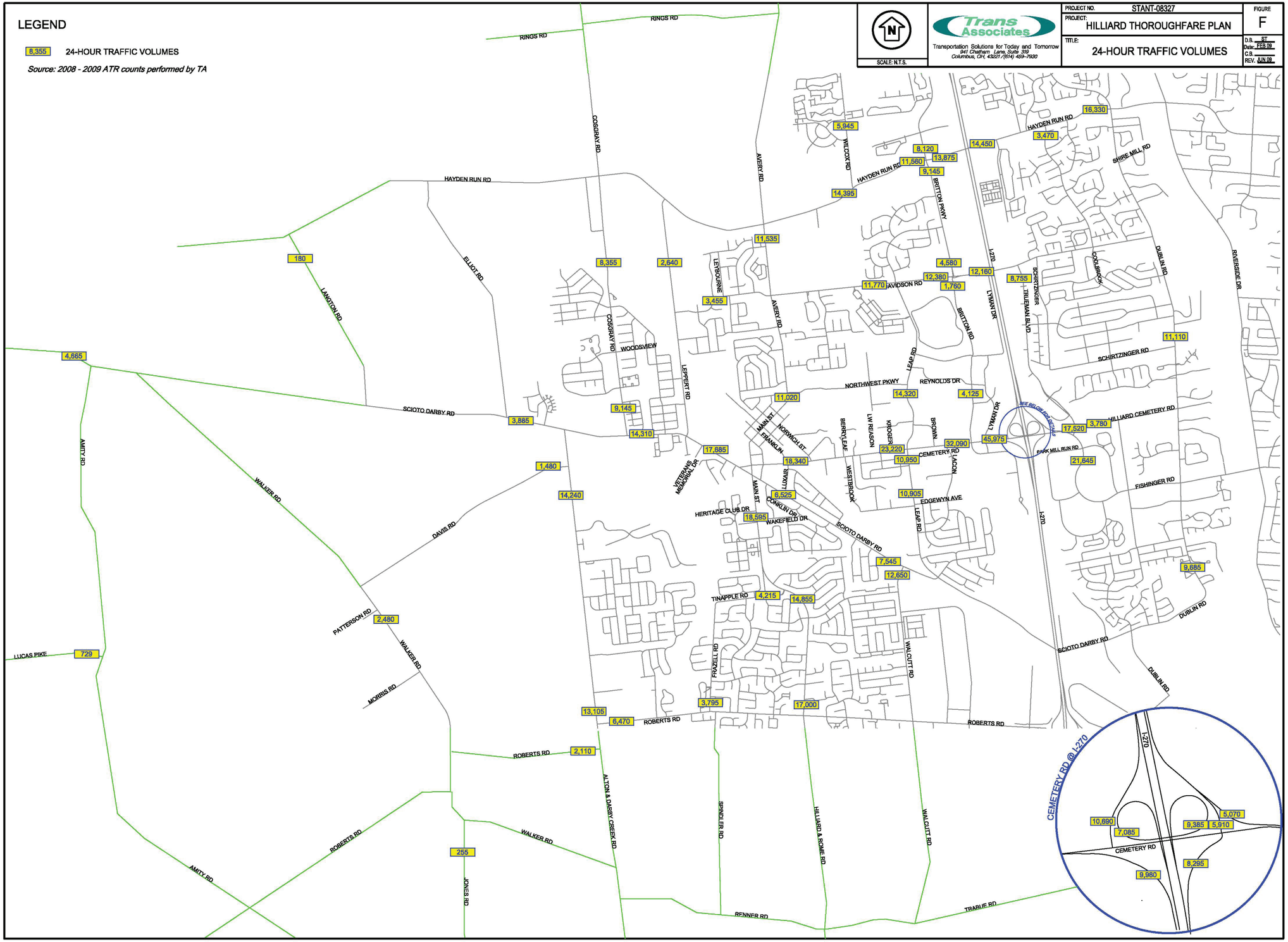
8,355 24-HOUR TRAFFIC VOLUMES

Source: 2008 - 2009 ATR counts performed by TA

SCALE: N.T.S.

Trans Associates
Transportation Solutions for Today and Tomorrow
941 Chatham Lane, Suite 319
Columbus, OH, 43221 (614) 459-7930

PROJECT NO. STANT-08327
PROJECT: HILLIARD THOROUGHFARE PLAN
TITLE: 24-HOUR TRAFFIC VOLUMES
FIGURE F
D.B. ST
Date: FEB 09
C.B.
REV. JUN 09



24-Hour Traffic Count Summary

					Average Weekday Traffic											
					24-Hour Traffic			AM Peak Hour				PM Peak Hour				
	Road	Location	Source	Month/ Year	EB/NB	WB/SB	ADT	Start Time	EB/NB	WB/SB	Total	Start Time	EB/NB	WB/SB	Total	Notes
1	Cosgray Road	At Homestead Park	TA	Oct-08	4,053	4,302	**8,355**	7:00 AM	509	173	682	5:00 PM	278	724	1,002	Weekday Average
2	Cosgray Road	North of Scioto Darby Road	TA	Oct-08	4,427	4,718	**9,145**	7:00 AM	422	274	696	5:00 PM	393	716	1,109	Weekday Average
3	Leppert Road	South of Hayden Run Creek	TA	Oct-08	1,339	1,299	**2,638**	7:00 AM	134	112	246	5:00 PM	102	213	315	Weekday Average
4	Avery Road	South of Hayden Run Road	TA	Oct-08	5,808	5,726	**11,534**	7:00 AM	492	476	968	5:00 PM	486	740	1,226	Weekday Average
5	Avery Road	South of Northwest Parkway	TA	Oct-08	5,593	5,425	**11,018**	7:00 AM	354	263	617	5:00 PM	449	612	1,061	Weekday Average
6	Leap Road	South of Northwest Parkway	TA	Apr-09	7,041	7,280	**14,321**	7:00 AM	344	549	893	5:00 PM	598	642	1,240	Weekday Average
7	Britton Road	South of Reynolds Drive	TA	Apr-09	1,922	2,201	**4,123**	7:00 AM	216	220	436	5:00 PM	239	192	431	Wednesday Count
8	Cemetery Road	West of Norwich Street	TA	Oct-08	8,629	9,708	**18,337**	7:00 AM	810	378	1,188	5:00 PM	572	1160	1,732	Weekday Average
9	Scioto Darby Road	East of Elliott Road	TA	Oct-08	1,963	1,921	**3,884**	7:00 AM	178	91	269	5:00 PM	200	220	420	Weekday Average
10	Scioto Darby Road	East of Cosgray Road	TA	Oct-08	7,236	7,071	**14,307**	7:00 AM	764	278	1,042	5:00 PM	669	772	1,441	Weekday Average
11	Scioto Darby Road	East of Veterans Memorial Drive	TA	Oct-08	8,916	8,767	**17,683**	7:00 AM	684	577	1,261	5:00 PM	659	885	1,544	Weekday Average
12	Scioto Darby Road	West of Conklin Drive	TA	Oct-08	3,471	3,053	**6,524**	7:00 AM	230	298	528	5:00 PM	380	302	682	Weekday Average
13	Scioto Darby Road	West of Walcutt Road	TA	Oct-08	3,994	3,551	**7,545**	7:00 AM	364	232	596	5:00 PM	366	361	727	Weekday Average
14	Davis Road	West of Alton & Darby Creek Road	TA	Oct-08	730	747	**1,477**	7:00 AM	78	22	100	5:00 PM	60	100	160	Weekday Average
15	Walker Road	Southeast of Patterson Road	TA	Oct-08	1,270	1,206	**2,476**	7:00 AM	111	94	205	5:00 PM	130	126	256	Weekday Average
16	Roberts Road	West of Alton & Darby Creek Road	TA	Oct-08	1,066	1,045	**2,111**	7:00 AM	100	70	170	5:00 PM	118	102	220	Weekday Average
17	Roberts Road	East of Alton & Darby Creek Road	TA	Oct-08	3,243	3,226	**6,469**	7:00 AM	206	342	548	5:00 PM	446	367	813	Weekday Average
18	Alton & Darby Creek Road	South of Davis Road	TA	Oct-08	7,078	7,160	**14,238**	7:00 AM	795	300	1,095	5:00 PM	699	955	1,654	Weekday Average
19	Alton & Darby Creek Road	North of Roberts Road	TA	Oct-08	6,541	6,563	**13,104**	7:00 AM	596	418	1,014	5:00 PM	693	765	1,458	Weekday Average
20	Frazell Road	North of Roberts Road	TA	Oct-08	1,958	1,838	**3,796**	7:00 AM	90	160	250	5:00 PM	204	162	366	Weekday Average
21	Tinapple Road	West of Main Street	TA	Oct-08	2,343	1,870	**4,213**	7:00 AM	264	49	313	5:00 PM	160	221	381	Weekday Average
22	Main Street	South of Heritage Club Drive North	TA	Oct-08	9,454	9,140	**18,594**	7:00 AM	468	108	576	5:00 PM	637	803	1,440	Weekday Average
23	Main Street	Southeast of Tinapple Road	TA	Oct-08	7,338	7,515	**14,853**	7:00 AM	212	138	350	5:00 PM	571	680	1,251	Weekday Average
24	Hilliard & Rome Road	North of Roberts Road	TA	Jun-09	8,101	8,899	**17,000**	7:00 AM	338	464	802	5:00 PM	552	597	1,149	Wednesday Count
25	Walcutt Road	South of Scioto Darby Road	TA	Oct-08	6,357	6,293	**12,650**	7:00 AM	633	272	905	5:00 PM	538	720	1,258	Weekday Average
26	Leap Road	North of Edgewyn Avenue	TA	Apr-09	5,484	5,421	**10,905**	7:00 AM	523	255	778	5:00 PM	484	558	1,042	Thursday Count
27	Hayden Run Road	West of Wilcox Road	TA	Apr-09	7,082	7,315	**14,397**	7:00 AM	913	427	1,340	5:00 PM	515	982	1,497	Tuesday Count
28	Hayden Run Road	East of I-270	TA	Apr-09	7,031	7,419	**14,450**	7:00 AM	615	538	1,153	5:00 PM	692	783	1,475	Thursday Count
29	Britton Road	South of Hayden Run Road	TA	May-09	4,398	4,745	**9,143**	7:00 AM	525	324	849	5:00 PM	440	631	1,071	Wednesday Count

24-Hour Traffic Count Summary

					Average Weekday Traffic											
					24-Hour Traffic			AM Peak Hour				PM Peak Hour				
	Road	Location	Source	Month/ Year	EB/NB	WB/SB	ADT	Start Time	EB/NB	WB/SB	Total	Start Time	EB/NB	WB/SB	Total	Notes
30	Trueman Boulevard	South of Davidson Road	TA	May-09	4,338	4,418	**8,756**	7:00 AM	169	244	413	5:00 PM	501	587	1,088	Weekday Average
32	Dublin Road	North of Schirtzinger Road	TA	Apr-09	5,160	5,950	**11,110**	7:00 AM	301	606	907	5:00 PM	548	530	1,078	Weekday Average
33	Hilliard Cemetery Road	East of Trueman Boulevard	TA	Apr-09	2129	1649	**3,778**	7:00 AM	82	166	248	5:00 PM	222	149	371	Wednesday Count
34	Davidson Road	West of Leybourne	TA	Oct-08	1704	1752	**3,456**	7:00 AM	228	84	312	5:00 PM	123	252	375	Weekday Average
35	Davidson Road	Between RR and Leap Rd.	TA	Oct-08	5918	5849	**11,767**	7:00 AM	708	581	1,289	5:00 PM	491	839	1,330	Weekday Average
36	Davidson Road	West of I-270	TA	Apr-09	6098	6063	**12,161**	7:00 AM	432	592	1,024	5:00 PM	639	696	1,335	Weekday Average
37	Britton Road	North of Hayden Run Rd.	TA	May-09	4061	4057	**8,118**	7:00 AM	471	139	610	5:00 PM	274	602	876	Wednesday Count
38	Britton Road	North of Davidson Rd.	TA	May-09	2222	2358	**4,580**	7:00 AM	225	182	407	5:00 PM	224	308	532	Weekday Average
39	Britton Road	South of Davidson Road	TA	May-09	826	936	**1,762**	7:00 AM	65	140	205	5:00 PM	112	98	210	Weekday Average
40	Leap Rd.	South of Cemetery Rd.	TA	Apr-09	5537	5414	**10,951**	7:00 AM	548	234	782	5:00 PM	486	560	1,046	Weekday Average
41	Davidson Road	East of Britton Rd.	TA	May-09	6060	6021	**12,081**	7:00 AM	444	620	1,064	5:00 PM	662	696	1,358	Weekday Average
42	Davidson Road	West of Britton Rd.	TA	May-09	6166	6212	**12,378**	7:00 AM	658	586	1,244	5:00 PM	575	810	1,385	Weekday Average
43	Hayden Run Road	East of Britton Rd.	TA	May-09	6847	7027	**13,874**	7:00 AM	616	482	1,098	5:00 PM	602	696	1,298	Weekday Average
44	Hayden Run Road	West of Britton Rd.	TA	May-09	5787	5773	**11,560**	7:00 AM	669	378	1,047	5:00 PM	432	762	1,194	Weekday Average
45	Hayden Run Road	West of Dublin Rd.	TA	May-09	7590	8741	**16,331**	7:00 AM	617	329	946	5:00 PM	667	822	1,489	Wednesday Count
46	Dexter Falls	South of Hayden Run Rd.	TA	May-09	1784	1687	**3,471**	7:00 AM	195	35	230	5:00 PM	133	208	341	Weekday Average
47	Cemetery Rd.	West of Britton Rd.	TA	Apr-09	14761	17331	**32,092**	7:00 AM	1023	992	2,015	5:00 PM	967	1565	2,532	Weekday Average
49A	Cemetery Rd. WB Lanes	West of Leap Rd.	TA	Apr-09		11673	**11,673**	7:00 AM		470	470	5:00 PM		1089	1,089	Weekday Average
49B	Cemetery Rd. EB Lanes	West of Leap Rd.	TA	Apr-09	11548		**11,548**	7:00 AM	814		814	5:00 PM	815		815	Wednesday Count
50A	Cemetery Rd. WB Lanes	East of Lyman Rd.	TA	Apr-09 May-09		23236	**23,236**	7:00 AM		1428	1,428	5:00 PM		1852	1,852	Weekday Average
50B	Cemetery Rd. EB Lanes	East of Lyman Rd.	TA	Apr-09 May-09	22737		**22,737**	7:00 AM	1754		1,754	5:00 PM	1727		1,727	Weekday Average
51	Cemetery Rd. Wb Lanes	West of Trueman Boulevard	TA	May-09		19092	**19,092**	7:00 AM	1044		1,044	5:00 PM		1675	1,675	Weekday Average
52	Fishinger Rd EB Lanes	East of Trueman Boulevard	TA	May-09	17143		**17,143**	7:00 AM	1020		1,020	5:00 PM	1499		1,499	Weekday Average
53	Trueman Boulevard SB Lanes	North of Cemetery Rd	TA	May-09		8518	**8,518**	7:00 AM		514	514	5:00 PM		725	725	Weekday Average
54	Trueman Boulevard NB Lanes	North of Cemetery Rd	TA	May-09	9000		**9,000**	7:00 AM	322		322	5:00 PM	948		948	Weekday Average
55	Cemetery Rd. WB Lanes	On I-270 overpass between Loop ramps	TA	May-09		23850	**23,850**	7:00 AM		1537	1,537	5:00 PM		1997	1,997	Weekday Average
56	I-270 NB off Ramp to WB Cemetery Rd.		TA	May-09	9386		**9,386**	7:00 AM	834		834	5:00 PM	846		846	Weekday Average
57	I-270 NB off Ramp to EB Cemetery Rd.		TA	Apr-09 May-09	8295		**8,295**	7:00 AM	579		579	5:00 PM	816		816	Tuesday Count
58	WB Cemetery to NB I-270 NB ON Ramp		TA	Apr-09 May-09	5068		**5,068**	7:00 AM	386		386	5:00 PM	441		441	Tuesday Count

24-Hour Traffic Count Summary

					Average Weekday Traffic											
					24-Hour Traffic			AM Peak Hour				PM Peak Hour				
	Road	Location	Source	Month/ Year	EB/NB	WB/SB	ADT	Start Time	EB/NB	WB/SB	Total	Start Time	EB/NB	WB/SB	Total	Notes
59	EB Cemetery to I-270 NB ON ramp		TA	Apr-09 May-09	5912		**5,912**	7:00 AM	583		583	5:00 PM	454		454	Tuesday Count
60	I-270 SB off Ramp to Cemetery Rd.		TA	Apr-09 May-09		10688	**10,688**	7:00 AM		758	758	5:00 PM		837	837	Tuesday Count
61	EB Cemetery to I-270 SB ON ramp		TA	May-09	9980		**9,980**	7:00 AM	1116		1,116	5:00 PM	636		636	Tuesday Count
62	WB Cemetery to I-270 SB ON Ramp		TA	Apr-09 May-09		7085	**7,085**	7:00 AM		465	465	5:00 PM		606	606	Tuesday Count
63	Fishinger Rd	South of Parkmill Rd.	TA	Apr-09	10572	11074	**21,646**	7:00 AM	520	628	1,148	5:00 PM	931	920	1,851	Weekday Average
64	Edwards Farms Rd.	North of Hayden Run Rd.	TA	Jun-09	1533	1474	**3,007**	7:00 AM	160	38	198	5:00 PM	116	177	293	Weekday Average
65	Camden Place Dr.	North of Hayden Run Rd.	TA	May-09	3028	3265	**6,293**	7:00 AM	175	87	262	5:00 PM	245	425	670	Weekday Average
C1	Roberts Road	North of I-70	MORPC	2007	687	768	**1,455**	-	-	-	0	-	-	-	-	2007 Growth 9%
C2	Amity Road	North of I-70	MORPC	2007	906	756	**1,662**	-	-	-	0	-	-	-	-	2007 Growth (-1%)
C3	Jones Road	North of Widener Rd. (I-70)	TA	Oct-08	127	128	**255**	7:00 AM	9	14	23	5:00 PM	23	12	35	
C4	Alton-Darby Creek Road	North of I-70	MORPC	2007	4053	3478	**7,531**	-	-	-	0	-	-	-	0	2007 Growth 4%
C5	Alton-Darby Creek Road	North of Renner Road	MORPC	2007	4729	4947	**9,676**	-	-	-	0	-	-	-	0	2007 Growth 8%
C6	Spindler Road	North of Renner Road	MORPC	2006	-	-	**4,959**	-	-	-	0	-	-	-	0	2006 Growth 4%
C7	Hilliard & Rome Road	North of Renner Road	MORPC	Sep-06	14,526	14,814	**29,340**	7:00 AM	-	-	0	5:00 PM	-	-	0	2006 Growth 3%
C8	Walcutt Road	North of Trabue Road	MORPC	Sep-06	3,714	2,844	**6,558**	7:00 AM	-	-	0	5:00 PM	-	-	0	2006 Growth 1 %
C9	Trabue Road	West of I-270	MORPC	2006	-	-	**16,459**	-	-	-	0	-	-	-	0	2006 Growth 3 %
C10	Roberts Road	West of I-270	MORPC	Jul-07	20,774	22,587	**43,361**	7:00 AM	-	-	0	5:00 PM	-	-	0	2007 Growth 1%
C11	Scioto & Darby Creek Road	West of I-270	MORPC	Jul-07	3,427	3,487	**6,914**	7:00 AM	4834	4851	9,685	5:00 PM	529	483	1,012	Weekday Average
C12	Dublin Road	South of Noreen Drive	TA	Jun-09	4,834	4,851	**9,685**	7:00 AM	382	265	647		529	483	1,012	
C13	Fishinger Road	West of Scioto River	MORPC	Sep-06	14,176	19,770	**33,946**		-	-	0		-	-	0	
C14	Hayden Road	West of Scioto River	MORPC	2008	18,768	17,674	**36,442**		-	-	0	-	-	-	0	2008 Growth 4 %
C15	Britton Parkway	At Columbus/Hilliard Line	TA	May-09	-	4,200	**4,200**	7:00 AM	154	427	581	5:00 PM	297	314	611	Wednesday Count-NB data not available due to tube cut
C16	Wilcox Road	At Columbus/Hilliard Line	TA	Jun-09	2,881	3,134	**6,015**	7:00 AM	346	104	450	5:00 PM	188	466	654	
C17	Avery Road	South of Rings Road	MORPC	2006	5663	6331	**11,994**	-	-	-	0	-	-	-	0	
C18	Cosgray Road	South of Rings Road	MORPC	Oct-07	3049	3232	**6,281**	-	-	-	0	-	-	-	0	2007 Growth 13%
C19	Hayden Run Road	West of Elliott Road	MORPC	2006	-	-	**2,149**	-	-	-	0	-	-	-	0	2006 Growth (-4%)
C20	Elliott Road	South of Hayden Run Road	MORPC	2006	-	-	**558**	-	-	-	0	-	-	-	0	
C21	Langton Road	South of Hayden Run Road	TA	Oct-08	91	104	**195**	7:00 AM	10	5	15	5:00 PM	7	15	22	
C22	Scioto & Darby Creek Road	West of Amity Road	TA	Oct-08	2248	2305	**4,553**	7:00 AM	279	158	437	5:00 PM	198	331	529	

24-Hour Traffic Count Summary

					Average Weekday Traffic											
					24-Hour Traffic			AM Peak Hour				PM Peak Hour				
	Road	Location	Source	Month/ Year	EB/NB	WB/SB	ADT	Start Time	EB/NB	WB/SB	Total	Start Time	EB/NB	WB/SB	Total	Notes
C23	Lucas Pike	West of Amity Road	TA	Oct-08	340	374	**714**	7:00 AM	24	24	48	5:00 PM	43	52	95	
H	Davidson Road	Between Leybourne & Stonehill	City	Apr-06	-	-	**3,310**	7:00 AM	-	-	324	5:00 PM	-	-	372	EB+WB totals - Thursday Count
H	Davidson Road	Between Wallington & Drayton	City	Apr-06	-	-	**3,884**	7:00 AM	-	-	363	5:00 PM	-	-	439	EB+WB totals - Thursday Count
H	Davidson Road	Between Brixston Ct & Brixston Dr	City	Apr-06	-	-	**2,836**	7:00 AM	-	-	232	5:00 PM	-	-	214	EB+WB totals - Thursday Count
H	Davidson Road	Between Leppert & Brixshire Dr	City	Apr-06	-	-	**2,634**	7:00 AM	-	-	253	5:00 PM	-	-	315	EB+WB totals - Thursday Count
H	Cosgray Road	N of Hoffman Farms; S of Rails to Trails	City	Mar-06	2909	3049	**5,958**	7:00 AM	269	71	340	5:00 PM	168	428	596	Wednesday Count
H	Cosgray Road	S of Woodsview	City	Mar-06	3427	3949	**7,376**	7:00 AM	251	133	384	5:00 PM	255	417	672	Wednesday Count
H	Cosgray Road	S of Shier Rings Road	City	Oct-07	2609	2901	**5,509**	7:00 AM	282	156	438	5:00 PM	188	436	624	Ave of 3 Weekdays
H	Cosgray Road	S of Rings Road	City	Oct-07	3226	3394	**6,620**	7:00 AM	388	188	576	5:00 PM	237	544	781	Ave of 3 Weekdays
H	Leppert Road	S of Rails to Trails	City	Mar-06	2250	2205	**4,455**	7:00 AM	110	119	229	5:00 PM	172	240	412	Wednesday Count
H	Scioto Darby Road	E of Hoffman Farms; W of Moundview	City	Mar-06	6566	5680	**12,246**	7:00 AM	171	388	559	5:00 PM	608	339	947	Wednesday Count
H	Emerald Parkway	Between Shier Rings to Perimeter	City	May-06	5267	4863	**10,130**	7:00 AM	293	457	750	5:00 PM	795	454	1,249	Tuesday Count
H	Emerald Parkway	N of Innovation Dr	City	May-06	5086	4565	**9,651**	7:00 AM	305	404	709	5:00 PM	841	378	1,219	Tuesday Count
H	Emerald Parkway	Between Rings Rd and Woerner Temple	City	May-06	7923	6959	**14,882**	7:00 AM	589	625	1,214	5:00 PM	958	504	1,462	Tuesday Count
H	Emerald Parkway	S of Rings Road	City	Mar-06	7500	6731	**14,231**	7:00 AM	558	658	1,216	5:00 PM	797	521	1,318	Tuesday Count
H	Lyman Road	N of Cemetery Road	City	Dec-06	3434	5101	**8,535**	7:00 AM	289	236	525	5:00 PM	166	341	507	Ave of 3 Weekdays
H	Cemetery Road	W of Lyman Road	City	Dec-06	16939	16962	**33,901**	7:00 AM	1176	965	2,141	5:00 PM	1268	1458	2,726	Ave of 3 Weekdays
H	Britton Road	N of Cemetery Road	City	Dec-06	1438	783	**2,221**	7:00 AM	45	79	124	5:00 PM	89	56	145	Ave of 3 Weekdays
H	Britton Road	S of Hayden Run Road	City	May-07	6272	5630	**11,902**	7:00 AM	376	559	935	5:00 PM	560	478	1,038	Weekday Average
H	Britton Road	N of Davidson Road	City	May-07	3111	5188	**8,299**	7:00 AM	411	384	795	5:00 PM	216	602	818	Weekday Average
H	Leap Road	N of Reynolds Drive	City	May-07	5304	5472	**10,776**	7:00 AM	372	445	817	5:00 PM	515	464	979	Weekday Average
H	Hayden Run Road	Between Wilcox and Britton	City	May-07	4511	4720	**9,231**	7:00 AM	263	518	781	5:00 PM	333	530	863	Weekday Average
H	Hayden Run Road	Between Britton and I-270	City	May-07	5723	6383	**12,106**	7:00 AM	566	386	952	5:00 PM	486	575	1,061	Weekday Average

Note

C9 Cordon Count Location

H Counts provided by City of Hilliard

MORPC Data from MORPC online resource http://gis.midwester

SCALE: N.T.S.

Trans Associates
Transportation Solutions for Today and Tomorrow
941 Chatham Lane, Suite 319
Columbus, OH, 43221 / (614) 459-7930

PROJECT NO. STANT-08327	FIGURE 7
PROJECT: HILLIARD THOROUGHFARE PLAN	
TITLE: MORPC TAZ's AND SPLITS	D.B. LDH Date: 5/27/2010 C.B. ____ REV. ____

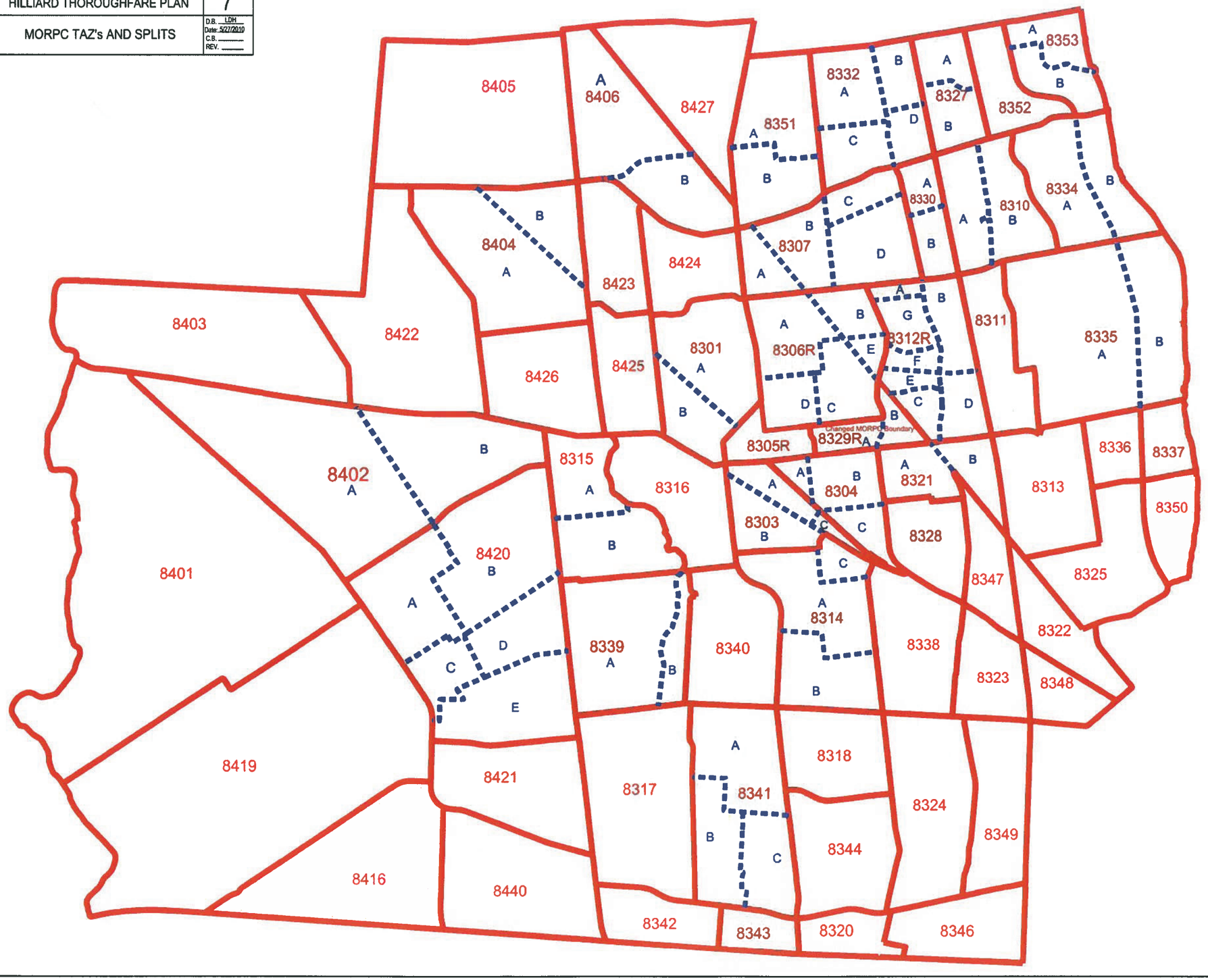


TABLE 4

Existing Land Use

Existing Land Use for TAZs				Residential - Multifamily (DUs)			Residential - Single Family (DUs)			Total Population	Industrial (SF)				Retail (SF)				Office (SF)				Total Employees	Student Enrollment	
Notes	TAZ_ID	MORPC TAZ #	TA SPLIT	Constructed	Occupied	Population	Constructed	Occupied	Population		Constructed	Vacant	Occupied	Employees	Constructed	Vacant	Occupied	Employees	Constructed	Vacant	Occupied	Employees		HS (08-09)	Mid & Elem (08-09)
ITE LAND_USE CODE				230	230	230	210	210	210	N/A	130	130	130	130	820	820	820	820	710	710	710	710	N/A	530	520
Between Rings Road/Tuttle Crossing and Hayden Run Road	8405	8405	-	2	2	4	19	18	52	56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	84061	8406	A	300	271	606	361	346	991	1,597	0	0	0	0	60,420	612	59,808	121	0	0	0	0	121	0	0
	84062	8406	B	419	389	870	129	124	354	1,224	5,748	0	5,748	4	0	0	0	0	0	0	0	0	4	0	0
	8427	8427	-	164	157	351	26	25	71	423	0	0	0	0	0	0	0	0	1,215	0	1,215	4	4	0	0
	83511	8351	A	1,142	1,106	2,474	52	50	143	2,617	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	83512	8351	B	0	0	0	8	8	22	22	0	0	0	0	8,680	0	8,680	17	0	0	0	0	17	0	0
	83321	8332	A	322	317	708	24	23	66	774	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	83322	8332	B	222	219	491	0	0	0	491	0	0	0	0	574,319	25,229	549,090	1,105	0	0	0	0	1,105	0	0
	83323	8332	C	16	12	27	4	4	11	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	83324	8332	D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	186,688	0	186,688	622	622	0	0
	83272	8327	B	0	0		0	0			0														
	83272	8327	B	754	722	1,615	0	0	0	1,615	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8352	8352	-	568	563	1,259	425	407	1,167	2,425	0	0	0	0	71,817	0	71,817	163	2,192	0	2,192	7	171	0	0
	83532	8353	B	0	0		0	0			0														
	83532	8353	B	266	255	570	170	163	467	1,036	0	0	0	0	46,568	0	46,568	106	0	0	0	0	106	0	0
East of Leppert Rd Between Hayden Run Road and Davidson Road	8424	8424	-	260	235	525	339	325	931	1,455	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	83071	8307	A	0	0	0	2	2	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	2089	0
	83072	8307	B	0	0	0	17	16	47	47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	83073	8307	C	0	0	0	1	1	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	83074	8307	D	0	0	0	462	442	1,268	1,268	0	0	0	0	0	0	0	0	0	0	0	0	0	0	843
	83301	8330	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	83302	8330	B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	201,450	0	201,450	672	672	0	0
	83101	8310	A	912	868	1,941	1	1	3	1,944	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	83102	8310	B	265	251	560	565	541	1,551	2,112	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	83341	8334	A	0	0	0	829	794	2,276	2,276	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	83342	8334	B	0	0	0	185	177	508	508	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
East of Leppert Rd Between Davidson Rd and Cemetery Road	83011	8301	A	20	19	43	858	822	2,356	2,398	28,019	0	28,019	19	69,072	0	69,072	194	4,305	0	4,305	14	227	0	0
	83012	8301	B	5	5	11	14	13	38	49	19,441	14,714	4,727	3	33,541	1,305	32,236	67	1,297	0	1,297	4	74	2302	2125
	83061	8306	A	210	180	403	418	400	1,148	1,550	0	0	0	0	0	0	0	0	3,846	0	3,846	13	13	0	1234
	83062	8306	B	91	68	152	1	1	3	155	597,650	274,097	323,553	216	0	0	0	0	0	0	0	0	216	0	629
	83063	8306	C	0	0	0	0	0	0	0	833,933	156,792	677,141	451	0	0	0	0	0	0	0	0	451	0	0
	83064	8306	D	0	0	0	8	8	22	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8305	8305	-	71	68	152	150	144	412	564	38,148	0	32,022	25	119,770	3,173	116,597	291	90,371	0	90,371	301	617	0	0
	83291	8329	A	224	215	480	4	4	11	491	4,233	0	4,233	3	127,938	0	127,938	270	21,988	0	21,988	73	346	0	387
	83292	8329	B	120	111	248	0	0	0	248	0	0	0	0	68,977	25,200	43,777	107	81,127	0	81,127	270	377	0	0
	83121	8312	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	83122	8312	B	0	0	0	0	0	0	0	344,693	0	344,693	230	58,007	0	58,007	116	0	0	0	0	346	0	0
	83123	8312	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	83124	8312	D	0	0	0	0	0	0	0	420,727	6,460	414,267	276	115,628	0	115,628	170	0	0	0	0	447	0	0
	83126	8312	E	0	0	0	0	0	0	0	248,394	28,214	220,180	147	0	0	0	0	0	0	0	0	147	0	0
	83127	8312	F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	83127	8312	F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8311	8311	-	0	0	0	103	99	283	283	0	0	0	0	299,364	28,416	270,948	551	143,110	10,464	132,646	442	993	0	0
	83351	8335	A	0	0	0	1,398	1,339	3,838	3,838	0	0	0	0	0	0	0	0	0	0	0	0	0	0	984
	83352	8335	B	0	0	0	195	187	535	535	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
West of Leppert Rd Between Hayden Run Rd and Scioto Darby Rd	8423	8423	-	52	34	76	25	24	69	145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8425	8425	-	146	137	306	448	429	1,230	1,536	0	0	0	0	0	0	0	0	0	0	0	0	0	0	459
	84041	8404	A	0	0	0	232	222	637	637	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	84042	8404	B	0	0	0	39	37	107	107	0	0	0	0	4,276	0	4,276	9	0	0	0	0	9	0	0
	8426	8426	-	32	21	47	153	147	420	467	0	0	0	0	81,481	6,970	74,511	89	13,469	3,162	10,307	34	124	0	0
	8422	8422	-	0	0	0	11	11	30	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8403	8403	-	0	0	0	27	26	74	74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
West of Alton Darby Rd Between Scioto Darby and I-70	84021	8402	A	0	0	0	54	52	148	148	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	84022	8402	B	0	0	0	60	57	165	165	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	84201	8420	A	0	0	0	19	18	52	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	84202	8420	B	0	0	0	15	14	41	41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	84203	8420	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	84204	8420	D	0	0	0	9	9	25	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	84204	8420	D	0	0	0	5	5	14	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	526
	8421	8421	-	0	0	0	33	32	91	91	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8440	8440	-	2	2	4	49	47	135	139	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8401	8401	-	0	0	0	118	113	324	324	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8419	8419	-	0	0	0	146	140	401	401	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8416	8416	-	0	0	0	35	34	96	96	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
East of Alton Darby Creek Rd Between Scioto Darby/Cemetery Rd	83151	8315	A	0	0	0	8	8	22	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	83152	8315	B	0	0	0	318	305	873	873	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	83391	8339	A	160	0	0	961	920	2,638	2,638	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1159
	83392	8339	B	80	77	171	119	114	327	498	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8316	8316	-	1,010	970	2,169	86	82	236	2,405	0	0	0	0	58,746	4,256	54,490	142	30,848	0	30,848	103	245	0	320
	8340	8340	-	142	136	304	1,229	1,177	3,374	3,678	0	0	0	0	54,606	1,300	53,306	117	0	0	0	0	117	0	0
	83031	8303	A	0	0	0	264	253	725	725	0	0	0	0	14,718	0	14,718	29	3,816	2,800	1,016	3	33	0	524
	83032	8303	B	26	25	56	504	483	1,384	1,439	0	0	0	0	79,818	3,712	76,106	166	2,649	0	2,649	9	175	0	0
	83031	8303	A	0	0	0	1	1	3	3	61,062	12,211	48,851	33	9,912	4,860	5,052	10	2,076	0	2,076	7	50	0	0
	83041	8304	A	6	6	13	4	4	11	24	0	0	0	0	2,160	0	2,160	4	25,948	5,307	20,641	69	73	0	0
	83042	8304	B	60	57	129	370	354	1,016	1,144	0	0	0	0	0	0	0	0	6,458	0	6,458	22	22	0	0
	83043	8304	C	100	97	217	35	34	96	313	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	83141	8314	A	380	364	814	1,004	961	2,757	3,570	0	0	0	0	0	0	0	0	0	0	0	0	0	0	571
	83142	8314	B	66	63	141	654	626	1,796	1,937	0	0	0	0	86,442	7,503	78,939	185	0	0	0	0	185	0	0
	83143	8314	C	0	0	0	134	128	368	368	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TABLE 4

Existing Land Use

Existing Land Use for TAZs				Residential - Multifamily (DUs)			Residential - Single Family (DUs)			Total Population	Industrial (SF)				Retail (SF)				Office (SF)				Total Employees	Student Enrollment	
Notes	TAZ_ID	MORPC TAZ #	TA SPLIT	Constructed	Occupied	Population	Constructed	Occupied	Population		Constructed	Vacant	Occupied	Employees	Constructed	Vacant	Occupied	Employees	Constructed	Vacant	Occupied	Employees		HS (08-09)	Mid & Elem (08-09)
Darby, Cemetery Rd and Roberts Rd	83211	8321	A	2	2	4	20	19	55	59	646,171	13,410	632,761	422	46,202	6,796	39,406	81	33,564	0	33,564	112	614	0	0
	83212	8321	B	0	0	0	0	0	0	0	636,004	84,924	551,080	367	67,768	0	67,768	85	0	0	0	0	453	0	0
	8328	8328	-	0	0	0	782	749	2,147	2,147	0	0	0	0	0	0	0	0	0	0	0	0	0	0	522
	8347	8347	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8338	8338	-	152	146	326	0	0	0	326	2,895,076	172,275	2,722,801	1,815	21,480	6,000	15,480	31	4,016	0	4,016	13	1,860	0	0
	8323	8323	-	0	0	0	0	0	0	0	682,123	119,004	563,119	375	0	0	0	0	0	0	0	0	375	0	0
	8313	8313	-	586	561	1,255	27	26	74	1,329	0	0	0	0	1,088,146	226,827	861,319	1,782	275,461	6,680	268,781	896	2,678	0	0
	8336	8336	-	0	0	0	174	167	478	478	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8337	8337	-	0	0	0	144	138	395	395	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8325	8325	-	324	310	694	838	802	2,301	2,995	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8350	8350	-	214	205	458	207	198	568	1,027	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8322	8322	-	0	0	0	9	9	25	25	748,144	0	748,144	499	16,182	0	16,182	32	3,344	0	3,344	11	542	0	0
	8348	8348	-	0	0	0	0	0	0	0	1,458,654	0	1,458,654	972	3,944	0	3,944	11	0	0	0	0	984	0	0
East of Alton Darby Creek Rd Between Roberts Rd and I-70	8317	8317	-	416	376	841	202	193	555	1,396	0	0	0	0	0	0	0	0	0	0	0	0	0	0	543
	83411	8341	A	384	368	823	822	787	2,257	3,080	0	0	0	0	148,079	0	148,079	319	51,305	0	51,305	171	490	0	0
	83412	8341	B	128	124	278	597	572	1,639	1,917	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	83413	8341	C	910	871	1,949	0	0	0	1,949	0	0	0	0	612,549	30,321	582,228	1,199	3,506	0	3,506	12	1,211	0	0
	8318	8318	-	1,383	1,312	2,934	485	464	1,332	4,265	183,879	11,520	172,359	115	116,967	42,978	73,989	156	21,434	0	21,434	71	342	0	0
	8344	8344	-	389	385	861	1	1	3	864	833,576	0	833,576	556	866,665	19,222	847,443	1,818	39,656	0	39,656	132	2,506	0	0
	8324	8324	-	0	0	0	104	100	286	286	721,883	145,707	576,176	384	3,920	0	3,920	13	968	0	968	3	400	0	0
	8349	8349	-	0	0	0	0	0	0	0	3,080,838	275,488	2,805,350	1,870	76,541	0	76,541	67	43,976	19,544	24,432	81	2,019	0	0
	8342	8342	-	0	0	0	198	190	544	544	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8343	8343	-	76	55	123	76	73	209	332	0	0	0	0	85,462	0	85,462	92	7,125	0	7,125	24	116	0	0
	8320	8320	-	14	13	30	15	14	41	71	308,445	0	308,445	206	93,088	0	93,088	138	0	0	0	0	343	0	0
	8346	8346	-	0	0	0	405	388	1,112	1,112	354,714	0	354,714	236	0	0	0	0	0	0	0	0	236	0	0
Totals				19,593	12,748	28,515	19,043	18,235	52,283	80,798	15,151,555	1,314,816	13,830,613	9,224	5,291,254	444,680	4,846,574	9,855	1,307,208	47,957	1,259,251	4,198	23,276	4,391	10,826

Note: TAZ boundary for 4 of the MORPC zones has been revised and is designated with "R" after the MORPC number

STANT-08327 Page 2 of 2 5/27/2010

TABLE 5

FUTURE 2030 LAND USE

Future 2030 Land Use for TAZs				Residential - Multifamily (DUs)		Residential - Single Family (DUs)		Industrial (SF)		Retail (SF)		Office (SF)		Student Enrollment		Retirement Community (DUs)	Municipal Building	WareHouse (SF)
Notes	TAZ_ID	MORPC TAZ #	TA SPLIT	Constructed	Occupied	Constructed	Occupied	Constructed	Occupied	Constructed	Occupied	Constructed	Occupied	HS (09-10)	Mid & Elem (09-10)	Occupied	Employees	Occupied
ITE LAND_USE CODE				230	230	210	210	130	130	820	820	710	710	530	520	255	733	150
Between Rings Road/Tuttle Crossing and Hayden Run Road	8405	8405	-	230	230	980	980	0	0	42,000	42,000	14,000	14,000	0	0			
	84061	8406	A	300	287	361	346	0	0	60,420	60,420	0	0	0	0			
	84062	8406	B	419	401	129	124	5,748	5,748	0	0	0	0	0	0			
	8427	8427	-	164	157	26	25	0	0	0	0	1,215	1,215	0	0			
	83511	8351	A	1,142	1,094	74	71	0	0	0	0	0	0	0	0			
	83512	8351	B	0	0	89	85	0	0	8,680	8,680	0	0	0	0			
	83321	8332	A	322	308	24	23	0	0	0	0	0	0	0	0			
	83322	8332	B	222	213	0	0	0	0	574,319	574,319	0	0	0	0			
	83323	8332	C	456	437	3	3	0	0	0	0	0	0	0	0			
	83324	8332	D	0	0	0	0	0	0	20,230	20,230	298,468	298,468	0	0			
	83272	8327	B	754	722	0	0	0	0	0	0	0	0	0	0			
	8352	8352	-	568	544	425	407	0	0	71,817	71,817	2,192	2,192	0	0			
	83532	8353	B	266	255	170	163	0	0	46,568	46,568	0	0	0	0			
East of Leppert Rd Between Hayden Run Road and Davidson Road	8424	8424	-	306	293	511	489	0	0	0	0	0	0	0	0			
	83071	8307	A	0	0	2	2	0	0	0	0	0	0	1893	0			
	83072	8307	B	0	0	17	16	0	0	0	0	0	0	0	0			
	83073	8307	C	0	0	162	155	0	0	20,850	20,850	0	0	0	0			
	83074	8307	D	0	0	462	442	0	0	0	0	0	0	0	849			
	83301	8330	A	0	0	0	0	0	0	13,960	13,960	0	0	0	0			
	83302	8330	B	0	0	0	0	0	0	0	0	201,450	201,450	0	0			
	83101	8310	A	912	873	1	1	0	0	0	0	0	0	0	0			
	83102	8310	B	265	254	565	541	0	0	0	0	0	0	0	0			
	83341	8334	A	0	0	829	794	0	0	0	0	0	0	0	0			
	83342	8334	B	0	0	185	177	0	0	0	0	0	0	0	0			
East of Leppert Rd Between Davidson Rd and Cemetery Road	83011	8301	A	12	11	867	830	34,234	34,234	97,323	97,323	43,137	43,137	0	0			
	83012	8301	B	14	13	25	24	0	0	48,439	48,439	26,197	26,197	1618	2022			
	83061	8306	A	210	201	420	402	12,000	12,000	0	0	3,846	3,846	0	1359			
	83062	8306	B			0	0			0	0	0	0	0	620	264		
	83063	8306	C	0	0	0	0	1,281,933	1,281,933	0	0	0	0	0	0			
	83064	8306	D	0	0	8	8	0	0	0	0	0	0	0	0		25	
	83065	8306	E															597,650
	8305	8305	-	188	180	142	136	6,118	6,118	153,138	153,138	143,452	143,452	0	0			
	83291	8329	A	224	215	0	0	0	0	127,938	127,938	90,988	90,988	0	367			
	83292	8329	B	120	115	0	0	0	0	68,977	68,977	81,127	81,127	0	0			
	83121	8312	A	0	0	0	0	0	0	0	0	50,000	50,000	0	0			
	83122	8312	B	0	0	0	0	0	0	31,700	31,700	185,520	185,520	0	0			
	83123	8312	C	181	173	0	0	0	0	167,400	167,400	44,000	44,000	0	0			
	83124	8312	D	0	0	0	0	0	0	116,300	116,300	65,500	65,500	0	0			
	83125	8312	E	0	0	0	0	291,000	291,000	0	0	0	0	0	0			
	83126	8312	F	0	0	0	0	295,500	295,500	0	0	0	0	0	0			
	83127	8312	G	0	0	0	0	0	0	0	0	0	0	0	0	945		
	8311	8311	-	0	0	103	99	0	0	359,604	359,604	195,110	195,110	0	0			
	83351	8335	A	0	0	1,398	1,339	0	0	0	0	0	0	0	985			
	83352	8335	B	0	0	195	187	0	0	0	0	0	0	0	0			
West of Leppert Rd Between Hayden Run Rd and Scioto Darby Rd	8423	8423	-	57	55	87	83	0	0	0	0	10,000	10,000	0	0			
	8425	8425	-	201	192	487	466	0	0	0	0	0	0	0	493			
	84041	8404	A	0	0	260	249	0	0	0	0	0	0	0	0			
	84042	8404	B	0	0	39	37	0	0	0	0	0	0	0	0			
	8426	8426	-	87	83	366	350	0	0	78,601	78,601	10,589	10,589	0	0			
	8422	8422	-	0	0	11	11	0	0	0	0	0	0	0	0			
	8403	8403	-	0	0	27	26	0	0	0	0	0	0	0	0			
West of Alton Darby Rd Between Scioto Darby and I-70	84021	8402	A	0	0	54	52	0	0	0	0	0	0	0	0			
	84022	8402	B	0	0	278	266	0	0	0	0	0	0	0	0			
	84201	8420	A	0	0	307	294	0	0	0	0	0	0	0	0			
	84202	8420	B	0	0	473	453	0	0	0	0	0	0	0	0			
	84203	8420	C	0	0	0	0	0	0	0	0	0	0	1036	0			
	84204	8420	D	0	0	203	194	0	0	0	0	0	0	0	0			
	84205	8420	E	0	0	303	290	0	0	125,000	125,000	0	0	0	534			
	8421	8421	-	0	0	33	32	0	0	0	0	0	0	0	0			
	8440	8440	-	2	2	49	47	0	0	0	0	0	0	0	0			
	8401	8401	-	0	0	118	113	0	0	0	0	0	0	0	0			
	8419	8419	-	0	0	146	140	0	0	0	0	0	0	0	0			
	8416	8416	-	0	0	35	34	0	0	0	0	0	0	0	0			

TABLE 5

FUTURE 2030 LAND USE

Future 2030 Land Use for TAZs				Residential - Multifamily (DUs)		Residential - Single Family (DUs)		Industrial (SF)		Retail (SF)		Office (SF)		Student Enrollment		Retirement Community (DUs)	Municipal Building	WareHouse (SF)
Notes	TAZ_ID	MORPC TAZ #	TA SPLIT	Constructed	Occupied	Constructed	Occupied	Constructed	Occupied	Constructed	Occupied	Constructed	Occupied	HS (09-10)	Mid & Elem (09-10)	Occupied	Employees	Occupied
East of Alton Darby Creek Rd Between Scioto Darby/Cemetery Rd and Roberts Rd	83151	8315	A	0	0	8	8	0	0	306,000	306,000	46,000	46,000	0	0			
	83152	8315	B	0	0	322	308	0	0	0	0	0	0	0	0			
	83391	8339	A	268	257	1,054	1,009	0	0	0	0	0	0	0	1133			
	83392	8339	B	80	77	119	114	0	0	0	0	0	0	0	0			
	8316	8316	-	1,010	967	86	82	0	0	58,746	58,746	30,848	30,848	0	320			
	8340	8340	-	142	136	1,229	1,177	0	0	54,606	54,606	0	0	0	0			
	83031	8303	A	0	0	264	253	0	0	14,718	14,718	3,816	3,816	0	511			
	83032	8303	B	26	25	504	483	0	0	79,818	79,818	2,649	2,649	0	0			
	83033	8303	C	58	56	0	0	0	0	30,000	30,000	43,200	43,200	0	0			
	83041	8304	A	0	0	0	0	0	0	74,000	74,000	48,756	48,756	0	0			
	83042	8304	B	108	103	365	350	0	0	0	0	6,458	6,458	0	0			
	83043	8304	C	100	96	35	34	0	0	20,000	20,000	0	0	0	0			
	83141	8314	A	380	364	1,004	961	0	0	0	0	0	0	0	543			
	83142	8314	B	66	63	654	626	0	0	86,442	86,442	0	0	0	0			
	83143	8314	C	0	0	134	128	0	0	0	0	0	0	0	0			
	83211	8321	A	2	2	20	19	646,171	646,171	46,202	46,202	33,564	33,564	0	0			
	83212	8321	B	0	0	0	0	668,104	668,104	77,768	77,768	0	0	0	0			
	8328	8328	-	0	0	782	749	0	0	0	0	0	0	0	521			
	8347	8347	-	0	0	0	0	567,742	567,742	0	0	0	0	0	0			
	8338	8338	-	152	146	0	0	2,895,076	2,895,076	21,480	21,480	4,016	4,016	0	0			
	8323	8323	-	0	0	0	0	682,123	682,123	0	0	0	0	0	0			
	8313	8313	-	586	561	27	26	0	0	960,307	960,307	275,461	275,461	0	0			
	8336	8336	-	0	0	174	167	0	0	0	0	0	0	0	0			
	8337	8337	-	0	0	144	138	0	0	0	0	0	0	0	0			
	8325	8325	-	324	310	838	802	0	0	0	0	0	0	0	0			
	8350	8350	-	214	205	207	198	0	0	0	0	0	0	0	0			
	8322	8322	-	0	0	9	9	748,144	748,144	16,182	16,182	3,344	3,344	0	0			
	8348	8348	-	0	0	0	0	1,458,654	1,458,654	3,944	3,944	0	0	0	0			
East of Alton Darby Creek Rd Between Roberts Rd and I-70	8317	8317	-	416	398	202	193	0	0	0	0	0	0	0	568			
	83411	8341	A	384	368	822	787	0	0	148,079	148,079	51,305	51,305	0	0			
	83412	8341	B	128	123	597	572	0	0	0	0	0	0	0	0			
	83413	8341	C	910	871	0	0	0	0	612,549	612,549	3,506	3,506	0	0			
	8318	8318	-	1,383	1,324	485	464	183,879	183,879	116,967	116,967	21,434	21,434	0	0			
	8344	8344	-	389	373	1	1	833,576	833,576	866,665	866,665	39,656	39,656	0	0			
	8324	8324	-	0	0	104	100	721,883	721,883	3,920	3,920	968	968	0	0			
	8349	8349	-	0	0	0	0	3,080,838	3,080,838	76,541	76,541	43,976	43,976	0	0			
	8342	8342	-	0	0	198	190	0	0	0	0	0	0	0	0			
	8343	8343	-	76	73	76	73	0	0	83,462	83,462	7,125	7,125	0	0			
	8320	8320	-	14	13	15	14	308,445	308,445	93,088	93,088	0	0	0	0			
	8346	8346	-	0	0	405	388	354,714	354,714	0	0	0	0	0	0			
Totals				**14,838**	**14,220**	**22,333**	**21,426**	**15,075,882**	15,075,882	**6,084,748**	6,084,748	**2,132,873**	**2,132,873**	**4,547**	**10,825**	**1,209**	**25**	**597,650**

Note: TAZ boundary for 4 of the MORPC zones has been revised and is designated with "R" after the MORPC number

TABLE 6

FUTURE BUILD-OUT LAND USE

Future BUILD-OUT Land Use for TAZs				Residential - Multifamily (DUs)		Residential - Single Family (DUs)		Industrial (SF)		Retail (SF)		Office (SF)		Student Enrollment		Retirement Community (DUs)	Municipal Building	WareHouse (SF)
Notes	TAZ_ID	MORPC TAZ #	TA SPLIT	Constructed	Occupied	Constructed	Occupied	Constructed	Occupied	Constructed	Occupied	Constructed	Occupied	HS (09-10)	Mid & Elem (09-10)	Occupied	Employees	Occupied
ITE LAND_USE CODE				230	230	210	210	130	130	820	820	710	710	530	520	255	733	150
Between Rings Road/Tuttle Crossing and Hayden Run Road	8405	8405	-	230	230	980	980	0	0	42,000	42,000	14,000	14,000	0	0			
	84061	8406	A	300	287	361	346	0	0	60,420	60,420	0	0	0	0			
	84062	8406	B	419	401	129	124	5,748	5,748	0	0	0	0	0	0			
	8427	8427	-	164	157	26	25	0	0	0	0	1,215	1,215	0	0			
	83511	8351	A	1,142	1,094	74	71	0	0	0	0	0	0	0	0			
	83512	8351	B	0	0	89	85	0	0	8,680	8,680	0	0	0	0			
	83321	8332	A	322	308	24	23	0	0	0	0	0	0	0	0			
	83322	8332	B	222	213	0	0	0	0	574,319	574,319	0	0	0	0			
	83323	8332	C	952	912	3	3	0	0	68,000	68,000	89,000	89,000	0	0			
	83324	8332	D	0	0	0	0	0	0	89,000	89,000	346,497	346,497	0	0			
	83272	8327	B	754	722	0	0	0	0	0	0	0	0	0	0			
	8352	8352	-	568	544	425	407	0	0	71,817	71,817	2,192	2,192	0	0			
	83532	8353	B	266	255	170	163	0	0	46,568	46,568	0	0	0	0			
East of Leppert Rd Between Hayden Run Road and Davidson Road	8424	8424	-	326	312	511	489	0	0	0	0	0	0	0	0			
	83071	8307	A	0	0	2	2	0	0	0	0	0	0	1893	0			
	83072	8307	B	0	0	315	302	0	0	0	0	0	0	0	0			
	83073	8307	C	0	0	162	155	0	0	93,000	93,000	102,642	102,642	0	0			
	83074	8307	D	0	0	462	442	0	0	0	0	41,000	41,000	0	849			
	83301	8330	A	0	0	0	0	0	0	59,000	59,000	824,161	824,161	0	0			
	83302	8330	B	0	0	0	0	0	0	0	0	201,450	201,450	0	0			
	83101	8310	A	912	873	1	1	0	0	0	0	480,000	480,000	0	0			
	83102	8310	B	265	254	565	541	0	0	0	0	0	0	0	0			
	83341	8334	A	0	0	829	794	0	0	0	0	0	0	0	0			
	83342	8334	B	0	0	185	177	0	0	0	0	0	0	0	0			
East of Leppert Rd Between Davidson Rd and Cemetery Road	83011	8301	A	12	11	867	830	34,234	34,234	116,280	116,280	116,280	116,280	0	0			
	83012	8301	B	14	13	25	24	0	0	82,690	82,690	82,690	82,690	1618	2022			
	83061	8306	A	210	201	420	402	12,000	12,000	0	0	3,846	3,846	0	1359			
	83062	8306	B			0	0			0	0	76,600	76,600	0	620	341		
	83063	8306	C	0	0	0	0	1,281,933	1,281,933	0	0	0	0	0	0			
	83064	8306	D	0	0	8	8	0	0	0	0	0	0	0	0		25	
	83065	8306	E															597,650
	8305	8305	-	253	242	142	136	6,118	6,118	230,027	230,027	241,686	241,686	0	0			
	83291	8329	A	224	215	0	0	0	0	127,938	127,938	90,988	90,988	0	367			
	83292	8329	B	120	115	0	0	0	0	68,977	68,977	125,327	125,327	0	0			
	83121	8312	A	0	0	0	0	0	0	0	0	250,000	250,000	0	0			
	83122	8312	B	0	0	0	0	0	0	386,934	386,934	844,509	844,509	0	0			
	83123	8312	C	410	393	0	0	0	0	207,900	207,900	84,000	84,000	0	0			
	83124	8312	D	140	134	0	0	0	0	243,709	243,709	411,905	411,905	0	0			
	83125	8312	E	0	0	0	0	291,000	291,000	0	0	0	0	0	0			
	83126	8312	F	0	0	0	0	295,500	295,500	0	0	200,000	200,000	0	0			
	83127	8312	G	0	0	0	0	0	0	0	0	0	0	0	0	945		
	8311	8311	-	0	0	103	99	0	0	399,364	399,364	483,110	483,110	0	0			
	83351	8335	A	0	0	1,398	1,339	0	0	0	0	0	0	0	985			
	83352	8335	B	0	0	195	187	0	0	0	0	0	0	0	0			
West of Leppert Rd Between Hayden Run Rd and Scioto Darby Rd	8423	8423	-	649	621	553	530	0	0	100,000	100,000	20,000	20,000	0	0			
	8425	8425	-	201	192	496	475	0	0	0	0	0	0	0	493			
	84041	8404	A	0	0	605	579	0	0	0	0	0	0	0	0			
	84042	8404	B	0	0	151	145	0	0	36,000	36,000	0	0	0	0			
	8426	8426	-	111	106	366	350	0	0	133,382	133,382	105,371	105,371	0	0			
	8422	8422	-	0	0	370	354	0	0	0	0	0	0	0	0			
	8403	8403	-	0	0	27	26	0	0	0	0	0	0	0	0			
West of Alton Darby Rd Between Scioto Darby and I-70	84021	8402	A	0	0	54	52	0	0	0	0	0	0	0	0			
	84022	8402	B	0	0	330	316	0	0	0	0	0	0	0	0			
	84201	8420	A	0	0	307	294	0	0	0	0	0	0	0	0			
	84202	8420	B	0	0	473	453	0	0	0	0	0	0	0	0			
	84203	8420	C	0	0	0	0	0	0	0	0	0	0	1036	0			
	84204	8420	D	0	0	203	194	0	0	0	0	0	0	0	0			
	84205	8420	E	0	0	303	290	0	0	257,400	257,400	0	0	0	534			
	8421	8421	-	0	0	33	32	0	0	0	0	0	0	0	0			
	8440	8440	-	2	2	49	47	0	0	0	0	0	0	0	0			
	8401	8401	-	0	0	118	113	0	0	0	0	0	0	0	0			
	8419	8419	-	0	0	146	140	0	0	0	0	0	0	0	0			
	8416	8416	-	0	0	35	34	0	0	0	0	0	0	0	0			

TABLE 6

FUTURE BUILD-OUT LAND USE

Future BUILD-OUT Land Use for TAZs				Residential - Multifamily (DUs)		Residential - Single Family (DUs)		Industrial (SF)		Retail (SF)		Office (SF)		Student Enrollment		Retirement Community (DUs)	Municipal Building	WareHouse (SF)
Notes	TAZ_ID	MORPC TAZ #	TA SPLIT	Constructed	Occupied	Constructed	Occupied	Constructed	Occupied	Constructed	Occupied	Constructed	Occupied	HS (09-10)	Mid & Elem (09-10)	Occupied	Employees	Occupied
East of Alton Darby Creek Rd Between Scioto Darby/Cemetery Rd and Roberts Rd	83151	8315	A	0	0	8	8	0	0	408,000	408,000	96,000	96,000	0	0			
	83152	8315	B	0	0	322	308	0	0	0	0	0	0	0	0			
	83391	8339	A	368	352	1,054	1,009	0	0	0	0	0	0	0	1133			
	83392	8339	B	80	77	119	114	0	0	0	0	0	0	0	0			
	8316	8316	-	1,010	967	86	82	0	0	58,746	58,746	30,848	30,848	0	320			
	8340	8340	-	142	136	1,229	1,177	0	0	54,606	54,606	0	0	0	0			
	83031	8303	A	0	0	264	253	0	0	14,718	14,718	3,816	3,816	0	511			
	83032	8303	B	26	25	504	483	0	0	79,818	79,818	2,649	2,649	0	0			
	83033	8303	C	88	84	0	0	0	0	90,000	90,000	90,000	90,000	0	0			
	83041	8304	A	0	0	0	0	0	0	74,000	74,000	48,756	48,756	0	0			
	83042	8304	B	108	103	365	350	0	0	0	0	6,458	6,458	0	0			
	83043	8304	C	130	124	35	34	0	0	55,000	55,000	55,000	55,000	0	0			
	83141	8314	A	380	364	1,004	961	0	0	0	0	0	0	0	543			
	83142	8314	B	66	63	654	626	0	0	86,442	86,442	0	0	0	0			
	83143	8314	C	0	0	134	128	0	0	70,000	70,000	70,000	70,000	0	0			
	83211	8321	A	2	2	20	19	646,171	646,171	46,202	46,202	33,564	33,564	0	0			
	83212	8321	B	0	0	0	0	668,104	668,104	77,768	77,768	0	0	0	0			
	8328	8328	-	0	0	782	749	0	0	0	0	0	0	0	521			
	8347	8347	-	0	0	0	0	1,516,800	1,516,800	0	0	0	0	0	0			
	8338	8338	-	152	146	0	0	2,895,076	2,895,076	21,480	21,480	4,016	4,016	0	0			
	8323	8323	-	0	0	0	0	682,123	682,123	0	0	0	0	0	0			
	8313	8313	-	586	561	27	26	0	0	979,621	979,621	501,666	501,666	0	0			
	8336	8336	-	0	0	174	167	0	0	0	0	0	0	0	0			
	8337	8337	-	0	0	144	138	0	0	0	0	0	0	0	0			
	8325	8325	-	324	310	838	802	0	0	0	0	0	0	0	0			
	8350	8350	-	214	205	207	198	0	0	0	0	0	0	0	0			
	8322	8322	-	0	0	9	9	748,144	748,144	16,182	16,182	3,344	3,344	0	0			
	8348	8348	-	0	0	0	0	1,458,654	1,458,654	3,944	3,944	0	0	0	0			
East of Alton Darby Creek Rd Between Roberts Rd and I-70	8317	8317	-	416	398	202	193	0	0	0	0	0	0	0	568			
	83411	8341	A	384	368	822	787	0	0	148,079	148,079	51,305	51,305	0	0			
	83412	8341	B	128	123	597	572	0	0	0	0	0	0	0	0			
	83413	8341	C	910	871	0	0	0	0	612,549	612,549	3,506	3,506	0	0			
	8318	8318	-	1,383	1,324	485	464	183,879	183,879	116,967	116,967	21,434	21,434	0	0			
	8344	8344	-	389	373	1	1	833,576	833,576	866,665	866,665	39,656	39,656	0	0			
	8324	8324	-	0	0	104	100	721,883	721,883	3,920	3,920	968	968	0	0			
	8349	8349	-	0	0	0	0	3,080,838	3,080,838	76,541	76,541	43,976	43,976	0	0			
	8342	8342	-	0	0	198	190	0	0	0	0	0	0	0	0			
	8343	8343	-	76	73	76	73	0	0	83,462	83,462	7,125	7,125	0	0			
	8320	8320	-	14	13	15	14	308,445	308,445	93,088	93,088	0	0	0	0			
	8346	8346	-	0	0	405	388	354,714	354,714	0	0	0	0	0	0			
Totals				**16,564**	**15,871**	**23,974**	**22,998**	**16,024,940**	16,024,940	**7,641,203**	7,641,203	**6,352,556**	**6,352,556**	**4,547**	**10,825**	**1,286**	**25**	**597,650**

Note: TAZ boundary for 4 of the MORPC zones has been revised and is designated with "R" after the MORPC number

City of Hilliard, Ohio
Thoroughfare Plan, Year 2009 Conditions
AM PEAK HOUR

City of Hilliard, Ohio
Thoroughfare Plan, Year 2030 Conditions
AM PEAK HOUR

LEGEND
Streets

City of Hilliard, Ohio

Thoroughfare Plan, Full Build-out Conditions

AM PEAK HOUR

LEGEND

Streets

City of Hilliard, Ohio
Thoroughfare Plan, Year 2009 Conditions
PM PEAK HOUR

LEGEND
Streets

City of Hilliard, Ohio

Thoroughfare Plan, Year 2030 Conditions

PM PEAK HOUR

LEGEND

Streets

City of Hilliard, Ohio

Thoroughfare Plan, Full Build-out Conditions

PM PEAK HOUR

SCALE: N.T.S.

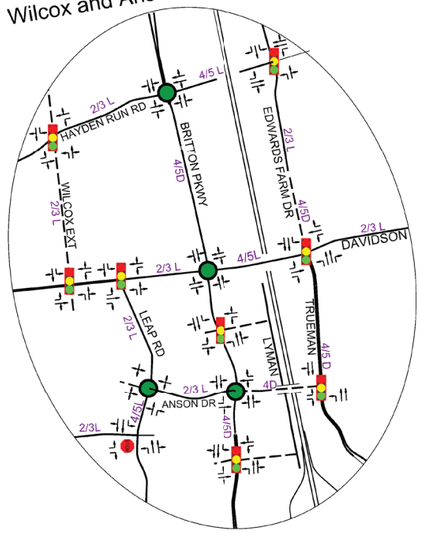
Trans Associates
Transportation Solutions for Today and Tomorrow
941 Chatham Lane, Suite 319
Columbus, OH, 43221 /(614) 459-7930

PROJECT NO. STANT-08327
PROJECT: HILLIARD THOROUGHFARE PLAN
TITLE: LANE DESIGNATIONS AND TRAFFIC CONTROL
FIGURE
D.B. LDH
Date: 5/27/2010
C.B. _____
REV. _____

EXISTING ROAD
PROPOSED ROAD
ROUNDABOUT
TRAFFIC SIGNAL
STOP-SIGN

2L - BASIC 2 - LANE ROADWAY
2/3L - 2 LANE ROADWAY WITH LEFT TURN LANES AT KEY INTERSECTIONS
4/5L - 4 - LANE ROADWAY WITH LEFT TURN LANES
4/5D - 4 - LANE ROADWAY WITH LEFT TURN LANES AND BARRIER MEDIAN

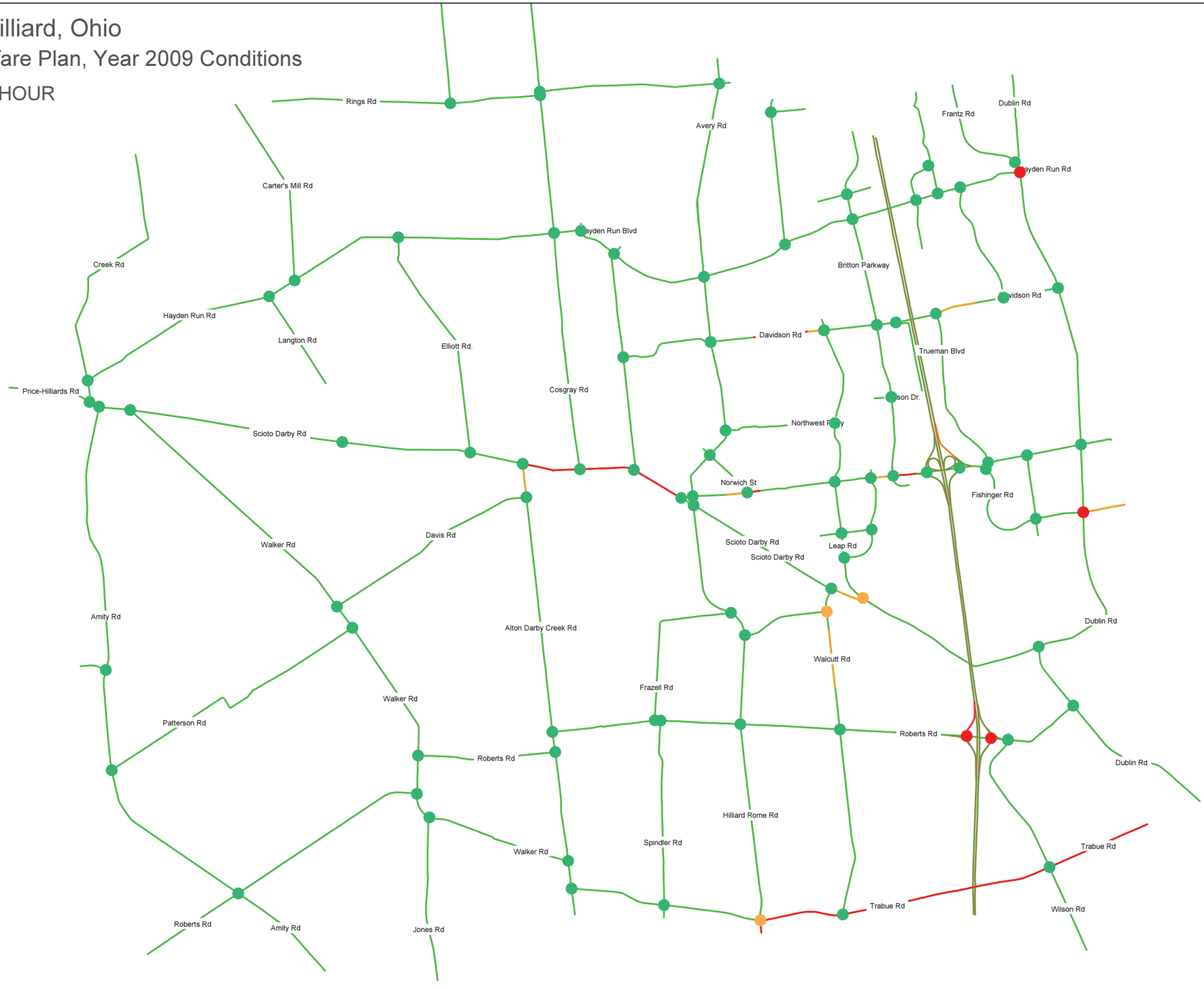
Wilcox and Anson Extensions



City of Hilliard, Ohio

Thoroughfare Plan, Year 2009 Conditions

AM PEAK HOUR



LEGEND

Streets
Link_VC

- < 0.9
- < 1.00
- >= 1.00

Intersections
Level of Service

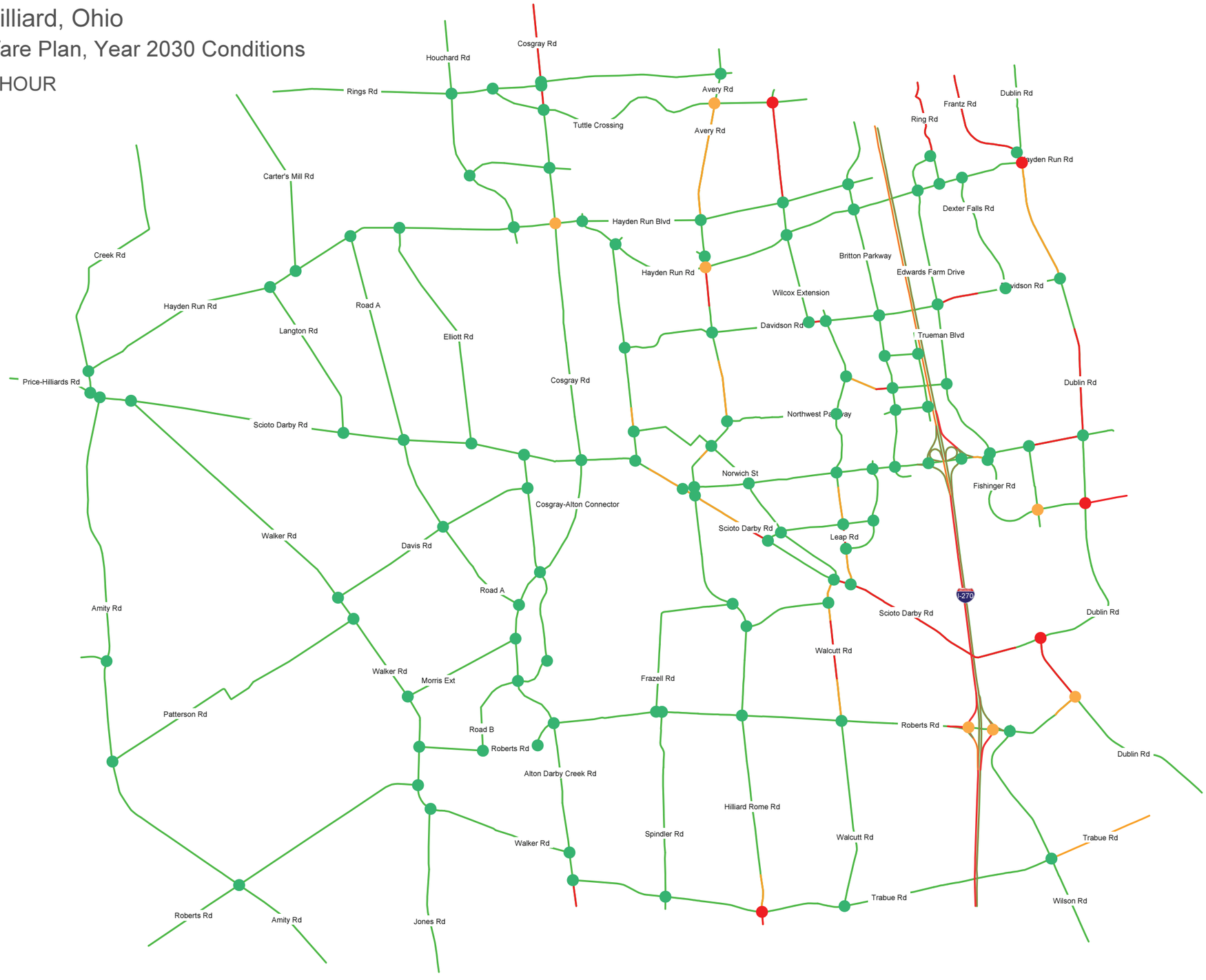
- LOS A
- LOS B
- LOS C
- LOS D
- LOS E
- LOS F

Trans Associates
04-27-2010

City of Hilliard, Ohio

Thoroughfare Plan, Year 2030 Conditions

AM PEAK HOUR



LEGEND

Streets
Link_VC

- < 0.9
- < 1.00
- >= 1.00

Intersections
Level of Service

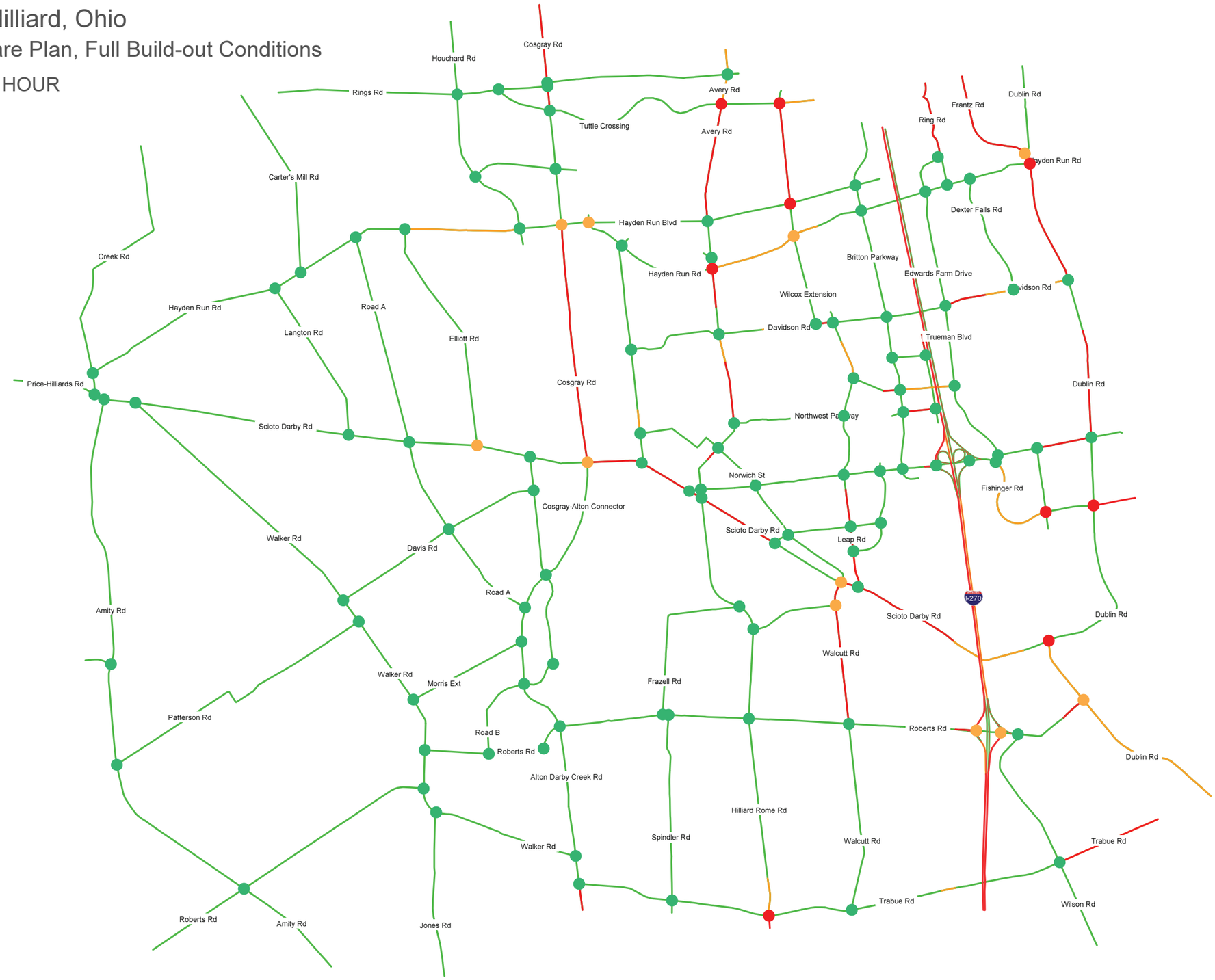
- LOS A
- LOS B
- LOS C
- LOS D
- LOS E
- LOS F

Trans Associates
04-27-2010

City of Hilliard, Ohio

Thoroughfare Plan, Full Build-out Conditions

AM PEAK HOUR



LEGEND

Streets
Link_VC

- < 0.9
- < 1.00
- >= 1.00

Intersections
Level of Service

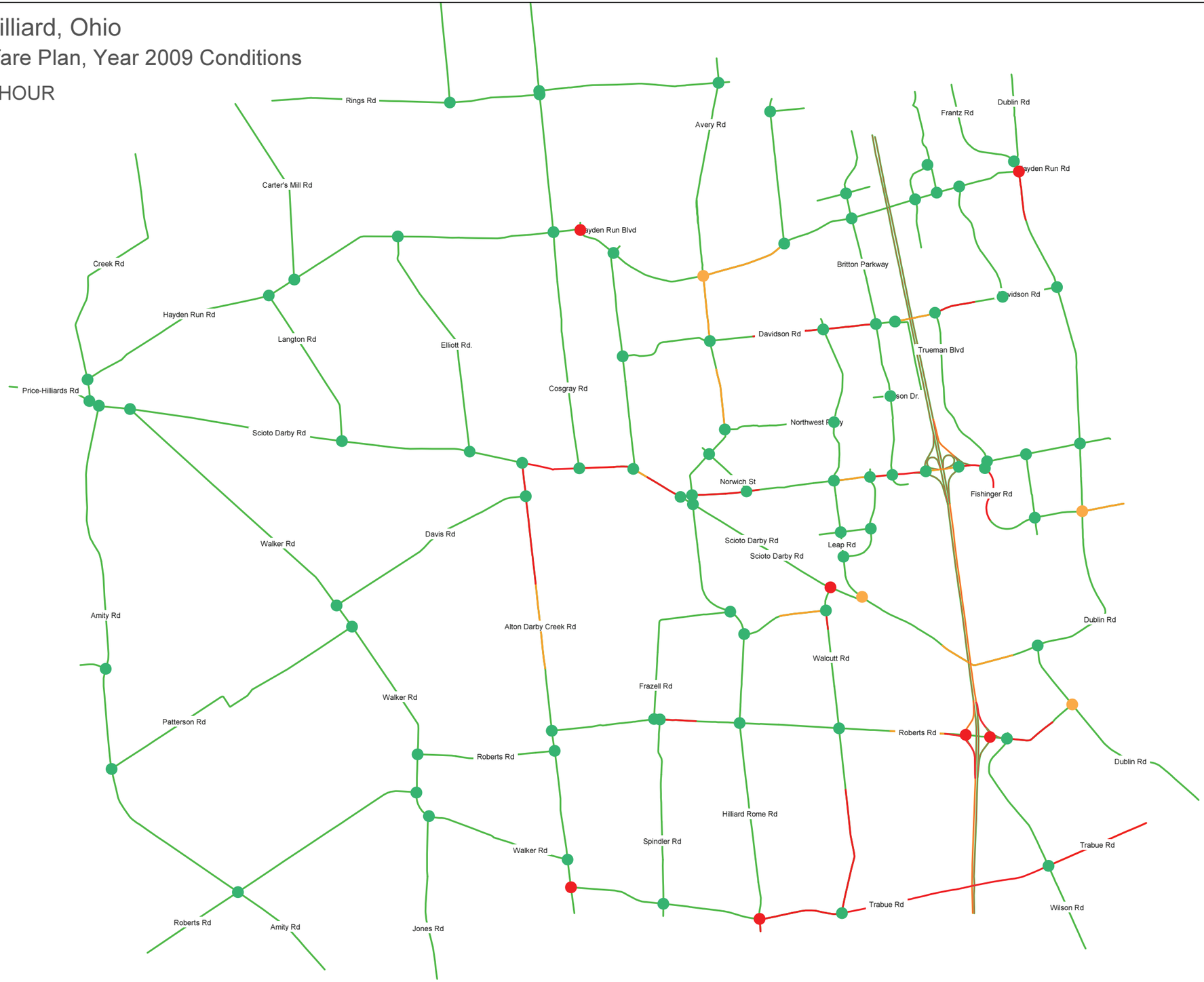
- LOS A
- LOS B
- LOS C
- LOS D
- LOS E
- LOS F

Trans Associates
04-27-2010

City of Hilliard, Ohio

Thoroughfare Plan, Year 2009 Conditions

PM PEAK HOUR

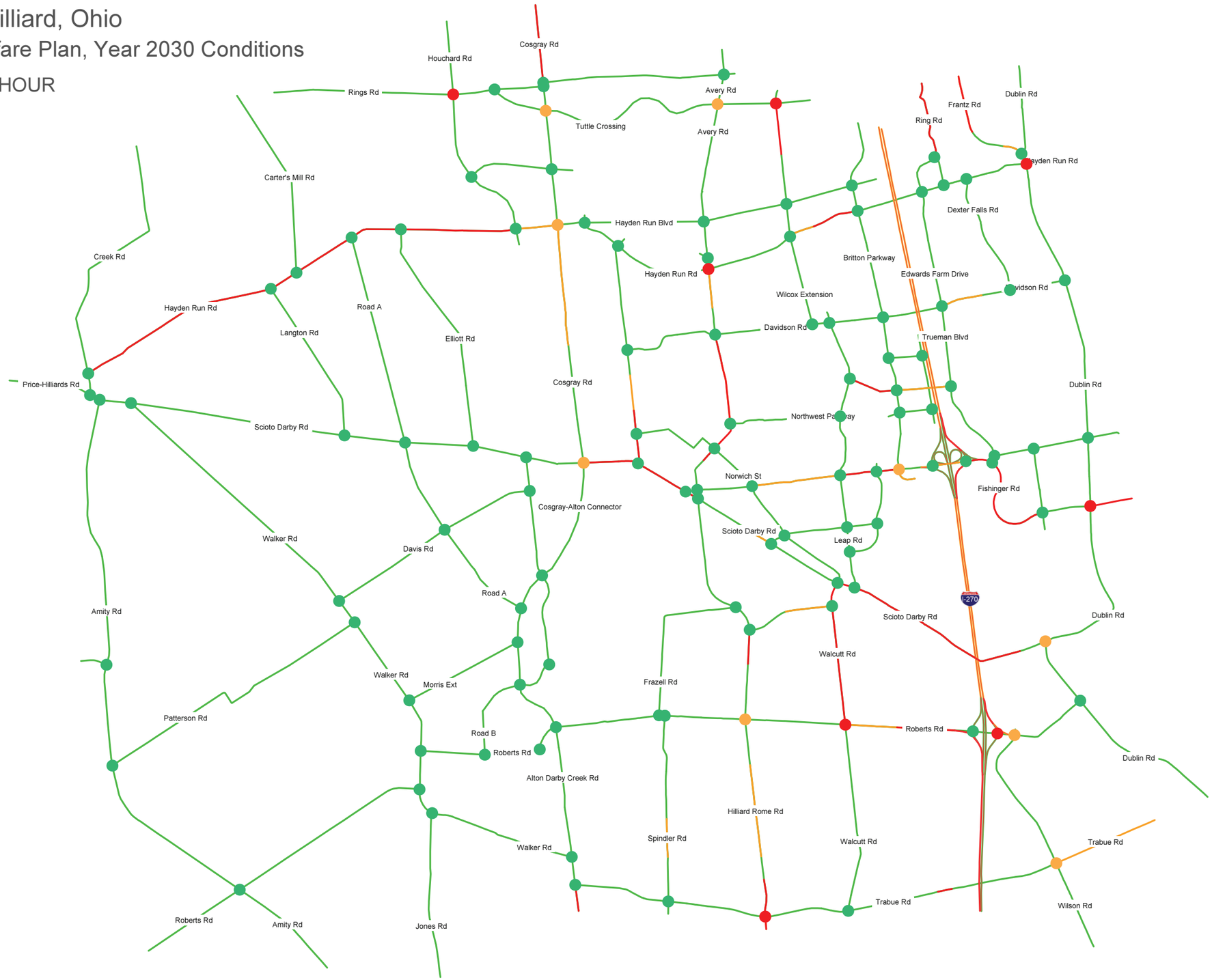


Trans Associates
04-27-2010

City of Hilliard, Ohio

Thoroughfare Plan, Year 2030 Conditions

PM PEAK HOUR

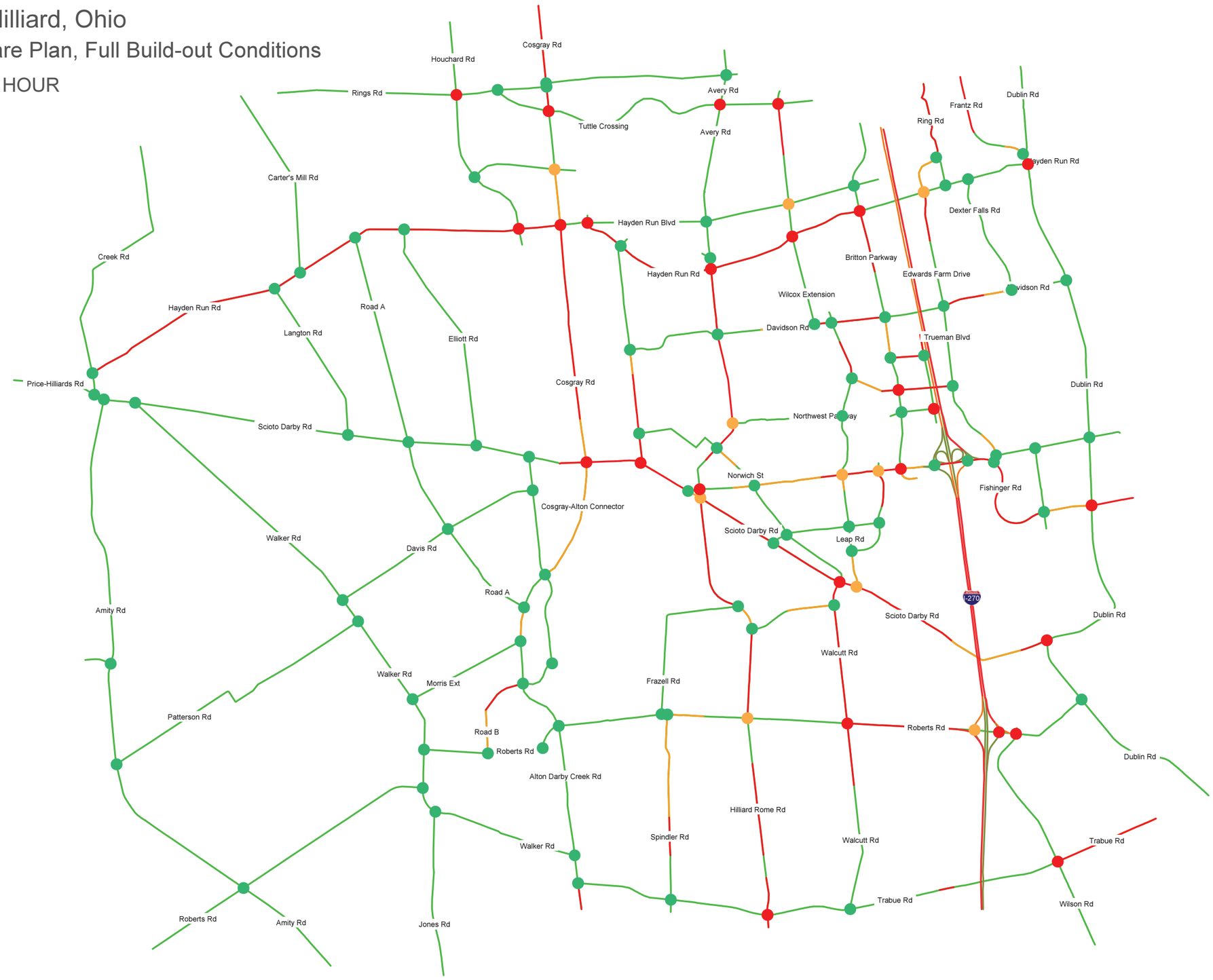


Trans Associates
04-27-2010

City of Hilliard, Ohio

Thoroughfare Plan, Full Build-out Conditions

PM PEAK HOUR



LEGEND

Streets
Link_VC

- < 0.9
- < 1.00
- >= 1.00

Intersections
Level of Service

- LOS A
- LOS B
- LOS C
- LOS D
- LOS E
- LOS F

Trans Associates
04-27-2010

Hilliard Thoroughfare Plan – Roadway Elements and Resultant V/C Ratios

	Roadway	Limits	Current Jurisdiction	Present Condition (Lanes)	Thoroughfare Plan		V/C Ratio (Greatest Directional Value)	
					Functional Classification	Number of Lanes	2030	Build-out
	Alton Darby Creek Road	Scioto Darby Road to Cosgray-Alton Connector	County	2/3	Network Collector	2/3	.65	.68
	Alton Darby Creek Road	Cosgray-Alton Connector to Cosgray-Alton Connector	County	2/3	Network Collector	2	.39	.39
	Alton Darby Creek Road	Roberts Road to Renner Road	County	2	Major Arterial	4/5	.54	.63
	Amity Road	Scioto Darby Road to Roberts Road	County	2	Network Collector	2	.55	.64
	Anson Drive	Leap Road to Britton Parkway	Hilliard	2/3	Network Collector	2/3	1.16	1.50
	Anson Drive Extension	Britton Parkway to Trueman Boulevard	Hilliard	N/A	Network Collector	4D	.89	1.07
	Avery Road	Tuttle Crossing Boulevard to Hayden Run Road	County/ Columbus	2	Major Arterial	4/5D	.92	1.03
	Avery Road	Hayden Run Road to Davidson Road	Hilliard/ County	2/3	Major Arterial	2/3	1.03	1.42
	Avery Road/Main Street	Davidson Road to Cemetery Road	Hilliard	2/3	Major Arterial	2/3	1.42	1.69
	Britton Parkway	Hilliard Corp Line to Hayden Run Road	Hilliard	4/5D	Major Arterial	4/5D	.55	.67
	Britton Parkway	Hayden Run Road to Davidson Road	Hilliard	2/3	Major Arterial	4/5D	.74	1.12
	Britton Parkway	Davidson Road to Anson Drive	Hilliard	4/5D	Major Arterial	4/5D	.76	.95
	Britton Parkway	Anson Drive to Cemetery Road	Hilliard	4/5D	Major Arterial	4/5D	.54	.81
	Cemetery Road	Scioto Darby Road to Norwich Street	Hilliard	2/3	Major Arterial	4/5	.88	.88
	Cemetery Road	Norwich Street to Leap Road	Hilliard	4/5	Major Arterial	4/5	.98	1.07
	Cemetery Road	Leap Road to Britton Parkway	Hilliard	4/5	Major Arterial	4/5	.81	1.26

Hilliard Thoroughfare Plan – Roadway Elements and Resultant V/C Ratios

	Roadway	Limits	Current Jurisdiction	Present Condition (Lanes)	Thoroughfare Plan		V/C Ratio* (Greatest Directional Value)	
					Functional Classification	Number of Lanes	2030	Build-out
	Cemetery Road	Britton Parkway to I-270	Hilliard	4/5	Major Arterial	6D	.99	1.16
	Cemetery Road	I-270 to Trueman Boulevard	Hilliard	6D	Major Arterial	6D	1.36	1.34
	Center Street (including Extension)	Leppert Road to Main Street	Hilliard	2	Network Collector	2	.53	.56
	Cosgray - Alton Connector	Scioto Darby Road to Roberts Road		N/A	Major Arterial	4/5	.73	.96
	Cosgray Road	Tuttle Crossing Boulevard Extension to Hayden Run Road	County	4/5D	Major Arterial	4/5D	.70	.90
	Cosgray Road	Hayden Run Road to Scioto Darby Road	County/ Hilliard	2	Major Arterial	4/5	.94	1.38
	Davidson Road	Leppert Road to Avery Road	Hilliard	2	Network Collector	2	.22	.45
	Davidson Road	Avery Road to Britton Parkway	Hilliard	2/3	Minor Arterial	2/3	1.06	1.45
	Davidson Road	Britton Parkway to Trueman Boulevard.	Hilliard	2	Minor Arterial	4/5	.36	.70
	Davidson Road	Trueman Boulevard to Dublin Road	Hilliard	2/3	Minor Arterial	2/3	1.15	1.62
	Davis Road	Walker Road to Alton Darby Creek Road	County	2	Network Collector	2	.43	.52
	Edgewyn Avenue	Leap Road to Lacon Road	Hilliard	2	Network Collector	2	.32	.22
	Edward Farms Drive Extension	Hilliard Corp Line to Davidson Road	Hilliard	N/A	Minor Arterial	4/5D	.72	1.28
	Elliott Road	Hayden Run Road to Scioto Darby Road	County	2	Network Collector	2	.46	.64
	Fishinger Boulevard	Cemetery Road to Smiley Road	Hilliard/ County	4/5D	Major Arterial	4/5D	1.31	1.40
	Frazell Road	Tinapple Road to Roberts Road	Hilliard	2	Network Collector	2	.12	.15
	Hayden Run Boulevard	Hayden Run Road to Avery Road	County/ Columbus	N/A	Network Collector	4/5D	.53	.70

Hilliard Thoroughfare Plan – Roadway Elements and Resultant V/C Ratios

	Roadway	Limits	Current Jurisdiction	Present Condition (Lanes)	Thoroughfare Plan		V/C Ratio[a] (Greatest Directional Value)	
					Functional Classification	Number of Lanes	2030	Build-out
	Hayden Run Boulevard	Avery Road to Wilcox Road	Hilliard/ Columbus	N/A	Network Collector	4/5D	.16	.40
	Hayden Run Road	Scioto Darby Road to Road A	County	2	Major Arterial	2	1.07	1.12
	Hayden Run Road	Road A to Cosgray Road	County	2	Major Arterial	2/3	1.13	1.40
	Hayden Run Road	Cosgray Road to Hayden Run Boulevard	County	2	Major Arterial	4/5	.36	.60
	Hayden Run Road	Hayden Run Boulevard to Avery Road	County	2	Major Arterial	2/3	.77	1.38
	Hayden Run Road	Avery Road to Britton Parkway	Hilliard/ County	2	Major Arterial	2/3	1.01	1.42
	Hayden Run Road	Britton Parkway to Dublin Road	Hilliard/ Col./County	2/3	Major Arterial	4/5	.57	.71
	Hilliard Cemetery Road	Trueman Boulevard to Dublin Road	Hilliard/ County	2	Network Collector	2	1.08	1.03
	Jeanette Road	Scioto Darby Road to Leap Road	Hilliard	2	Network Collector	2/3	.29	.50
	Lacon Road	Cemetery Road to Leap Road	Hilliard	2	Network Collector	2	.83	1.02
	Langton Road	Hayden Run Road to Scioto Darby Road	Township	2	Network Collector	2	.03	.05
	Leap Road	Davidson Road to Anson Drive	Hilliard	2/3	Minor Arterial	2/3	.80	1.07
	Leap Road	Anson Drive to Cemetery Road	Hilliard	4/5	Minor Arterial	4/5	.73	.79
	Leap Road	Cemetery Road to Scioto Darby Road	Hilliard	2	Minor Arterial	2	.96	1.17
	Leppert Road	Hayden Run Road to Scioto Darby Road	County/ Hilliard	2	Network Collector	2/3	1.09	1.18
	Main Street	Cemetery Road to Roberts Road	Hilliard/ County	4/5	Major Arterial	4/5	1.05	1.34
	Morris Road Extension	Walker Road to Cosgray-Alton Connector	Township	N/A	Network Collector	2/3	.38	.34

Hilliard Thoroughfare Plan – Roadway Elements and Resultant V/C Ratios

	Roadway	Limits	Current Jurisdiction	Present Condition (Lanes)	Thoroughfare Plan		V/C Ratio (Greatest Directional Value)	
					Functional Classification	Number of Lanes	2030	Build-out
	Northwest Parkway	Avery Road to Leap Road	Hilliard	2	Network Collector	2/3	.93	1.01
	Norwich Street	Main Street to Cemetery Road	Hilliard	2/3	Network Collector	2/3	.64	.95
	Norwich Street Extension	Cemetery Road to Scioto Darby Road	Hilliard/ County	N/A	Network Collector	2	.31	.41
	Patterson Road	Amity Road to Walker Road	County	2	Network Collector	2	.07	.07
	Riggins Road	Wilcox Road to Britton Parkway	Hilliard	4/5	Network Collector	4/5	.45	.68
	Road A	Hayden Run Road to Cosgray-Alton Connector	N/A	N/A	Network Collector	2/3	.35	.45
	Road B	Cosgray-Alton Connector to Roberts Road	N/A	N/A	Network Collector	2/3	.88	1.01
	Roberts Road	Amity Road to Walker Road	County	2	Network Collector	2	.23	.22
	Roberts Road	Walker Road to Alton Darby Creek Road	County	2	Minor Arterial	2/3	.33	.53
	Roberts Road	Alton Darby Creek Road to Hilliard Rome Road	Hilliard/ Columbus	2	Minor Arterial	4/5	.77	.89
	Roberts Road	Hilliard Rome Road to I-270	County/ Columbus	4/5	Minor Arterial	4/5	1.01	1.07
	Scioto Darby Road	Amity Road to Road A	County	2	Major Arterial	2/3	.27	.38
	Scioto Darby Road	Road A to Cosgray Road	Hilliard/ County	2/3	Major Arterial	4/5	.70	1.05
	Scioto Darby Road	Cosgray Road to Main Street	Hilliard	2/3	Major Arterial	4/5	1.50	1.62
	Scioto Darby Road	Main Street to I-270	Hilliard/ County	2	Minor Arterial	2/3	1.64	2.11
	Tinapple Road	Frazell Road to Main Street	Hilliard	2	Network Collector	2	.48	.61
	Trueman Boulevard	Davidson Road to Cemetery Road	Hilliard	4/5D	Minor Arterial	4/5D	.95	.92

Hilliard Thoroughfare Plan – Roadway Elements and Resultant V/C Ratios

	Roadway	Limits	Current Jurisdiction	Present Condition (Lanes)	Thoroughfare Plan		V/C Ratio (Greatest Directional Value)	
					Functional Classification	Number of Lanes	2030	Build-out
	Walker Road	Scioto Darby Road to Alton Darby Creek Road	County	2	Network Collector	2	.50	.54
	Wilcox Road	Tuttle Crossing Boulevard to Riggins Road	Dublin/Col./ Hilliard	2/3	Minor Arterial	2/3	1.57	1.93
	Wilcox Road	Riggins Road to Hayden Run Road	Hilliard	2/3	Minor Arterial	2/3	.52	.67
	Wilcox Road Extension	Hayden Run Road to Davidson Road	Hilliard	N/A	Minor Arterial	2/3	.59	.75

City of Hilliard
Thoroughfare Plan

Technical Appendix:
Access Management Plan

Prepared by
Trans Associates Engineering Consultants, Inc.

October 2011

Overview

Access Management is an efficient way of reducing crashes and congestion and improving traffic flow. By minimizing potential conflict points such as driveways and median openings, streets become safer for all users, especially motorists, bicyclists, and pedestrians. Congestion and the likelihood of crashes become greater as the number of driveways and intersections increase and the distance between them decreases. Depending on the condition and treatment used, access management techniques can reduce crashes by upwards of 50 percent.

The City of Hilliard has adopted an Access Management Plan based on the following principles:

- To promote public safety by minimizing crashes.
- To improve the driving experience by increasing mobility and decreasing delay.
- To provide necessary and safe access to property.
- To promote the use of non-vehicular modes to safely access private property by all modes.
- To minimize costs by making more efficient use of existing and proposed roadways.

The Access Management Plan considers: (1) modifications to existing roadways to provide better access management, (2) proper access management along all new roadways, and (3) proper management and design of the site access and circulation systems associated with new and infill development. The following sets forth the guidelines associated with the location and design of driveways. In terms of this Access Management Plan, a driveway is a point of vehicular access connecting adjacent property to a public roadway. Driveways can provide full access, (allowing drivers to enter or exit in any direction) or partial access (restricting one or more movement to improve roadway safety and reduce congestion).

Road Access Categories and Characteristics

The roadways located in Hilliard have been categorized according to their functional and operational intent. The categories are based on maintaining the roadway's function in terms of capacity, traffic flow, property access, and safety. The functional descriptions of the eight basic categories are outlined below. The classification of roadways relative to these access management categories is provided in the Roadway Characteristics table.

Category A

These are generally higher level arterial roadways that cross I-270 and carry significant traffic volumes. Access to these roadways is limited now, and no new access will be permitted. Access to adjacent private property will not be maintained off Category A

roadways, but rather through access point(s) on other Category B-H roadways, possibly via access easement(s) through adjacent private property where necessary. Multi-use paths along these corridors are critical and should be continuous.

Category B
These are generally arterial roadways that include a center median. Access to these roadways is limited. Full access driveway has been/will be established with development text and/or as a part of roadway design. New right-in, right-out driveway access may be considered under special circumstances. Reconstructed roadway sections or extensions should follow driveway spacing of adjacent sections (typically 600' to 800' minimum depending on proximity to major intersections). Pedestrian connections to adjacent properties, paths, sidewalks, and public rights-of-way are critical.

Category C
These are generally arterial roadways. Access to these roadways is limited. Though medians may be considered near major intersections, or to provide pedestrian refuge at key pedestrian crossings, continual medians would not be used throughout a corridor. Driveways should be consolidated or combined as a condition of redevelopment when it occurs. Driveways should be located as far from major intersections as possible. Pedestrian connections to adjacent properties, paths, sidewalks, and public rights-of-way are critical.

Category D
This category is generally comprised of arterial and collector roads. Access may be controlled with a median, near intersections, or to allow pedestrian refuge for crossings and to help control vehicle speeds. Minimum spacing of full access residential driveways is 500 feet. Minimum spacing of full access commercial driveways is 750 feet. Pedestrian connections to adjacent properties, paths, sidewalks, and public rights-of-way are critical.

Category E
This category is generally comprised of arterial and collector roads. Access is not planned to be controlled by a median except as needed near intersections, or to provide pedestrian refuge at key crossings. The minimum spacing for minor driveways is 350 feet. The minimum spacing for major driveways is 500 feet. Pedestrian connections to adjacent properties, paths, sidewalks, and public rights-of-way are critical.

Category F
This category is generally comprised of collector roads, serving adjacent residential areas. Access to these streets is not planned to be controlled with a median except near major intersections where needed. If nearby land uses change from predominantly residential, access control may need to be reevaluated. Pedestrian connections to adjacent properties, paths, sidewalks, and public rights-of-way are critical.

Category G
This category covers local roadways in areas where a grid street system is implemented. In such areas, alleys should be used to provide vehicular connections to adjacent development. Pedestrian connections to adjacent properties, paths, sidewalks, and public rights-of-way are critical. Good street connectivity disperses traffic, creates a walkable block system and results in smaller streets more suitable for walking.

Category H
This category applies to local streets that provide access to individual properties that abut the street. Full access will be permitted to each adjacent parcel or lot.

Driveway Types

Five types of driveways have been defined as a part of this Access Management Plan. These are:

- Farm or Field Drives: A driveway providing access to an agricultural tract of land.
- Single Family Residential: A driveway providing access to one or two structures, which may be single family homes or duplexes.
- Multi-Family Residential: A driveway providing access for up to 20 dwellings, generally multi-family housing development.
- Commercial: A driveway providing access to any commercial, industrial, institutional use (that services fewer than ten trucks per day), or multi-family housing development with more than 20 units.
- Industrial/Delivery: A driveway serving as the primary entrance or exit of an industrial property (serviced by semi-trucks), or for driveways leading to or from a truck dock for a commercial/retail use. Commercial properties may have drives designated for deliveries and others designated for customers. These drives would then follow the guidelines for one of the other drive types.

For Access Management purposes, driveways are also classified by traffic volumes as follows:

- Low Volume Driveway (LVD): greater than 5 and up to 100 two-way vehicle-trips in one or more 60-minute periods of a day.
- Medium Volume Driveway (MVD): greater than 100 and up to 200 two-way vehicle-trips in one or more 60-minute periods of a day.
- High Volume Driveway (HVD): greater than 200 two-way vehicle-trips in one or more 60-minute periods of a day.

Driveway Locations and Spacing

- The number of driveways afforded any one site shall be minimized. The need for more than one driveway must be justified to City staff, and may require a Traffic Impact Study).
- Access for multiple properties shall be combined, where feasible.
- Driveways and parking areas shall be interconnected for all non-residential uses, and mixed-use developments (with or without a residential component). This includes existing situations, as well as planning for future situations.
- Driveways shall be located in accordance with applicable **sight distance requirements** (Stopping Sight Distance (SSD) and Intersection Sight Distance (ISD) as contained in Section 200 of the ODOT Location and Design Manual).
- **Minimum driveway spacing – based on posted speed limits** -- shall be determined using the values for high speed roadways (greater than 40 mph) and low speed roadways (equal to or less than 40 mph) as follows:

High Speed Road		Low Speed Road	
Posted Speed	Minimum Distance	Posted Speed	Minimum Distance
55 mph	600 ft.	40 mph	325 ft.
50 mph	550 ft.	35 mph	250 ft.
45 mph	500 ft.	30 mph	200 ft.
		25 mph	150ft.*

It should be noted that these are desirable minimum distances. It is recognized that site frontage and property limits may, by necessity, alter these dimensions. At the same time, City staff reserves the right to call for greater spacing distances where feasible. Where necessary, City staff may exercise discretion to allow closer spacing of infrequently used drives such as those for deliveries. *Single Family Residential driveways are likely to require closer spacing and need not be combined to satisfy driveway spacing requirements on local, Category H roadways.

- Full access driveway spacing shall consider the location of driveways on both sides of a roadway. ***If the City Engineer deems appropriate, a driveway*** may be required to be located in such a way as to form an intersection with any existing driveways across the street.
- Driveways shall be located where they will not interfere with movements to and from an existing or planned street, highway, or driveway on the opposite side of the roadway.

- Driveways shall be located a sufficient distance from an adjacent public road intersections so as not to interfere with the traffic operations at the intersection. Particularly, private driveways shall not be located within the "influence area" of an adjacent intersection. The "influence area" is defined as the area within the limits of the peak hour traffic queues for the intersection.
- The following table provides the **minimum acceptable distances between drive locations and adjacent intersections**. For all access categories, where two roads of different access levels intersect, the restrictions and distances of the higher level roadway will apply along the lower classified roadway. (The defined distances are measured from the centerline of the intersecting road to the centerline of the proposed driveway.)

Recommended Drive Distances from Intersection by Classification

Roadway Classification	Distance from Intersection
Intersecting Category A	No Access Permitted
Intersecting Category B, C, or D	600 feet
Intersecting Category E, F, or G	300 feet

Path and/or Walk Locations and Spacing

Pedestrian/bike connections will be made to all structures containing non-residential and all multi-family uses (with the exception of accessory uses such as storage facilities), as required as part of any rezoning or building permit. Path location and circulation patterns will be reviewed and governed by the site review process and provided as directed by City staff.

All non-residential, and multi-family residential uses will be required to provide at least one pedestrian/bike connection per driveway from the existing or proposed pedestrian/bike network within the right-of-way to the edge of one's property.

Properties with frontage in excess of 660 feet (1/8 mile) shall provide two or more connections, with the location to be approved by City staff. Paths should provide access from nearby intersections, or from any corners of the property along the right-of-way. Properties with frontages in excess of 1,320 feet (1/4 mile) shall provide an additional connection(s) near the middle of the frontage, at a location approved by City staff.

Properties provided a signalized driveway access will be required to provide pedestrian push buttons and pedestrian signal heads on such a signal as a condition of permitting the signal. A pedestrian/bike path shall be provided from the signal into the development and to any building for which employees work, customers shop, or visitors visit. The design of said path should be protected with landscaping and curbs from

vehicle paths and shall be shaded by street trees per the direction of the Planning Director in review of the site development plan, as directed by the City staff.

Properties with frontages on two or more public roads shall provide an access point from the intersection to structures on the property, as well as additional access points on each frontage from the far corners of the property (away from the signal), as directed by the City staff.

Properties that adjoin existing pedestrian/bike paths, or (re)developable parcels of which may include pedestrian/bike paths, must connect to any existing pedestrian/bike path stubs, or provide new stubs to adjacent properties that may be connected to by future (re)development as directed by the City staff.

These are minimum pedestrian/bike connectivity standards. Modification to the location of pedestrian/bike access may be impacted by the site design and if so, property owners/developers should work with City staff to ensure an appropriate location for these path access points. The intent is to have access to major multi-use paths approximately every 660 feet.

Access Management Standards

This section defines the standards and specifications to be used in conjunction with the access categories and driveway types to protect the functional integrity of roads in and near the City. The following describes the access standards to be applied for each access category.

(See table on page 64)

Roadway	Driveway	Permitted?	Minimum Spacing *(a)(b)*	Traffic Control	Movements
Category B, D					
	HVD	Yes *(c)*	½ mile *(d)*	Signal if warranted, or Roundabout	All *(e)*
	MVD	Yes *(c)*	SSD/ISD & Table *(f)*	Stop	All *(e)*
	LVD	Yes *(c)(g)*	SSD/ISD & Table *(f)*	Stop	All *(e)*
Category C, E					
	HVD	Yes *(c)*	¼ mile *(h)*	Signal if warranted, or Roundabout	All *(e)*
	MVD	Yes *(c)*	SSD/ISD & Table *(f)*	Stop	All *(e)*
	LVD	Yes *(c)(g)*	SSD/ISD & Table *(f)*	Stop	All *(e)*
Category F, G					
	HVD	Yes *(c)*	¼ mile *(h)*	Signal if warranted, or Roundabout	All *(e)*
	MVD	Yes *(c)*	SSD/ISD	Stop	All *(e)*
	LVD	Yes *(c)*	SSD/ISD	Stop	All *(e)*

HVD = High Volume Drive, MVD = Medium Volume Drive
LVD = Low Volume Drive
SSD/ISD = Stopping Sight Distance and Intersection Sight Distance

(a) These are desirable minimum distances. It is recognized that site frontage and property limits may, by necessity, alter these dimensions. At the same time, the City reserves the right to call for greater spacing distances.

(b) Spacing requirements shall properly consider driveways on both sides of the highway.

(c) One direct private access shall be permitted per parcel or contiguous parcels under common ownership. Additional access may be permitted if: (1) the access will not adversely affect the safety and operation of the highway, (2)

such access is necessary for the safe and efficient use of the property, and (3) such access will not adversely affect access to adjacent or nearby properties.

(d) ½ mile is recommended, however, ¼ mile may be allowed when there is no reasonable alternative access to the general street system. If these cannot be achieved, then the restrictions of SSD, ISD, and minimum spacing based on posted speed limit shall apply

(e) All movements permitted if not deemed detrimental by the City Engineer; certain movements may be restricted due to operational and safety considerations.

(f) Spacing shall be determined using the greatest value identified for SSD, ISD, and minimum driveway spacing based on posted speed limit.

(g) Low volume driveways shall be discouraged on roadways with speed limits greater than 50 mph. Where there is an opportunity, low volume drives should be consolidated and combined using appropriate means such as service roads, cross easements, and joint access to reduce the number of access points.

(h) ¼ mile is recommended, however, one-eighth mile may be allowed when there is no reasonable alternative access to the general street system. If these cannot be achieved, then the restrictions of SSD, ISD, and minimum spacing based on posted speed limit shall apply.

- *Category H Roadways*: Full access permitted per parcel or lot.

Driveway Geometrics and Design

Driveway widths and turning radii are determined by the number and use of lanes on the driveway and the design vehicle chosen for the driveway. The width and radii of the driveway shall permit vehicles to enter and exit with a minimum of interference to through traffic, yet be restrictive enough to discourage erratic maneuvers or significant injury or death to a pedestrian crossing the driveway. Farm lot and Single Family Residential driveways shall be designed according to City standards, code, subdivision regulation, or development agreements. The following table provides guidelines for driveway dimension guidelines based on driveway type and design vehicle.

Driveway Type	Multi-Family Residential		Commercial		Industrial/Delivery	
Design Vehicle	P		SU-30		WB-50/WB-67	
Nominal Width 1/	Min. (feet)	Max. (feet)	Min. (feet)	Max. (feet)	Min. (feet)	Max. (feet)
One-way Drive	10	14	14	20	14	26
Two-way Drive	20	24	26	32	26	38
Corresponding RT Radius	25	15	35	25	75	50

1/ Driveway throat width measured parallel to highway and clear of the turn radii.
P: Passenger car
SU-30: Single-unit truck; 30 feet in length
WB-50: Large semi-trailer truck; 55 feet in length
WB-67: Interstate semi-trailer truck; 74 feet in length
RT Radius: Right turn radius (Note: the smaller the drive width, the larger turn radius required to accommodate the path of the vehicle.)

- Driveway characteristics, typical user types, and roadway speed will impact the recommended right turn radius (from the edge of the through lane).
    - Multi-Family Residential driveway radii (measured in feet) shall be equal the speed limit minus five with a minimum RT Radius of 25 feet, giving preference to a narrower nominal width.
    - Commercial driveways shall have a radius at least equal to the speed limit (e.g. 35 mph roadway requires a 35 foot radius). Driveways entering large, multi-tenant commercial uses (e.g. shopping center, and/or other retail use, etc.) may require deceleration right turn lanes or other special considerations based on the discretion of City staff.
    - Industrial/Delivery driveways should be designed to utilize the smallest turning radii possible, minimizing disruption to any sidewalk or multi-use path the driveway crosses.
- Driveways that enter a public roadway at traffic signals shall have the number of lanes as determined by a capacity analysis. Turn templates shall be used to ensure adequate radius-throat width combinations. Lane widths of the proposed driveway should match the planned lane widths of the roadway being accessed.
- Two-way driveways shall intersect the highway at an intersection angle between 70º and 90º. An angle less than 70º will not be permitted on new two-way driveways. One-way operation driveways (right in only or right out only) shall not have an angle less than 45º.
- Driveway curb radii may be reduced on roadways with on-street parking. The turn radius, in such a case, is measured from the edge of the through lane, allowing a smaller curb radii of which will reduce crossing distances for pedestrians.
- For low and medium volume driveways it may be allowable for larger vehicle paths to encroach upon adjacent lane to keep driveways narrower, especially in higher pedestrian areas.
- All driveways will be required to meet both ADA accessibility standards and the City's design standards.
    - Single Family Residential and Multi-family Residential driveways should be designed to allow the sidewalk to continue through the driveway. Where necessary, sidewalks may be lowered to reduce the slope of the driveway

apron between the curb and sidewalk so long as the sidewalk is at least two inches higher than the bottom of the gutter pan.

  - For all other driveways, their profile shall be designed to meet accessibility standards, include a marked crosswalk (for all crossings in excess of 24 feet) and include the proper placement of curb ramps, if necessary.

- Drives shall not be obstructed within the right-of-way by gates, or similar obstacles. Any access with a gate shall be designed so that the longest vehicle can completely clear the traveled way, including a public walk or path, when the gate is closed.
- The need for traffic signals shall be determined by warrant analyses using the Ohio Manual of Uniform Traffic Control Devices. Even if a signal is warranted, the City's signal spacing guidelines will need to be consulted to determine where such a new signal can be erected. The use of roundabouts in lieu of traffic signals may be considered in many intersection types.
- High volume driveways that do not meet signal warrants may be denied certain traffic movements if traffic volumes and conditions on the highway would make the full movement operation unsafe.

Driveway Islands at Public Street Intersections

In some situations, it is desirable to prohibit certain movements through the use of median or channelizing islands. However, because driveway islands increase the size of a driveway, the use of driveway islands is to be limited to situations where the installation of a driveway island is a benefit to traffic operations, and/or pedestrians. Driveway islands shall not be used for landscaping or for private signs; these aesthetic treatments shall be placed outside the limits of the driveway travel lanes to keep driveways as narrow as possible.

AUXILIARY TURN LANES

The requirement for separate left and/or right turn lanes on the main roadway at site access points shall be based on the following guidelines:

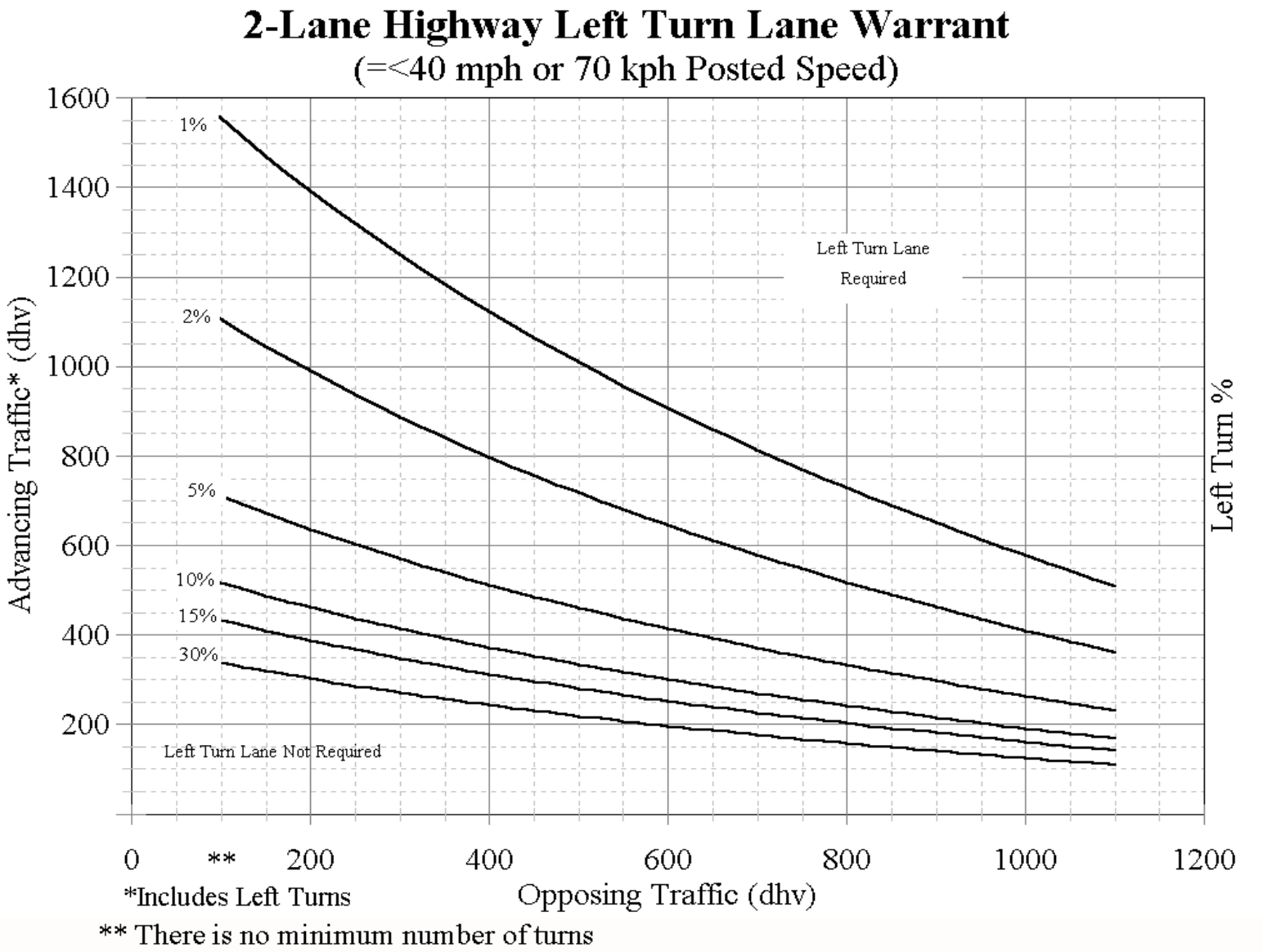
- Left turn lanes shall be provided in accordance with the following conditions:
  - Per Graph 1, 2, or 3 (the left turn warrant charts) contained in the ODOT State Highway Access Management Manual (See Figures 21, 22, and 23 on pages 69 through 71), or
  - On major and minor arterial roadways with posted speed limits greater than 40 mph, or
  - On network collector roadways with posted speed limits greater than 40 mph and more than 10 left turning vehicles during a design hour.

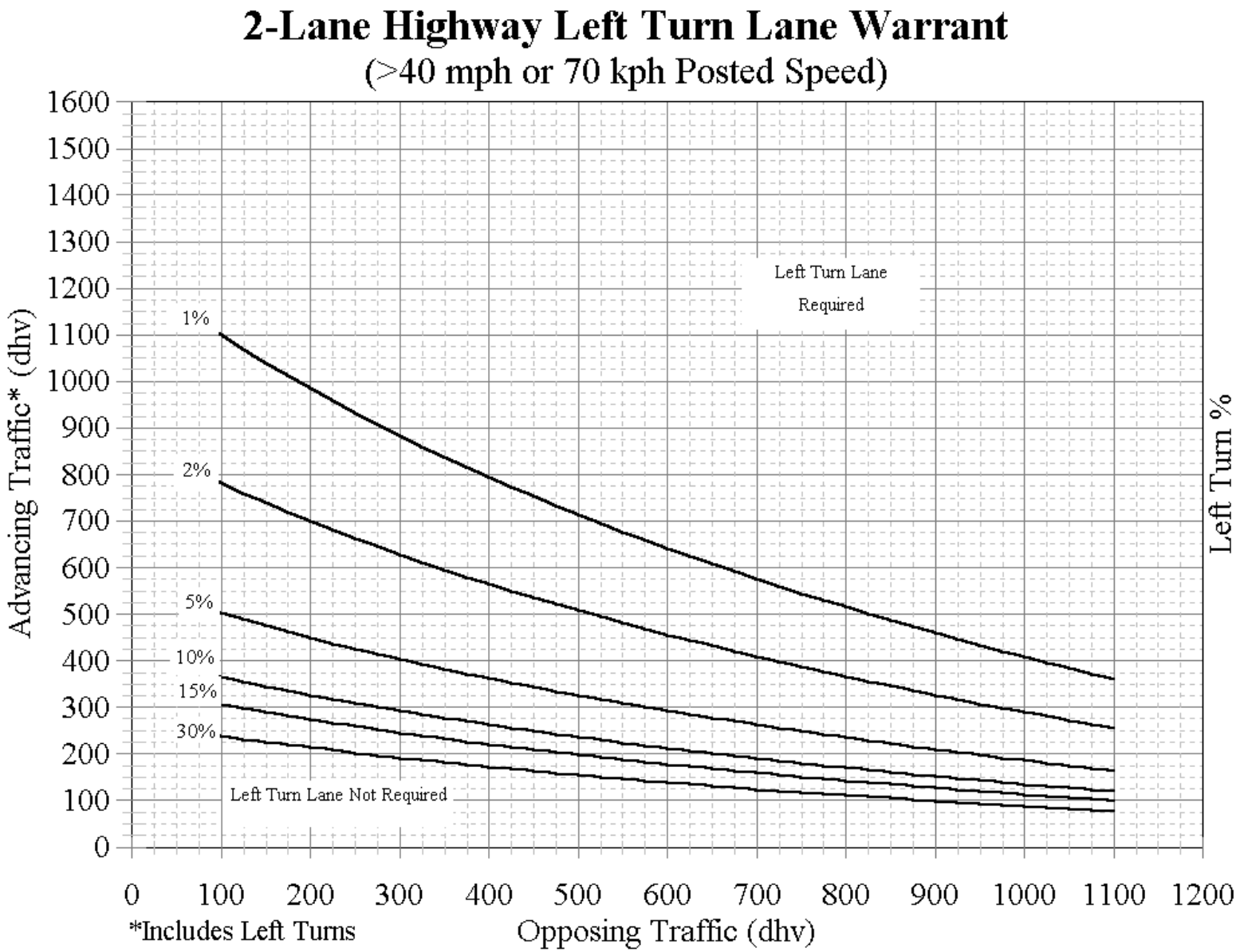
- Right turn lanes shall be provided in accordance with right turn warrant charts contained in the ODOT State Highway Access Management Manual (see figures 24, 25, 26, and 27 on pages 72 through 75) with the following exceptions:
  - Right turn lanes are not required for right turn volumes of less than 10 vehicles during a design peak hour.

- Left or right turn lanes may also be required when deemed necessary for safety purposes by the City.

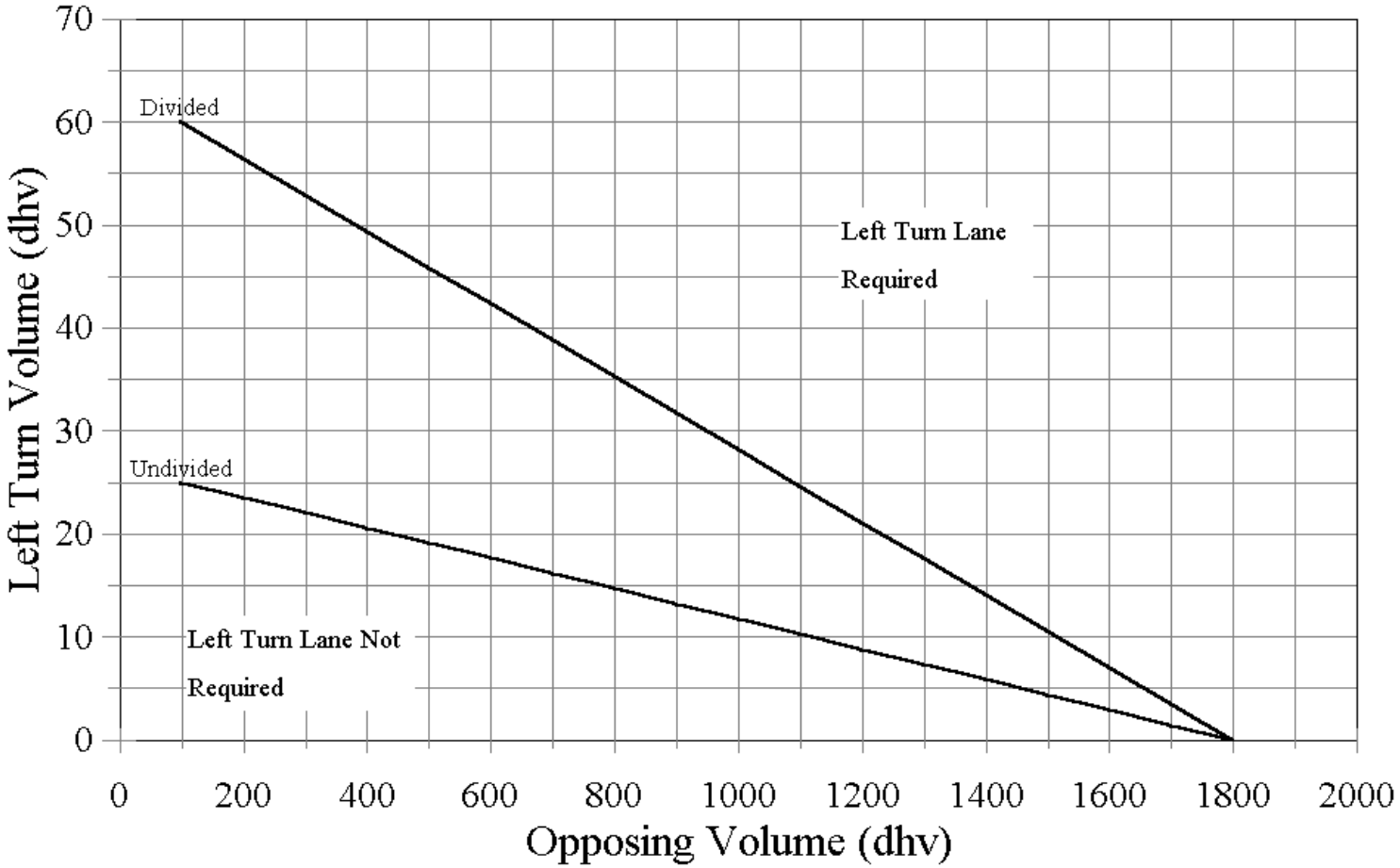
- These requirements shall apply to both new and existing arterial and network collector streets at intersecting driveways. They shall also apply to existing driveways serving properties that are redeveloped.

- The length of left and right turn lanes shall be based on the criteria contained in the ODOT Location and Design Manual or, where appropriate, on the results of queuing analyses associated with the capacity calculations contained in the applicable traffic impact study.


2-Lane Highway Left Turn Lane Warrant
(=<40 mph or 70 kph Posted Speed)
Advancing Traffic* (dhv)
Left Turn %
1600
1400
1200
1000
800
600
400
200
1%
2%
5%
10%
15%
30%
Left Turn Lane
Required
Left Turn Lane Not Required
0
**
200
400
600
800
1000
1200
*Includes Left Turns
Opposing Traffic (dhv)
** There is no minimum number of turns

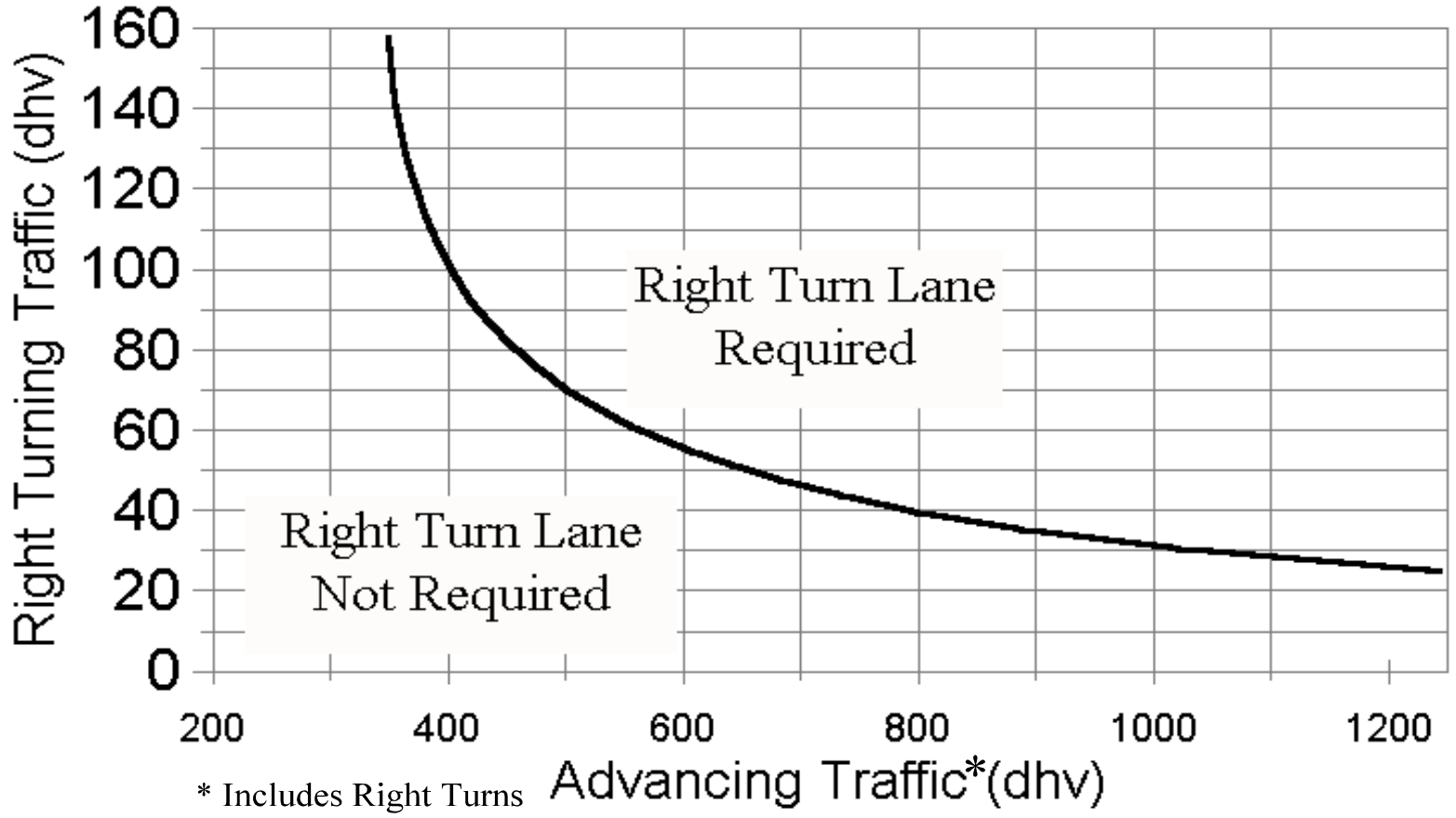

2-Lane Highway Left Turn Lane Warrant
(>40 mph or 70 kph Posted Speed)
Advancing Traffic* (dhv)
Left Turn %
Left Turn Lane
Required
Left Turn Lane Not Required
1%
2%
5%
10%
15%
30%
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
100
0
0
100
200
300
400
500
600
700
800
900
1000
1100
1200
*Includes Left Turns
Opposing Traffic (dhv)

4-Lane Highway Left Turn Lane Warrant



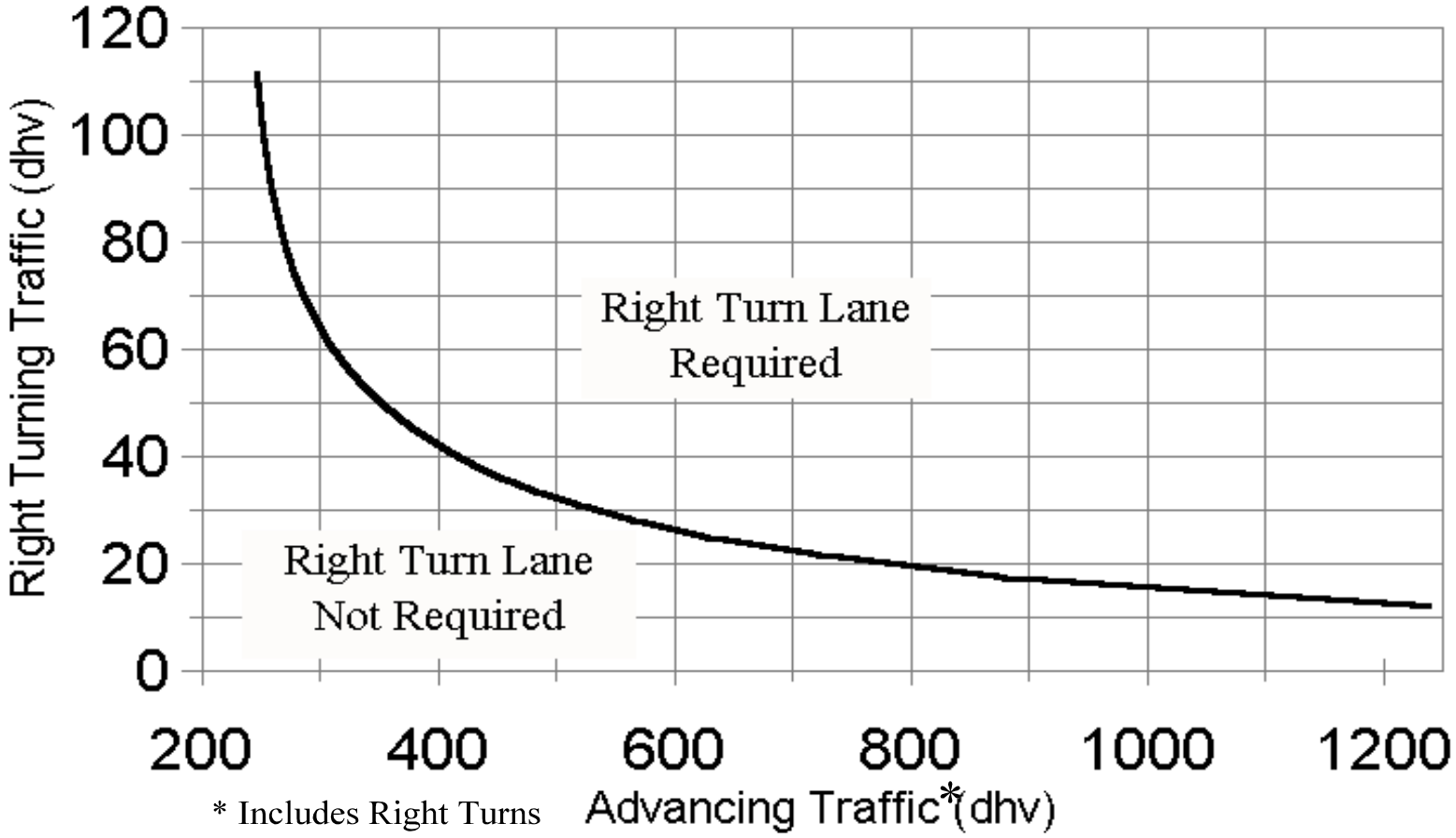
2-Lane Highway Right Turn Lane Warrant

=< 40 mph or 70 kph Posted Speed

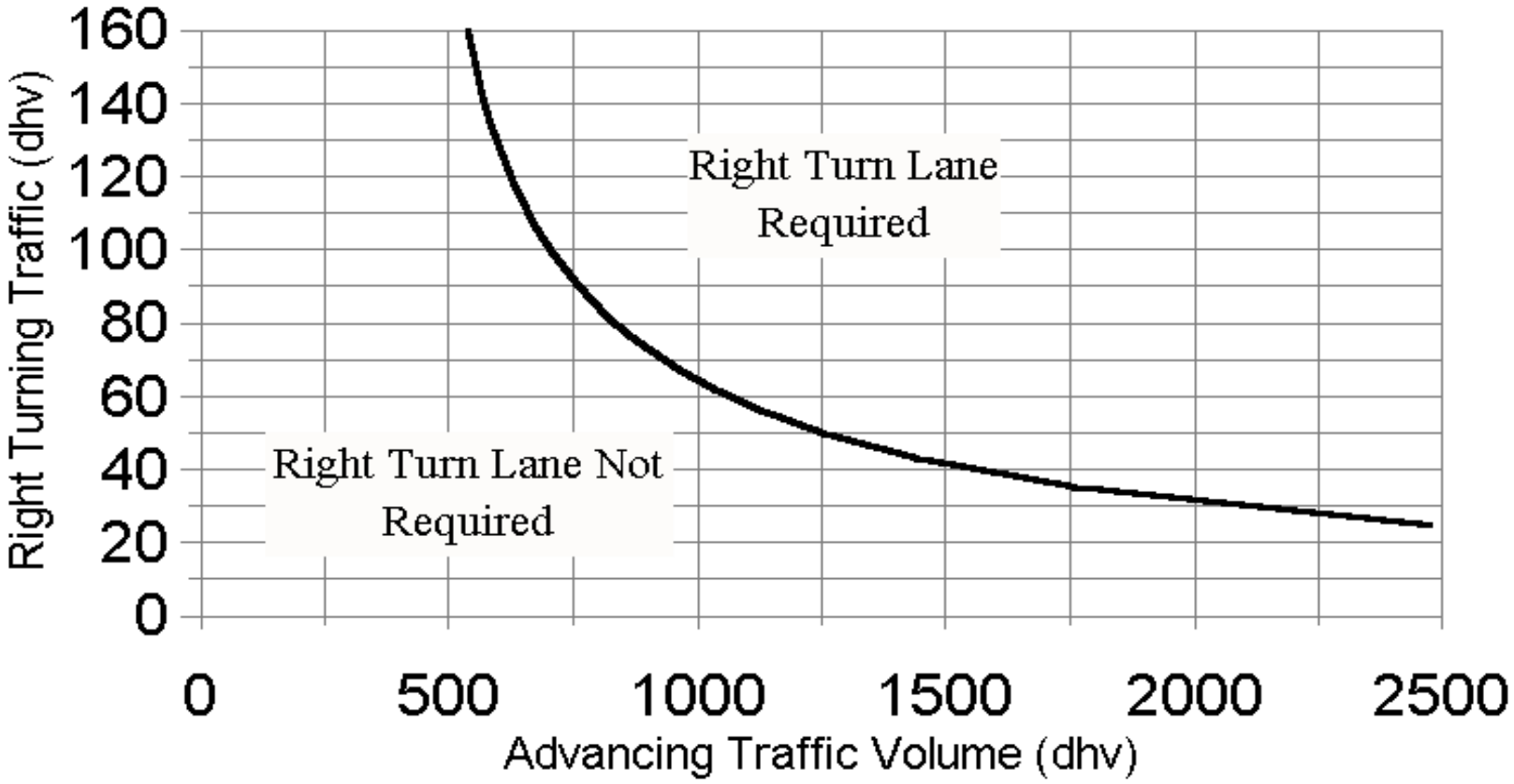


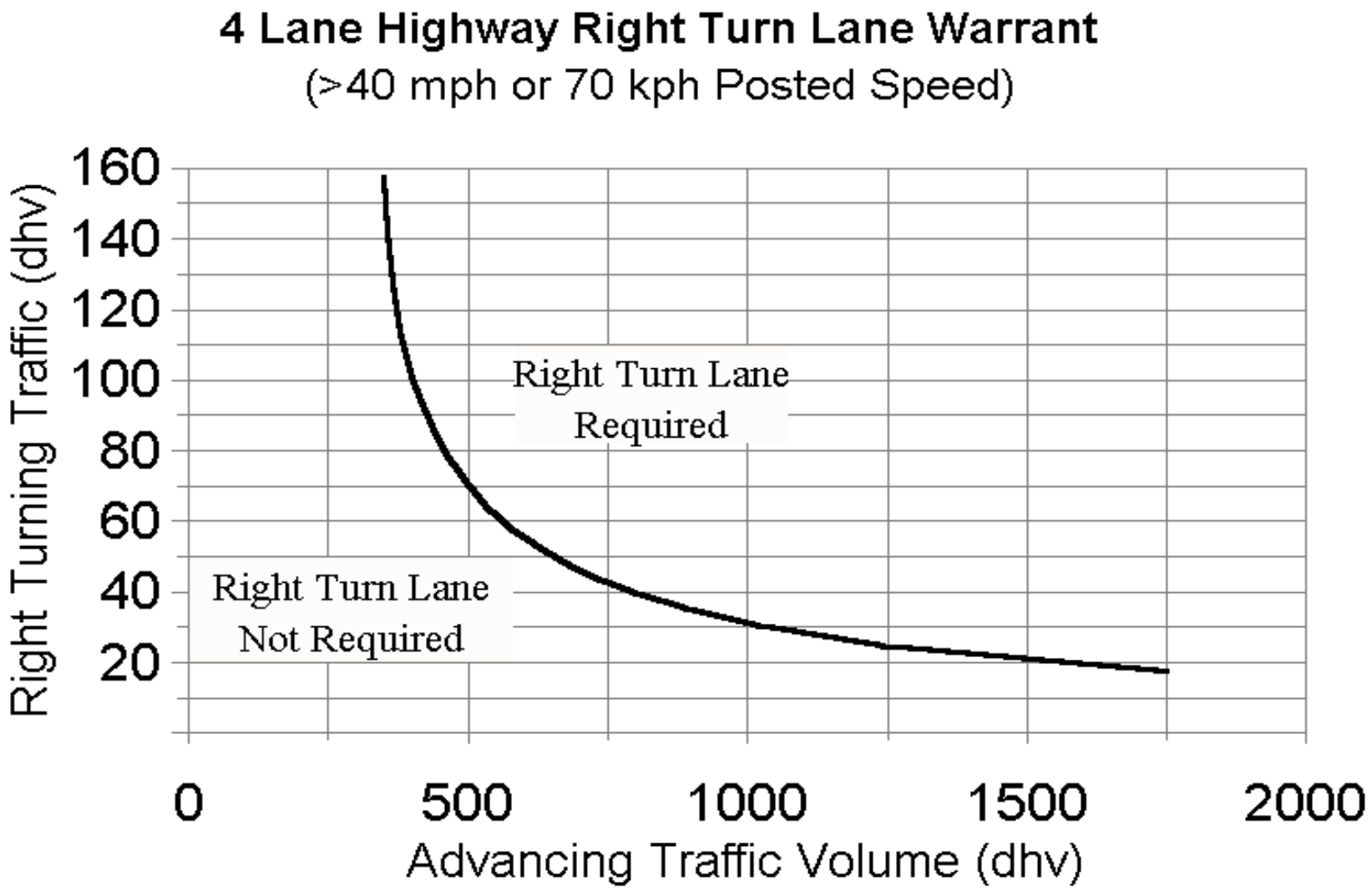
2-Lane Highway Right Turn Lane Warrant

> 40 mph or 70 kph Posted Speed



4 Lane Highway Right Turn Lane Warrant
(=<40 mph or 70 kph Posted Speed)




4 Lane Highway Right Turn Lane Warrant
(>40 mph or 70 kph Posted Speed)
Right Turning Traffic (dhv)
160
140
120
100
80
60
40
20
Right Turn Lane Required
Right Turn Lane Not Required
0
500
1000
1500
2000
Advancing Traffic Volume (dhv)