2009
COLUMBUS-PHENIX CITY METROPOLITAN PLANNING ORGANIZATION CONGESTION MANAGEMENT PROCESS UPDATE

Columbus-Phenix City Metropolitan Planning Organization
Congestion Management Process 2009

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Figure 1-1

The boundary of the Columbus-Phenix City Metropolitan Planning Organization (Columbus-Phenix City Transportation Study).

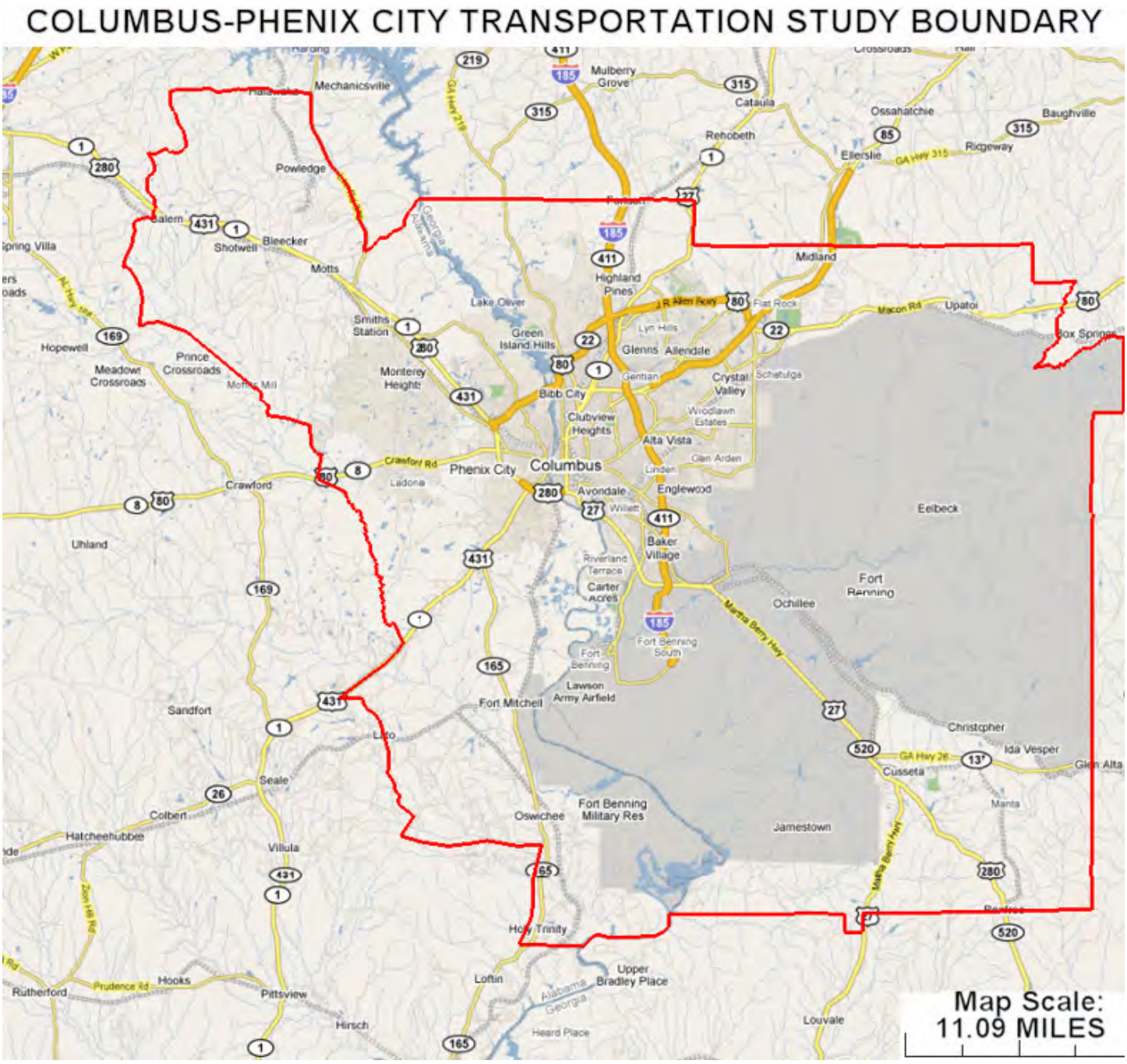
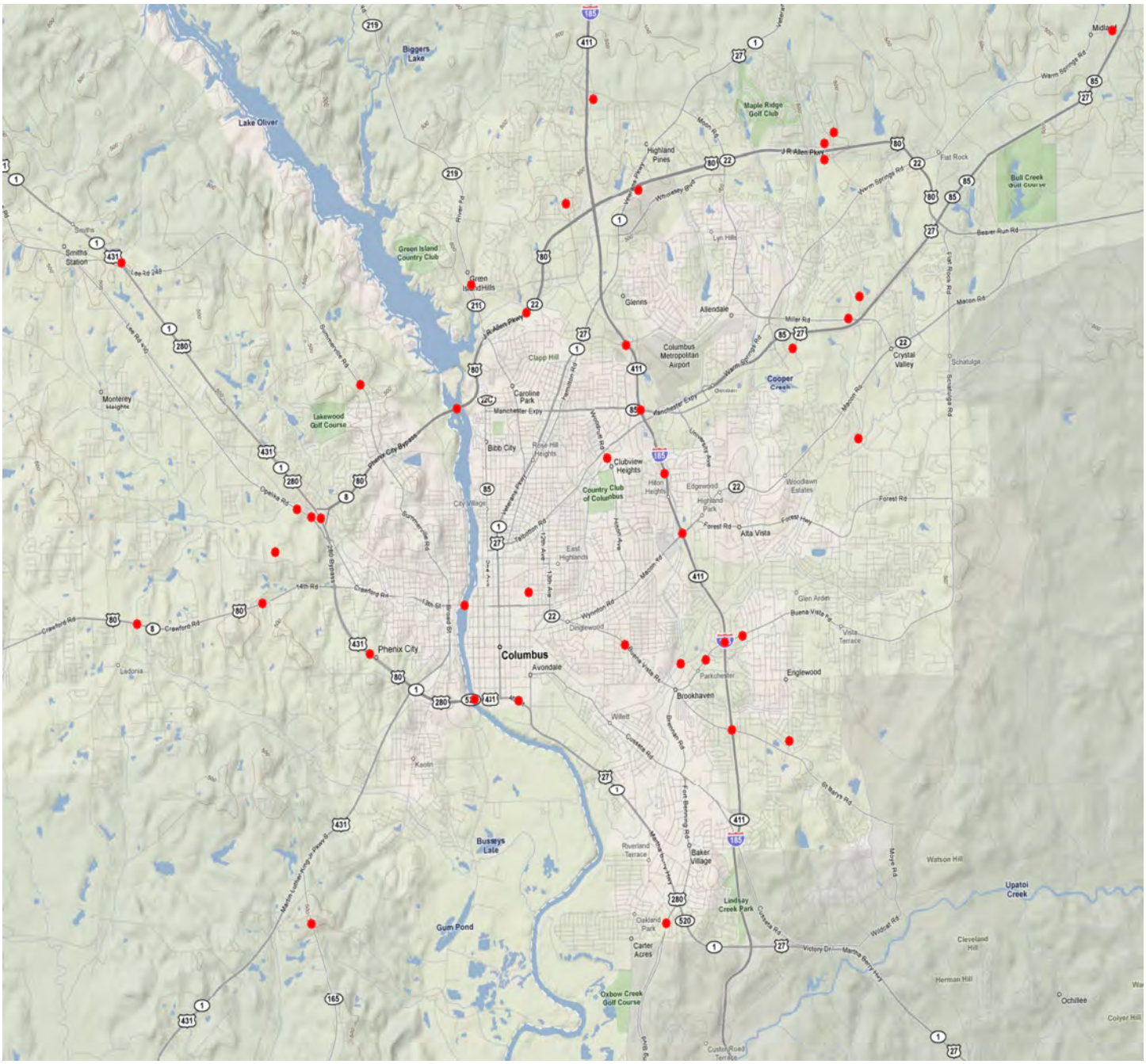


FIGURE 1-2
AREAS IDENTIFIED AS HAVING TRAFFIC CONGESTION
WITHIN THE NEXT 25 YEARS BY 2035 REGIONAL TRAFFIC MODEL



The Columbus-Phenix City Metropolitan Planning Organization (CPCMPO) Congestion Management Process (CMP) plan identifies the overall level of congestion in the region, based on congestion and mobility measures , as well as other data sources, and will focus on potential improvement projects in the most congested areas. The primary purpose of the CMP is to rate the performance of transportation facilities in the Columbus area and to recommend low cost, short-term strategies to alleviate congestion in the long term.

In Spring 2003, Wilbur Smith Associates were hired to prepare the initial Congestion Management Process (CMP) Plan for the CPCMPO; Figure 1-1 depicts the CPCMPO planning area. This study is the third update to the CMP plan, which was undertaken by the CPCMPO staff in September and October of 2004, with subsequent updates in the Spring and Fall of 2005. As laid down in the previous CMP plans, congestion monitoring should occur on all “regionally significant” roadway and transit facilities, with data collected continuously to identify the location and extent of congestion on these facilities

STUDY TASKS

Activities undertaken during the development of the Congestion Management Process study

1. Identify New Congested Corridors
2. Define Congestion Mitigation Strategies
3. Development of Congestion Related Performance Measures
4. Data Collection and Monitoring
5. Summary of Findings and Recommendations.

STUDY SCHEDULE

Data gathering for the CPCMPO Congestion Management Process was initially conducted in September and October of 2004, with subsequent updates in the Fall of 2005 and then the Spring of 2007. As a continuous process, this study was again conducted from March through May of 2009 with the report findings being released in mid Summer.

In the coming years, Fort Benning will see its ranks grow as a result of the Army armor school being relocated there by a decision of the military Base Realignment Commission (BRAC). Over the next four years, this shift is expected to result in many new residents and employers moving into the CPCMPO region. The findings in this report will help guide policy makers in decision making on siting for new housing, zoning and funding transportation improvements to accommodate the increased population.

The CPCMPO for the Columbus-Phenix City area is a bi-state organization -- the Georgia participants are: Columbus (Muscogee County), Chattahoochee County and Ft. Benning, while the Alabama participants are: Phenix City, and Lee and Russell Counties. Annually, the CPCMPO prepares the Unified Planning Work Program (UPWP), which identifies all transportation planning activities agreed upon to be performed by the CPCMPO participants and funded by Federal Grants and State Contracts. The mission of the CPCMPO is to facilitate multi-modal transportation planning and infrastructure improvements in a coordinated, comprehensive and continuous manner for the Columbus-Phenix City Metropolitan Area.

CURRENT IMPROVEMENT PROJECTS

The Columbus-Phenix City Metropolitan Planning Organization maintains a work program developed in accordance with Federal and State planning guidelines. This document, known as the Transportation Improvement Program (TIP), details the use of Federal, State and local dollars on transportation projects in the Metropolitan Planning Organization (CPCMPO) study area. The TIP is a subset of the Long-Range Transportation Plan (LRTP), a planning document that investigates the transportation needs of the Columbus area and develops a plan to address those needs. The development of long range transportation plan must be accomplished using a comprehensive, cooperative and continuing process.

A Congestion Management Process is a decision support tool in the development of the LRTP. The Congestion Management Process is especially helpful in identifying transportation deficiencies, transportation needs and priorities related to congestion within the CPCMPO planning boundaries. Figure 1-2 depicts the locations identified as potentially having future congestion problems within the next 25 years and under preliminary evaluation during the Long Range Transportation Plan update process for inclusion in the programming process.

CHAPTER 2
CONGESTION MANAGEMENT PROCESS
OVERALL INTENT

The intent of the Congestion Management Process is to protect the region's investment in, and improve the effectiveness of, the existing and future transportation networks. This is achieved by using the Congestion Management Process to provide decision makers with information about transportation system performance and alternative strategies to reduce congestion, and enhance the mobility of persons and goods. Recommendations on strategies considered most appropriate for congested locations in the Area will be developed during later tasks in the Study.

A Congestion Management Process is a decision support tool in the development of the LRTP. The Congestion Management Process is especially helpful in identifying transportation deficiencies, transportation needs and priorities related to congestion within the CPCMPO planning boundaries. Figure 1-2 depicts the locations identified through the traffic model as potentially having future congestion problems within the next 25 years and under preliminary evaluation during the Long Range Transportation Plan update process for inclusion in the programming process.

WHAT IS A CONGESTION MANAGEMENT PROCESS PLAN?

A Congestion Management Process is a continuous cycle of transportation planning activities designed to provide decision-makers with better information about transportation system performance and the effectiveness of alternative strategies to deal with congestion. A Congestion Management Process may be considered as consisting of four main components:

- Measurement and identification of congestion;
- A matrix of congestion mitigation strategies;
- Monitoring of effectiveness after implementation; and
- An orderly evaluation process.

The current federal highway authorization bill titled the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) requires that congestion relief be considered in the selection of transportation improvement projects, and that all urbanized areas with populations in excess of 200,000 (termed Transportation Management Areas [TMAs]) develop and implement a Congestion Management Process.

As shown in Figure 2-1 the components of the Congestion Management Process form a continuous cycle of transportation planning activities. By monitoring the effectiveness of congestion mitigation strategies and evaluating their benefits in an orderly, consistent manner, planners and decision-makers can improve their ability, over time, to select the most cost-effective strategies appropriate to their specific local conditions and needs.

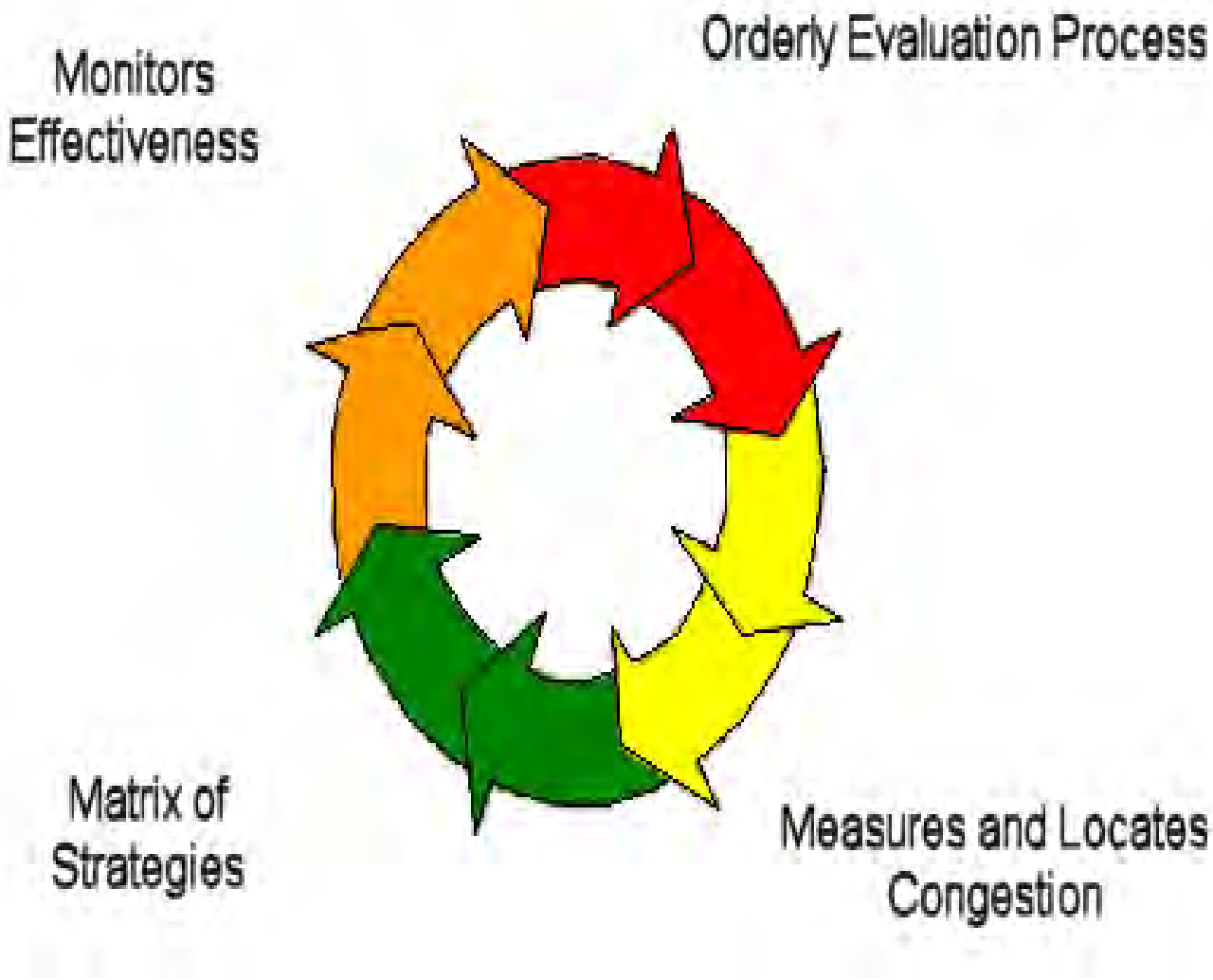


Figure 2-1
Congestion Management: A Cyclical Process

The Federal Highway Administration (FHWA) has issued guidelines on what constitutes a fully operational Congestion Management Plan.[1] The guidelines are summarized under the following steps:

- System Monitoring and Identification of Congested Locations;
- Performance Measure Development;
- Identification of Congestion Causes;
- Identification and Ranking of Mitigation Strategies;
- Implementation of Strategies; and
- Monitoring of Effectiveness.

1. Interim Congestion Management Guidebook - Office of Operations, Federal Highway Administration, February, 2009 - http://ops.fhwa.dot.gov/publications/cmpguidebook/

SYSTEM MONITORING

With respect to congestion management planning, system monitoring is an all inclusive term meant to encompass all the various activities that transportation planners engage in to collect data relevant to transportation system performance. System monitoring should occur on all “regionally significant” roadway and transit facilities, with data collected continuously to identify the location and extent of congestion on these facilities.

With respect to roadways, this would include facilities classified as arterial (23 CFR 500.109(b)). or higher. System monitoring activities typically incorporate one or more of the following:

- **Floating Car Travel Time / Delay Collection:**

  This method of data collection involves recording the time and position of a vehicle “floating” within the traffic stream at control points along a roadway facility. The speed / time / delay data may be obtained via a tape recorder or stopwatch. However, maximum flexibility in data reduction and presentation can be achieved by using proven Global Positioning System (GPS) technology to record and store the time and position of the floating vehicle at intervals of up to 1/10 second.

- **Traffic Count Collection / Analysis:**

  Traffic count data was used from GDOT, ALDOT and Columbus Consolidated Government counters to monitor roadway system performance. Often, travel time / delay runs will highlight segments along a route, or at an intersection, where traffic counts may need to be collected. These “as-needed” counts are an important component of the system monitoring process. Time and delay runs and traffic counts serve as integral inputs to the third mechanism to monitor system performance:

- **Regional Travel Demand Model:**

  The regional travel demand model can serve a two fold purpose with respect to monitoring system performance. First, it provides a method of determining speed and volume values on facilities not directly observed under either of the system monitoring processes described above. Second, it allows for the forecasting of future traffic congestion along broadly defined roadway corridors or activity center areas.

PERFORMANCE MEASURES

Performance measures (and associated threshold values) are used to identify congested conditions at individual locations, or within corridors and activity centers.

These adopted measures are the primary means by which congestion information is communicated among transportation professionals and the public. Therefore, care must be taken in the selection, organization and presentation of these measures so that they are:

- Clearly understood;
- Sensitive to all travel modes;
- Sensitive to time;
- Supported by data that are neither costly nor difficult to collect;
- Supported by data that may be forecast into the future and able to mea sure the effects of strategies meant to mitigate congestion.
- FHWA also suggests that selected performance measures be categorized as follows:
    1. Those that measure congestion (facility-based measures, such as V/C ratios);
    2. Those that measure mobility (travel time-based measures);
    3. Those that measure accessibility (activity-based measures, such as the number of jobs within 35 minutes of a particular facility, or within ½ mile of a transit stop);
    4. Those that measure system efficiency (measures that provide an overall assessment of system wide performance, such as the number of congested lane-miles, or VMT under congested conditions).

CAUSES OF CONGESTION

The causes of congestion at problem locations and within problem corridors or activity centers are identified. Sometimes the cause of congestion is not readily apparent from the collection and analysis of system performance data. In such cases, field visits to the congested site are necessary to make the determination.

MANAGEMENT STRATEGIES

Mitigation strategies are identified through an evaluation process that addresses the identified cause of congestion at a particular location or area, giving the least priority to strategies that add single-occupant vehicle (SOV) capacity. The highest-ranking strategies that address congestion at a particular location are then incorporated within the TIP development process.

MONITORING OF EFFECTIVENESS

Finally, carried out strategies are then monitored for their effectiveness as part of ongoing system monitoring (transportation system performance data collection) activities.

CHAPTER 3
CONGESTION MANAGEMENT STRATEGIES

INTRODUCTION

A key task in the development of a Congestion Management Process is the identification and structuring of congestion mitigation strategies in a fashion that is easily understood by not only technical staff, but also the public. This chapter provides a focused discussion of those strategies thought most applicable to the congestion problems identified in the CPCMPO area during this study.

STRATEGY CLASSES

Strategy classes represent broad groupings of individual strategies and improvement measures. The strategies in this discussion have been broken into the following twelve classes, as identified in the Federal Congestion Management Process Final Rule 1 for the Congestion Management Process:

1. Transportation demand management (TDM) measures
2. Traffic operations improvements
3. Measures to encourage high occupancy vehicle (HOV) use
4. Public transit capital improvements
5. Public transit operational improvements
6. Measures to encourage the use of non-motorized modes
7. Congestion pricing
8. Growth management
9. Access management
10. Incident management
11. Intelligent Transportation Systems (ITS)
12. General purpose capacity expansion

For each strategy class, groups of distinct strategies have been identified, as well as representative measures of effectiveness (MOEs) to assess the pre- or post implementation effectiveness of a given strategy group. Note that Congestion Management Process guidelines do not specify that all possible strategies be analyzed for every location of congestion. Only those that could potentially mitigate congestion at the given location in a reasonable manner should be analyzed.

Table 3-1 Congestion Mitigation Strategy Classes and Groups

STRATEGY CLASS	STRATEGY GROUP	REPRESENTATIVE STRATEGIES
1. Transportation Demand Management	A. Ride sharing programs	Ride share matching, Marketing and promotion, Van pool Operations.
	B. Alternative Work Arrangements	Telecommuting, flextime or compressed workweeks, Staggered work hours.
	C. Transit/Carpool Incentives	Employer paid transit passes or Employer subsidized van pool
	D. Parking Management	Preferred carpool/van pool parking, Carpool/Van pool parking discounts, increased parking fees
	E. Guaranteed Ride Home (GRH) Programs	Used with van pool or HOV programs to provide participants a ride home in event of emergency, thus alleviating their perception that they need to drive their personal vehicle daily as a contingency for such situations.
2. Traffic Operational Improvements	A. Improved signalization patterns	Signal re timing, coordinated systems, demand responsive systems
	B. Roadway geometry improvements	Turn lanes, channelization, acceleration/deceleration lanes, bus turnouts, lane widening, one-way couplets, grade separation.
	C. Time of Day Restrictions	Turning restrictions, parking restrictions, truck access restrictions
	D. Ramp Metering	Localized ramp metering, coordinated ramp metering, demand responsive metering, HOV bypass metering.
	E. Commercial Vehicle Improvements	Commercial vehicle facilities, intermodal facilities, geometric improvements, truck routes
	F .Construction Management	Management plans, detour signing improvements, advance information of closures and alternate routes.

Table 3-1 Congestion Mitigation Strategy Classes and Groups

STRATEGY CLASS	**STRATEGY GROUP**	**REPRESENTATIVE STRATEGIES**
3. HOV Measures	HOV Priority Systems and Support Services	HOV priority lane, HOV ramps, transit signal priority, park and ride facilities.
4. Transit Capital Improvements	A. Fleet Improvements	Fleet expansion, vehicle replacement or upgrades, transit vehicle management systems, vehicle type changes.
	B. Transit support facilities	Park and ride facilities, transit centers, improved stations/stop facilities
5. Transit Operational Improvements	A. Transit Service Improvements	Increased frequency, add stops, modify operating hours, express routes, route modification
	B. Transit Marketing/Information	Marketing programs, agency coordination, transit information systems
	C. Fare Incentives	Fare reductions, fare packages
	D. Traffic Operations for transit	Traffic signal priority, signal coordination, bus turnouts, railroad crossing coordination
6. Non-Motorized Modes	A. Bike/ped infrastructure improvements	Bike lanes, bike/ped paths, bike route marking, sidewalks
	B. Bike/ped support services	Bike rack/lockers, transit vehicle bike carriers,/employer showers, bike/ped planning, bike maps
7. Congestion Pricing	A. Road user fees	Tolls, time of day pricing, HOV facility fees
	B. Parking fees	Surcharges, time of day pricing.
8. Growth Management	A. Compact development	Density standards
	B. Redevelopment/Plan	Site reclamation/reuse, incentives to develop in areas with existing infrastructure.
	C. Mixed use development	Zoning regulations
	D. Jobs/Housing balance	Zoning regulations
	E. Transit-Oriented Development	Density standards, bicycle/pedestrian access, design requirements
	F. Corridor land use & transportation coordination	Intergovernmental agreements

Table 3-1
Congestion Mitigation Strategy Classes and Groups

STRATEGY CLASS	STRATEGY GROUP	REPRESENTATIVE STRATEGIES
9. Access Management	A. Driveway management	Policies and standards, side street/alley access, shared access/common driveways
	B. Median management	Policies and standards, establishing medians, bi-directional turn lanes
	C. Frontage roads	
10. Incident Management	A. Incident Detection	Emergency traffic patrols, emergency monitoring, roadway detectors and surveillance.
	B. Incident response	Emergency vehicle priority, emergency traffic patrols, communication systems protocol.
	C. Incident clearance	Emergency response teams, service patrols
	D. Incident Information/routing	Highway advisory radio, alternative route planning, variable message signs.
11. Intelligent Transportation Systems	A. Advance Traffic Management Systems	Freeway management, traffic signal control, emergency management,
	B. Advance Traveler Information Systems	Multi-modal regional traveler information.
	C. Advance Public Transportation Systems	Vehicle management systems, automated vehicle location systems, electronic fare payment.
	D. Commercial Vehicle Control Systems	Weigh in motion, electronic identification
	E. Advance Vehicle Control Systems	Collision avoidance system. Vehicle guidance system.
12. General Purpose Capacity Expansion	A. Expressway lanes,	Add lane to existing facilities or construct new facilities.
	B. Arterial lanes	

CHAPTER 4
PERFORMANCE MEASURES

Performance measures provide the basis for evaluating transportation system operating conditions and for identifying the location and severity of congestion. Performance measures typically used in a Congestion Management Process are discussed in detail. The Chapter ends with a discussion of measures appropriate to the current CPCMPO Congestion Management Process plan.

TYPICAL MOES FOR CONGESTION MANAGEMENT PROCESS

As noted in the previous chapter, Measures of Effectiveness (MOEs) typically considered in Congestion Management Process plans include.

- Travel Time Measures (vehicle hours traveled by mode, delay and speed)
- Volume to capacity ratios
- Annual traffic counts
- Intersection Level of Service
- Percentage of Households and Employment within “X” miles of a Bus Route
- Percentage of Households and Employment within “X’ miles of an interchange
- Transit System measures (rider volumes, reserve capacity, et cetera)
- Vehicle occupancy
- Incident Measures

Of these measurements of effectiveness, travel time measures are often used as the primary measure of effectiveness in Congestion Management Process plan development. Typically, volume to capacity ratios are used as a secondary measure of effectiveness. MOEs are frequently selected based on consideration of the following factors:

- Availability of data from existing sources;
- Ease of data collection and processing;
- Applicability of those measures in quantifying system performance; and
- Ability of the performance measure to help forecast future system deficiencies.

The following pages go on to describe the various measures used in the development of the current study.

Descriptions of Congestion Management Process performance measures follows:

CONGESTION MEASURES

Volume-to-Capacity (V/C) Ratio [1]

Due to the wide availability of volume and capacity figures, as well as the straightforward nature of the measure, Volume-to-Capacity (V/C) ratios 1 are widely used as general measures of congestion in transportation planning. The Transportation Research Board’s (TRB) Highway Capacity Manual (HCM) has established relationships between V/C ratio and traffic operation, and is a standard guide in the field.

1. V/C ratios are typically available from regional travel demand models or traffic count program and can be analyzed by link or corridor.

Travel Time and Travel Speed

Travel time and travel speed[2] are closely related measures that illustrates the reduction in mobility people experience during congestion. Travel time and speed experienced under congested conditions can be compared to those found in free flow operating conditions to assess the magnitude of congestion. The speed reduction index is an example of using travel time/speed data in this fashion. The duration of congestion can also be determined by measuring the reduced travel speeds over a period of time.

Travel time and speed are relatively easily obtained from model forecast data, and may also be directly observed through "floating car" travel time runs. Some surveillance detectors (occupancy loop or video detection), or signal control detectors can also provide speed data.

These data may be summarized at any analysis level desired: link, corridor or region-wide.

SYSTEM EFFICIENCY MEASURES

Vehicle Miles Traveled (VMT)

Vehicle miles traveled[3] is defined as the number of miles traveled by a vehicle in each trip and is a direct output of regional travel demand models. VMT can be reported for a link, corridor, major activity center or region wide. VMT is a good indicator of travel demand, as well as air quality emissions. VMT projections readily allow for comparisons between various alternatives of a given scenario, and can also report the frequency of travel between two defined areas. While VMT can report travel by different modes, the measure cannot be used to make comparisons between various modes. As a measure of performance, VMT is best used when:

- Comparing similar links, corridors, and areas;
- Comparing system scenarios in different planning years; and
- Evaluating highway-related project alternatives.

INCIDENT (NON-RECURRING CONGESTION) MEASURES

Incident measures[4] differs from the other performance measures, which all attempt to measure recurring congestion. An attempt should be made to measure incident congestion, which accounts for much of the congestion experienced in Columbus.

- Accident Location and Frequency
- Incident-Related Delay
- Incident Duration

Due to the nature of incidents (which include accidents or special events), this information is very difficult to obtain in a systematic way.

1. V/C ratios are typically available from regional travel demand models or traffic count program and can be analyzed by link or corridor.
2. Primary measure selected for the Columbus Area Congestion Management Process
3. Secondary measure selected for the Columbus Area Congestion Management Process
4. 2000 Highway Capacity Manual, Special Report 209, Transportation Research Board, National Research Council, Washington, DC.

CHAPTER 5
DATA COLLECTION

INTRODUCTION

This chapter describes the data collection activities undertaken for the CPCMPO Congestion Management Process study. It covers new data collected by the study team, such as travel time surveys, the use of existing data and other data such as additional traffic counts, obtained from other government agencies. The processing of these data and the generation of Measures of Effectiveness (MOEs) are also described.

TRAVEL TIME SURVEYS

Travel Time Surveys were conducted along arterial routes throughout the Columbus-Phenix City Metropolitan area. Surveyed routes were determined by the CPCMPO. The surveys were conducted between March and May, 2009.

Objectives

The purpose of the surveys was to measure travel speed during three weekday travel periods, the morning peak period (approximately 6:30 A.M. to 8:30 A.M.), off peak period (10 A.M. to 12 P.M. and 1 P.M. to 3 P.M.) and the evening peak period (approximately 4:30 P.M. to 6:30 P.M.).

Delays caused by traffic signals or other traffic conditions were also recorded. The travel time surveys were designated to provide MOEs that measure both congestion levels, such as delays and speed reduction ratios, and mobility, such as travel times.

Routes Surveyed

Travel time surveys were conducted along a total of 23 routes, as shown in Table 5-1.

CPCMPO staff members identified the critical time of day and conducted surveys in both directions along each route. The 23 routes covered a total of 158 miles of roadway, 9 of which are major arterial routes in the Columbus-Phenix City metropolitan area.

Individual routes ranged in length from 1.65 miles to 14.45 miles. In total, 316 miles of roadway were surveyed (both directions) during the 8-week period of data collection .

Figure 5-1
Columbus Congestion Management Process – Data Collection

Road Segment	Road Length (miles)	Sample Size	From:	To:
2nd Avenue	3.98	9	Victory Drive	Manchester Expwy.
54th Street and Airport Thruway	6.13	9	River Road	Miller Road
Bradley Park Drive	2.26	9	River Road	Whitesville Road
Buena Vista Road	9.24	9	Macon Road	Schatulga Road
Double Churches Road	2.87	9	River Road	Veterans Parkway
Forrest Road	4.17	9	Macon Road	Schatulga Road
Fort Benning Road/ Brennan Road	3.04	9	Saint Marys Road	Victory Drive
Interstate 185	9.22	9	Williams Road	Saint Marys Road
J.R. Allen Parkway (US 80)	12.29	9	US 280	Flat Rock Road
Lee Road 248- Summerville Road - Martin Luther King Jr. Parkway	10.57	9	US 280	Fifth Avenue South
Macon Road	7.95	9	10th Avenue	US 80
Manchester Expressway	8.33	9	Second Avenue	J.R. Allen Parkway
River Road	4.28	9	Veterans Parkway	Double Churches Road
River Chase Drive/Pierce Road	4.2	9	US 280	Stadium Drive
St. Mary's Road	3.56	9	Buena Vista Rd.	Fort Benning Boundary
Stadium Drive	2.5	9	Opelika Road	River Chase Drive
US Highway 280 in Alabama	8.69	9	Lee Road	Veterans Parkway
US Highway 80/13th Street	13.76	9	Alabama 169	Macon Road
Veterans Parkway (US 27)	12	9	Wooldridge Road	Victory Drive
Victory Drive	5.4	9	Veterans Parkway	Interstate 185
Warm Springs Road	11.86	9	Veterans Parkway	County Line Road
Whitesville Road	3.76	9	Airport Thruway	Williams Road
Whittlesey Road and Blvd.	3.36	9	Bradley Park Drive	Moon Road
Williams Road and Moon Road	4.91	9	Whitesville Road	Miller Road
Total Segment Mileage:	158.33			

METHODOLOGY

Travel time and speed data was collected via Global Positioning System (GPS) technology, with TruTraffic, transportation planning software which can read the current position and speed of the vehicle. This information is used to record trip logs and generate comparative travel time and delay reports.

The survey vehicles, standard passenger cars, were operated by C-PCMPO staff members. During peak data collection weeks, five cars were in operation. The driver used the floating car technique to ensure the vehicle traveled at a speed representative of the typical vehicle for that time of day and specific route travel. A GPS unit was attached to a computer and set up in the vehicle to record GPS current location and travel speed. Some of the recorded data included:

- GPS location of a predetermined checkpoint along the route, such as a signalized intersection;
- Distance from one segment on the route to the next (segments divided by check points);
- Stopped time at a signalized or sign controlled intersection; and
- Delay along each segment, based on user-specified limitations (segment distance and free flow speed)

A GPS receiver connected to the laptop computer used signals from a series of earth-orbiting satellites to continuously monitor the location of the survey vehicle. For each run, a file of GPS data was created with both spatial and temporal information, including the location and time of each of the recorded events.

DATA PROCESSING

GPS data files were processed and imported into Excel® spreadsheets. The predetermined checkpoints along the routes were used to divide each route into manageable segments.

Based on the location of each checkpoint, the survey vehicle's progress along each segment was recorded in terms of travel time along each segment, distance between checkpoints, and delay in travel time from previous node (checkpoint) based on user specified design speed. These readings are just a few of the data collected by the TruTraffic software.

At a minimum, three runs per direction were taken along each route during the AM and PM peak periods, while at least one run per direction was taken during the off-peak period. From these data, the average speed of travel along each segment and for the whole route was calculated. Travel delay times were also computed from the free flow speed, distance between segments and the average segment travel speed.

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At a minimum, three runs per direction were taken along each route during the AM and PM peak periods, while at least one run per direction was taken during the off-peak period. From this data, the average speeds of travel along each segment and for the whole route were calculated. Travel delay times were also computed from the free flow speed, distance between segments and the average segment travel speed.

CONGESTION CATEGORIES

Each section on the route was assigned one of five congestion categories. The principal criteria used was the percentage of free flow speed observed during the travel time survey. This percentage was calculated as:

Percentage of free flow speed (FFS) = Observed speed/free flow speed

The free flow speed was taken to be the speed limit on that segment of the route. The levels of congestion were described as follows:

Good – The average speed of the floating car was at 80% or higher of the posted speed limit for a segment of road.
Okay – The average speed of the floating car was between 65% and 79% of the posted speed limit for a segment of road.
Marginal - The average speed of the floating car was between 50% and 64% of the posted speed limit for a segment of road.
Congested - The average speed of the floating car was between 40% and 49% of the posted speed limit for a segment of road.
Severe - The average speed of the floating car was below 40% of the posted speed limit for a segment of road.

Figure 5-2
PM Peak Run Along Manchester Expressway

PM PEAK HOUR EASTBOUND	AVERAGE DELAY (seconds)	AVERAGE SPEED (mph)	FREE FLOW RATING	FREE FLOW GRADE
SECOND AVENUE	STARTING POINT			
RIVER ROAD	23	26.3	0.65	OKAY
VETERANS PARKWAY	70	16	0.4	SEVERE
WOODRUFF ROAD	82	17.1	0.38	SEVERE
ARMOUR ROAD	78	19.7	0.44	CONGESTED
INTERSTATE 185	4	36	0.8	GOOD
WARM SPRINGS	122	18.9	0.38	SEVERE
MILLER ROAD	25	55.7	0.86	GOOD
JR ALLEN PARKWAY	6	61.1	0.94	GOOD

Table 5-2 shows sample results from the travel time surveys The results of the PM Peak speed runs along Manchester Expressway is shown. The route surveyed begins on the west at 2nd Avenue and runs 7.5 miles to the J.R. Allen Parkway exit. Starting from 2nd Avenue heading eastward:

- The average delay was 23 seconds. This refers to the average additional wait time the floating car (measurement vehicle operated by the CPCMPO staff) encountered on each of its trips through the link.
- The free flow speed (free flow) was 26.3 miles per hour (mph).
- Free flow rating (FF time) was 0.65, signifying that traffic was flowing at an average speed that was 65 percent of the posted speed limit for the link (40 mph). This puts this link of road in the marginal category for congestion during this time of the day.

TRAFFIC COUNTS:

Traffic count data was obtained from GDOT and ALDOT. **Table 5-2** illustrates the free flow speeds along the survey routes. **Figure 5-3** shows the estimated 2008 average annual daily traffic (AADT) counts at these locations.

The actual level of service or degree of congestion experienced on a particular roadway is dependent on many more variables than the number of lanes and functional class. These variables include signal timing and coordination, proportion of turning vehicles, frequency of driveway and median cuts, directional distributions and peak hour factors. The influence of these factors, when present, is reflected in the average travel speeds measured during the travel time surveys.

Therefore, the percent reduction in free flow speed was selected as the primary measure of effectiveness for the Columbus-Phenix City Congestion Management Process (CMP) study.

The congestion levels were developed based on the ratio of observed travel speed to free flow speed. The following figures show congestion categories for each roadway as well as other details, such as the high accident locations. The buffered areas highlight some select corridor segments based on congestion levels as well as isolated locations, which should be the area of focus for relieving congestion.

Figure 5-3 Multilane Highway Capacities
(Adapted from Table 21-2 of the Highway Capacity Manual)

Free Flow Speed of Traffic	Capacity Per Lane Per Hour	4 Lane Divided Roadway (Vehicular Capacity Per Lane Per Hour)	6 Lane Divided Roadway Capacity (Vehicular Capacity Per Lane Per Hour)
60 + mph	2,200	8,800	13,200
55 mph	2,100	8,400	12,600
50 mph	2,000	8,000	12,000
45 mph	1,900	7,600	11,400

Figure 5-4 Divided and Undivided Roadway Capacities
(Adapted from Table 21-2 of the Highway Capacity Manual)

	Undivided Roadways					**Divided Roadways**	
Free Flow Speed	**Capacity/ Lane**	**2 Lane**	**3 Lane**	**4 Lane**	**5 Lane**	**4 Lane**	**6 Lane**
30 mph	1,200	2,200	2,400	4,300	4,800	4,800	6,000
35 mph	1,300	2,400	2,600	4,700	5,200	5,200	6,500
40 mph	1,400	2,600	2,800	5,100	5,600	5,600	8,000
45 mph	1,500	2,800	3,000	5,500	6,000	6,000	7,500
50 mph	1,600	3,000	3,200	5,900	6,400	6,400	8,000
55 mph	1,700	3,200	3,400	6,300	6,800	6,800	8,500

Volume to Capacity (V/C) ratios were calculated for each of the count stations located on the survey routes. Nominal 24 hour capacities were developed from standard roadway AADT capacities, using the Highway Capacity Manual as a guide. These capacities are comparable to those used in transportation planning models used in urban areas. The two way capacities that were used for these analyses are depicted in Table 5-5 . These capacities are a function of the roadway's Functional Classification and number of lanes.

V/C ratios have been estimated as a secondary measure of effectiveness (MOE) to help in ranking improvements at locations found to be congested based on reductions in free flow speeds. Within a group of locations with similar levels of congestion and causation, those with higher V/C rations should be addressed first.

An additional reason for selecting V/C ratios as a secondary MOE is that it may be easily projected out to future years. The traffic volume and corresponding capacities may be run for future year conditions to identify locations with high or rapidly increasing V/C ratios. This information, combined with existing travel time survey results, identifies locations where improvements will be required in the future or where more frequent monitoring of congestion is warranted.

V/C estimates, based on the capacities shown in the tables at right are shown in Table 5-5. As noted above, V/C ratios are not necessarily a precise indication of congestion, but it is instructive to review those locations with a V/C ratio greater than 0.7.

Figure 5-5 : GENERAL HIGHWAY CAPACITY BY FACILITY AND LEVEL OF SERVICE

	LEVEL OF SERVICE RATING				
FACILITY TYPE	**A**	**B**	**C**	**D**	**E**
Interstate					
4 Lanes	18,500	37,000	51,800	62,900	74,000
6 Lanes	27,750	55,500	111,000	94,350	111,000
8 Lanes	37,000	74,000	148,000	125,800	148,000
Freeway					
4 Lanes	16,000	32,000	44,800	54,400	64,600
6 Lanes	24,000	48,000	67,200	81,600	96,000
8 Lanes	32,000	64,000	89,600	108,800	128,000
Expressway					
4 Lanes	13,800	27,600	38,640	46,920	55,200
6 Lanes	20,700	41,400	57,960	70,380	82,800
8 Lanes	27,600	55,200	77,280	93,840	110,400
Divided Arterial					
2 Lanes	4,850	9,700	13,580	16,490	19,400
4 Lanes	9,700	19,400	27,160	32,980	38,800
6 Lanes	14,550	29,100	40,740	49,470	58,200
8 Lanes	19,400	38,800	54,320	65,960	77,600
Undivided Arterial					
2 Lanes	4,150	8,300	11,620	14,110	16,600
2 Lanes (with center turn lane)	4,775	9,550	13,370	16,235	19,100
4 Lanes	8,300	16,600	23,240	28,220	33,200
4 Lanes (with center turn lane)	8,925	17,850	24,990	30,345	35,700
6 Lanes	12,450	24,900	34,860	42,330	49,800
One Way Arterial					
2 Lanes	3,550	7,100	9,940	12,070	14,200
2 Lanes (with center turn lane)	4,075	8,150	11,410	13,855	16,300
4 Lanes	7,100	14,200	19,880	24,140	28,400
4 Lanes (with center turn lane)	7,625	15,250	21,350	25,925	30,500
Collectors					
Two Lane (divided)	3,750	7,500	10,500	12,750	15,000
Two Lane (undivided)	4,075	8,150	11,410	13,855	16,300
Local Roads					
Two Lane (divided)	2,500	5,000	7,000	8,500	10,000
Two Lane (undivided)	1,800	3,600	5,040	6,120	7,200
Ramps (Enter/Exit)					
One Lane	2,650	5,300	7,420	9,010	10,600
Two Lane	5,300	10,600	14,840	18,020	21,200
Ramps (Freeway-to-Freeway)					
One Lane	3,800	7,600	10,640	12,920	15,200
Two Lane	7,600	15,200	21,280	25,840	30,400

Note: Capacities and Level of Service are based on Georgia Department of Transportation Travel Demand Model. The value in the level of service column signifies the highest possible value that each level of service can accommodate for that facility type.

HOW TO READ THE TABLE

This table gives roadway capacities by facility type and level of service. So a facility type "Interstate" with four lanes can handle traffic volumes between 0 to 17,800 to maintain the level of service “A”. In the same manner, facility type -Interstate with four lanes can handle volume between 17,801 to 35,600 to maintain a level of service “B”.

FIGURE 5-8
MAP OF INTERSECTIONS WITH HIGHEST NUMBER OF ACCIDENTS IN REGION

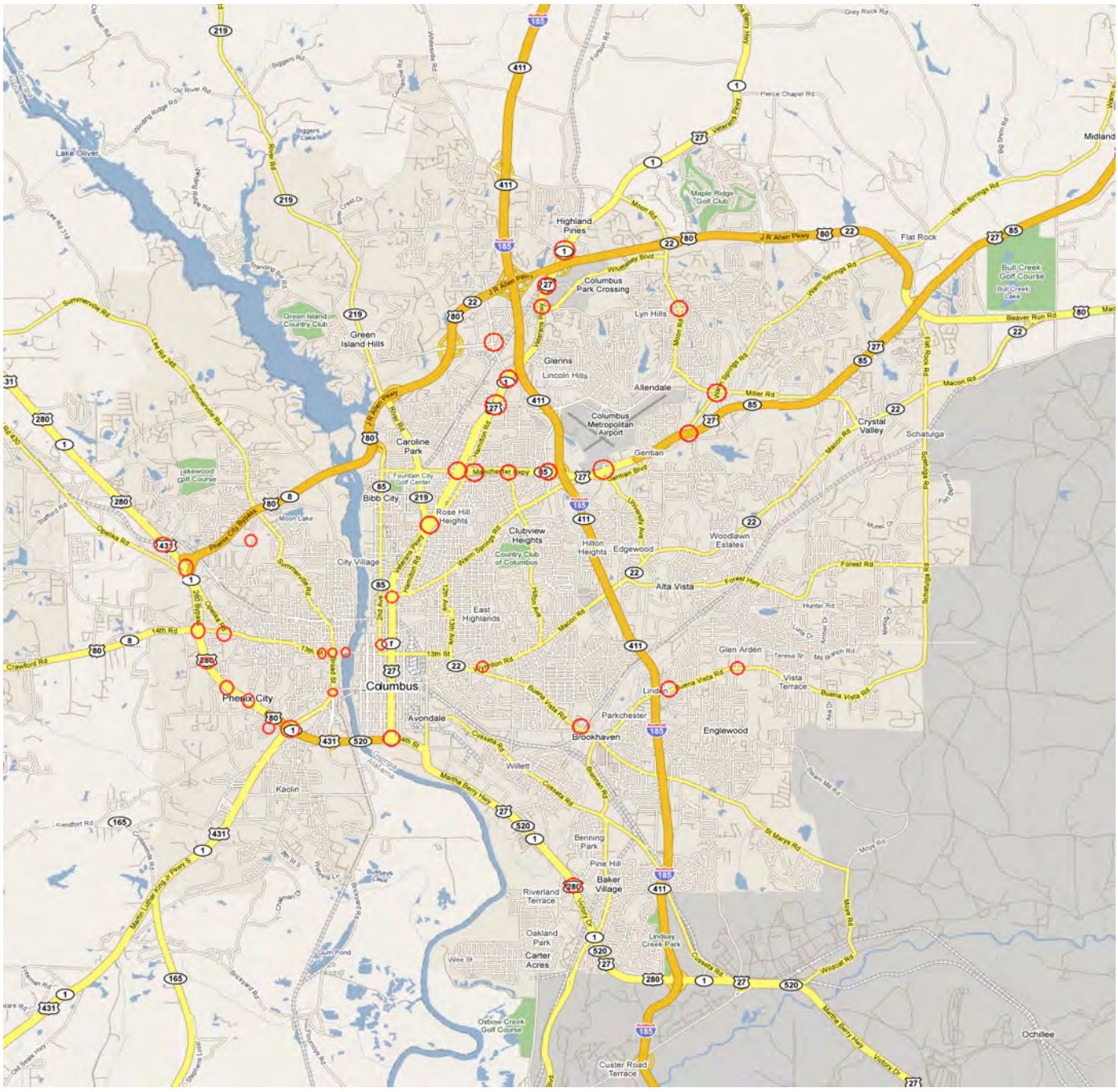


Figure 5-9
25 Intersections in Columbus with highest amount of vehicle collisions between 2005 to 2008

	Intersection Location	Total Accidents	Property Damage Only	Severity	Persons Killed	Persons Injured	AADT
1	Veterans Parkway at Manchester Expressway	334	260	5.81	1	112	30,056
2	Manchester Expressway at Armour Road	324	259	4.75	0	94	38,143
3	14th Street at 2nd Avenue	269	203	5.87	0	89	20,921
4	Manchester Expressway at University Avenue	218	176	4.31	0	61	32,151
5	Veterans Parkway at Hamilton Road	207	159	5.02	0	64	25,283
6	Veterans Parkway at Gepca Dr.	194	155	4.95	0	56	22,504
7	Veterans Parkway at 13th Street	172	138	4.53	0	50	24,752
8	Veterans Parkway at River Road	170	128	6.35	0	64	22,574
9	Manchester Expressway at Warm Springs Rd	169	125	6.63	0	78	24,149
10	University Avenue at Gentian Blvd	167	136	4.43	0	43	14,853
11	Manchester Expressway at Hamilton Road	167	132	4.43	0	49	30,430
12	Buena Vista Road at Wynnton Road	166	138	3.61	0	39	18,553
13	Manchester Expressway at Woodruff Road	161	115	6.96	0	65	31,936
14	Andrews Road at Buena Vista Road	155	110	6.19	0	81	6,178
15	Veterans Parkway at Whitesville Road	155	129	3.74	0	41	25,439
16	Whittlesey Road at Bradley Park Drive	152	122	4.61	0	38	7,260
17	Victory Drive at Veterans Parkway	151	120	4.37	0	45	30,074
18	Victory Drive at Leslie Drive	150	111	6.4	0	64	37,462
19	Victory Drive at Fort Benning Road	147	110	6.26	1	48	24,922
20	Forrest Road at Floyd Road	146	115	4.79	0	46	6,212
21	Whitesville Road at Bradley Park Drive	140	120	3.57	0	37	12,710
22	Buena Vista Road at Floyd Road	132	89	7.73	0	72	14,902
23	Victory Drive at South Lumpkin	129	95	6.82	2	57	25,957
24	Armour Road at Warm Springs Rd	126	99	5.4	0	36	1,205
25	Victory Drive at Benning Drive	123	91	6.18	0	56	25,183

Table 5-10 25 Intersections in Phenix City with highest amount of vehicle collisions - 2005 to 2008

Ranking	Location	Total	Fatal	Injury	PDO	Crash Severity	Killed	Injured
1	US 80 at US 431/280	202	1	44	157	5.15	1	69
2	CRAWFORD RD at US 80	163	0	28	135	2.88	0	31
3	OPELIKA RD at US 280	133	1	30	102	5.49	1	37
4	SUMMERVILLE RD at SR 8/US 80	95	1	11	83	3.26	1	19
5	13TH ST at US 280 & US 431	84	1	16	67	4.17	1	27
6	BROAD ST at 13TH ST	76	0	9	67	2.63	0	14
7	MAGNOLIA DR (US 431) at SR 190	66	0	13	53	4.70	0	26
8	11TH ST at US 280 & US 431	65	0	18	47	5.85	0	22
9	S 16TH AVE at US 280 & 431	60	0	14	46	5.17	0	27
10	14TH AVE S at SR 1	54	0	12	42	4.44	0	19
11	38TH PL at STADIUM RD	52	0	9	43	2.88	0	9
12	20TH ST at US 280/431	51	0	18	33	7.06	0	30
13	25TH AVE at US 280/431	46	0	9	37	3.26	0	9
14	OLD OPELIKA RD at SR 8/US 80	44	1	13	30	7.73	1	17
15	25TH ST at US 280/US 431	42	0	15	27	8.33	0	25
16	MAGNOLIA DR (US 431) at SAVAGE DR	42	0	5	37	1.67	0	7
17	28TH AVE at CRAWFORD RD (US 80)	41	0	20	21	10.49	0	32
18	CRAWFORD RD at OPELIKA RD	37	0	13	24	5.41	0	23
19	US 431 US 280 at LAKEWOOD DR	31	0	4	27	1.61	0	5
20	BROAD ST at DILLINGHAM ST	31	0	4	27	2.90	0	4
21	DOBBS DR at LAKEWOOD DR	31	0	4	27	1.61	0	5
22	13TH ST at 3RD AVE	30	0	7	23	3.67	0	10
23	14TH AVE S at SANDFORT RD	29	0	7	22	4.83	0	9
24	13TH ST at 7TH AVE	28	0	5	23	1.79	0	6
25	14TH ST at BROAD ST	28	0	3	25	2.50	0	4

Figure 5-11 - Traffic Counts Along Major Roads in Columbus-Phenix City Region

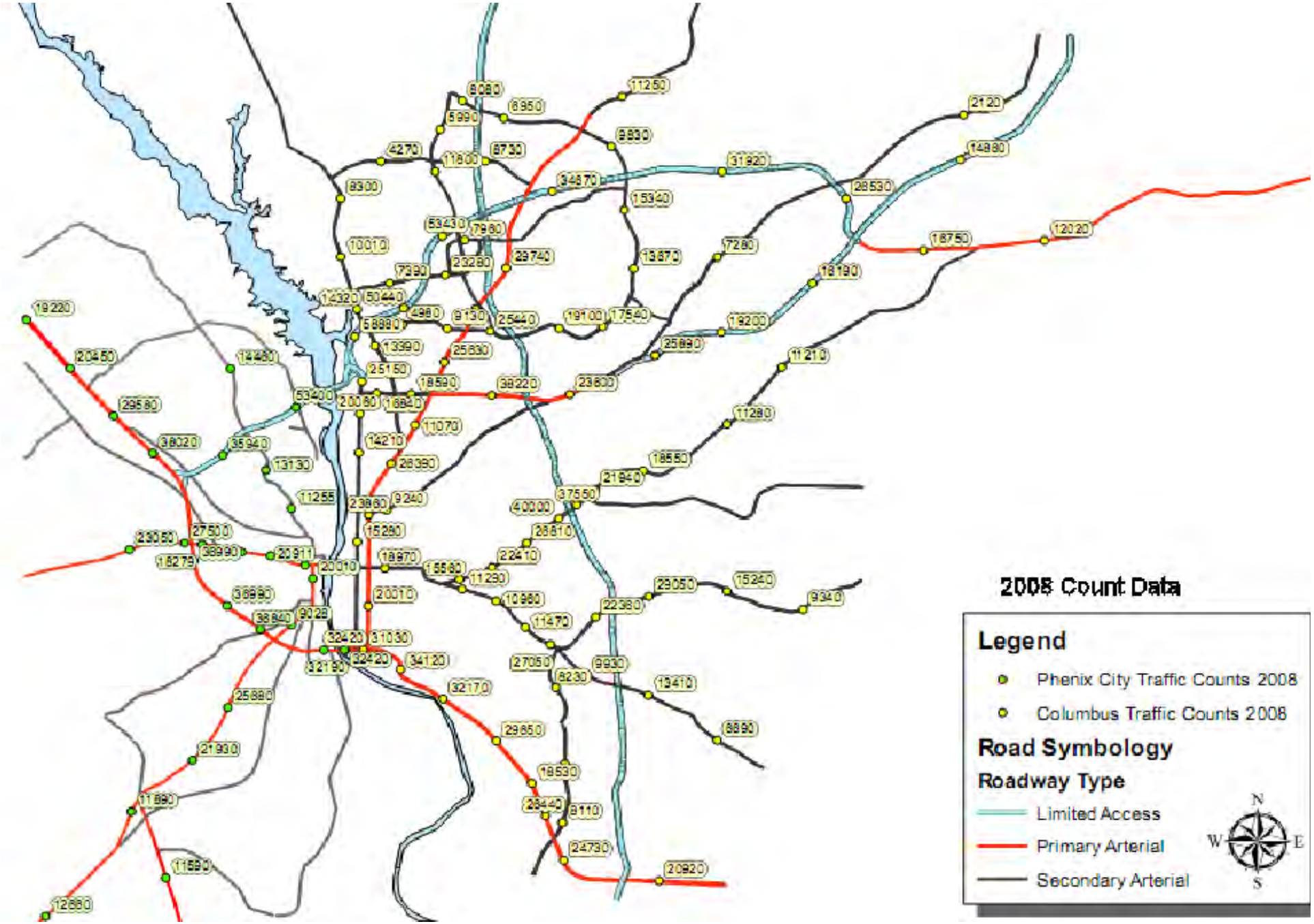
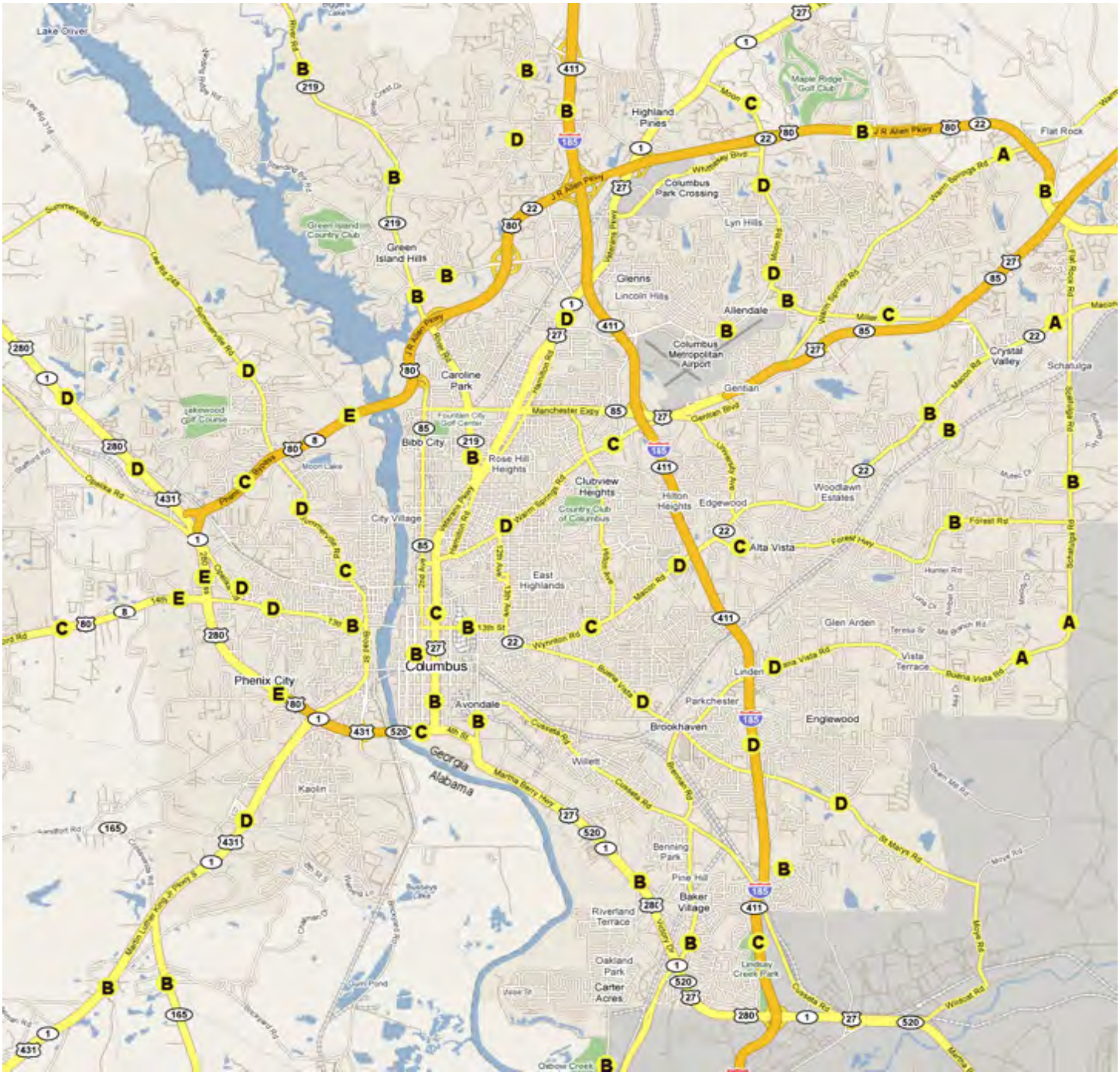
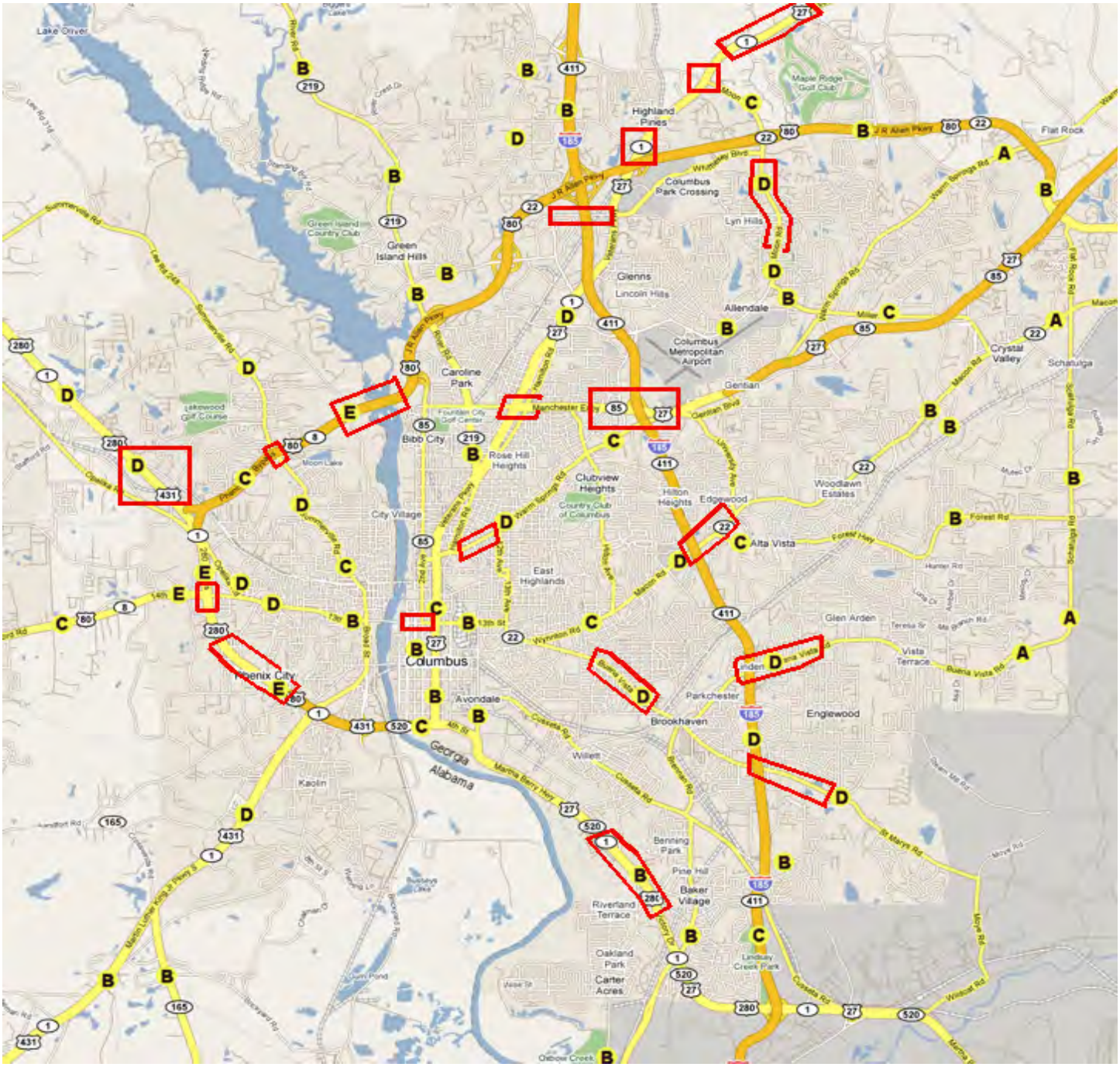


Figure 5-12
LEVEL OF SERVICE MAP: (EXISTING VOLUME TO ROADWAY CAPACITY RATIO)



The criteria for different letter grades of Levels of Service are explained on Table 5-5 “General Highway Capacity by Facility and Level of Service” located on page 25.

Figure 5-13
LEVEL OF SERVICE DIAGRAM AND FOCUS AREAS FOR CONGESTION MANAGEMENT



2nd AVENUE	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
VICTORY DRIVE TO MANCHESTER EXPRESSWAY	DISTANCE: 3.90 MILES

LOCATION MAP OF ROUTE MEASURED

North Segment of Second Avenue

South Segment of Second Avenue

2nd AVENUE	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
VICTORY DRIVE TO MANCHESTER EXPRESSWAY	DISTANCE: 3.90 MILES

CUMULATIVE AVERAGE - ALL MEASURED TIME PERIODS OF DAY, BOTH DIRECTIONS

INTERSECTION	NORTHBOUND AVERAGE SPEED (MPH)	SOUTHBOUND AVERAGE SPEED (MPH)	POSTED SPEED LIMIT
MANCHESTER EXPRESSWAY	34		45
38TH STREET	28	30	40
32ND STREET	36	38	40
17TH STREET	32	36	35
14TH STREET	28	32	35
13TH STREET	11	12	30
11TH STREET	16	14	30
9TH STREET	20	16	30
6TH STREET	19	20	30
VICTORY DRIVE		20	30

INTERSECTION	FREE FLOW RATING NORTHBOUND	FREE FLOW RATING SOUTHBOUND	SEGMENT LENGTH (MILES)
MANCHESTER EXPRESSWAY	GOOD		0.26
38TH STREET	GOOD	GOOD	0.57
32ND STREET	GOOD	GOOD	0.37
17TH STREET	GOOD	GOOD	1.13
14TH STREET	GOOD	GOOD	0.34
13TH STREET	SEVERE	GOOD	0.13
11TH STREET	MARGINAL	SEVERE	0.27
9TH STREET	MARGINAL	MARGINAL	0.26
6TH STREET	MARGINAL	MARGINAL	0.39
VICTORY DRIVE		MARGINAL	0.26

2nd AVENUE	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
VICTORY DRIVE TO MANCHESTER EXPRESSWAY	DISTANCE: 6.84 MILES

AM PEAK HOUR NORTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
VICTORY DRIVE	STARTING POINT			
6TH STREET	12	20.7	0.25	OKAY
9TH STREET	11	24.3	0.38	GOOD
11TH STREET	37	14.2	0.28	CONGESTED
13TH STREET	53	11.7	0.26	SEVERE
14TH STREET	3	27.7	0.13	OKAY
17TH STREET	9	30.9	0.41	GOOD
32ND STREET	-11	38.9	1.07	GOOD
38TH STREET	15	25.2	0.36	OKAY
MANCHESTER EXPRESSWAY	6	34.4	0.57	GOOD
AM PEAK HOUR SOUTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
MANCHESTER EXPRESSWAY	STARTING POINT			
38TH STREET	25	28.2	0.71	OKAY
32ND STREET	-2	37	1.06	GOOD
17TH STREET	-8	37.7	1.08	GOOD
14TH STREET	0	35.1	1.00	GOOD
13TH STREET	38	10.2	0.29	SEVERE
11TH STREET	50	12.1	0.40	CONGESTED
9TH STREET	38	14.5	0.48	CONGESTED
6TH STREET	23	20.5	0.68	MARGINAL
VICTORY DRIVE	13	20.6	0.69	MARGINAL

2nd AVENUE

CONGESTION MANAGEMENT PROCESS SPRING 2009

VICTORY DRIVE TO MANCHESTER EXPRESSWAY

DISTANCE: 3.90 MILES

OFF PEAK HOURS SOUTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
MANCHESTER EXPRESSWAY	STARTING POINT			
38TH STREET	32	25.2	0.63	MARGINAL
32ND STREET	-2	37.4	1.07	GOOD
17TH STREET	-3	36.3	1.04	GOOD
14TH STREET	14	27.5	0.79	OKAY
13TH STREET	44	13.3	0.38	SEVERE
11TH STREET	39	13.7	0.46	CONGESTED
9TH STREET	28	16.2	0.54	MARGINAL
6TH STREET	24	20.4	0.68	OKAY
VICTORY DRIVE	13	20.3	0.68	OKAY

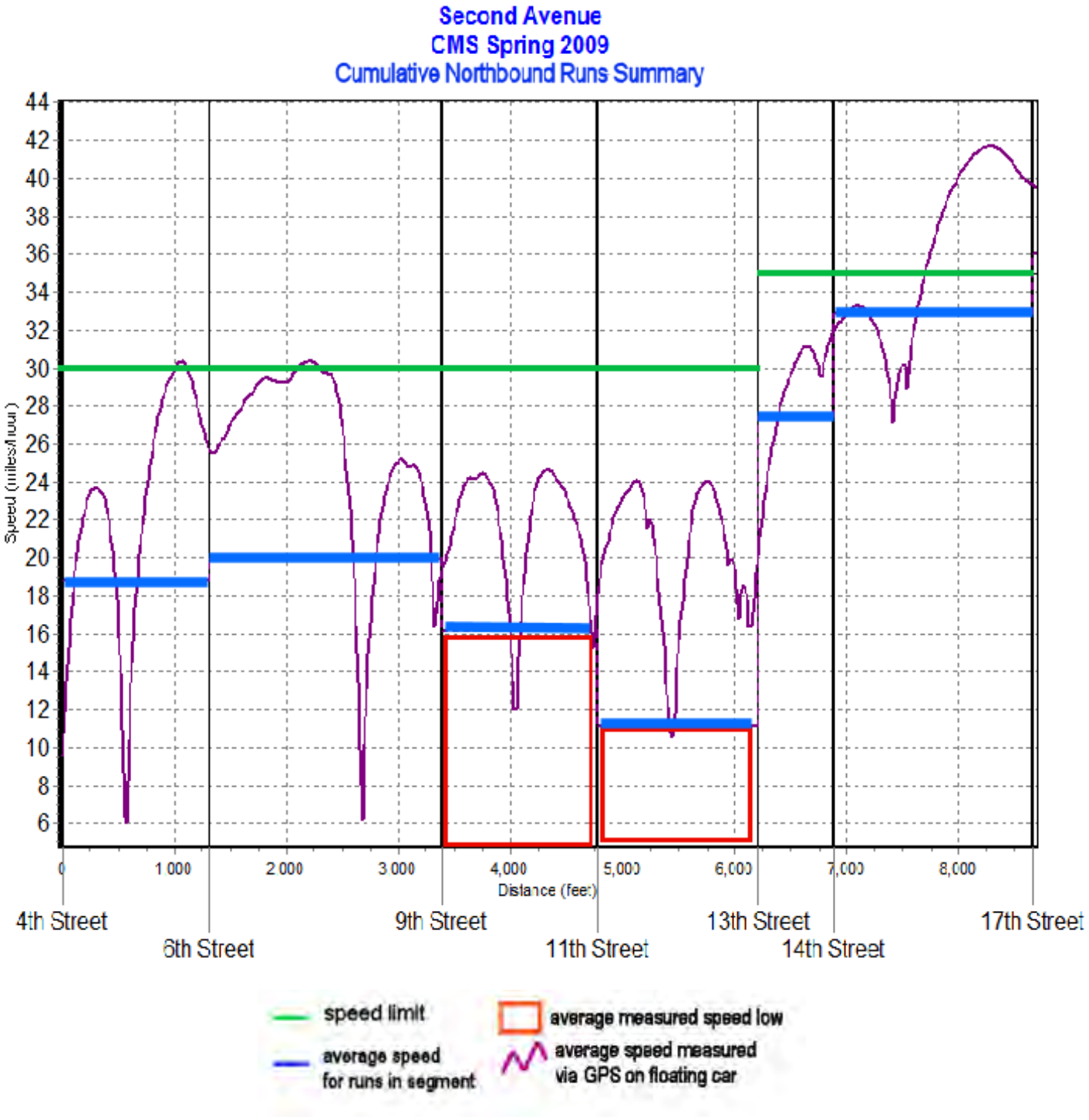
OFF PEAK HOURS NORTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
VICTORY DRIVE	STARTING POINT			
6TH STREET	24	16.7	0.56	MARGINAL
9TH STREET	49	16.8	0.56	MARGINAL
11TH STREET	17	19.9	0.66	OKAY
13TH STREET	51	12.6	0.42	CONGESTED
14TH STREET	5	26.5	0.76	OKAY
17TH STREET	2	34.6	0.99	GOOD
32ND STREET	5	34.3	0.98	GOOD
38TH STREET	7	31.1	0.89	GOOD
MANCHESTER EXPRESSWAY	9	34.5	0.99	GOOD

2nd AVENUE	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
VICTORY DRIVE TO MANCHESTER EXPRESSWAY	DISTANCE: 3.90 MILES

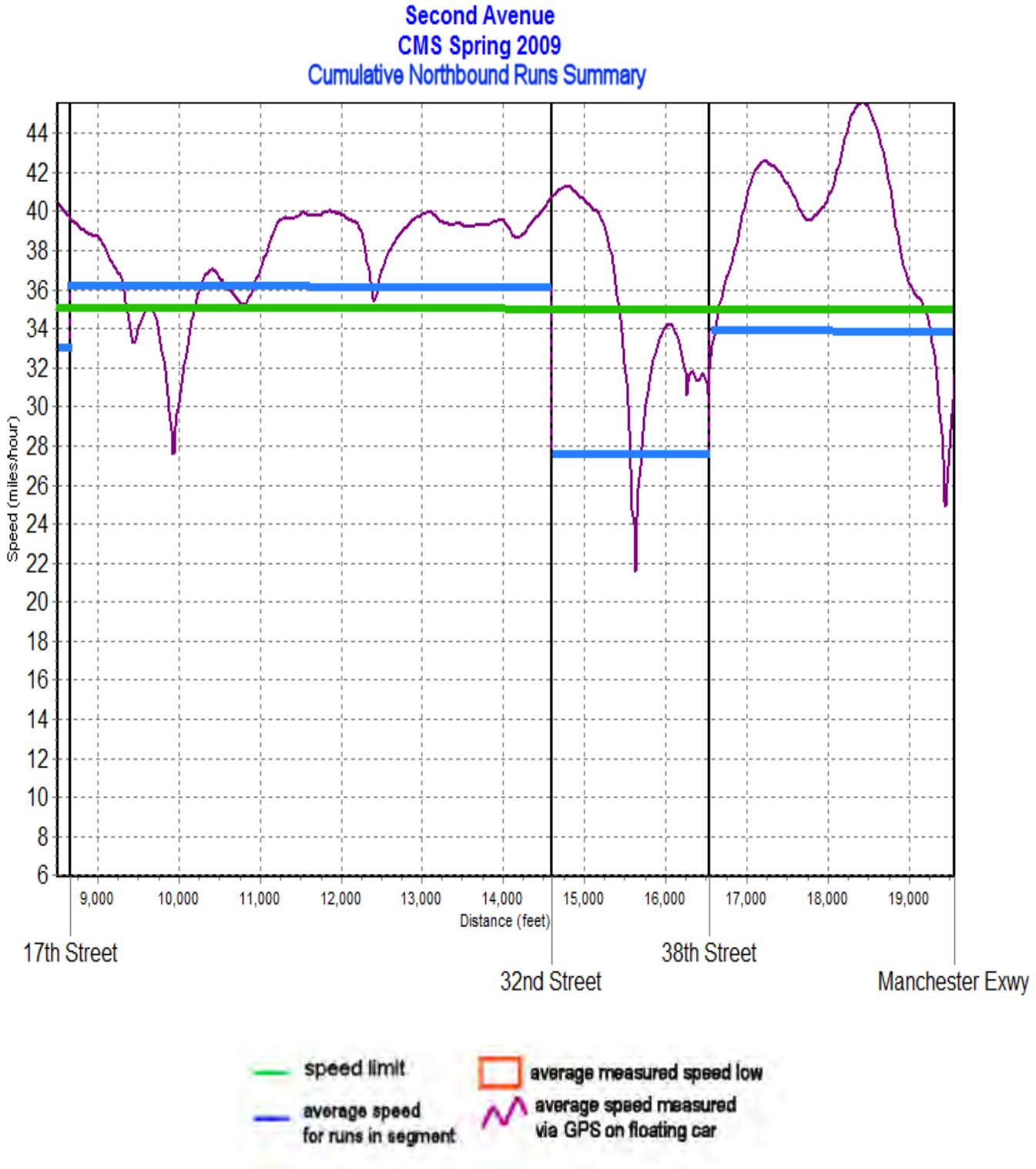
PM PEAK HOUR SOUTHBOUND	AVERAGE DELAY	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
MANCHESTER EXPRESSWAY	STARTING POINT			
38TH STREET	8	35.4	0.89	GOOD
32ND STREET	-2	36.6	1.05	GOOD
17TH STREET	-1	35.5	1.01	GOOD
14TH STREET	3	32.6	0.93	GOOD
13TH STREET	40	13.9	0.40	CONGESTED
11TH STREET	37	14.7	0.49	CONGESTED
9TH STREET	22	18.9	0.63	OKAY
6TH STREET	24	19.9	0.66	OKAY
VICTORY DRIVE	19	18	0.60	MARGINAL

PM PEAK HOUR NORTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
VICTORY DRIVE	STARTING POINT			
6TH STREET	16	19.6	0.65	OKAY
9TH STREET	25	20.1	0.67	OKAY
11TH STREET	44	13.6	0.45	CONGESTED
13TH STREET	75	9.2	0.31	SEVERE
14TH STREET	3	28.3	0.81	GOOD
17TH STREET	4	32.5	0.93	GOOD
32ND STREET	-2	35.8	1.02	GOOD
38TH STREET	15	25.6	0.73	OKAY
MANCHESTER EXPRESSWAY	7	33	0.94	GOOD

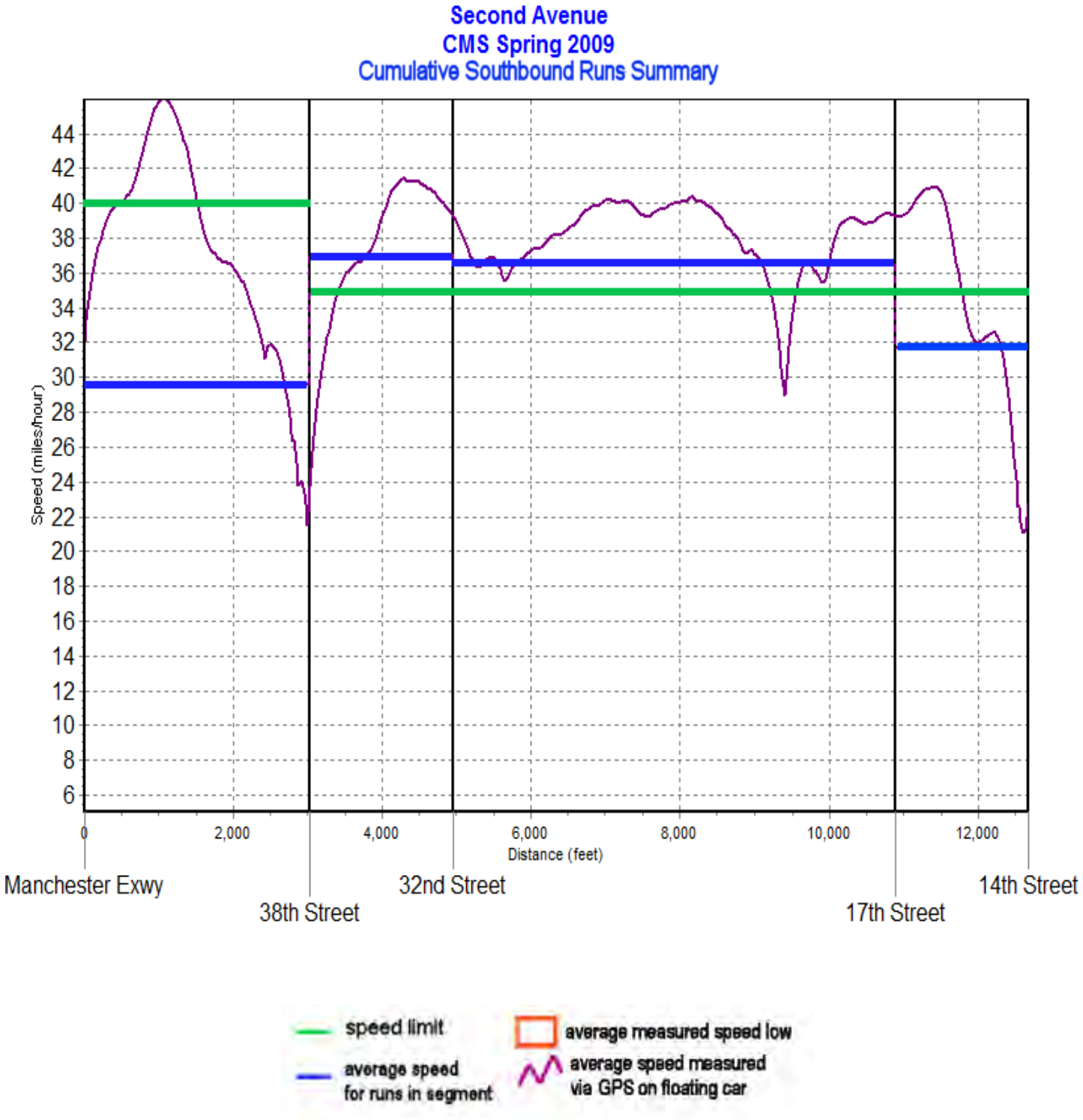
2nd AVENUE	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
VICTORY DRIVE TO MANCHESTER EXPRESSWAY	DISTANCE: 3.90 MILES



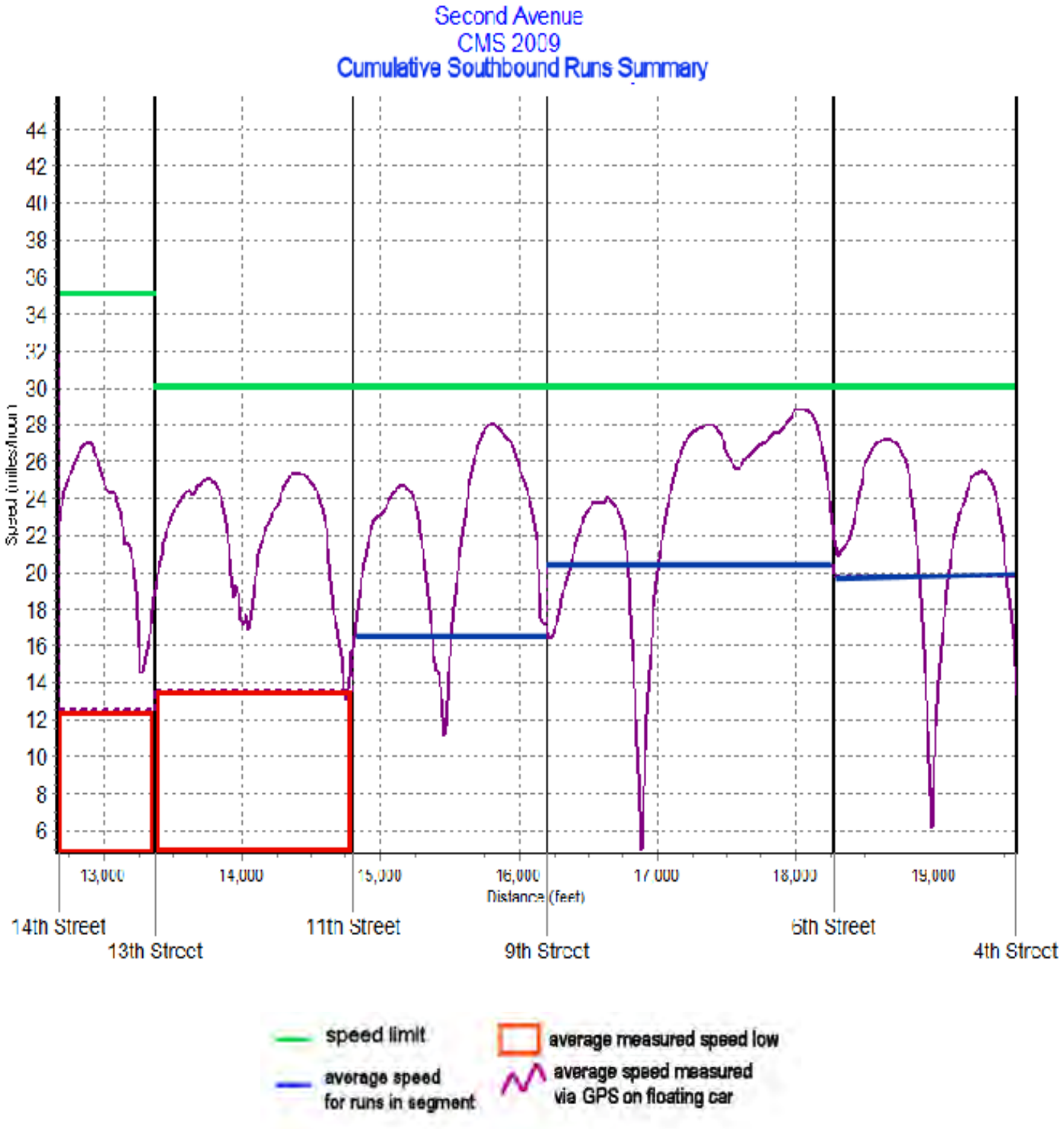
2nd AVENUE	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
VICTORY DRIVE TO MANCHESTER EXPRESSWAY	DISTANCE: 3.90 MILES



2nd AVENUE	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
VICTORY DRIVE TO MANCHESTER EXPRESSWAY	DISTANCE: 3.90 MILES



2nd AVENUE	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
VICTORY DRIVE TO MANCHESTER EXPRESSWAY	DISTANCE: 3.90 MILES



2nd AVENUE	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
VICTORY DRIVE TO MANCHESTER EXPRESSWAY	DISTANCE: 3.90 MILES

CUMULATIVE AVERAGE CONGESTION RATING FOR ALL THREE MEASURED TIME PERIODS BY DIRECTION TRAVELED

MAP CONTINUES ON FOLLOWING PAGE

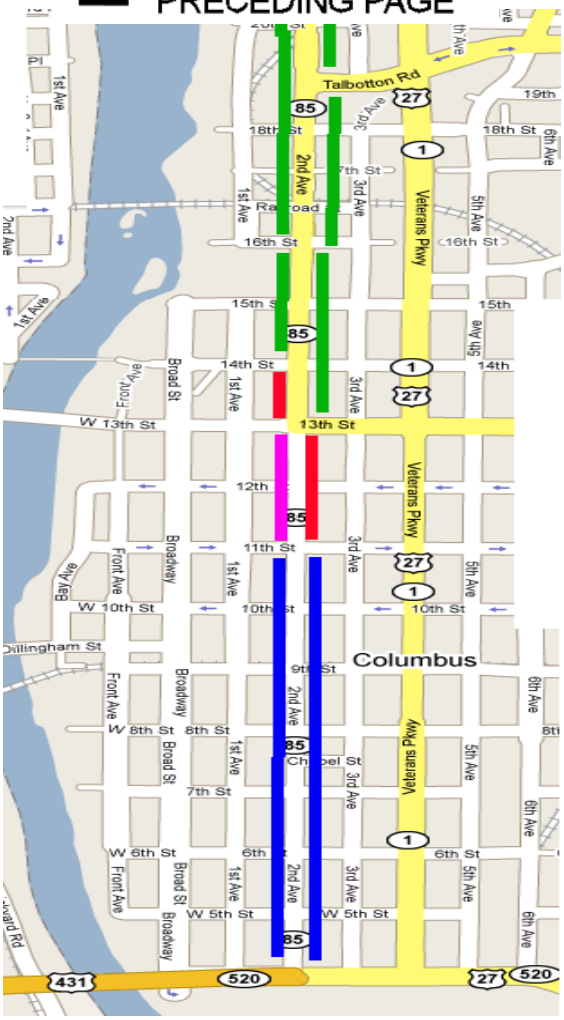
COLOR KEY AND RANKING CATEGORIES
FOR FREE FLOW TRAFFIC SPEED MEASUREMENTS

- SEVERE - Average traffic speed below 40% of the posted speed limit
- CONGESTED - Average traffic speed between 40% and 49% of the posted speed limit
- MARGINAL - Average traffic speed between 50% and 64% of the posted speed limit.
- OKAY - Average traffic speed between 65% and 80% of the posted speed limit.
- GOOD - Average traffic speed between 80% of to the posted speed limit.

2nd AVENUE	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
VICTORY DRIVE TO MANCHESTER EXPRESSWAY	DISTANCE: 3.90 MILES

CUMULATIVE AVERAGE CONGESTION RATING FOR ALL THREE MEASURED TIME PERIODS BY DIRECTION TRAVELED

MAP CONTINUES ON PRECEDING PAGE



COLOR KEY AND RANKING CATEGORIES
FOR FREE FLOW TRAFFIC SPEED MEASUREMENTS

- SEVERE - Average traffic speed below 40% of the posted speed limit
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- GOOD - Average traffic speed between 80% of to the posted speed limit.

2nd AVENUE	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
VICTORY DRIVE TO MANCHESTER EXPRESSWAY	DISTANCE: 3.90 MILES

POSSIBLE CAUSES OF CONGESTION

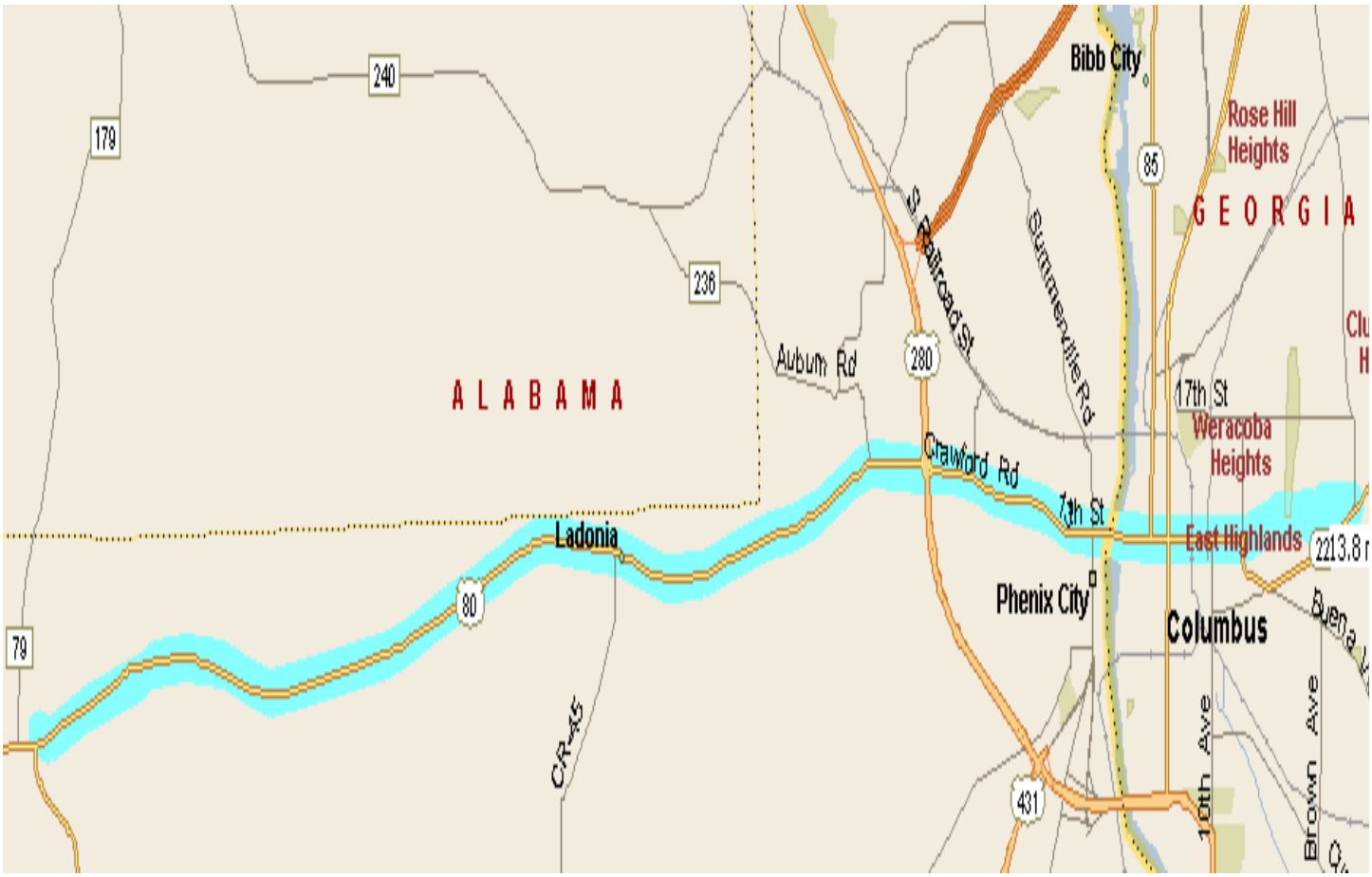
- **AM and PM peak hour traffic in and out of downtown causes congestion between 8th and 23rd Streets.**
- **Street parking and pedestrian crossings cause travel delay and increases incident risk.**
- **Signal coordination could be improved to boost output of PM peak traffic flows from downtown.**

Second Avenue	Travel Time	V/C Ratio	Arterial and Intersection L.O.S.	Transit System Measures	Incident Management
TDM Measures	▶	▶	▶	▶	▶
Capacity Expansion	▲	▲	▲	▶	▶
Access Management	▶	▶	▲	▶	▶
Traffic Operational Improvement	▶	▲	▲	▶	▲
Non-Motorized Modes	▲	▶	▲	▶	▶

▲	Positive effect on congestion.
▶	No discernable effect on congestion.
▼	Negative effect on congestion.

US 80 & 13th STREET	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
JOWERS ROAD (Alabama) TO WYNNTON ROAD (Columbus)	DISTANCE: 13.76 MILES

LOCATION MAP OF ROUTE MEASURED



US 80 & 13th STREET

CONGESTION MANAGEMENT PROCESS SPRING 2009

JOWERS ROAD (Alabama) TO WYNNTON ROAD (Columbus)

DISTANCE: 13.76 MILES

**CUMULATIVE AVERAGE -
ALL MEASURED TIME PERIODS OF DAY
BOTH DIRECTIONS**

INTERSECTION	AVERAGE SPEED EASTBOUND	AVERAGE SPEED WESTBOUND	POSTED SPEED LIMIT
SR 169	55	55	55
JOWERS ROAD	52	55	55
LEE ROAD 212	45	45	45
AUBURN AVENUE	45	34	45
US 280 BYPASS	28	26	30
OPELIKA ROAD	20	25	35
BROAD STREET	17	25	30
2ND AVENUE	19	15	30
VETERANS PARKWAY.	19	21	35
18TH AVENUE	24	22	35
WYNNTON ROAD	20	21	35

INTERSECTION	FREE FLOW RATING WESTBOUND	FREE FLOW RATING EASTBOUND	SEGMENT DISTANCE (MILES)
SR 169	GOOD	GOOD	
JOWERS ROAD	GOOD	GOOD	2.43
LEE ROAD 212	GOOD	GOOD	3.02
AUBURN AVENUE	GOOD	OKAY	3.32
US 280 BYPASS	GOOD	GOOD	0.55
OPELIKA ROAD	MARGINAL	MARGINAL	0.35
BROAD STREET	MARGINAL	GOOD	1.40
2ND AVENUE	MARGINAL	MARGINAL	0.61
VETERANS PARKWAY.	MARGINAL	MARGINAL	0.16
18TH AVENUE	OKAY	MARGINAL	1.19
WYNNTON ROAD	MARGINAL	MARGINAL	0.73

US 80 & 13th STREET

CONGESTION MANAGEMENT PROCESS SPRING 2009

JOWERS ROAD (Alabama) TO WYNNTON ROAD (Columbus)

DISTANCE: 13.76 MILES

WESTBOUND AM PEAK HOURS	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
WYNNTON ROAD	STARTING POINT			
18TH STREET	52	21.3	0.61	MARGINAL
VETERANS PARKWAY	96	19.8	0.57	MARGINAL
BROAD STREET	43	20	.0.66	OKAY
10TH AVENUE	-4	33	1.10	GOOD
OPELIKA ROAD	84	22.8	0.76	OKAY
US 280	77	15.2	0.34	SEVERE
AUBURN AVENUE	13	35.2	0.78	OKAY
LEE ROAD 212	9	43.6	0.97	GOOD
JOWERS ROAD	6	53.3	0.97	GOOD
AL-169	4	53.8	0.98	GOOD
EASTBOUND AM PEAK HOURS	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
AL-169	STARTING POINT			
JOWERS ROAD	2	54.4	0.99	GOOD
LEE ROAD 212	14	51.8	0.94	GOOD
AUBURN AVENUE	71	42.2	0.77	OKAY
US 280	58	22.6	0.50	MARGINAL
OPELIKA ROAD	44	17.7	0.39	SEVERE
10TH AVENUE	15	32	0.91	GOOD
BROAD STREET	81	10.2	0.34	SEVERE
VETERANS PARKWAY	30	23.4	0.78	OKAY
18TH STREET	38	24.3	0.81	GOOD
WYNNTON ROAD	84	19	0.54	MARGINAL

US 80 & 13th STREET

CONGESTION MANAGEMENT PROCESS SPRING 2009

JOWERS ROAD (Alabama) TO WYNNTON ROAD (Columbus)

DISTANCE: 13.76 MILES

WESTBOUND OFF PEAK HOURS	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
MACON ROAD	STARTING POINT			
18TH STREET	40	23.3	0.67	OKAY
VETERANS PARKWAY	88	21.5	0.61	MARGINAL
BROAD STREET	43	20	0.66	MARGINAL
10TH AVENUE	-4	33.1	1.10	GOOD
OPELIKA ROAD	123	21.3	0.71	OKAY
US 280	60	17.8	0.40	CONGESTED
AUBURN AVENUE	18	32.2	0.72	OKAY
LEE ROAD 212	-4	45.7	1.02	GOOD
JOWERS ROAD	9	52.6	0.96	GOOD
AL-169	2	54.2	0.99	GOOD

EASTBOUND OFF PEAK HOURS	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
AL-169	STARTING POINT			
JOWERS ROAD	2	54.6	0.55	MARGINAL
LEE ROAD 212	8	53.3	0.51	MARGINAL
AUBURN AVENUE	39	47.4	0.43	CONGESTED
US 280	38	28.3	0.82	GOOD
OPELIKA ROAD	33	22.2	0.83	GOOD
10TH AVENUE	8	33	0.46	CONGESTED
BROAD STREET	40	15.8	0.78	OKAY
VETERANS PARKWAY	136	11.9	1.04	GOOD
18TH STREET	42	24	0.97	GOOD
MACON ROAD	110	15.2	0.99	GOOD

US 80 & 13th STREET

CONGESTION MANAGEMENT PROCESS SPRING 2009

JOWERS ROAD (Alabama) TO WYNNTON ROAD (Columbus)

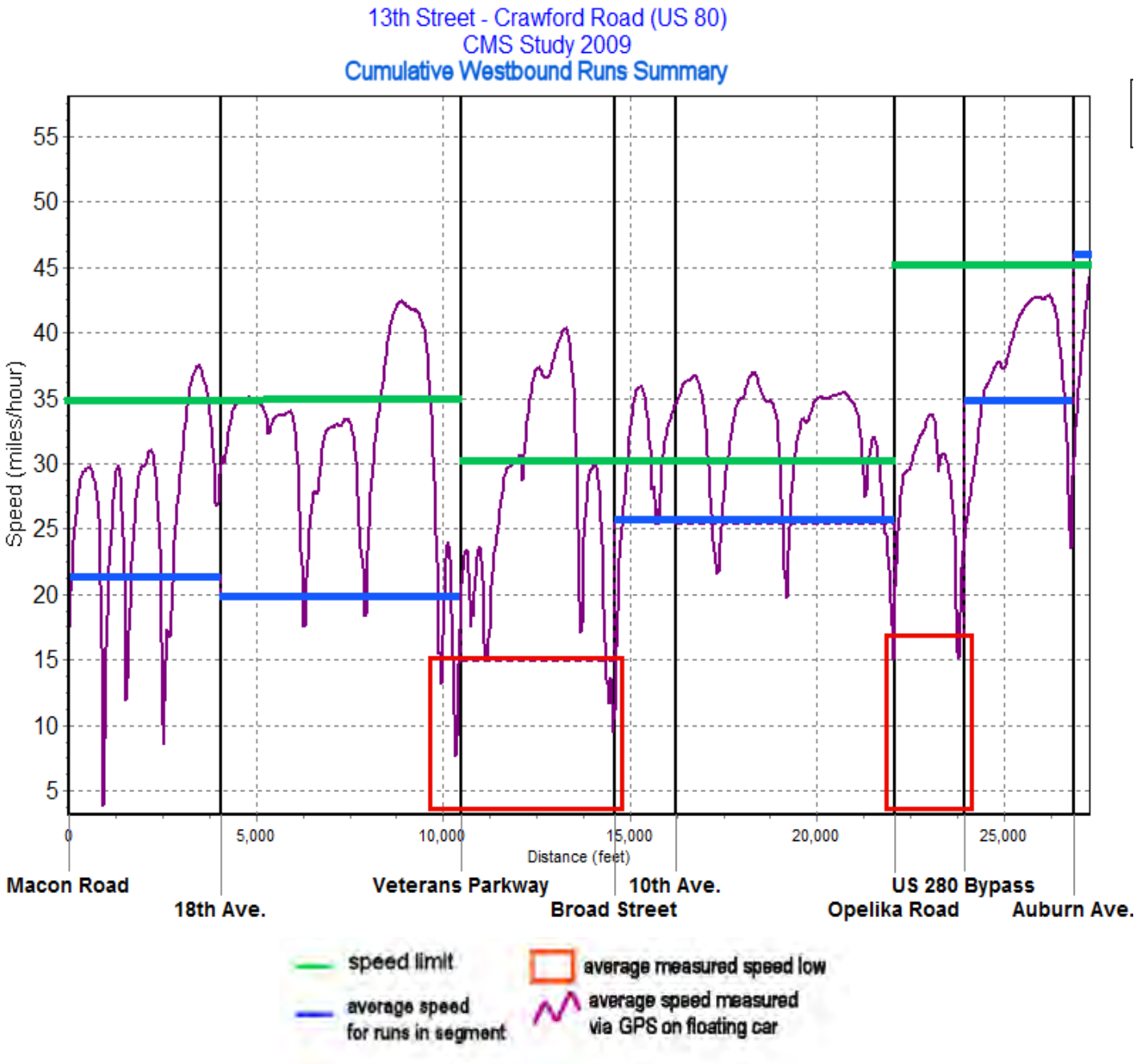
DISTANCE: 13.76 MILES

WESTBOUND PM PEAK HOURS	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
MACON ROAD	STARTING POINT			
18TH STREET	69	19.4	0.55	MARGINAL
VETERANS PARKWAY	124	17.9	0.51	MARGINAL
BROAD STREET	127	12.9	0.43	CONGESTED
10TH AVENUE	12	24.5	0.82	GOOD
OPELIKA ROAD	30	24.8	0.83	GOOD
US 280	40	20.8	0.46	CONGESTED
AUBURN AVENUE	15	35	0.78	OKAY
LEE ROAD 212	-6	46.9	1.04	GOOD
JOWERS ROAD	8	53.3	0.97	GOOD
AL-169	2	54.3	0.99	GOOD

EASTBOUND PM PEAK HOURS	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
AL-169	STARTING POINT			
JOWERS ROAD	1	54.8	1.00	GOOD
LEE ROAD 212	19	50.5	0.92	GOOD
AUBURN AVENUE	71	42.3	0.77	OKAY
US 280	40	30.6	0.68	OKAY
OPELIKA ROAD	37	20.4	0.45	CONGESTED
10TH AVENUE	8	33	0.94	GOOD
BROAD STREET	47	19.7	0.66	OKAY
VETERANS PARKWAY	50	19.2	0.64	MARGINAL
18TH STREET	63	22.4	0.75	OKAY
MACON ROAD	53	21.9	0.63	MARGINAL

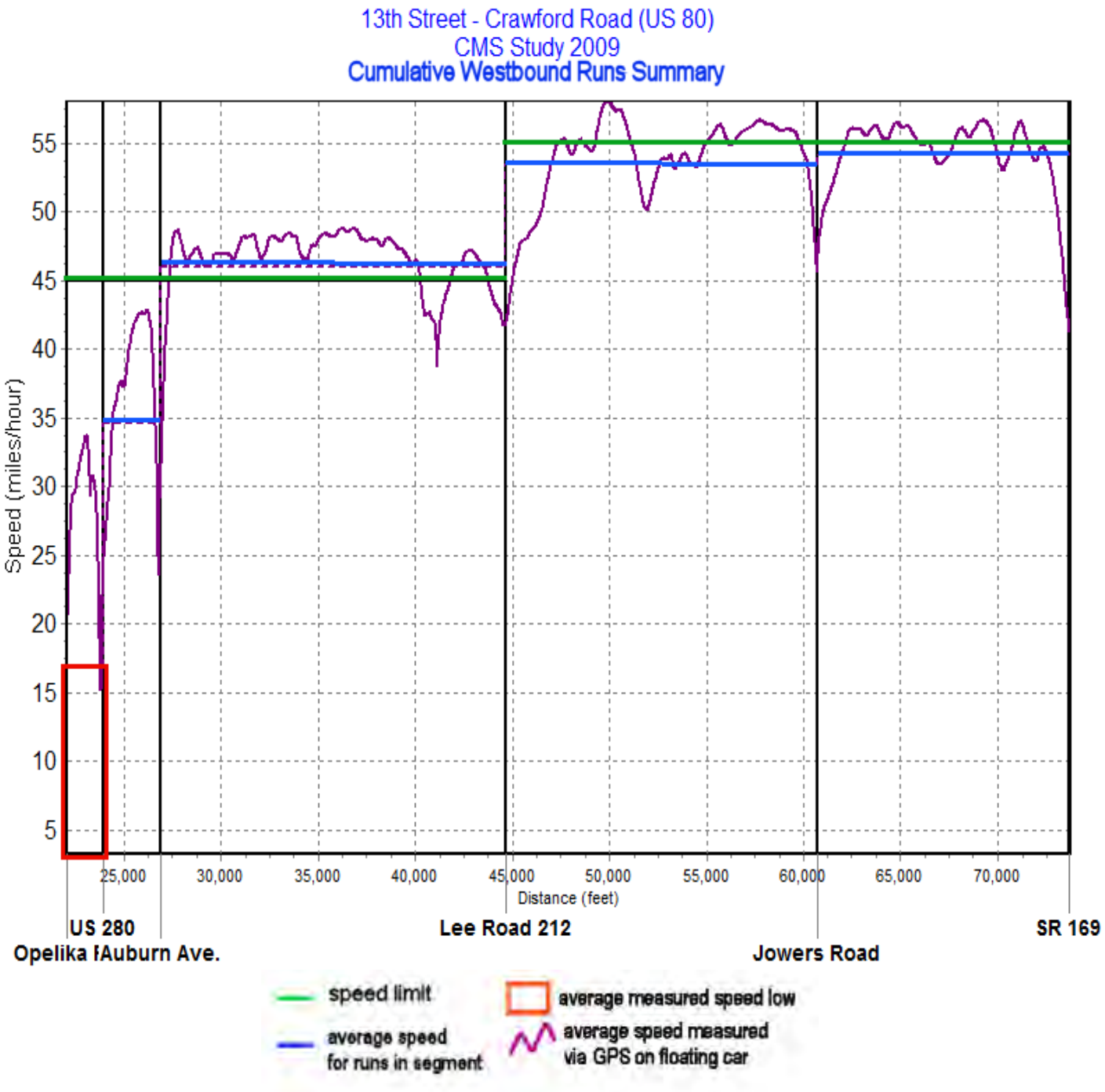
US 80 & 13th STREET	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
JOWERS ROAD (Alabama) TO WYNNTON ROAD (Columbus)	DISTANCE: 13.76 MILES

CUMULATIVE AVERAGE CONGESTION RATING FOR ALL THREE MEASURED TIME PERIODS BY DIRECTION TRAVELED



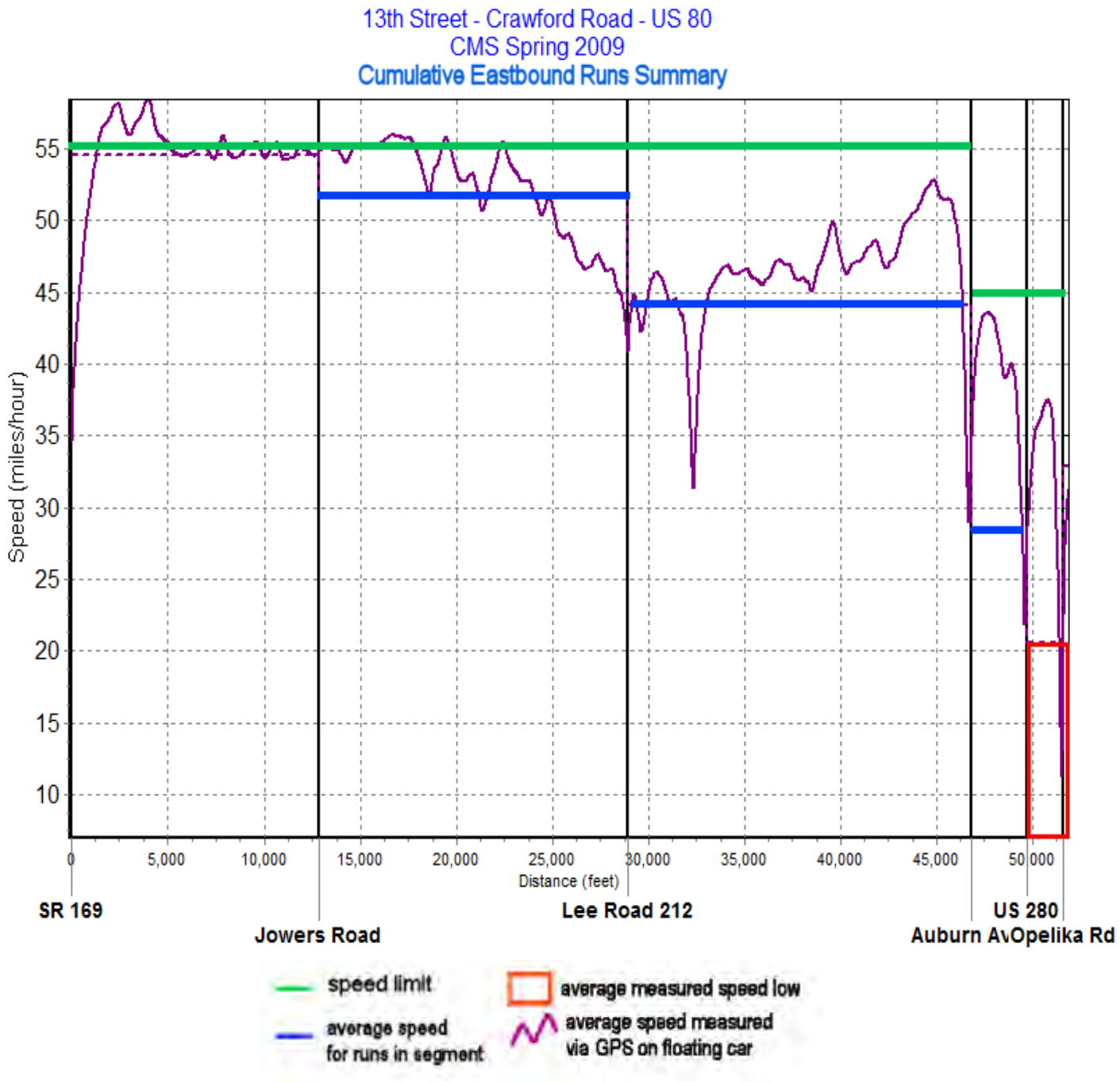
US 80 & 13th STREET	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
JOWERS ROAD (Alabama) TO WYNNTON ROAD (Columbus)	DISTANCE: 13.76 MILES

CUMULATIVE AVERAGE CONGESTION RATING FOR ALL THREE MEASURED TIME PERIODS BY DIRECTION TRAVELED



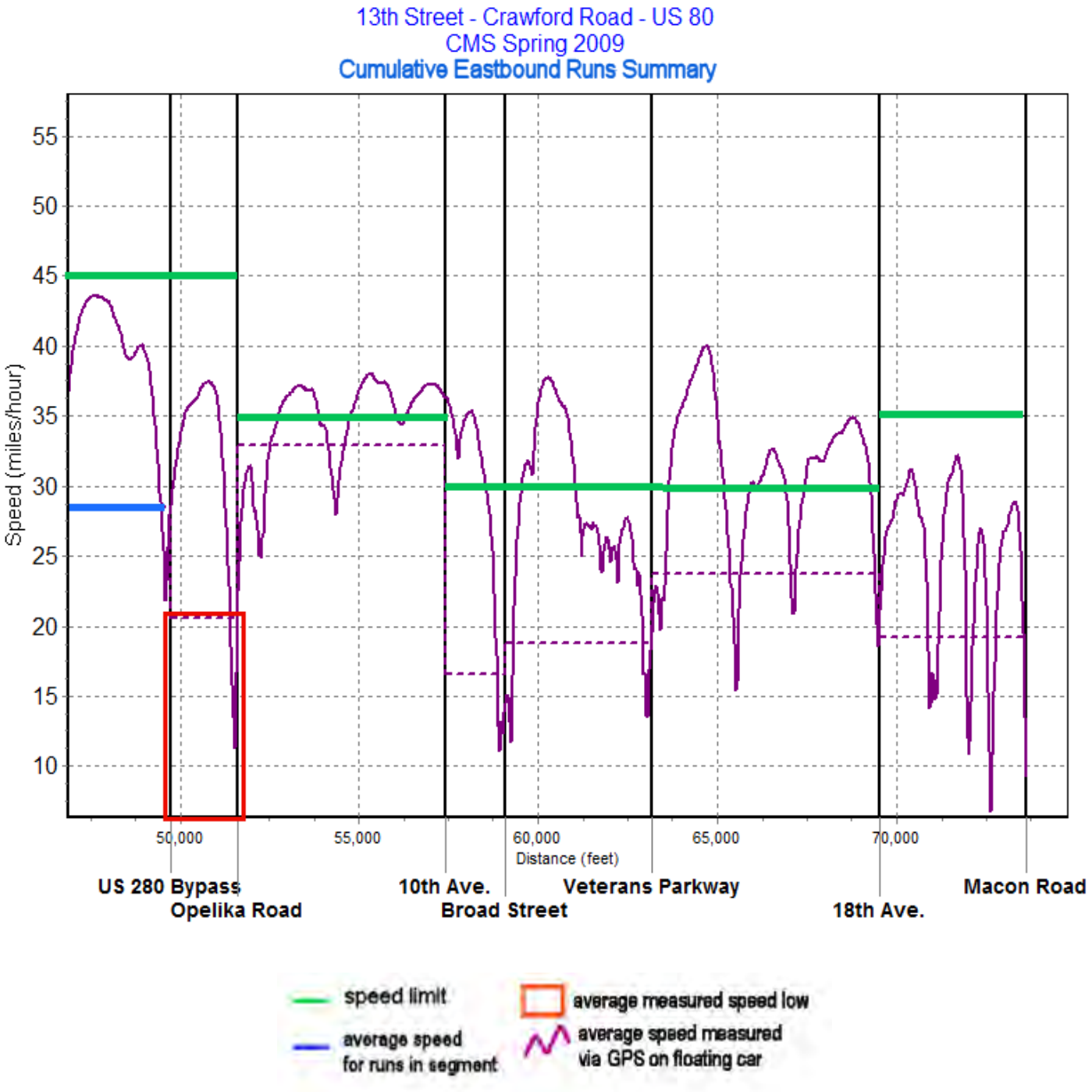
US 80 & 13th STREET	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
JOWERS ROAD (Alabama) TO WYNNTON ROAD (Columbus)	DISTANCE: 13.76 MILES

CUMULATIVE AVERAGE CONGESTION RATING FOR ALL THREE MEASURED TIME PERIODS BY DIRECTION TRAVELED



US 80 & 13th STREET	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
JOWERS ROAD (Alabama) TO WYNNTON ROAD (Columbus)	DISTANCE: 13.76 MILES

CUMULATIVE AVERAGE CONGESTION RATING FOR ALL THREE MEASURED TIME PERIODS BY DIRECTION TRAVELED



US 80 & 13th STREET	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
JOWERS ROAD (Alabama) TO WYNNTON ROAD (Columbus)	DISTANCE: 13.76 MILES

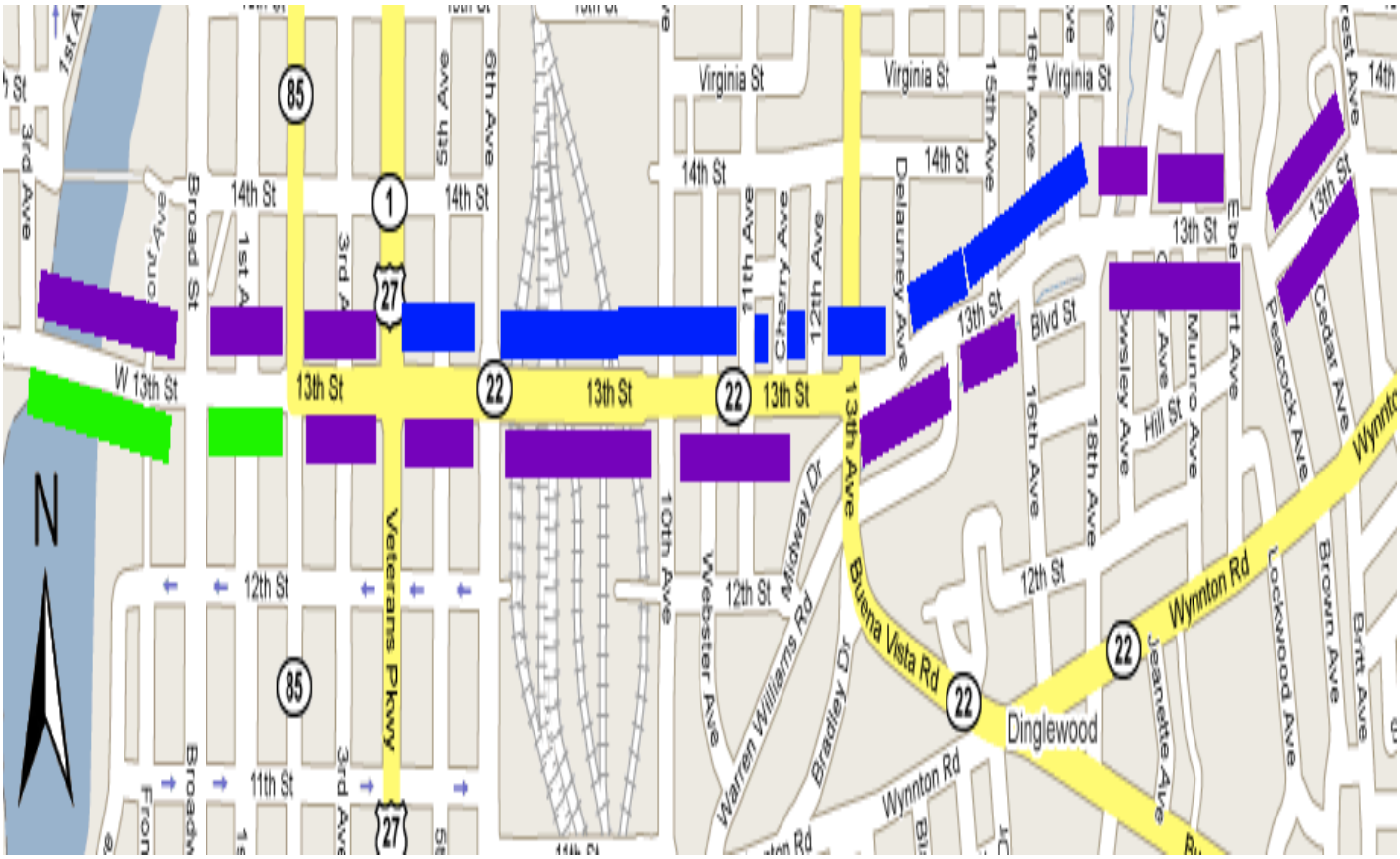
CUMULATIVE AVERAGE CONGESTION RATING FOR ALL THREE MEASURED TIME PERIODS BY DIRECTION TRAVELED

COLOR KEY AND RANKING CATEGORIES
FOR FREE FLOW TRAFFIC SPEED MEASUREMENTS

- SEVERE - Average traffic speed below 40% of the posted speed limit
- CONGESTED - Average traffic speed between 40% and 49% of the posted speed limit
- MARGINAL - Average traffic speed between 50% and 64% of the posted speed limit.
- OKAY - Average traffic speed between 65% and 80% of the posted speed limit.
- GOOD - Average traffic speed between 80% of to the posted speed limit.

US 80 & 13th STREET	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
JOWERS ROAD (Alabama) TO WYNNTON ROAD (Columbus)	DISTANCE: 13.76 MILES

CUMULATIVE AVERAGE CONGESTION RATING FOR ALL THREE MEASURED TIME PERIODS BY DIRECTION TRAVELED



COLOR KEY AND RANKING CATEGORIES
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- OKAY - Average traffic speed between 65% and 80% of the posted speed limit.
- GOOD - Average traffic speed between 80% of to the posted speed limit.

US 80 & 13th STREET

CONGESTION MANAGEMENT PROCESS SPRING 2009

JOWERS ROAD (Alabama) TO WYNNTON ROAD (Columbus)

DISTANCE: 13.76 MILES

POSSIBLE CAUSES OF CONGESTION

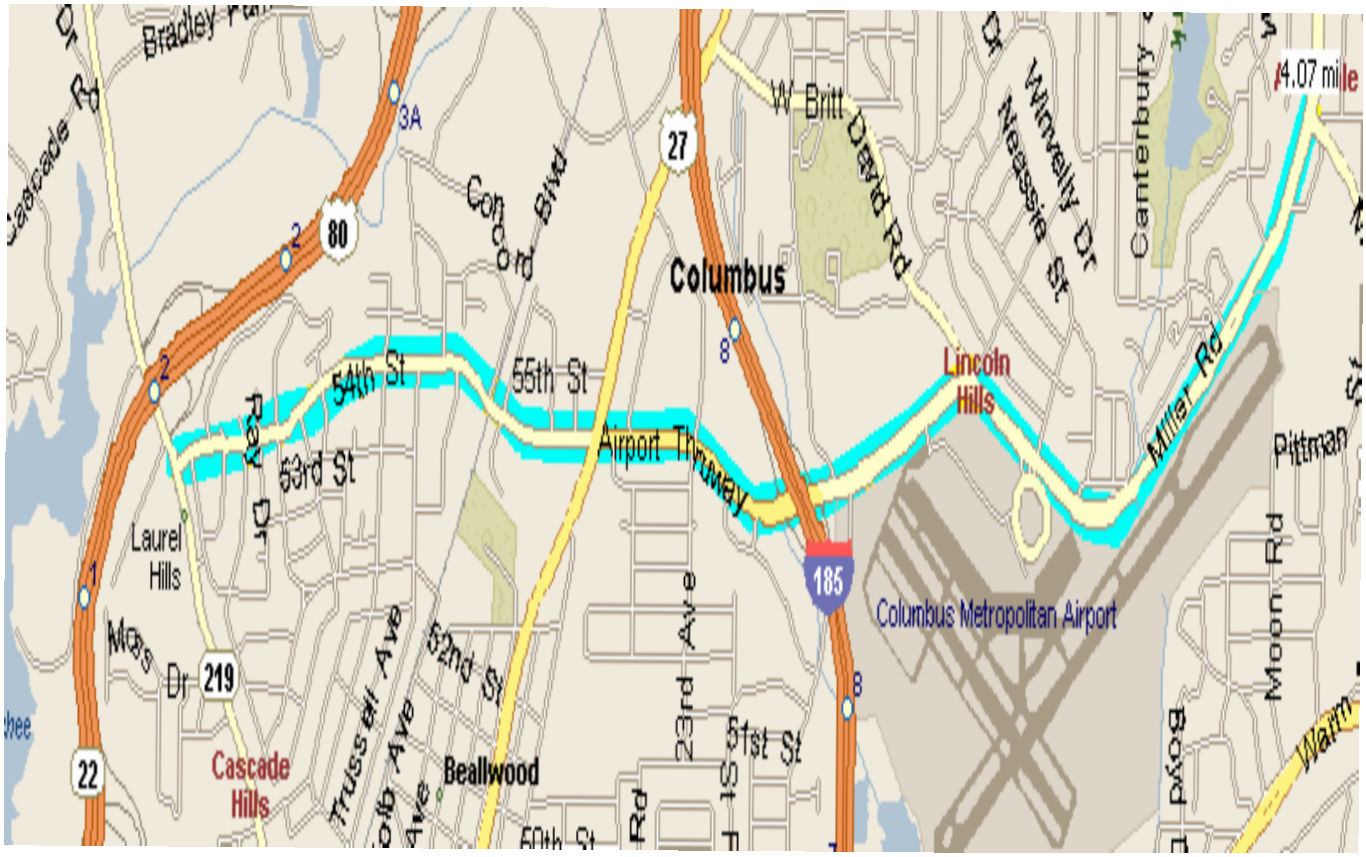
- **Close proximity of signalized intersections between 13th Street Bridge and Veterans Parkway.**
- **Heavy traffic volume at US 80/US 280 intersection, due to absence of freeway connection between Ladonia and current end of North Bypass.**
- **Access management issues along 13th Street in Phenix City**
- **13th Street Bridge is frequently jammed in afternoon PM peak headed westbound into Alabama.**

US 80 and 13th Street	Travel Time	V/C Ratio	Arterial and Intersection L.O.S.	Transit System Measures	Incident Management
TDM Measures	▶	▶	▲	▶	▶
Capacity Expansion	▲	▲	▲	▶	▶
Access Management	▶	▶	▲	▶	▶
Traffic Operational Improvement	▶	▲	▲	▶	▲
Non-Motorized Modes	▲	▶	▲	▶	▶

▲	Positive effect on congestion.
▶	No discernable effect on congestion.
▼	Negative effect on congestion.

54th STREET, AIRPORT THRUWAY & MILLER ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
RIVER ROAD TO MANCHESTER EXPRESSWAY	DISTANCE: 4.28 MILES

LOCATION MAP OF ROUTE MEASURED



54th STREET, AIRPORT THRUWAY & MILLER ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
RIVER ROAD TO MANCHESTER EXPRESSWAY	DISTANCE: 4.28 MILES

CUMULATIVE AVERAGE - ALL MEASURED TIME PERIODS OF DAY BOTH DIRECTIONS

INTERSECTION	EASTBOUND AVERAGE SPEED	WESTBOUND AVERAGE SPEED	POSTED SPEED LIMIT
RIVER ROAD		26	35
MORRIS AVENUE	29	28	35
VETERANS PARK-WAY	20	24	35
ARMOUR ROAD	26	27	40
W. BRITT DAVID ROAD	28	40	40
WINDSOR DRIVE	42	32	45
WARM SPRINGS ROAD	23	32	45
ALT US 27	35		45

INTERSECTION	FREE FLOW GRADE EASTBOUND	FREE FLOW GRADE WESTBOUND	SEGMENT LENGTH (MILES)
RIVER ROAD	GOOD	OKAY	0.35
MORRIS AVENUE	MARGINAL	OKAY	0.79
VETERANS PARK-WAY	OKAY	OKAY	0.57
ARMOUR ROAD	OKAY	OKAY	0.81
W. BRITT DAVID ROAD	GOOD	GOOD	0.42
WINDSOR DRIVE	CONGESTED	OKAY	1.11
WARM SPRINGS RD	OKAY	OKAY	0.69
ALT US 27	OKAY		1.39

54th STREET, AIRPORT THRUWAY & MILLER ROAD

CONGESTION MANAGEMENT PROCESS SPRING 2009

RIVER ROAD TO MANCHESTER EXPRESSWAY

DISTANCE: 4.28 MILES

AM PEAK HOUR EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
RIVER ROAD	STARTING POINT			
MORRIS AVENUE	7	32.4	0.93	GOOD
VETERANS PARKWAY	28	26.4	0.75	OKAY
ARMOUR ROAD	39	25.5	0.73	OKAY
W. BRITT DAVID ROAD	16	29.6	0.74	OKAY
WINDSOR DRIVE	-4	41.7	1.04	GOOD
WARM SPRINGS ROAD	65	24	0.53	MARGINAL
ALT US 27	25	37	0.82	GOOD
AM PEAK HOUR WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
ALT US 27	STARTING POINT			
WARM SPRINGS ROAD	42	33.1	0.74	OKAY
WINDSOR DRIVE	36	30.3	0.67	OKAY
W. BRITT DAVID	15	39.4	0.88	GOOD
ARMOUR ROAD	6	35.2	0.88	GOOD
VETERANS PARKWAY	46	27.2	0.68	OKAY
MORRIS AVENUE	26	27.3	0.68	OKAY
RIVER ROAD	16	29.6	0.85	GOOD

54th STREET, AIRPORT THRUWAY & MILLER ROAD

CONGESTION MANAGEMENT PROCESS SPRING 2009

RIVER ROAD TO MANCHESTER EXPRESSWAY

DISTANCE: 4.28 MILES

OFF PEAK EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
RIVER ROAD	STARTING POINT			
MORRIS AVENUE	32	25.3	0.72	OKAY
VETERANS PARKWAY	90	15.3	0.44	MARGINAL
ARMOUR ROAD	24	28.6	0.82	GOOD
W. BRITT DAVID	16	31.5	0.79	OKAY
WINDSOR DRIVE	-12	45.2	1.13	GOOD
WARM SPRINGS ROAD	59	25.1	0.56	MARGINAL
ALT US 27	24	37.1	0.82	GOOD
OFF PEAK WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
ALT US 27	STARTING POINT			
WARM SPRINGS ROAD	45	32.8	0.73	OKAY
WINDSOR DRIVE	38	29.8	0.66	OKAY
W. BRITT DAVID	8	41.4	0.92	GOOD
ARMOUR ROAD	38	20.8	0.52	MARGINAL
VETERANS PARKWAY	89	20.4	0.51	MARGINAL
MORRIS AVENUE	19	29.4	0.74	OKAY
RIVER ROAD	50	22.9	0.65	MARGINAL

54th STREET, AIRPORT THRUWAY & MILLER ROAD

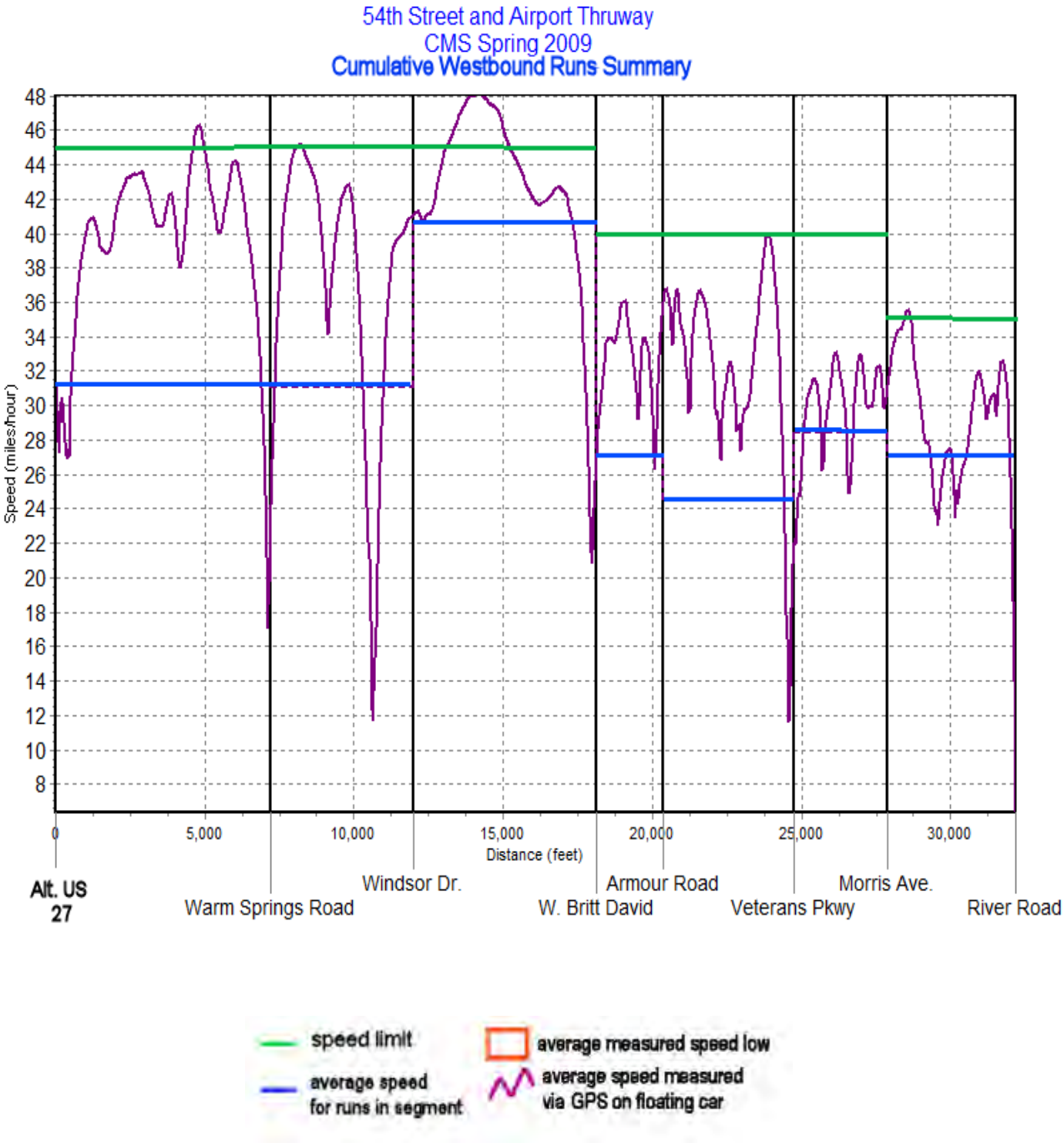
CONGESTION MANAGEMENT PROCESS SPRING 2009

RIVER ROAD TO MANCHESTER EXPRESSWAY

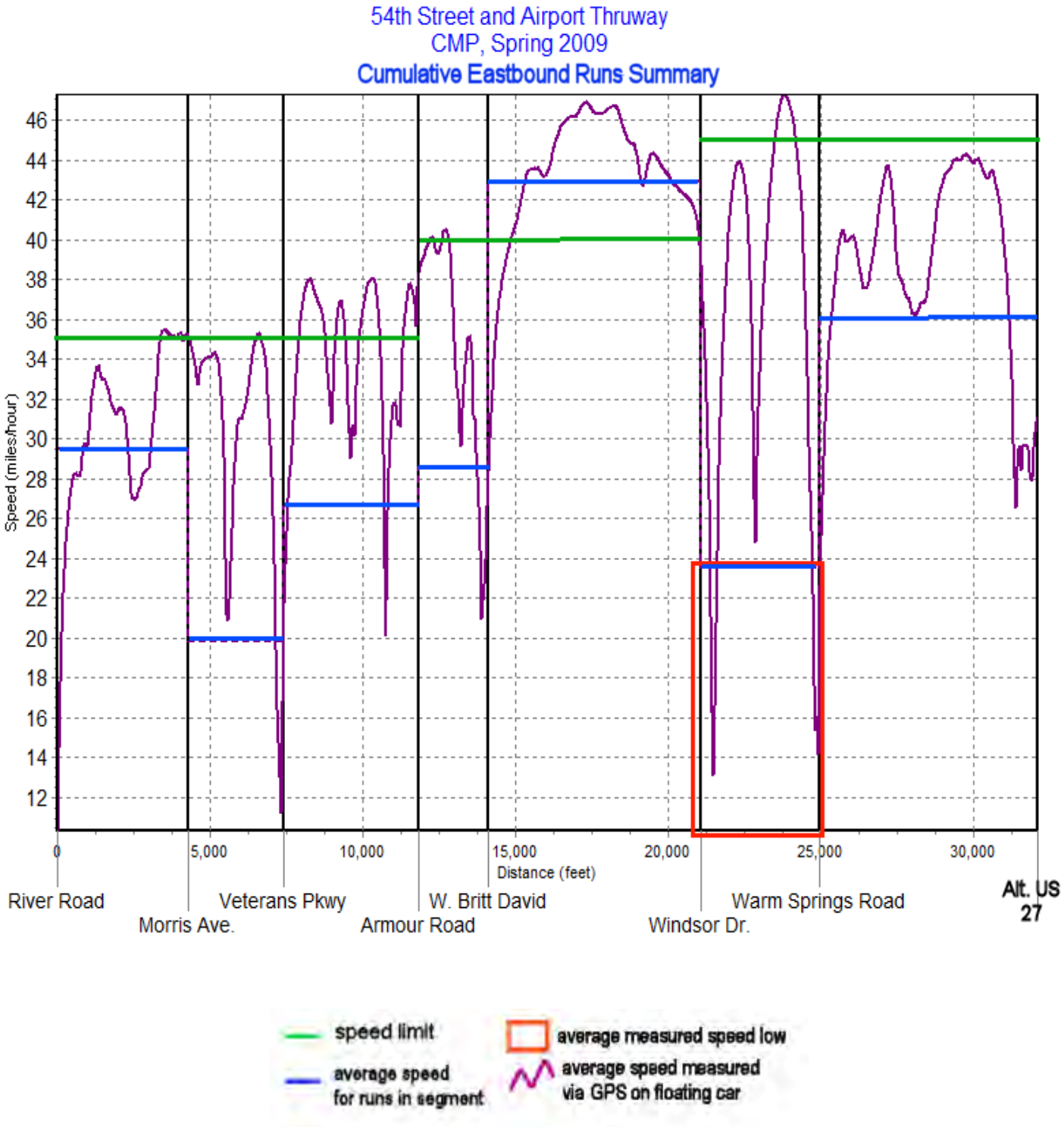
DISTANCE: 4.28 MILES

PM PEAK HOUR EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
RIVER ROAD	STARTING POINT			
MORRIS AVENUE	9	31.7	0.91	GOOD
VETERANS PARKWAY	66	20.8	0.59	MARGINAL
ARMOUR ROAD	29	27	0.77	OKAY
W. BRITT DAVID	21	28.5	0.71	OKAY
WINDSOR DRIVE	-4	41.8	1.05	GOOD
WARM SPRINGS ROAD	60	27.4	0.61	MARGINAL
ALT US 27	30	35.7	0.79	OKAY
PM PEAK HOUR WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
ALT US 27	STARTING POINT			
WARM SPRINGS ROAD	124	21.1	0.47	CONGESTED
WINDSOR DRIVE	15	37.1	0.82	GOOD
W. BRITT DAVID	7	41.7	0.93	GOOD
ARMOUR ROAD	35	21.1	0.53	MARGINAL
VETERANS PARKWAY	26	29.6	0.74	OKAY
MORRIS AVENUE	20	29.3	0.73	OKAY
RIVER ROAD	8	31.9	0.91	GOOD

54th STREET, AIRPORT THRUWAY & MILLER ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
RIVER ROAD TO MANCHESTER EXPRESSWAY	DISTANCE: 4.28 MILES



54th STREET, AIRPORT THRUWAY & MILLER ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
RIVER ROAD TO MANCHESTER EXPRESSWAY	DISTANCE: 4.28 MILES



54th STREET, AIRPORT THRUWAY & MILLER ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
RIVER ROAD TO MANCHESTER EXPRESSWAY	DISTANCE: 4.28 MILES

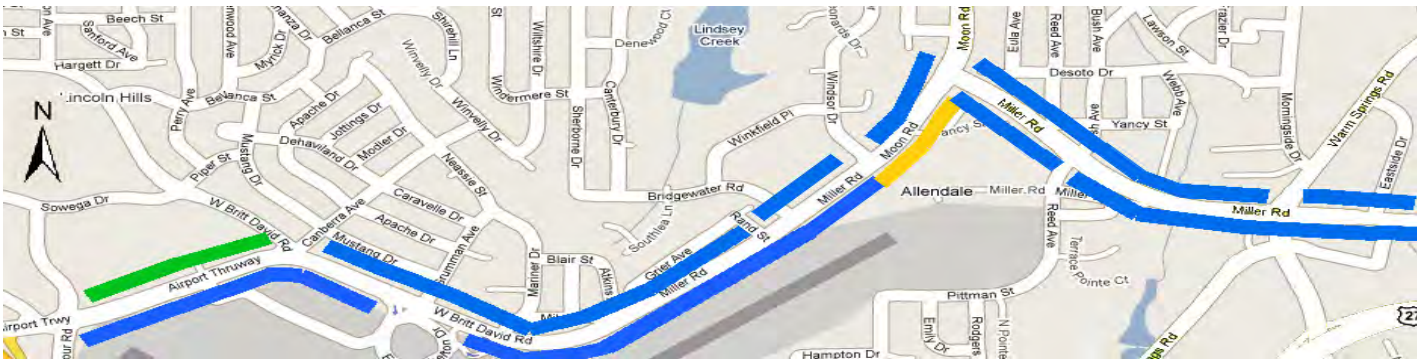
CUMULATIVE AVERAGE CONGESTION RATING FOR ALL THREE MEASURED TIME PERIODS BY DIRECTION TRAVELED

COLOR KEY AND RANKING CATEGORIES
FOR FREE FLOW TRAFFIC SPEED MEASUREMENTS

- SEVERE - Average traffic speed below 40% of the posted speed limit
- CONGESTED - Average traffic speed between 40% and 49% of the posted speed limit
- MARGINAL - Average traffic speed between 50% and 64% of the posted speed limit.
- OKAY - Average traffic speed between 65% and 80% of the posted speed limit.
- GOOD - Average traffic speed between 80% of to the posted speed limit.

54th STREET, AIRPORT THRUWAY & MILLER ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
RIVER ROAD TO MANCHESTER EXPRESSWAY	DISTANCE: 4.28 MILES

CUMULATIVE AVERAGE CONGESTION RATING FOR ALL THREE MEASURED TIME PERIODS BY DIRECTION TRAVELED



COLOR KEY AND RANKING CATEGORIES
FOR FREE FLOW TRAFFIC SPEED MEASUREMENTS

- SEVERE - Average traffic speed below 40% of the posted speed limit
- CONGESTED - Average traffic speed between 40% and 49% of the posted speed limit
- MARGINAL - Average traffic speed between 50% and 64% of the posted speed limit.
- OKAY - Average traffic speed between 65% and 80% of the posted speed limit.
- GOOD - Average traffic speed between 80% of to the posted speed limit.

54th STREET, AIRPORT THRUWAY & MILLER ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
RIVER ROAD TO MANCHESTER EXPRESSWAY	DISTANCE: 4.28 MILES

POSSIBLE CAUSES OF CONGESTION

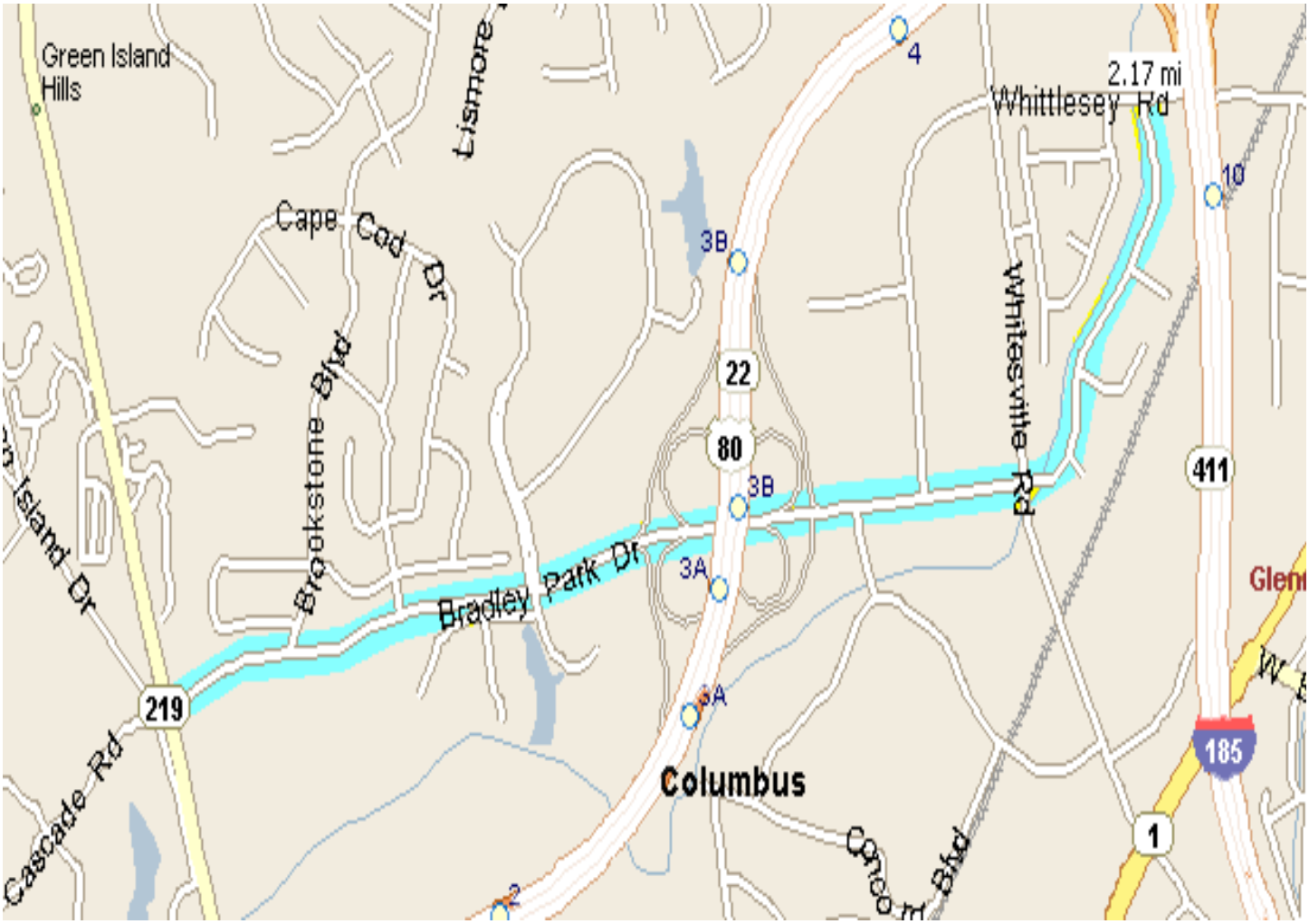
- **Heavy traffic volume in the vicinity of Veterans Parkway and Interstate 185.**
- **Heavy turning volume onto Veterans Parkway from westbound Airport Thruway can cause queues of traffic.**
- **Numerous business entrances along Airport Thruway may cause some traffic flow disruption.**

54th Street, Airport Thruway & Miller Road	Travel Time	V/C Ratio	Arterial and Intersection L.O.S.	Transit System Measures	Incident Management
TDM Measures	▶	▶	▶	▶	▶
Traffic Operational Improvements	▲	▲	▲	▶	▶
Growth Management	▶	▶	▲	▶	▶
Access Management	▶	▲	▲	▶	▶
Intelligent Transportation	▲	▶	▲	▶	▶

▲	Positive effect on congestion.
▶	No discernable effect on congestion.
▼	Negative effect on congestion.

BRADLEY PARK DRIVE	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
RIVER ROAD TO WHITTLESEY ROAD EAST	DISTANCE: 2.26 MILES

LOCATION MAP OF ROUTE MEASURED



BRADLEY PARK DRIVE	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
RIVER ROAD TO WHITTLESEY ROAD EAST	DISTANCE: 2.26 MILES

POSSIBLE CAUSES OF CONGESTION

- **Congestion occurring in proximity to Whitesville Road and Whittlesey Road due to high levels of commercial retail activity.**

Bradley Park Drive	Travel Time	V/C Ratio	Arterial and Intersection L.O.S.	Transit System Measures	Incident Management
TDM Measures	▶	▶	▲	▶	▶
Traffic Operational Improvements	▲	▲	▲	▶	▶
Growth Management	▶	▶	▲	▶	▶
Access Management	▶	▲	▲	▶	▲
Intelligent Transportation	▲	▶	▲	▶	▶

▲	Positive effect on congestion.
▶	No discernable effect on congestion.
▼	Negative effect on congestion.

BRADLEY PARK DRIVE	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
RIVER ROAD TO WHITTLESEY ROAD EAST	DISTANCE: 2.26 MILES

CUMULATIVE AVERAGE - ALL MEASURED TIME PERIODS OF DAY BOTH DIRECTIONS

INTERSECTION	AVERAGE SPEED EASTBOUND	AVERAGE SPEED WESTBOUND	POSTED SPEED LIMIT
RIVER ROAD		25	35
BROOKSTONE PARKWAY	29	35	35
BELFAST AVE	33	23	45
WHITTLESEY ROAD WEST	22	21	45
WHITESVILLE ROAD	10	25	35
WHITTLESEY ROAD EAST	25		35

INTERSECTION	FREE FLOW EASTBOUND RATING	FREE FLOW WESTBOUND RATING	SEGMENT LENGTH (MILES)
RIVER ROAD		OKAY	0.15
BROOKSTONE PARKWAY	GOOD	CONGESTED	0.68
BELFAST AVE	OKAY	MARGINAL	0.59
WHITTLESEY ROAD WEST	CONGESTED	GOOD	0.13
WHITESVILLE ROAD	SEVERE	OKAY	0.18
WHITTLESEY ROAD EAST	OKAY		0.53

BRADLEY PARK DRIVE

CONGESTION MANAGEMENT PROCESS SPRING 2009

RIVER ROAD TO WHITTLESEY ROAD EAST

DISTANCE: 2.26 MILES

AM PEAK HOUR EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
RIVER ROAD	STARTING POINT			
BROOKSTONE PARKWAY	17	28.3	0.81	GOOD
BELFAST AVE	19	32.3	0.72	OKAY
WHITTLESEY ROAD WEST	20	21.5	0.48	CONGESTED
WHITESVILLE ROAD	47	12.6	0.28	SEVERE
WHITTLESEY ROAD EAST	30	24.1	0.69	OKAY
AM PEAK HOUR WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
WHITTLESEY ROAD EAST	STARTING POINT			
WHITESVILLE ROAD	17	27.6	0.79	OKAY
WHITTLESEY ROAD WEST	13	26.1	0.58	MARGINAL
BELFAST AVE	9	25.3	0.56	MARGINAL
BROOKSTONE PARKWAY	5	32.8	0.94	GOOD
RIVER ROAD	40	24	0.69	OKAY

BRADLEY PARK DRIVE

CONGESTION MANAGEMENT PROCESS SPRING 2009

RIVER ROAD TO WHITTLESEY ROAD EAST

DISTANCE: 2.26 MILES

OFF PEAK EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
RIVER ROAD	STARTING POINT			
BROOKSTONE PARKWAY	13	29.6	0.85	GOOD
BELFAST AVE	17	34.5	0.77	OKAY
WHITTLESEY ROAD WEST	7	31.5	0.70	OKAY
WHITESVILLE ROAD	55	10.7	0.24	SEVERE
WHITTLESEY ROAD EAST	37	22.7	0.65	MARGINAL
OFF PEAK WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
WHITTLESEY ROAD EAST	STARTING POINT			
WHITESVILLE ROAD	35	24.2	0.69	OKAY
WHITTLESEY ROAD WEST	38	18.8	0.42	CONGESTED
BELFAST AVE	34	18.1	0.40	CONGESTED
BROOKSTONE PARKWAY	-3	37.3	1.07	GOOD
RIVER ROAD	32	24.5	0.70	OKAY

BRADLEY PARK DRIVE

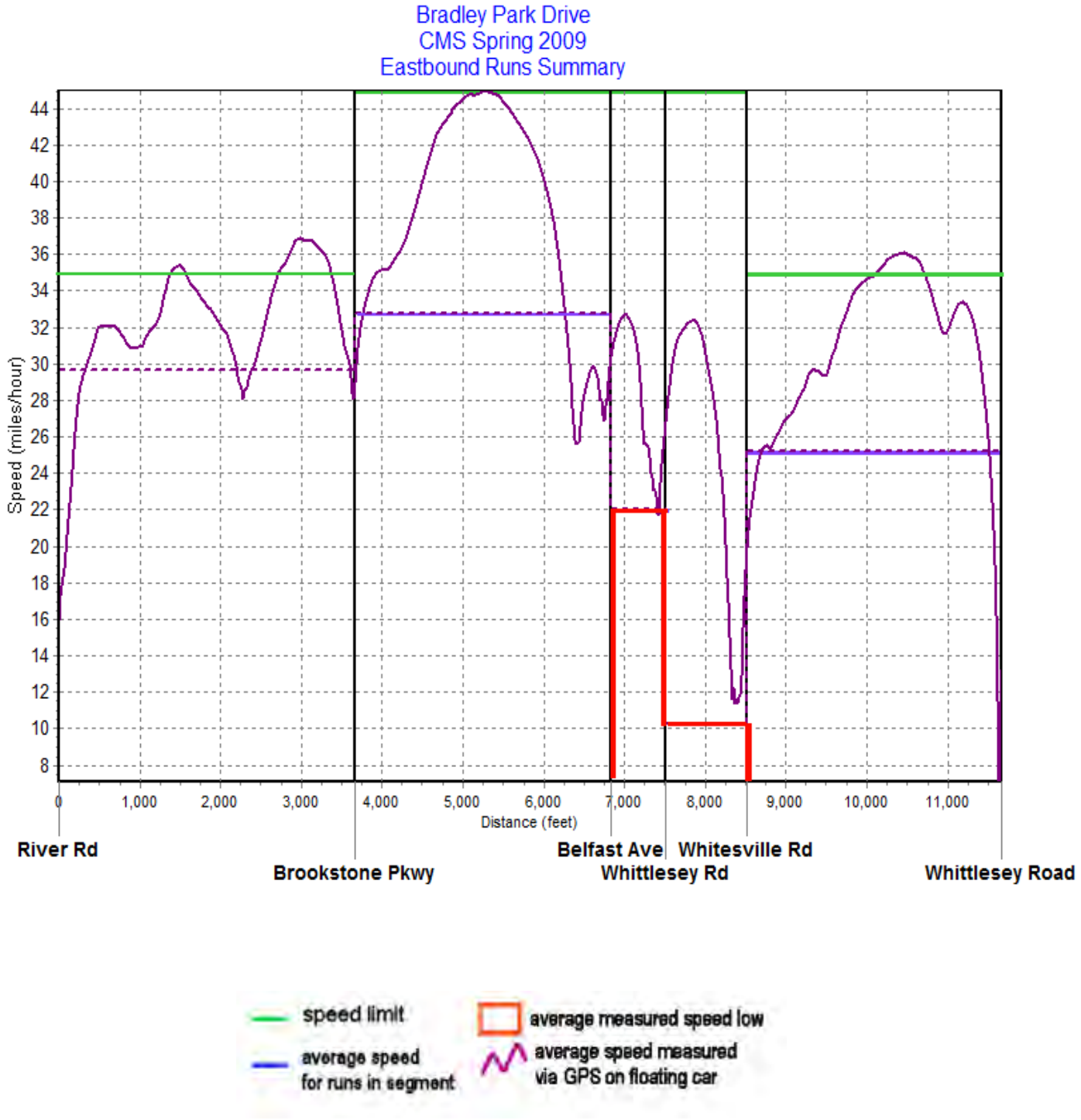
CONGESTION MANAGEMENT PROCESS SPRING 2009

RIVER ROAD TO WHITTLESEY ROAD EAST

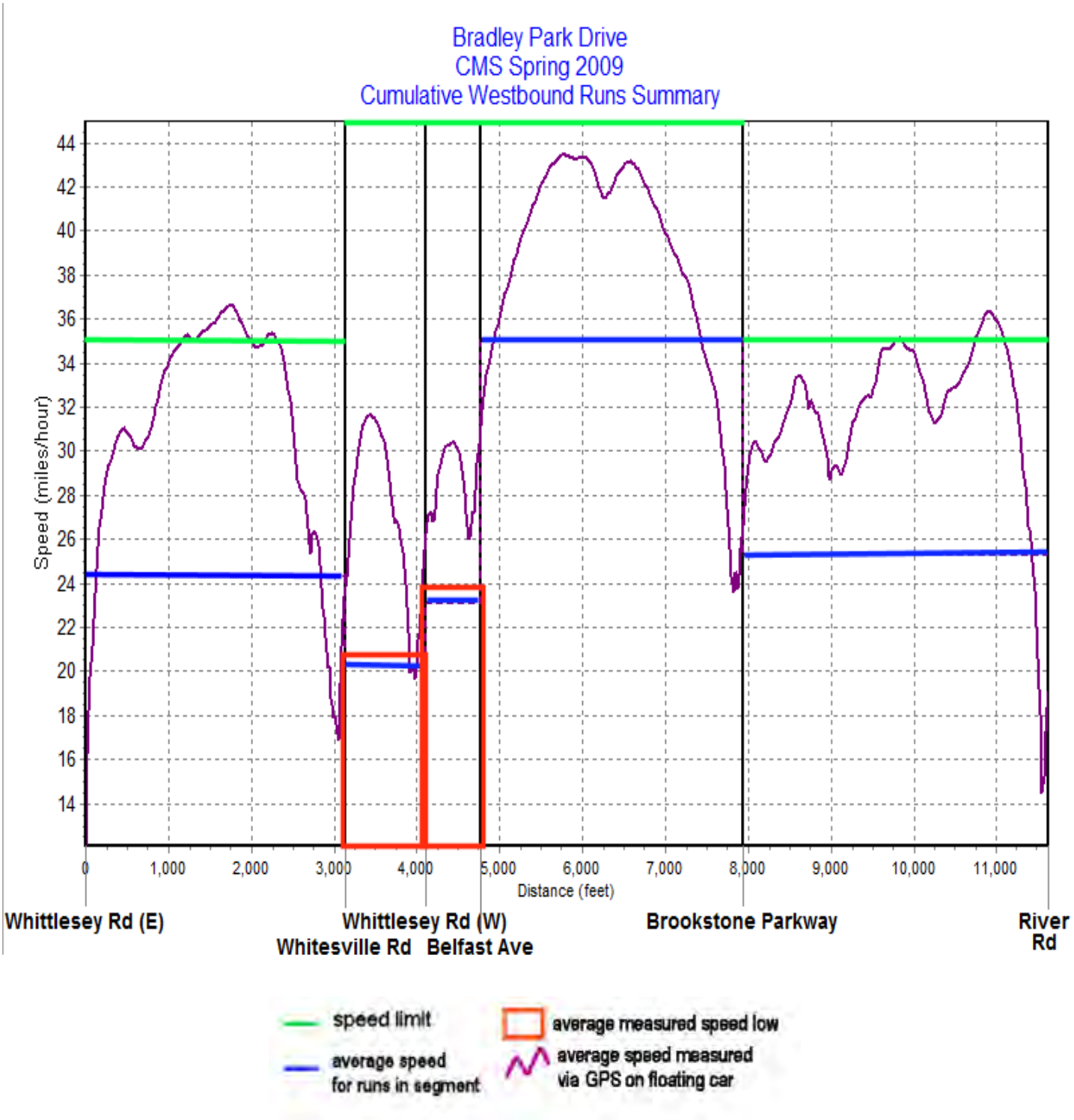
DISTANCE: 2.26 MILES

PM PEAK HOUR EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
RIVER ROAD	STARTING POINT			
BROOKSTONE PARKWAY	5	32.5	0.93	GOOD
BELFAST AVE	24	31.3	0.70	OKAY
WHITTLESEY ROAD WEST	43	13.3	0.30	SEVERE
WHITESVILLE ROAD	70	8.2	0.18	SEVERE
WHITTLESEY ROAD EAST	16	28.5	0.81	GOOD
PM PEAK HOUR WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
WHITTLESEY ROAD EAST	STARTING POINT			
WHITESVILLE ROAD	52	21.9	0.63	MARGINAL
WHITTLESEY ROAD WEST	31	17	0.38	SEVERE
BELFAST AVE	14	25.2	0.56	MARGINAL
BROOKSTONE PARKWAY	1	35.2	1.01	GOOD
RIVER ROAD	25	26.8	0.77	OKAY

BRADLEY PARK DRIVE	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
RIVER ROAD TO WHITTLESEY ROAD EAST	DISTANCE: 2.26 MILES

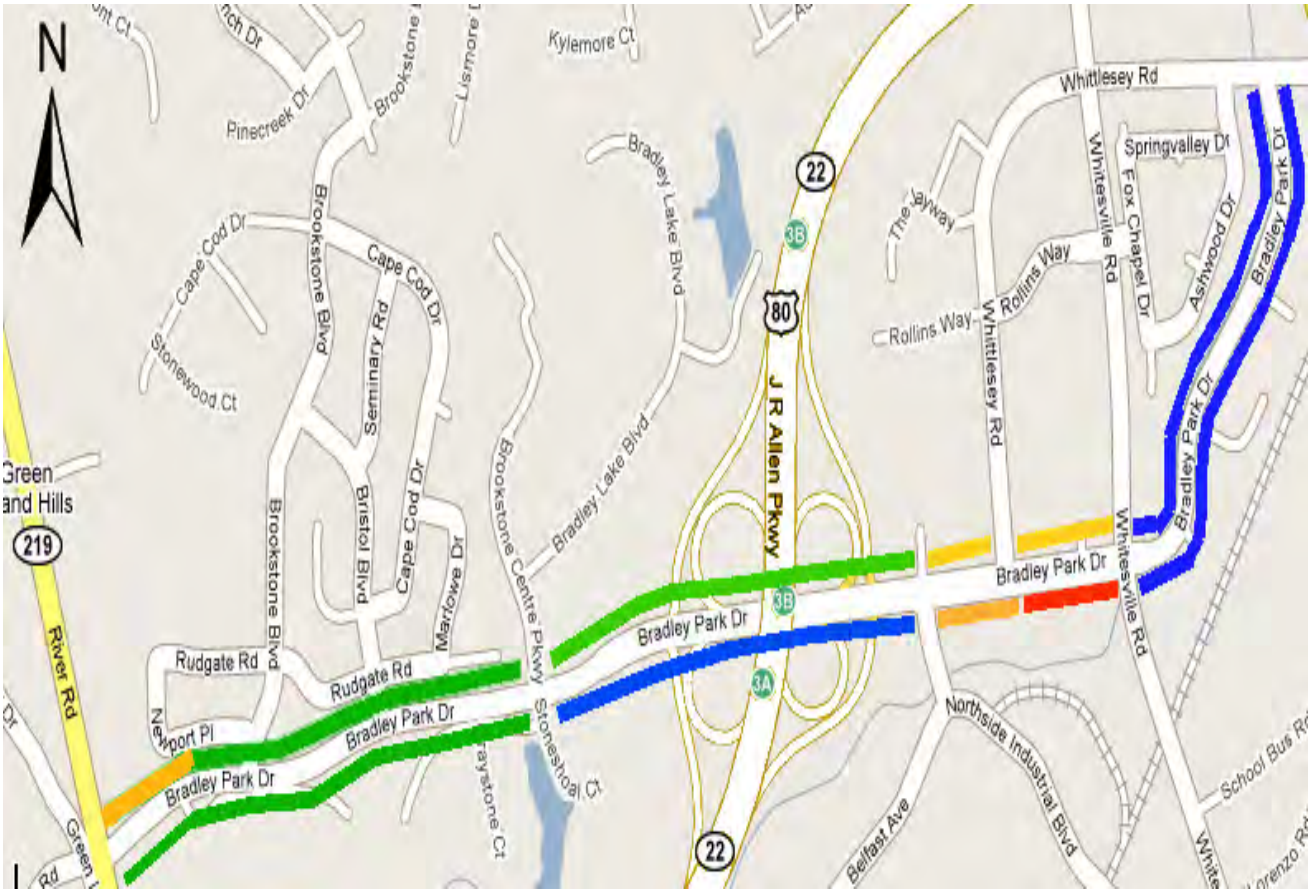


BRADLEY PARK DRIVE	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
RIVER ROAD TO WHITTLESEY ROAD EAST	DISTANCE: 2.26 MILES



BRADLEY PARK DRIVE	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
RIVER ROAD TO WHITTLESEY ROAD EAST	DISTANCE: 2.26 MILES

CUMULATIVE AVERAGE CONGESTION RATING FOR ALL THREE MEASURED TIME PERIODS BY DIRECTION TRAVELED



COLOR KEY AND RANKING CATEGORIES
FOR FREE FLOW TRAFFIC SPEED MEASUREMENTS

- SEVERE - Average traffic speed below 40% of the posted speed limit
- CONGESTED - Average traffic speed between 40% and 49% of the posted speed limit
- MARGINAL - Average traffic speed between 50% and 64% of the posted speed limit.
- OKAY - Average traffic speed between 65% and 80% of the posted speed limit.
- GOOD - Average traffic speed between 80% of to the posted speed limit.

BRADLEY PARK DRIVE	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
RIVER ROAD TO WHITTLESEY ROAD EAST	DISTANCE: 2.26 MILES

POSSIBLE CAUSES OF CONGESTION

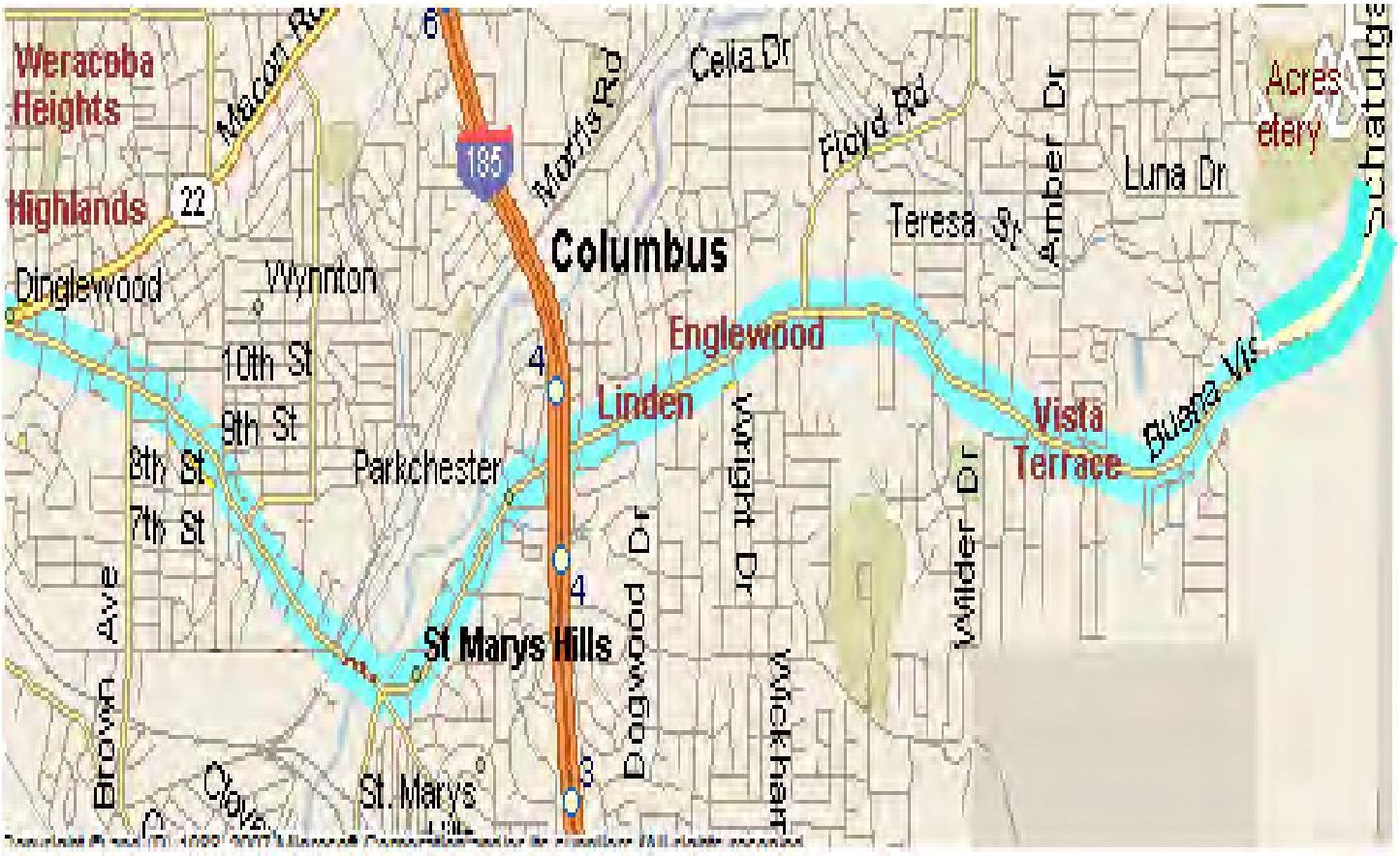
- **Congestion occurring in proximity to Whitesville Road and Whittlesey Road due to high levels of commercial retail activity.**

Bradley Park Drive	Travel Time	V/C Ratio	Arterial and Intersection L.O.S.	Transit System Measures	Incident Management
TDM Measures	▶	▶	▲	▶	▶
Traffic Operational Improvements	▲	▲	▲	▶	▶
Growth Management	▶	▶	▲	▶	▶
Access Management	▶	▲	▲	▶	▲
Intelligent Transportation	▲	▶	▲	▶	▶

▲	Positive effect on congestion.
▶	No discernable effect on congestion.
▼	Negative effect on congestion.

BUENA VISTA ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
MACON (WYNNTON) ROAD TO SCHATULGA ROAD	DISTANCE: 9.24 MILES

LOCATION MAP OF ROUTE MEASURED



BUENA VISTA ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
MACON (WYNNTON) ROAD TO SCHATULGA ROAD	DISTANCE: 9.24 MILES

CUMULATIVE AVERAGE - ALL MEASURED TIME PERIODS OF DAY BOTH DIRECTIONS

INTERSECTION	AVERAGE EASTBOUND SPEED	AVERAGE WESTBOUND SPEED	POSTED SPEED LIMIT
MACON ROAD		18	35
BROWN AVE	33	24	40
ANDREWS ROAD	24	25	40
ST. MARYS ROAD	19	34	40
STEAM MILL ROAD	33	38	40
I-185	21	28	40
MCBRIDE DRIVE	28	41	40
SCHATULGA ROAD	42		40

INTERSECTION	FREE FLOW EASTBOUND GRADE	FREE FLOW WESTBOUND GRADE	SEGMENT LENGTH (MILES)
MACON ROAD		MARGINAL	0.56
BROWN AVE	GOOD	MARGINAL	1.16
ANDREWS ROAD	MARGINAL	MARGINAL	0.17
ST. MARYS ROAD	CONGESTED	GOOD	0.42
STEAM MILL ROAD	GOOD	GOOD	0.53
I-185	MARGINAL	OKAY	3.50
MCBRIDE DRIVE	OK	GOOD	2.39
SCHATULGA ROAD	GOOD		0.51

BUENA VISTA ROAD

CONGESTION MANAGEMENT PROCESS SPRING 2009

MACON (WYNNTON) ROAD TO SCHATULGA ROAD

DISTANCE: 9.24 MILES

AM PEAK HOUR EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
MACON ROAD	STARTING POINT			
BROWN AVE	4	32.9	0.94	GOOD
ANDREWS ROAD	44	27.3	0.78	OKAY
ST. MARYS ROAD	33	19.3	0.48	CONGESTED
STEAM MILL ROAD	12	31.2	0.78	OKAY
I-185	74	16.1	0.40	CONGESTED
MCBRIDE DRIVE	50	26.8	0.67	OKAY
SCHATULGA ROAD	-16	43.1	1.08	GOOD

AM PEAK HOUR WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
SCHATULGA ROAD	STARTING POINT			
MCBRIDE DRIVE	-9	41.9	1.05	GOOD
I-185	31	30.7	0.77	OKAY
STEAM MILL ROAD	11	34	0.85	GOOD
ST. MARYS ROAD	2	38.1	0.95	GOOD
ANDREWS ROAD	16	25.6	0.64	MARGINAL
BROWN AVE	39	29.7	0.74	OKAY
MACON ROAD	54	18.6	0.53	MARGINAL

BUENA VISTA ROAD

CONGESTION MANAGEMENT PROCESS SPRING 2009

MACON (WYNNTON) ROAD TO SCHATULGA ROAD

DISTANCE: 9.24 MILES

OFF PEAK EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
MACON ROAD	STARTING POINT			
BROWN AVE	4	32.9	0.94	GOOD
ANDREWS ROAD	44	27.3	0.78	OKAY
ST. MARYS ROAD	33	19.3	0.48	CONGESTED
STEAM MILL ROAD	12	31.2	0.78	OKAY
I-185	74	16.1	0.40	CONGESTED
MCBRIDE DRIVE	50	26.8	0.67	MARGINAL
SCHATULGA ROAD	-16	43.1	1.08	GOOD
OFF PEAK WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
SCHATULGA ROAD	STARTING POINT			
MCBRIDE DRIVE	-5	41.9	1.05	GOOD
I-185	105	30.7	0.77	OKAY
STEAM MILL ROAD	-1	34	0.85	GOOD
ST. MARYS ROAD	15	38.1	0.95	GOOD
ANDREWS ROAD	16	25.6	0.64	MARGINAL
BROWN AVE	86	29.7	0.74	OKAY
MACON ROAD	63	18.6	0.53	MARGINAL

BUENA VISTA ROAD

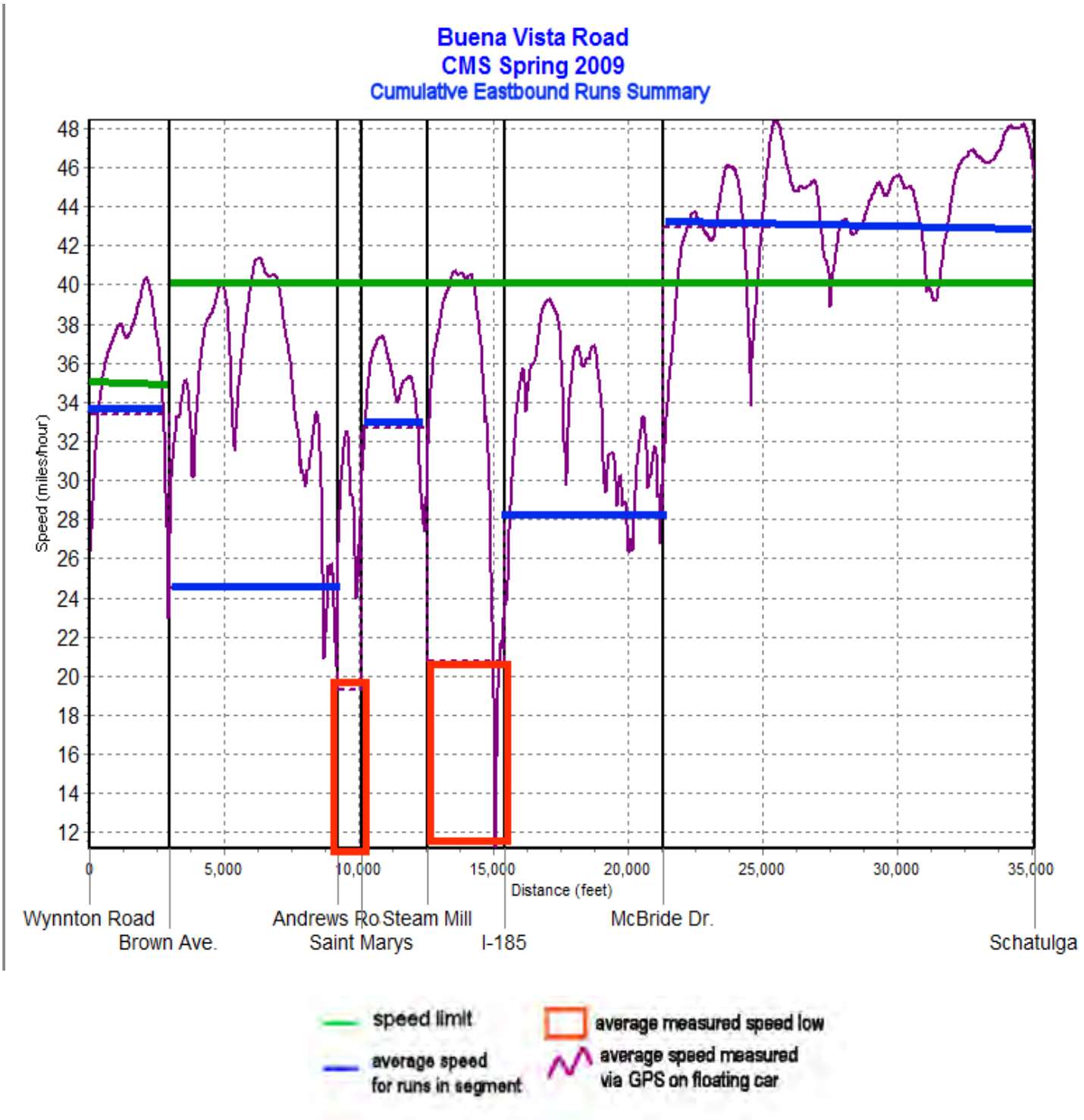
CONGESTION MANAGEMENT PROCESS SPRING 2009

MACON (WYNNTON) ROAD TO SCHATULGA ROAD

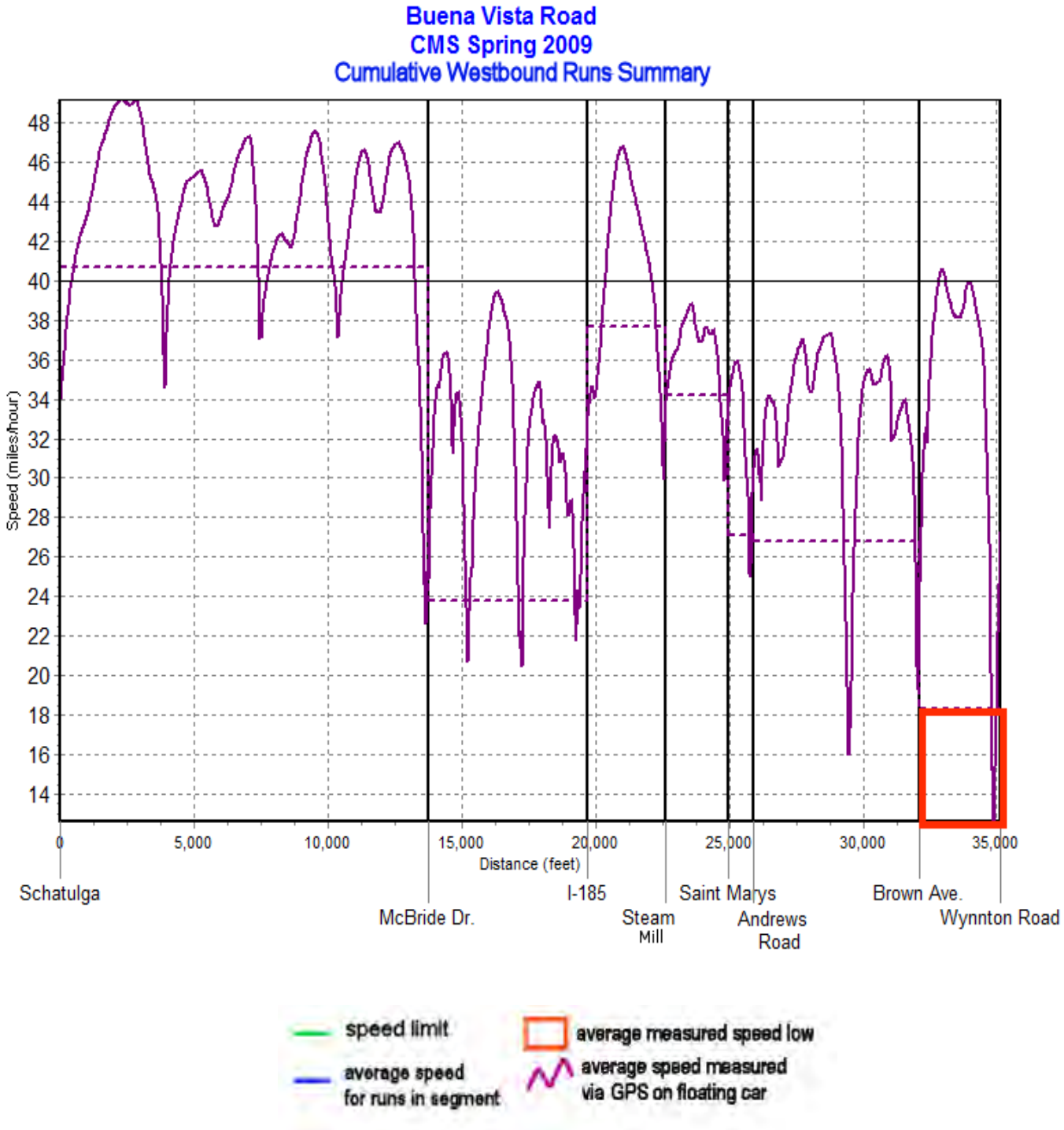
DISTANCE: 9.24 MILES

PM PEAK HOUR EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
MACON ROAD	STARTING POINT			
BROWN AVE	11	29.8	0.85	GOOD
ANDREWS ROAD	204	18.5	0.53	MARGINAL
ST. MARYS ROAD	71	7.5	0.19	SEVERE
STEAM MILL ROAD	5	36.2	0.91	GOOD
I-185	66	17.4	0.44	MARGINAL
MCBRIDE DRIVE	52	27	0.68	OKAY
SCHATULGA ROAD	-27	45.2	1.13	GOOD
PM PEAK HOUR WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
SCHATULGA ROAD	STARTING POINT			
MCBRIDE DRIVE	5	39.3	0.98	GOOD
I-185	104	19.9	0.50	MARGINAL
STEAM MILL ROAD	3	37.7	0.94	GOOD
ST. MARYS ROAD	7	34.3	0.86	GOOD
ANDREWS ROAD	7	30.5	0.76	OKAY
BROWN AVE	46	28.3	0.71	OKAY
MACON ROAD	63	17.7	0.51	MARGINAL

BUENA VISTA ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
MACON (WYNNTON) ROAD TO SCHATULGA ROAD	DISTANCE: 9.24 MILES

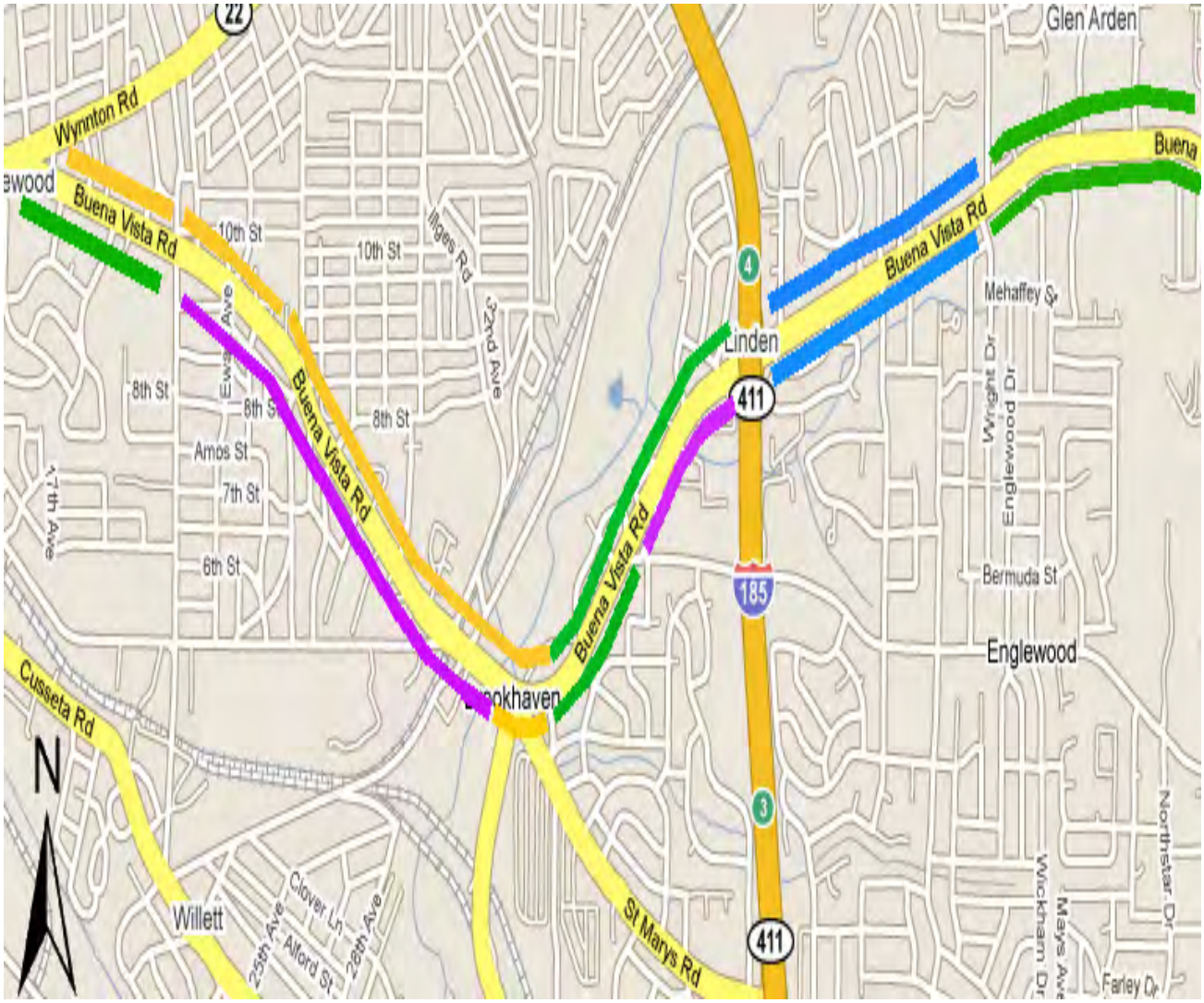


BUENA VISTA ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
MACON (WYNNTON) ROAD TO SCHATULGA ROAD	DISTANCE: 9.24 MILES



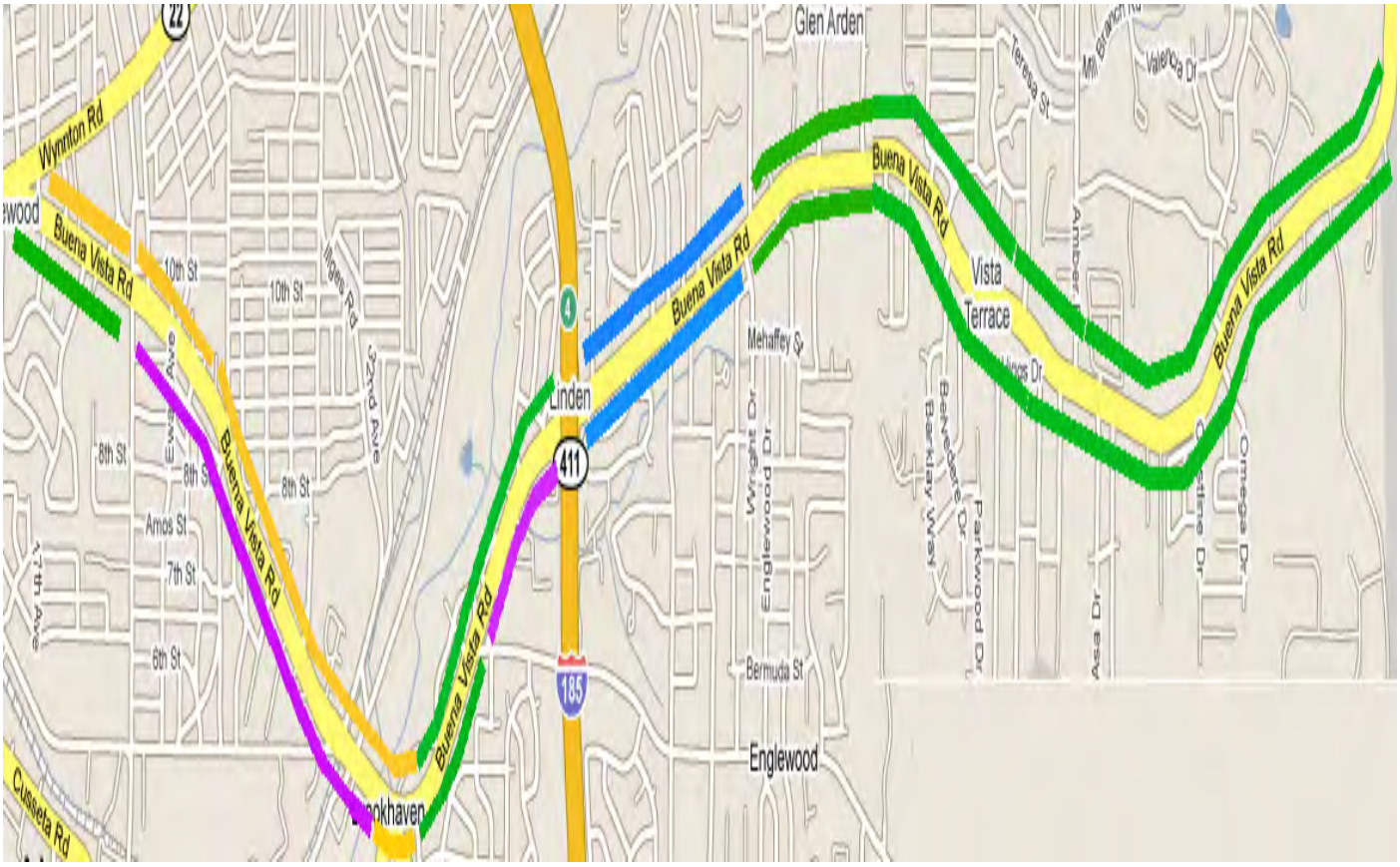
BUENA VISTA ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
MACON (WYNNTON) ROAD TO SCHATULGA ROAD	DISTANCE: 9.24 MILES

CUMULATIVE AVERAGE CONGESTION RATING FOR ALL THREE MEASURED TIME PERIODS BY DIRECTION TRAVELED



BUENA VISTA ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
MACON (WYNNTON) ROAD TO SCHATULGA ROAD	DISTANCE: 9.24 MILES

CUMULATIVE AVERAGE CONGESTION RATING FOR ALL THREE MEASURED TIME PERIODS BY DIRECTION TRAVELED



COLOR KEY AND RANKING CATEGORIES
FOR FREE FLOW TRAFFIC SPEED MEASUREMENTS

- SEVERE - Average traffic speed below 40% of the posted speed limit
- CONGESTED - Average traffic speed between 40% and 49% of the posted speed limit
- MARGINAL - Average traffic speed between 50% and 64% of the posted speed limit.
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- GOOD - Average traffic speed between 80% of to the posted speed limit.

BUENA VISTA ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
MACON (WYNNTON) ROAD TO SCHATULGA ROAD	DISTANCE: 9.24 MILES

POSSIBLE CAUSES OF CONGESTION

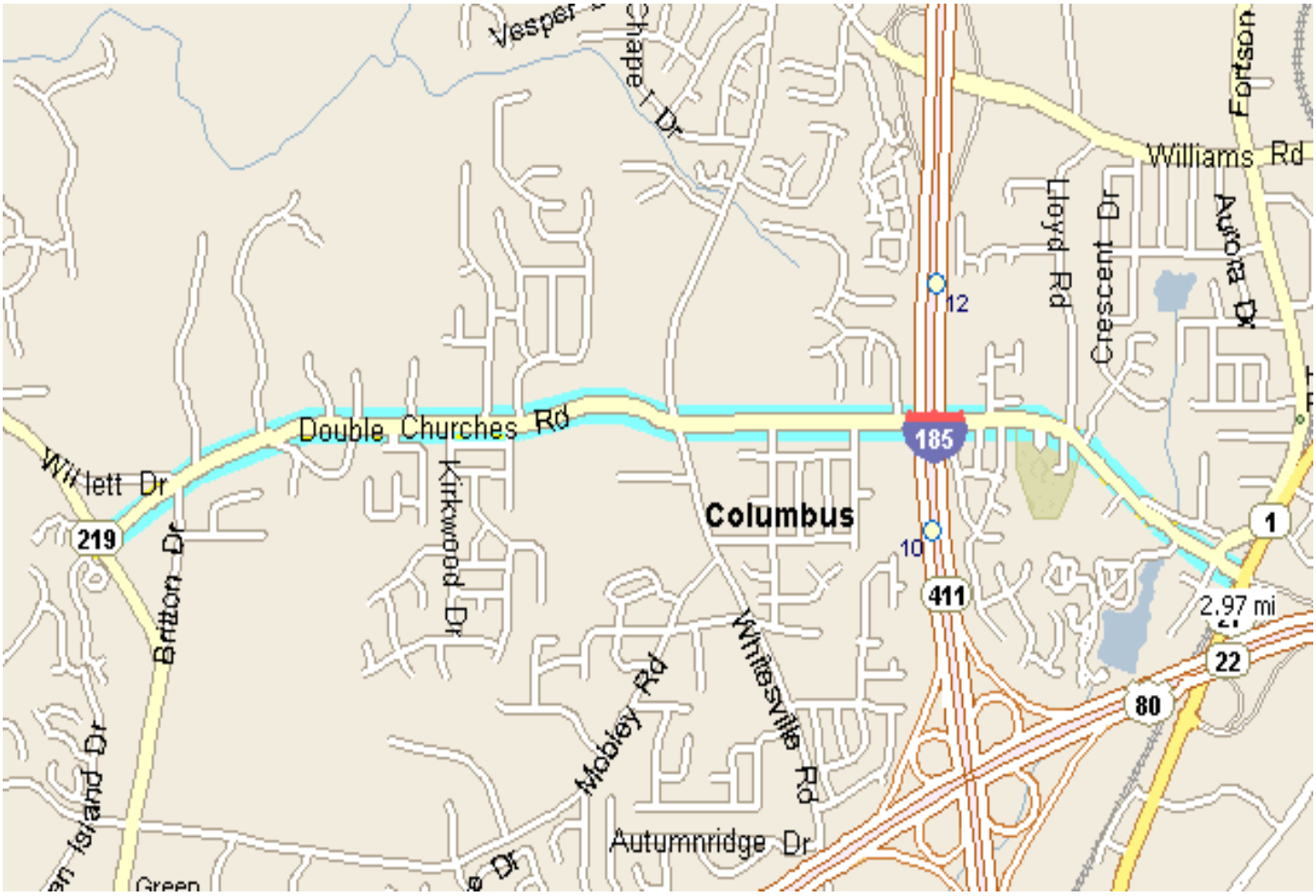
- Two schools along the route adds to traffic delays during the AM Peak Hour.
- High number of left turning vehicles into retail areas near Interstate 185.
- Absence of center turn lanes along the 2 lane segment of the route.
- Regular traffic stoppages at railroad crossing at Buena Vista/Andrews/St. Mary's Road/Brennan Road can cause significant delays.

Double Churches Road	Travel Time	V/C Ratio	Arterial and Intersection LOS	Transit System Measures	Incident Management
TDM Measures	▲	▶	▲	▶	▶
Traffic Operational Improvements	▲	▶	▲	▶	▶
Non-Motorized Modes	▲	▶	▲	▶	▶
Access Management	▲	▶	▲	▶	▶

▲	Positive effect on congestion.
▶	No discernable effect on congestion.
▼	Negative effect on congestion.

DOUBLE CHURCHES ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
RIVER ROAD TO VETERANS PARKWAY	DISTANCE: 2.87 MILES

LOCATION MAP OF ROUTE MEASURED



DOUBLE CHURCHES ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
RIVER ROAD TO VETERANS PARKWAY	DISTANCE: 2.87 MILES

CUMULATIVE AVERAGE -
ALL MEASURED TIME PERIODS OF DAY
BOTH DIRECTIONS

INTERSECTION	AVERAGE SPEED EASTBOUND	AVERAGE SPEED WESTBOUND	POSTED SPEED LIMIT
RIVER ROAD		26	45
BRITTON DRIVE	35	43	45
EDGEWATER DRIVE	40	34	40
WHITESVILLE ROAD	23	29	45
VETERANS PARKWAY	29		45
INTERSECTION	FREE FLOW EASTBOUND RATING	FREE FLOW WESTBOUND RATING	SEGMENT LENGTH (MILES)
RIVER ROAD		MARGINAL	
BRITTON DRIVE	OK	GOOD	0.2
EDGEWATER DRIVE	GOOD	GOOD	0.8
WHITESVILLE ROAD	MARGINAL	MARGINAL	0.5
VETERANS PARKWAY	MARGINAL		1.37

DOUBLE CHURCHES ROAD

CONGESTION MANAGEMENT PROCESS SPRING 2009

RIVER ROAD TO VETERANS PARKWAY

DISTANCE: 2.87 MILES

AM PEAK HOUR EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
RIVER ROAD	STARTING POINT			
BRITTON DRIVE	5	35	0.78	OKAY
EDGEWATER DRIVE	4	43.1	0.96	GOOD
WHITESVILLE ROAD	27	26.2	0.75	OKAY
VETERANS PARKWAY	36	29	0.64	MARGINAL

AM PEAK HOUR WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
VETERANS PARKWAY	STARTING POINT			
WHITESVILLE ROAD	61	29	0.68	OKAY
EDGEWATER DRIVE	9	30.2	0.86	GOOD
BRITTON DRIVE	7	41.4	0.92	GOOD
RIVER ROAD	27	21.5	0.48	CONGESTED

DOUBLE CHURCHES ROAD

CONGESTION MANAGEMENT PROCESS SPRING 2009

RIVER ROAD TO VETERANS PARKWAY

DISTANCE: 2.87 MILES

OFF PEAK EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
RIVER ROAD	STARTING POINT			
BRITTON DRIVE	5	35.1	0.78	OKAY
EDGEWATER DRIVE	6	41.4	0.92	GOOD
WHITESVILLE ROAD	22	24.7	0.71	OKAY
VETERANS PARKWAY	40	29	0.64	MARGINAL
OFF PEAK WEST BOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
VETERANS PARKWAY	STARTING POINT			
WHITESVILLE ROAD	60	24	0.53	MARGINAL
EDGEWATER DRIVE	3	34.1	0.97	GOOD
BRITTON DRIVE	5	42.1	0.94	GOOD
RIVER ROAD	12	27.9	0.62	OKAY

DOUBLE CHURCHES ROAD

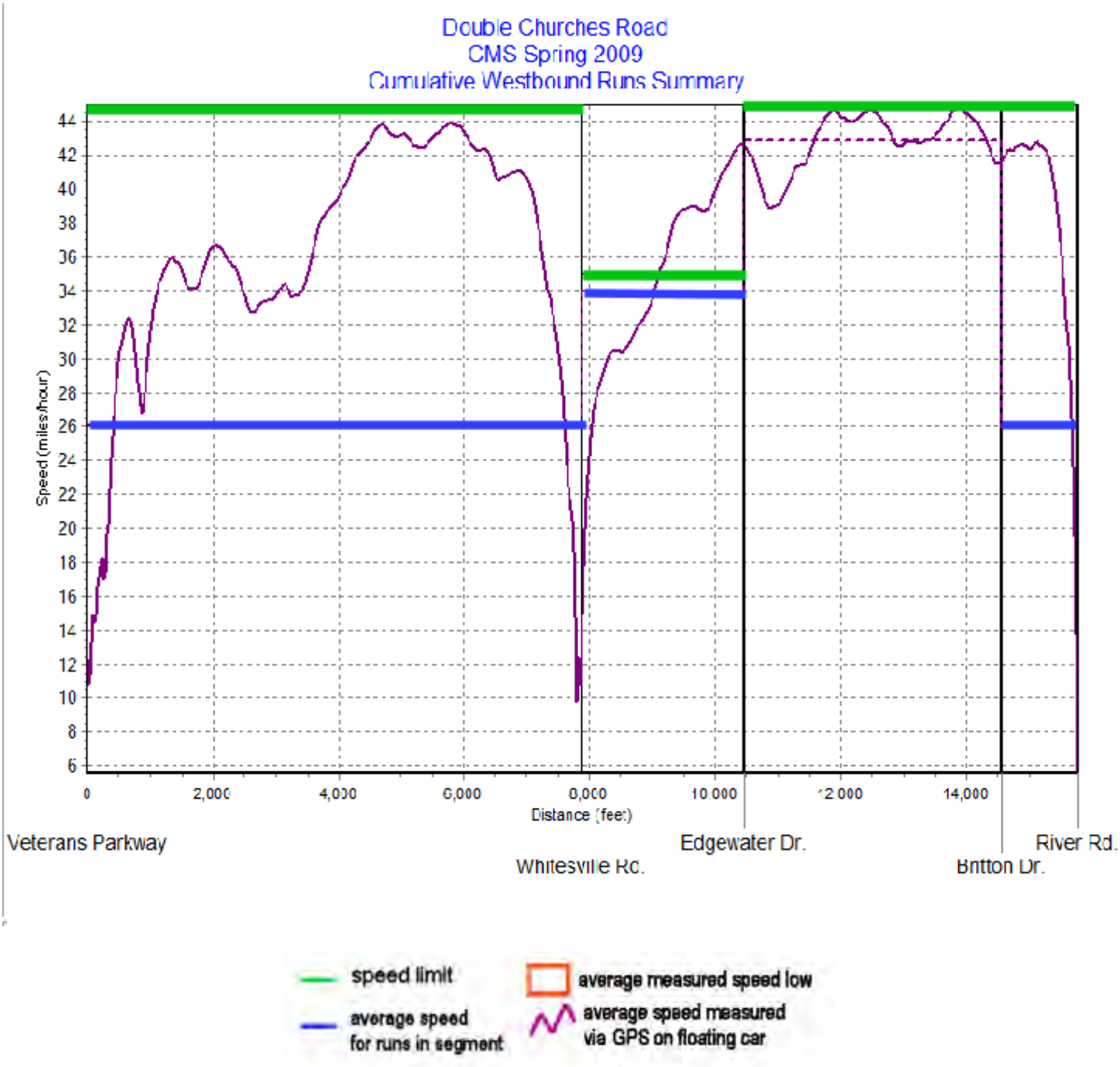
CONGESTION MANAGEMENT PROCESS SPRING 2009

RIVER ROAD TO VETERANS PARKWAY

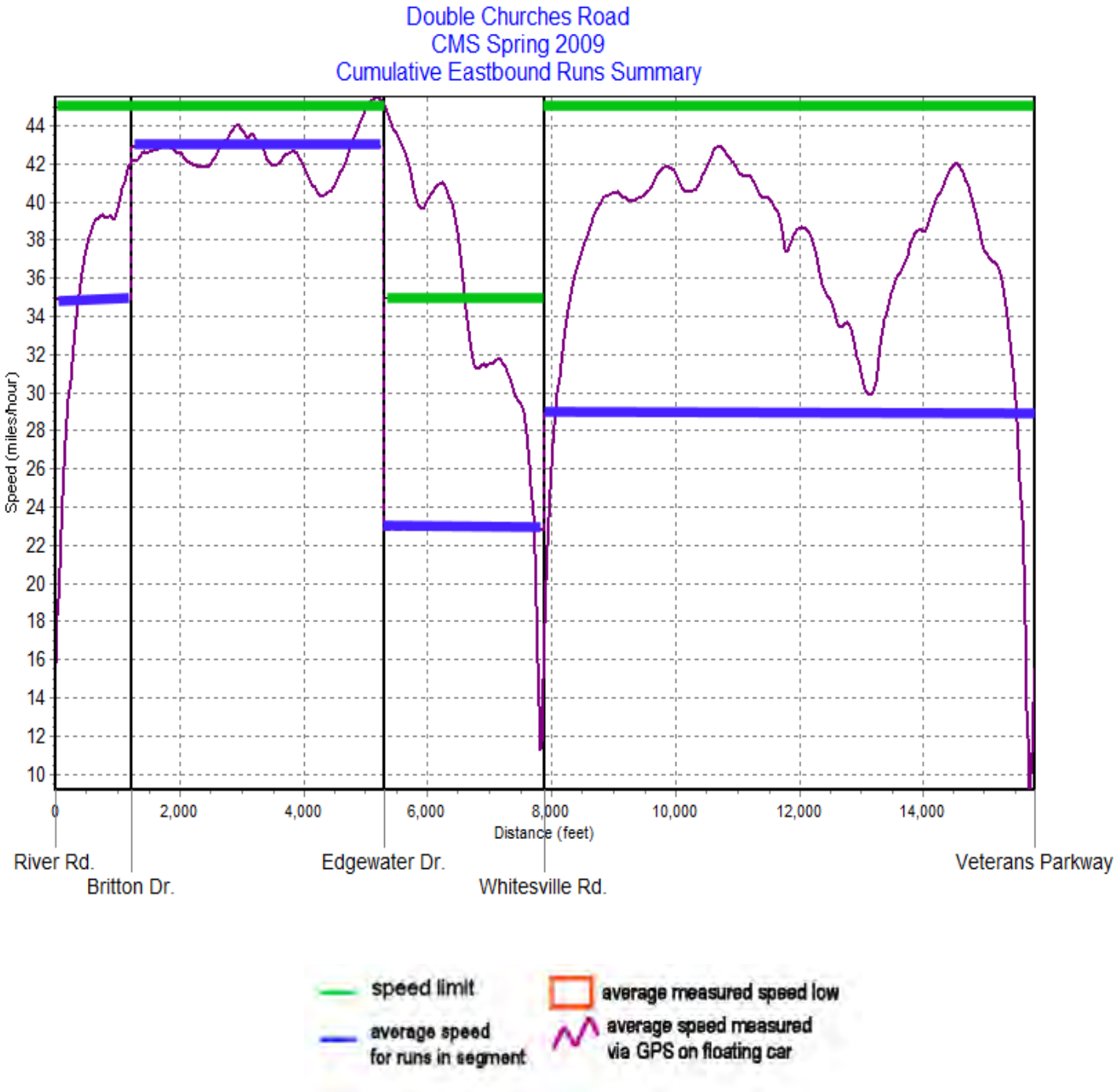
DISTANCE: 2.87 MILES

PM PEAK HOUR EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
RIVER ROAD	STARTING POINT			
BRITTON DRIVE	6	34.6	0.77	OKAY
EDGEWATER DRIVE	2	44.2	0.98	GOOD
WHITESVILLE ROAD	53	17.5	0.50	CONGESTED
VETERANS PARKWAY	53	29	0.64	MARGINAL
PM PEAK HOUR WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
VETERANS PARKWAY	STARTING POINT			
WHITESVILLE ROAD	65	29.7	0.66	OKAY
EDGEWATER DRIVE	-2	37.7	1.08	GOOD
BRITTON DRIVE	1	45.2	1.00	GOOD
RIVER ROAD	12	28.6	0.64	MARGINAL

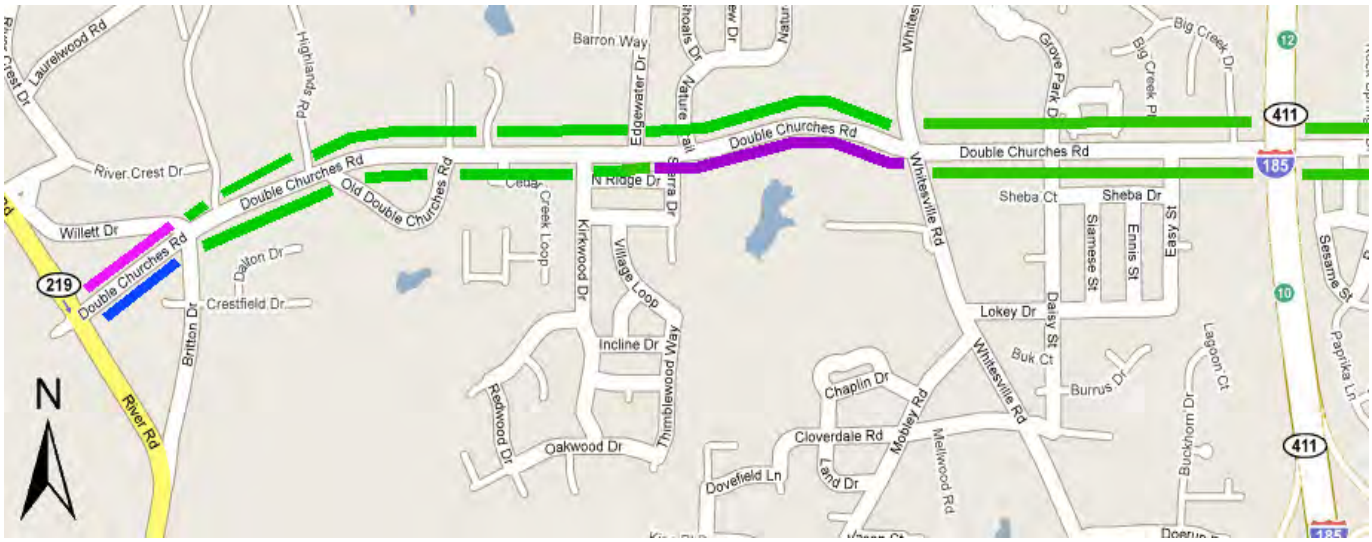
DOUBLE CHURCHES ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
RIVER ROAD TO VETERANS PARKWAY	DISTANCE: 2.87 MILES

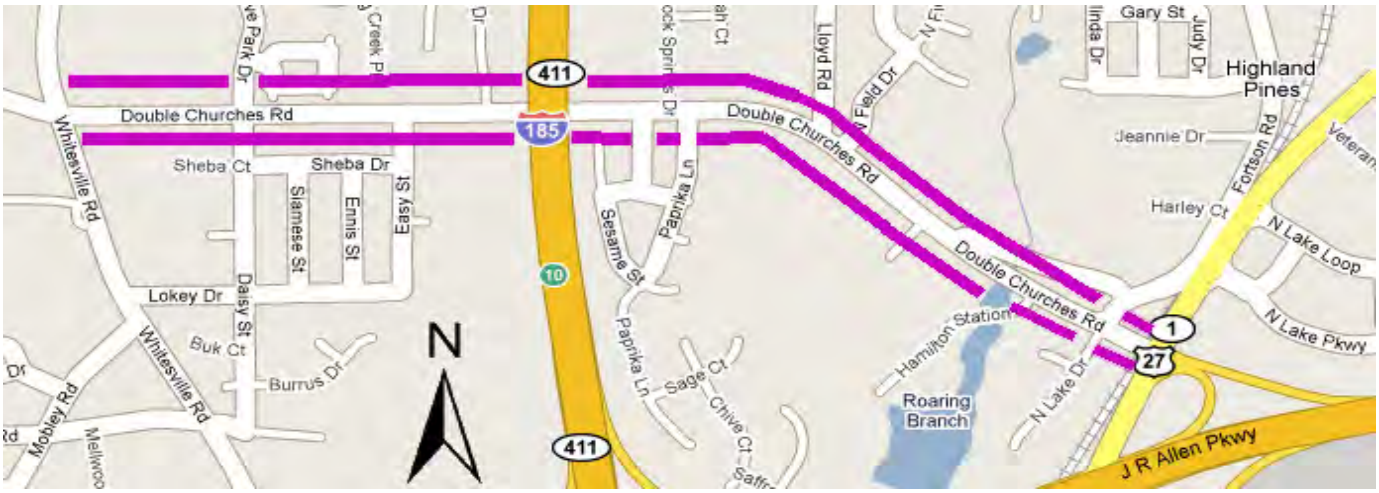


DOUBLE CHURCHES ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
RIVER ROAD TO VETERANS PARKWAY	DISTANCE: 2.87 MILES



DOUBLE CHURCHES ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
RIVER ROAD TO VETERANS PARKWAY	DISTANCE: 2.87 MILES





COLOR KEY AND RANKING CATEGORIES
FOR FREE FLOW TRAFFIC SPEED MEASUREMENTS

- SEVERE - Average traffic speed below 40% of the posted speed limit
- CONGESTED - Average traffic speed between 40% and 49% of the posted speed limit
- MARGINAL - Average traffic speed between 50% and 64% of the posted speed limit.
- OKAY - Average traffic speed between 65% and 80% of the posted speed limit.
- GOOD - Average traffic speed between 80% of to the posted speed limit.

DOUBLE CHURCHES ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
RIVER ROAD TO VETERANS PARKWAY	DISTANCE 2.87 MILES

POSSIBLE CAUSES OF CONGESTION

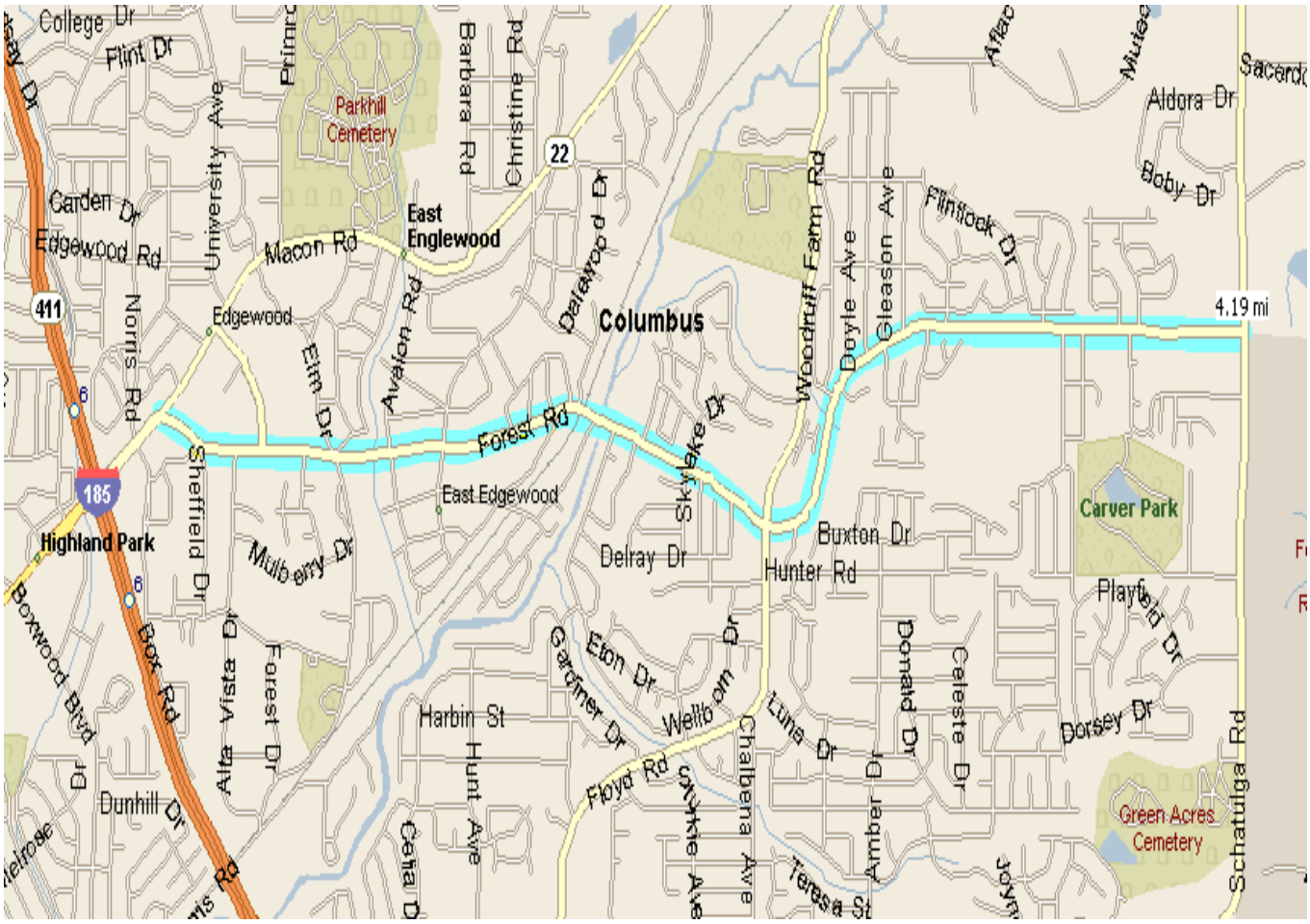
- **School zone speed limits around intersection of Double Churches and Whitesville affects overall level of service at adjacent Whitesville and Double Churches intersection.**
- **New commercial and residential development around intersections with Fortson and Whitesville is resulting in more volume.**
- **Intersection of Double Churches and Veterans Parkway is in need of improvement to handle increased turn volume.**

Double Churches Road	**Travel Time**	**V/C Ratio**	**Arterial and Intersection L.O.S.**	**Transit System**	**Incident Management**
TDM Measures	▲	▶	▲	▶	▶
Traffic Operational Improvements	▲	▶	▲	▶	▶
Non-Motorized Modes	▲	▶	▲	▶	▶
Access Management	▲	▶	▲	▶	▶

▲	Positive effect on congestion.
▶	No discernable effect on congestion.
▼	Negative effect on congestion.

FORREST ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
MACON ROAD TO SCHATULGA ROAD	DISTANCE: 4.17 MILES

LOCATION MAP OF ROUTE MEASURED



FORREST ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
MACON ROAD TO SCHATULGA ROAD	DISTANCE: 4.17 MILES

CUMULATIVE AVERAGE - ALL MEASURED TIME PERIODS OF DAY BOTH DIRECTIONS

INTERSECTION	AVERAGE SPEED EASTBOUND	AVERAGE SPEED (MPH) WESTBOUND	POSTED SPEED LIMIT
MACON ROAD		20	35
ELM DR	22	26	35
WOODRUFF FARM ROAD	26	36	35
SCHATULGA ROAD	35		40
INTERSECTION	FREE FLOW EASTBOUND RATING	FREE FLOW WESTBOUND RATING	SEGMENT LENGTH (MILES)
MACON ROAD		MARGINAL	0.29
ELM DR	MARGINAL	OK	1.68
WOODRUFF FARM ROAD	OK	GOOD	1.59
SCHATULGA ROAD	GOOD		0.61

FORREST ROAD

CONGESTION MANAGEMENT PROCESS SPRING 2009

MACON ROAD TO SCHATULGA ROAD

DISTANCE: 4.17 MILES

AM PEAK HOUR EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
MACON ROAD	STARTING POINT			
ELM DR	49	21	0.6	MARGINAL
WOODRUFF FARM ROAD	43	28	0.80	GOOD
SCHATULGA ROAD	32	33.7	0.84	GOOD
AM PEAK HOUR WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
SCHATULGA ROAD	STARTING POINT			
WOODRUFF FARM ROAD	50	31.1	0.78	GOOD
ELM DR	119	22.5	0.56	MARGINAL
MACON ROAD	76	16.8	0.48	CONGESTED

FORREST ROAD

CONGESTION MANAGEMENT PROCESS SPRING 2009

MACON ROAD TO SCHATULGA ROAD

DISTANCE: 4.17 MILES

OFF PEAK HOURS EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
MACON ROAD	STARTING POINT			
ELM DR	33	24.2	0.69	OKAY
WOODRUFF FARM ROAD	68	24.8	0.71	OKAY
SCHATULGA ROAD	12	37.3	0.93	GOOD
OFF PEAK HOURS WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
SCHATULGA ROAD	STARTING POINT			
WOODRUFF FARM ROAD	25	35.1	0.88	GOOD
ELM DR	75	26.4	0.66	OKAY
MACON ROAD	11	29.7	0.85	GOOD

FORREST ROAD

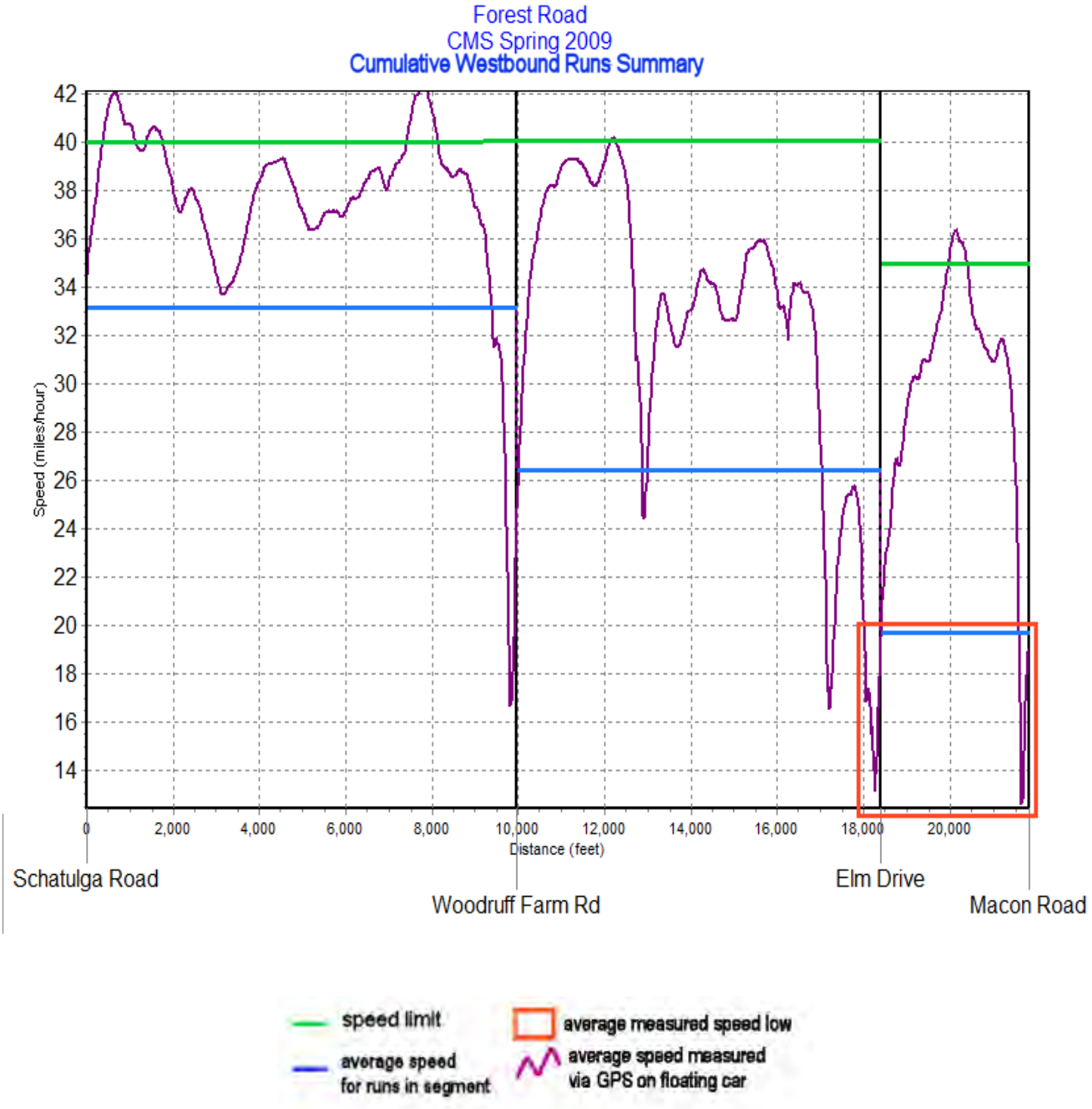
CONGESTION MANAGEMENT PROCESS SPRING 2009

MACON ROAD TO SCHATULGA ROAD

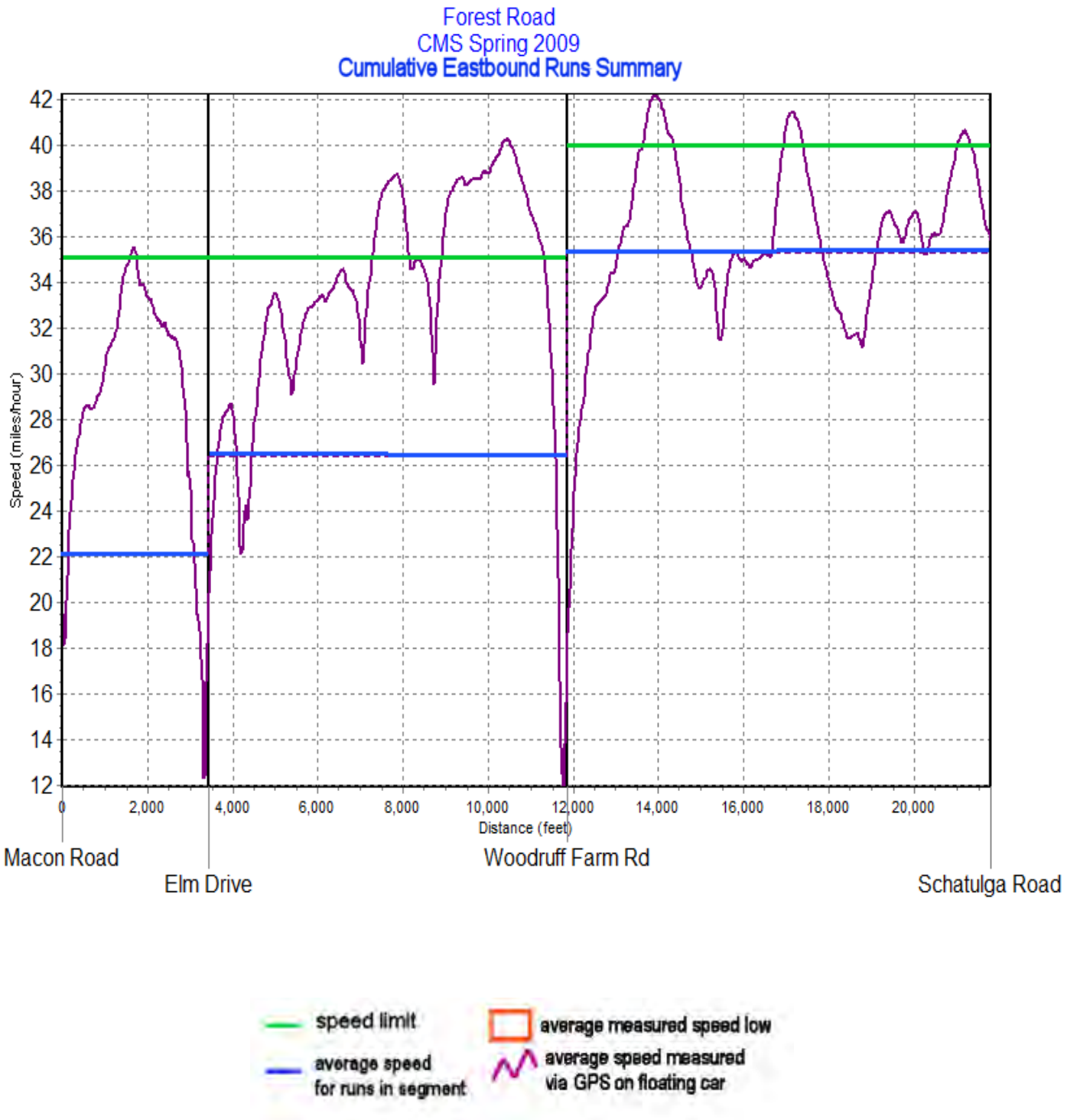
DISTANCE: 4.17 MILES

PM PEAK HOUR EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
MACON ROAD	STARTING POINT			
ELM DR	49	21	0.60	MARGINAL
WOODRUFF FARM ROAD	55	26.4	0.75	OKAY
SCHATULGA ROAD	25	34.8	0.87	GOOD
PM PEAK HOUR WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
SCHATULGA ROAD	STARTING POINT			
WOODRUFF FARM ROAD	45	32.1	0.80	GOOD
ELM DR	43	30.9	0.77	OKAY
MACON ROAD	38	24	0.69	GOOD

FORREST ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
MACON ROAD TO SCHATULGA ROAD	DISTANCE: 4.17 MILES

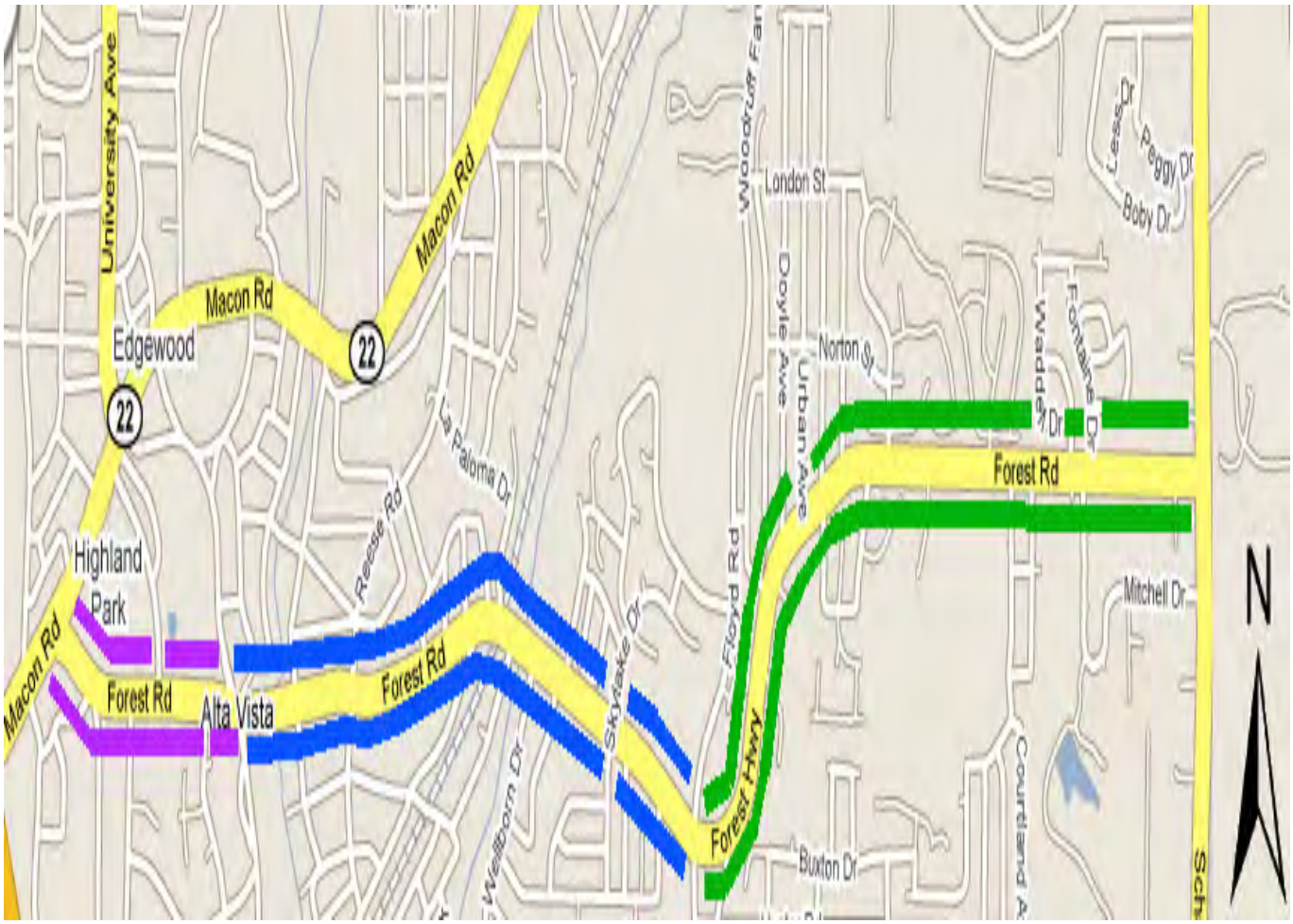


FORREST ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
MACON ROAD TO SCHATULGA ROAD	DISTANCE: 4.17 MILES



FORREST ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
MACON ROAD TO SCHATULGA ROAD	DISTANCE: 4.17 MILES

CUMULATIVE AVERAGE CONGESTION RATING FOR ALL THREE MEASURED TIME PERIODS BY DIRECTION TRAVELED



COLOR KEY AND RANKING CATEGORIES
FOR FREE FLOW TRAFFIC SPEED MEASUREMENTS

- SEVERE - Average traffic speed below 40% of the posted speed limit
- CONGESTED - Average traffic speed between 40% and 49% of the posted speed limit
- MARGINAL - Average traffic speed between 50% and 64% of the posted speed limit.
- OKAY - Average traffic speed between 65% and 80% of the posted speed limit.
- GOOD - Average traffic speed between 80% of to the posted speed limit.

FORREST ROAD

CONGESTION MANAGEMENT PROCESS SPRING 2009

MACON ROAD TO SCHATULGA ROAD

DISTANCE: 4.17 MILES

POSSIBLE CAUSES OF CONGESTION

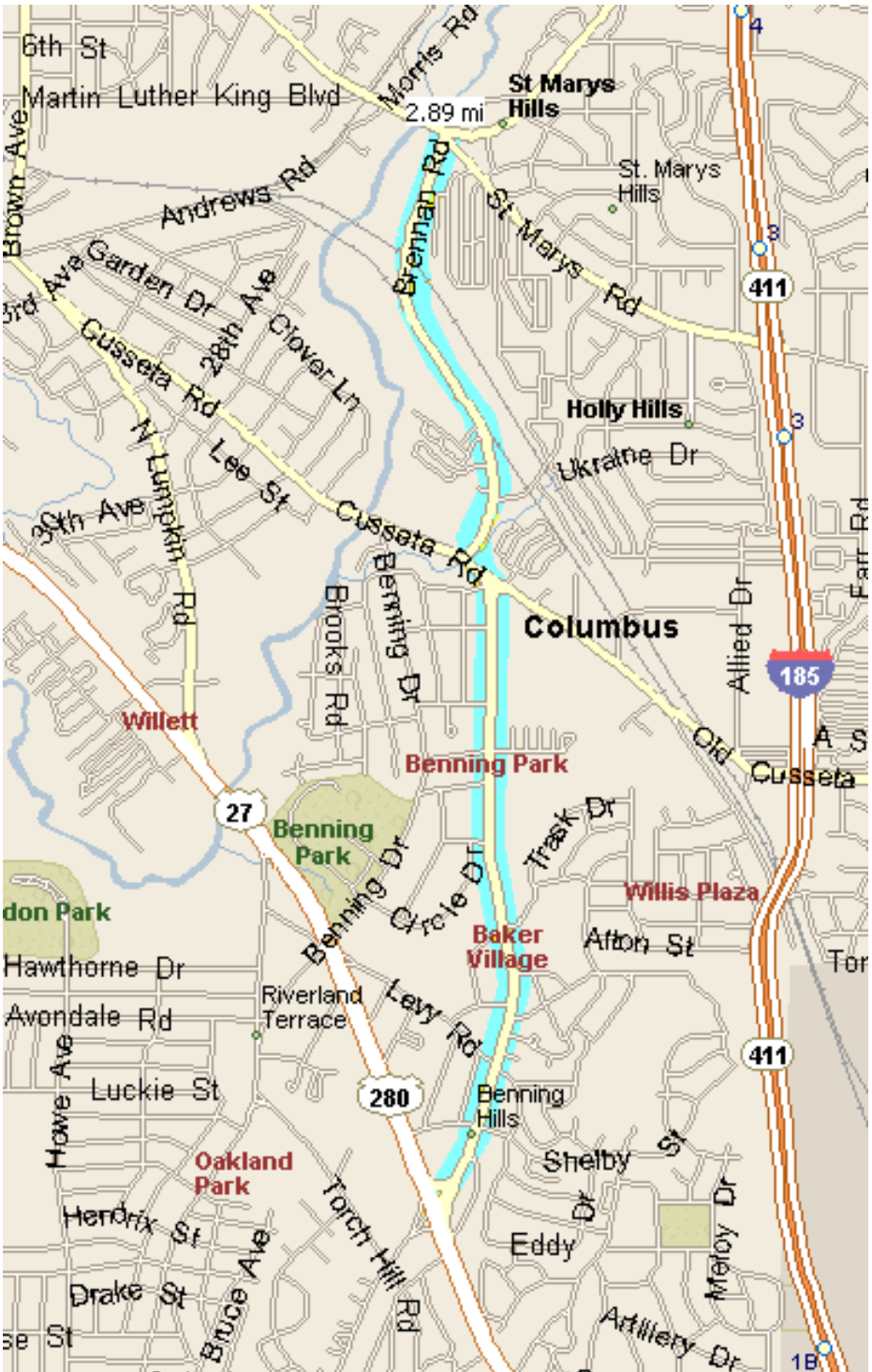
- **High number of turning vehicles into adjacent residential streets and houses from roadway, which lacks seperate left turn lane(s).**
- **Reduced capacity at locations where roadway transitions from 4 lanes to 2 lanes.**

Forrest Road	Travel Time	V/C Ratio	Arterial and Intersection L.O.S.	Transit System Measures	Incident Management
TDM Measures	▲	▶	▶	▶	▶
Traffic Operational Improvements	▲	▲	▲	▶	▲
Access Improvements	▲	▲	▶	▶	▲
Capacity Expansion	▲	▲	▲	▶	▶

▲	Positive effect on congestion.
▶	No discernable effect on congestion.
▼	Negative effect on congestion.

FORT BENNING ROAD & BRENNAN ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
VICTORY DRIVE TO BUENA VISTA ROAD	DISTANCE: 3.04 MILES

LOCATION MAP OF ROUTE MEASURED



FORT BENNING ROAD & BRENNAN ROAD

CONGESTION MANAGEMENT PROCESS SPRING 2009

VICTORY DRIVE TO BUENA VISTA ROAD

DISTANCE: 3.04 MILES

CUMULATIVE AVERAGE - ALL MEASURED TIME PERIODS OF DAY BOTH DIRECTIONS

INTERSECTION	NORTHBOUND AVERAGE SPEED	SOUTHBOUND AVERAGE SPEED	POSTED SPEED LIMIT
BUENA VISTA ROAD		28	35
BRENNAN ROAD	27	26	35
OLD CUSSETA ROAD	22	32	35
BAKER PLAZA	22	30	35
ALBIAN WAY	32	34	35
LEVY ROAD	34	21	35
VICTORY DRIVE	33		35

INTERSECTION	FREE FLOW GRADE NORTHBOUND	FREE FLOW GRADE SOUTHBOUND	SEGMENT DISTANCE (MILES)
BUENA VISTA ROAD	OKAY		1.17
BRENNAN ROAD	MARGINAL	GOOD	0.09
OLD CUSSETA ROAD	MARGINAL	OKAY	0.36
BAKER PLAZA	GOOD	GOOD	0.46
ALBIAN WAY	GOOD	GOOD	0.36
LEVY ROAD	GOOD	GOOD	0.40
VICTORY DRIVE		MARGINAL	0.20

FORT BENNING ROAD & BRENNAN ROAD

CONGESTION MANAGEMENT PROCESS SPRING 2009

VICTORY DRIVE TO BUENA VISTA ROAD

DISTANCE: 3.04 MILES

AM PEAK HOUR NORTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
VICTORY DRIVE	STARTING POINT			
LEVY ROAD	0	36.7	1.05	GOOD
ALBIAN WAY	-1	36.8	1.05	GOOD
BAKER PLAZA	2	34.6	0.99	GOOD
OLD CUSSETA ROAD	18	25.3	0.72	OKAY
BRENNAN ROAD	9	19.3	0.55	MARGINAL
BUENA VISTA ROAD	56	25.6	0.73	OKAY
AM PEAK HOUR SOUTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
BUENA VISTA ROAD	STARTING POINT			
BRENNAN ROAD	35	27.1	0.77	OKAY
OLD CUSSETA ROAD	4	26.2	0.75	OKAY
BAKER PLAZA	2	33.5	0.96	GOOD
ALBIAN WAY	4	32.3	0.92	GOOD
LEVY ROAD	1	33.8	0.97	GOOD
VICTORY DRIVE	24	26	0.74	OKAY

FORT BENNING ROAD & BRENNAN ROAD

CONGESTION MANAGEMENT PROCESS SPRING 2009

VICTORY DRIVE TO BUENA VISTA ROAD

DISTANCE: 3.04 MILES

OFF PEAK HOURS SOUTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
BUENA VISTA ROAD	STARTING POINT			
BRENNAN ROAD	35	27.1	0.77	OKAY
OLD CUSSETA ROAD	4	26.2	0.75	OKAY
BAKER PLAZA	2	33.5	0.96	GOOD
ALBIAN WAY	4	32.3	0.92	GOOD
LEVY ROAD	1	33.8	0.97	GOOD
VICTORY DRIVE	24	26	0.74	OKAY
OFF PEAK HOURS NORTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
VICTORY DRIVE	STARTING POINT			
LEVY ROAD	0	36.7	1.05	GOOD
ALBIAN WAY	-1	36.8	1.05	GOOD
BAKER PLAZA	2	34.6	0.99	GOOD
OLD CUSSETA ROAD	18	25.3	0.72	OKAY
BRENNAN ROAD	9	19.3	0.55	MARGINAL
BUENA VISTA ROAD	56	25.6	0.73	OKAY

FORT BENNING ROAD & BRENNAN ROAD

CONGESTION MANAGEMENT PROCESS SPRING 2009

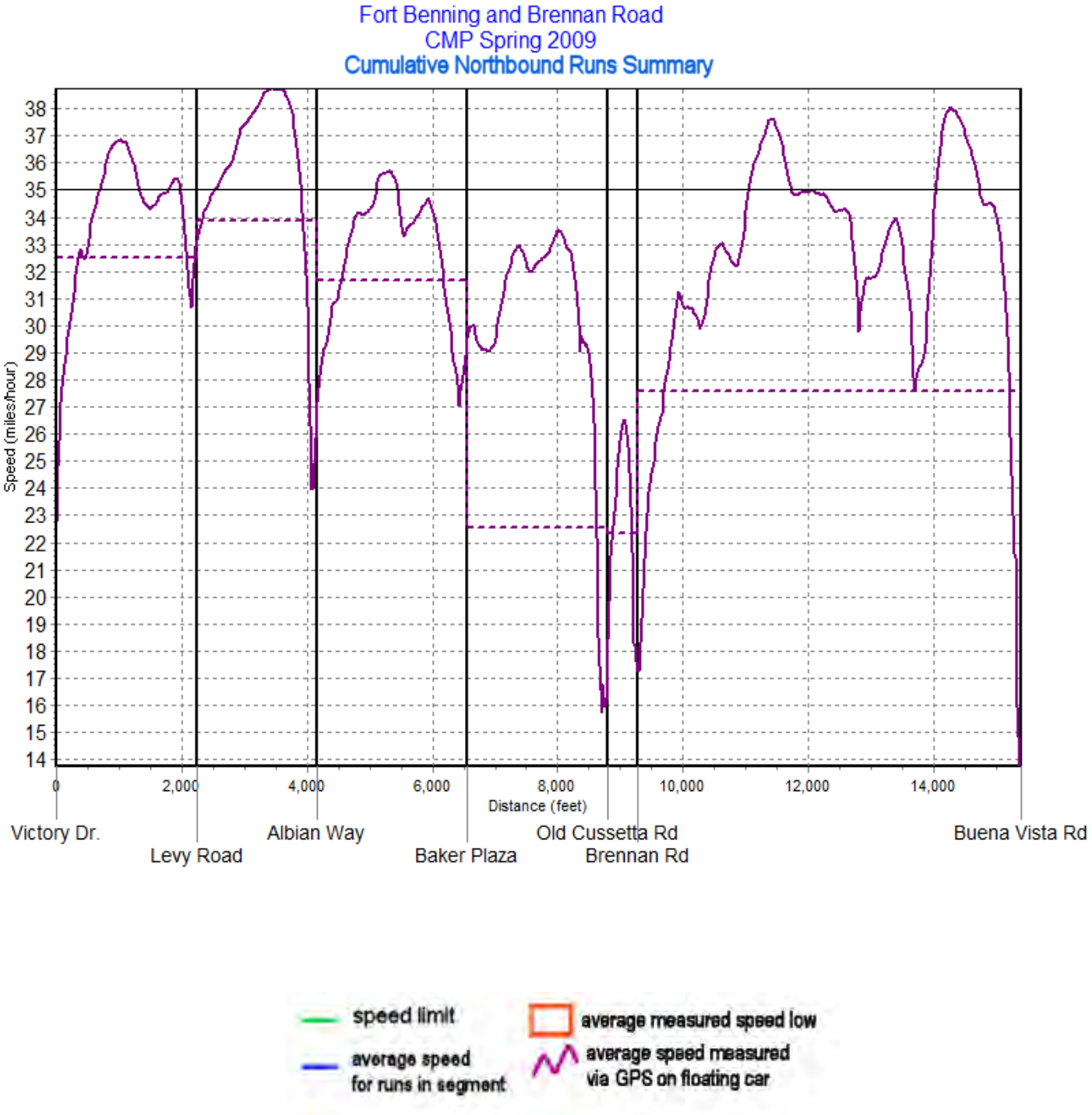
VICTORY DRIVE TO BUENA VISTA ROAD

DISTANCE: 3.04 MILES

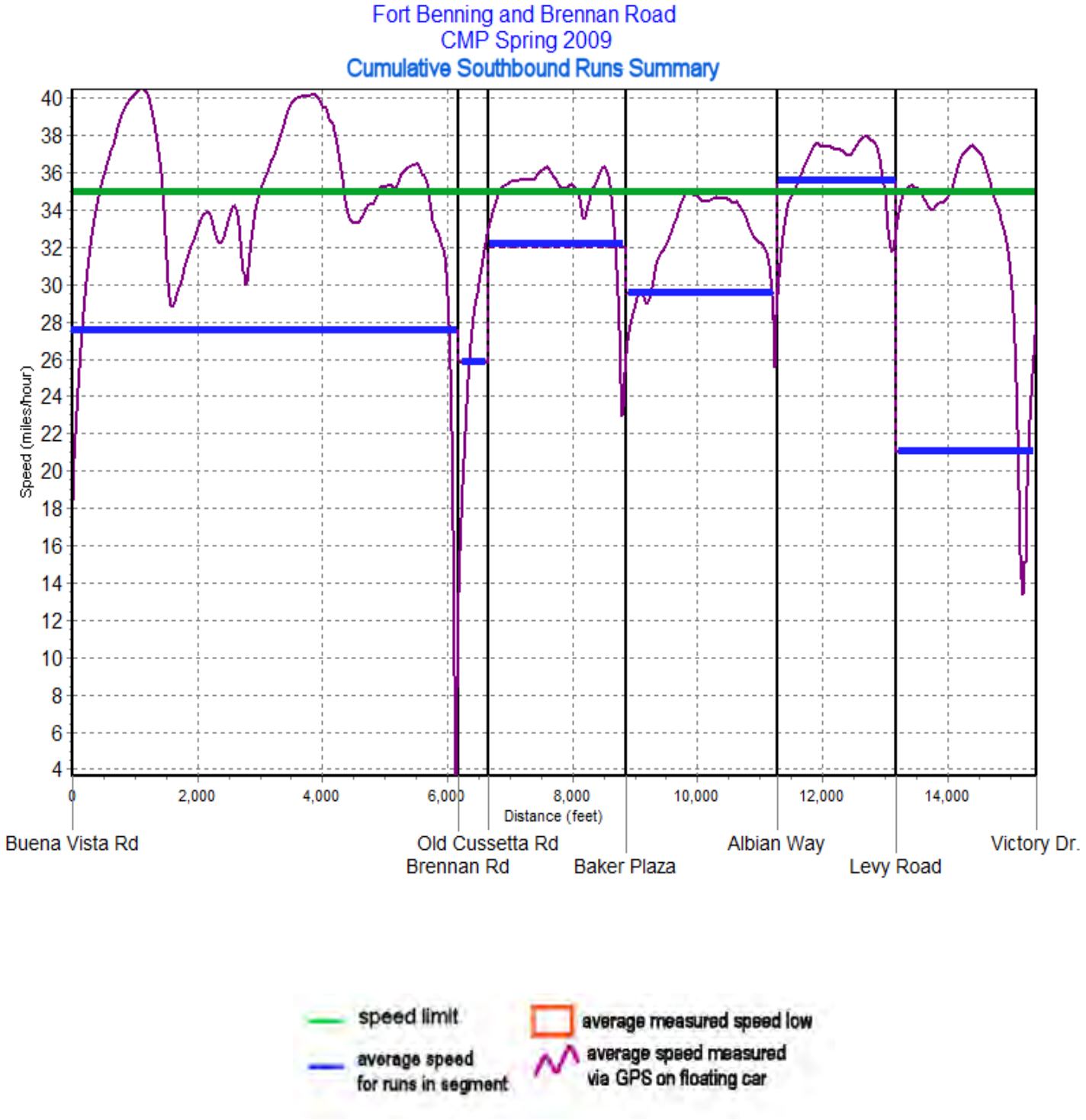
PM PEAK HOUR SOUTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
BUENA VISTA ROAD	STARTING POINT			
BRENNAN ROAD	55	23.8	0.68	OKAY
OLD CUSSETA ROAD	4	24.5	0.70	OKAY
BAKER PLAZA	-1	36	1.03	GOOD
ALBIAN WAY	21	24.3	0.69	OKAY
LEVY ROAD	3	32.5	0.93	GOOD
VICTORY DRIVE	49	16.8	0.48	CONGESTED

PM PEAK HOUR NORTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
VICTORY DRIVE	STARTING POINT			
LEVY ROAD	8	31.6	0.90	GOOD
ALBIAN WAY	-1	37.2	1.06	GOOD
BAKER PLAZA	6	33	0.94	GOOD
OLD CUSSETA ROAD	29	21.5	0.61	MARGINAL
BRENNAN ROAD	4	25.5	0.73	OKAY
BUENA VISTA ROAD	8	32.5	0.93	GOOD

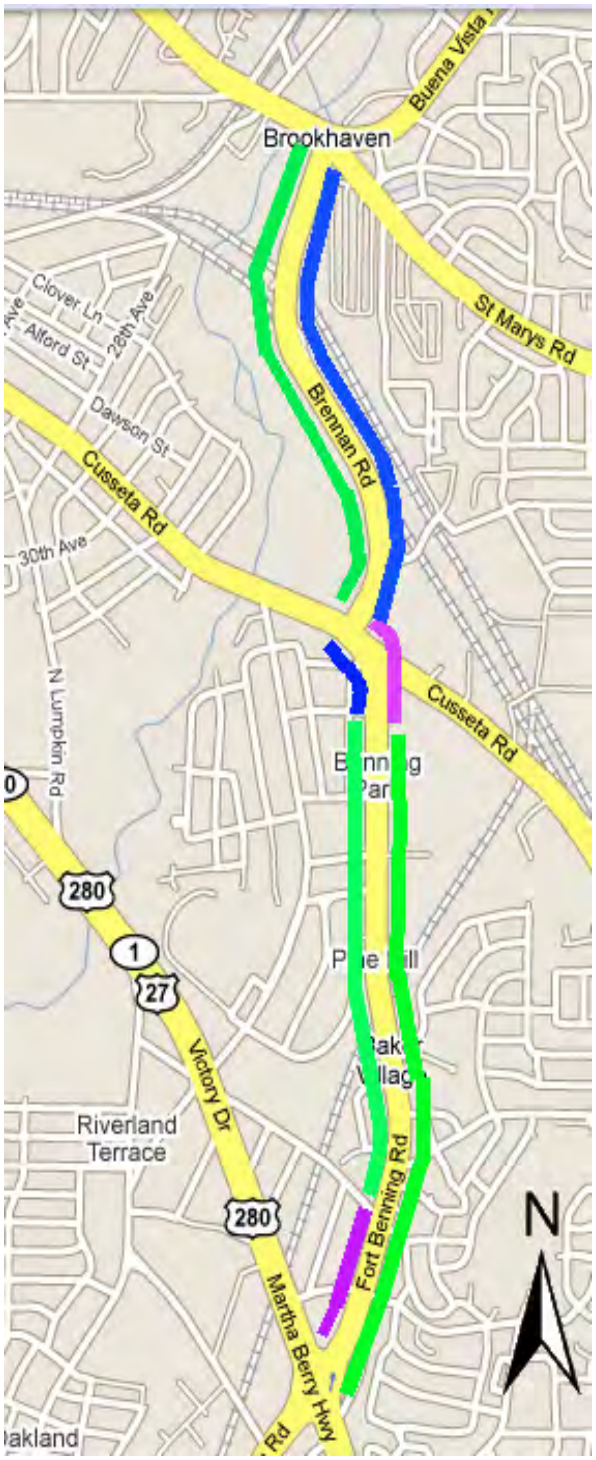
FORT BENNING ROAD & BRENNAN ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
VICTORY DRIVE TO BUENA VISTA ROAD	DISTANCE: 3.04 MILES



FORT BENNING ROAD & BRENNAN ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
VICTORY DRIVE TO BUENA VISTA ROAD	DISTANCE: 3.04 MILES



FORT BENNING ROAD & BRENNAN ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
VICTORY DRIVE TO BUENA VISTA ROAD	DISTANCE: 3.04 MILES



CUMULATIVE AVERAGE CONGESTION RATING FOR ALL THREE MEASURED TIME PERIODS BY DIRECTION TRAVELED

COLOR KEY AND RANKING CATEGORIES
FOR FREE FLOW TRAFFIC SPEED MEASUREMENTS

- SEVERE - Average traffic speed below 40% of the posted speed limit
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- GOOD - Average traffic speed between 80% of to the posted speed limit.

FORT BENNING ROAD & BRENNAN ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
VICTORY DRIVE TO BUENA VISTA ROAD	DISTANCE: 3.04 MILES

POSSIBLE CAUSES OF CONGESTION

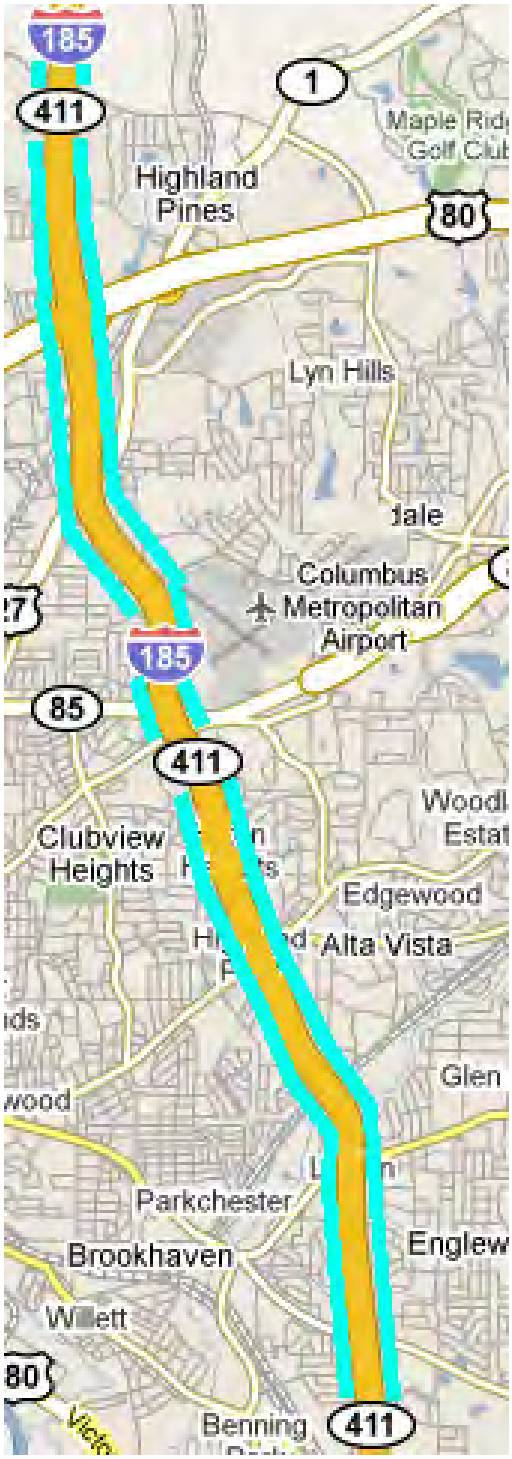
- **High number of turning vehicles into adjacent residential streets and houses and commercial properties.**
- **Reduced capacities as 4 lanes transition into 2 lanes.**
- **Lack of center turn lanes along the two lane routes. Volume to capacity issues along the route on both northbound and southbound routes.**

Fort Benning and Brennan Road	**Travel Time**	**V/C** Ratio	**Arterial and** Intersection LOS	**Transit** System Measures	**Incident** Management
Tdm Measures	▲	▶	▶	▶	▶
Traffic Operational Improvements	▲	▲	▲	▲	▲
Access Management	▲	▲	▶	▶	▲
Capacity Expansion	▲	▲	▲	▶	▶

▲	Positive effect on congestion.
▶	No discernable effect on congestion.
▼	Negative effect on congestion.

INTERSTATE 185	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
WILLIAMS ROAD TO SAINT MARYS ROAD	DISTANCE: 9.22 MILES

LOCATION MAP OF ROUTE MEASURED



INTERSTATE 185	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
WILLIAMS ROAD TO SAINT MARYS ROAD	DISTANCE: 9.22 MILES

CUMULATIVE AVERAGE - ALL MEASURED TIME PERIODS OF DAY BOTH DIRECTIONS

INTERCHANGE	AVERAGE SPEED SOUTHBOUND	AVERAGE SPEED NORTHBOUND	POSTED SPEED LIMIT
WILLIAMS ROAD	59	59	55
J.R. ALLEN PARKWAY	59	59	55
AIRPORT THRUWAY	58	59	55
MANCHESTER EXPRESSWAY	56	57	55
MACON ROAD	56	56	55
BUENA VISTA ROAD	56	56	55
SAINT MARYS ROAD	56	57	55

INTERCHANGE	FREE FLOW SOUTHBOUND RATING	FREE FLOW NORTHBOUND RATING	SEGMENT LENGTH (MILES)
WILLIAMS ROAD	GOOD	GOOD	0.60
J.R. ALLEN PARKWAY	GOOD	GOOD	1.52
AIRPORT THRUWAY	GOOD	GOOD	1.81
MANCHESTER EXPRESSWAY	GOOD	GOOD	0.89
MACON ROAD	GOOD	GOOD	1.74
BUENA VISTA ROAD	GOOD	GOOD	1.55
SAINT MARYS ROAD	GOOD	GOOD	1.11

INTERSTATE 185

CONGESTION MANAGEMENT PROCESS SPRING 2009

WILLIAMS ROAD TO SAINT MARYS ROAD

DISTANCE: 9.22 MILES

AM PEAK HOUR SOUTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
WILLIAMS ROAD	STARTING POINT			
J.R. ALLEN PARKWAY	-2	56.3	1.02	GOOD
AIRPORT THRUWAY	-6	57.9	1.05	GOOD
MANCHESTER EXPRESSWAY.	-2	56.6	1.03	GOOD
MACON ROAD	-2	56.2	1.02	GOOD
BUENA VISTA ROAD	0	55.2	1.00	GOOD
SAINT MARYS ROAD	0	55	1.00	GOOD

AM PEAK HOUR NORTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
SAINT MARYS ROAD	STARTING POINT			
BUENA VISTA ROAD	-2	56.3	1.02	GOOD
MACON ROAD	0	55.2	1.00	GOOD
MANCHESTER EXPRESSWAY	-5	57.7	1.05	GOOD
AIRPORT THRUWAY	-1	56.5	1.03	GOOD
J.R. ALLEN PARKWAY	-6	57.8	1.05	GOOD
WILLIAMS ROAD	-1	55.7	1.01	GOOD

INTERSTATE 185

CONGESTION MANAGEMENT PROCESS SPRING 2009

WILLIAMS ROAD TO SAINT MARYS ROAD

DISTANCE: 9.22 MILES

OFF PEAK SOUTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
WILLIAMS ROAD	STARTING POINT			
J.R. ALLEN PARKWAY	-6	59.8	1.09	GOOD
AIRPORT THRUWAY	-4	57.1	1.04	GOOD
MANCHESTER EXPRESSWAY	-1	55.8	1.01	GOOD
MACON ROAD	-1	55.7	1.01	GOOD
BUENA VISTA ROAD	0	55	1	GOOD
SAINT MARYS ROAD	1	54.1	0.98	GOOD

OFF PEAK NORTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
SAINT MARYS ROAD	STARTING POINT			
BUENA VISTA ROAD	-2	56.2	1.02	GOOD
MACON ROAD	0	54.9	1.00	GOOD
MANCHESTER EXPRESSWAY	7	52.1	0.95	GOOD
AIRPORT THRUWAY	-2	57	1.04	GOOD
J.R. ALLEN PARKWAY	-6	57.9	1.05	GOOD
WILLIAMS ROAD	-5	58.3	1.06	GOOD

INTERSTATE 185

CONGESTION MANAGEMENT PROCESS SPRING 2009

WILLIAMS ROAD TO SAINT MARYS ROAD

DISTANCE: 9.22 MILES

PM PEAK HOUR SOUTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
WILLIAMS ROAD	STARTING POINT			
J.R. ALLEN PARKWAY	-9	62.6	1.14	GOOD
AIRPORT THRUWAY	-16	63.7	1.16	GOOD
MANCHESTER EXPRESSWAY	-8	63.5	1.15	GOOD
MACON ROAD	-11	60.8	1.11	GOOD
BUENA VISTA ROAD	-6	58.1	1.06	GOOD
SAINT MARYS ROAD	-4	58	1.05	GOOD

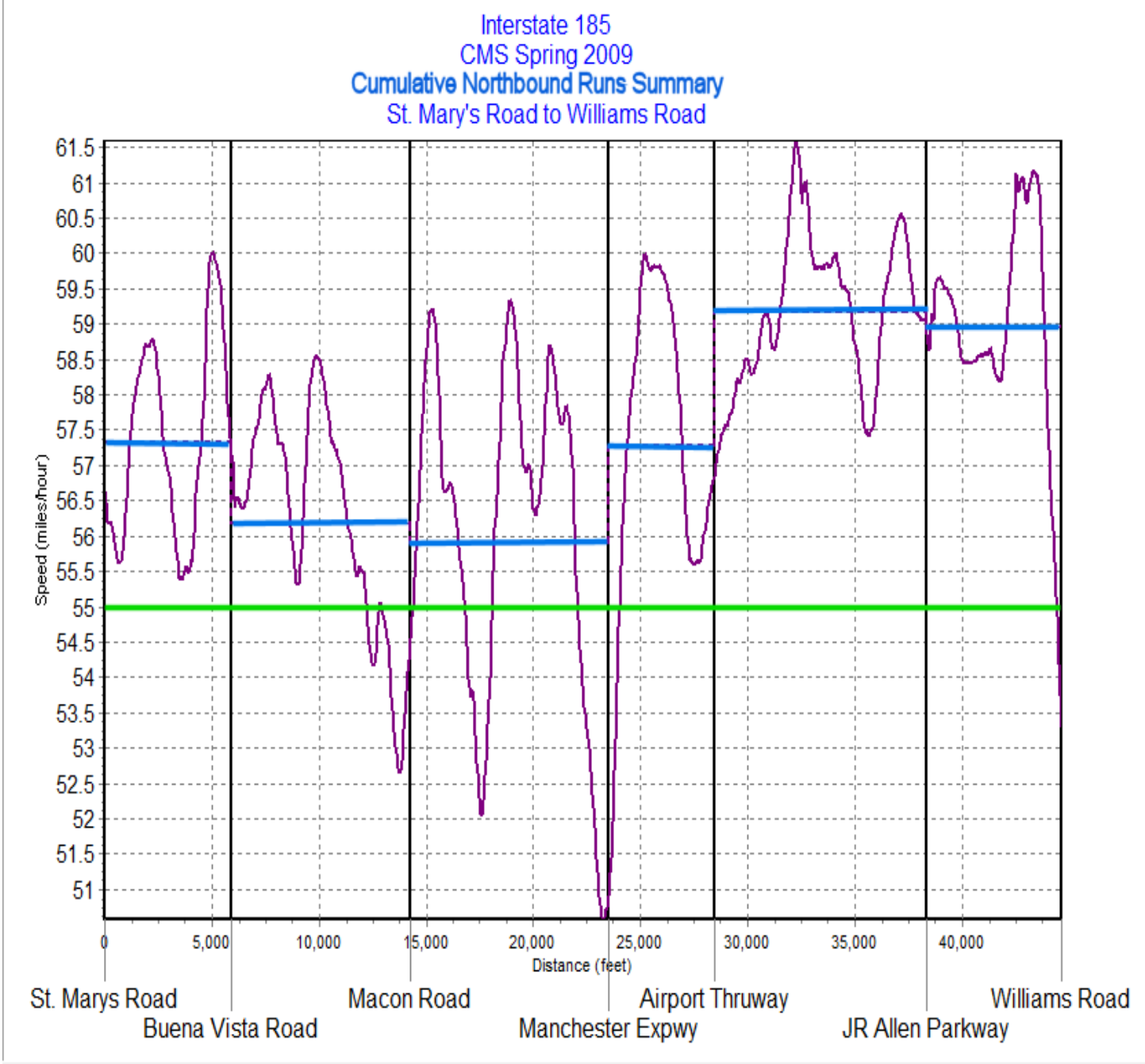
PM PEAK HOUR NORTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
SAINT MARYS ROAD	STARTING POINT			
BUENA VISTA ROAD	-4	58.4	1.06	GOOD
MACON ROAD	-3	57.3	1.04	GOOD
MANCHESTER EXPRESSWAY	-3	56.9	1.03	GOOD
AIRPORT THRUWAY	-2	57.8	1.05	GOOD
J.R. ALLEN PARKWAY	-11	60.5	1.10	GOOD
WILLIAMS ROAD	-8	60.9	1.11	GOOD

INTERSTATE 185

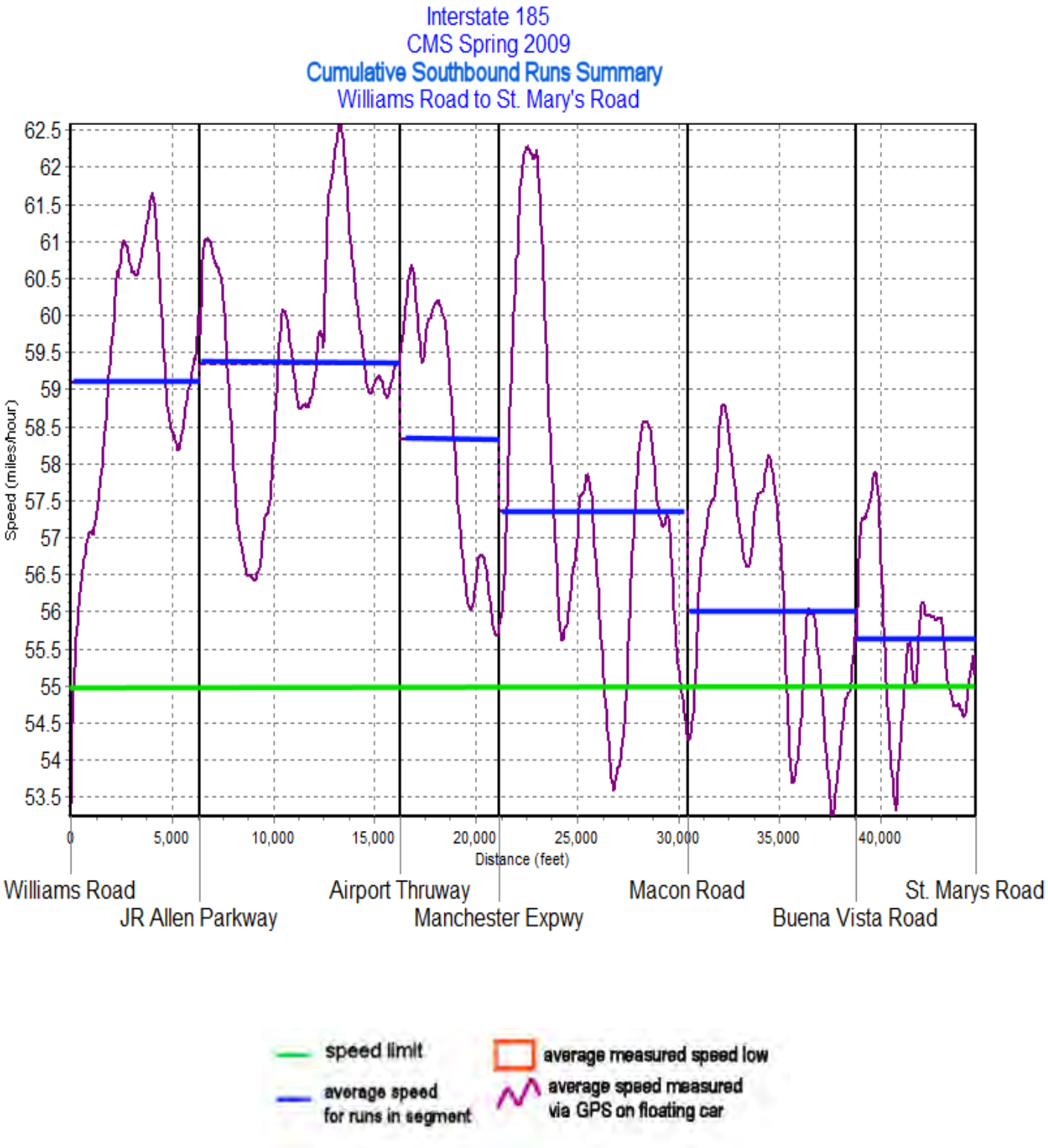
CONGESTION MANAGEMENT PROCESS SPRING 2009

WILLIAMS ROAD TO SAINT MARYS ROAD

DISTANCE: 9.22 MILES



INTERSTATE 185	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
WILLIAMS ROAD TO SAINT MARYS ROAD	DISTANCE: 9.22 MILES



INTERSTATE 185	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
WILLIAMS ROAD TO SAINT MARYS ROAD	DISTANCE: 9.22 MILES

CUMULATIVE AVERAGE CONGESTION RATING FOR ALL THREE MEASURED TIME PERIODS BY DIRECTION TRAVELED

COLOR KEY AND RANKING CATEGORIES
FOR FREE FLOW TRAFFIC SPEED MEASUREMENTS

- SEVERE - Average traffic speed below 40% of the posted speed limit
- CONGESTED - Average traffic speed between 40% and 49% of the posted speed limit
- MARGINAL - Average traffic speed between 50% and 64% of the posted speed limit.
- OKAY - Average traffic speed between 65% and 80% of the posted speed limit.
- GOOD - Average traffic speed between 80% of to the posted speed limit.

INTERSTATE 185	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
WILLIAMS ROAD TO SAINT MARYS ROAD	DISTANCE: 9.22 MILES

POSSIBLE CAUSES OF CONGESTION

- **Increasing volume leading into Fort Benning expected with BRAC expansion.**
- **Carries significant volume of local, short distance trips that originate and end within Muscogee County.**

Interstate 185	Travel Time	V/C Ratio	Arterial and Intersection LOS	Incident Management
Capacity Expansion	▲	▲	▲	▲
Access Management	▶	▶	▶	▲
Traffic Operational Improvement	▲	▶	▶	▲

▲	Positive effect on congestion.
▶	No discernable effect on congestion.
▼	Negative effect on congestion.

J.R. ALLEN PARKWAY (US 80)	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
US 280 TO FLAT ROCK ROAD	DISTANCE: 12.29 MILES

LOCATION MAP OF ROUTE MEASURED

J.R. ALLEN PARKWAY (US 80)

CONGESTION MANAGEMENT PROCESS SPRING 2009

US 280 TO FLAT ROCK ROAD

DISTANCE: 12.29 MILES

CUMULATIVE AVERAGE - ALL MEASURED TIME PERIODS OF DAY BOTH DIRECTIONS

	EASTBOUND AVERAGE SPEED (MPH)	WESTBOUND AVERAGE SPEED (MPH)	POSTED SPEED LIMIT
US 280		62	65
SUMMERVILLE ROAD	55	64	65
2ND AVE	64	62	65
RIVER ROAD	62	65	65
BRADLEY PARK DR	68	66	65
INTERSTATE 185	68	65	65
VETERANS PARKWAY	64	66	65
MOON ROAD	68	67	65
BLACKMON ROAD	68	63	65
SWIFT MILL ROAD	58	29	50
FLAT ROCK	32		50
	EASTBOUND FREE FLOW GRADE	WESTBOUND FREE FLOW GRADE	SEGMENT LENGTH (miles)
US 280		GOOD	0.54
SUMMERVILLE ROAD	GOOD	GOOD	1.22
2ND AVE	GOOD	GOOD	1.75
RIVER ROAD	GOOD	GOOD	0.64
BRADLEY PARK DR	GOOD	GOOD	1.10
INTERSTATE 185	GOOD	GOOD	1.20
VETERANS PARKWAY	GOOD	GOOD	0.64
MOON ROAD	GOOD	GOOD	1.46
BLACKMON ROAD	GOOD	GOOD	1.67
SWIFT MILL ROAD	GOOD	MARGINAL	1.59
FLAT ROCK	MARGINAL		0.48

J.R. ALLEN PARKWAY (US 80)

CONGESTION MANAGEMENT PROCESS SPRING 2009

US 280 TO FLAT ROCK ROAD

DISTANCE: 12.29 MILES

AM PEAK HOUR WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
FLAT ROCK ROAD	STARTING POINT			
SWIFT MILL	25	28.7	0.64	MARGINAL
BLACKMON ROAD	6	62.2	0.96	GOOD
MOON ROAD	-4	67.8	1.04	GOOD
VETERANS PARKWAY	-1	66.3	1.02	GOOD
I-185	0	64.5	0.99	GOOD
BRADLEY PARK DRIVE	0	66	1.02	GOOD
RIVER ROAD	0	64.8	1.00	GOOD
2ND AVENUE	5	58.9	0.91	GOOD
SUMMERVILLE ROAD	4	62.2	0.96	GOOD
US 280	3	61	0.94	GOOD

AM PEAK HOUR EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
US 280	STARTING POINT			
SUMMERVILLE ROAD	9	56.2	0.86	GOOD
2ND AVENUE	11	60	0.92	GOOD
RIVER ROAD	12	54.4	0.84	GOOD
BRADLEY PARK DRIVE	-1	66.3	1.02	GOOD
I-185	-1	66.4	1.02	GOOD
VETERANS PARKWAY	-1	66.3	1.02	GOOD
MOON ROAD	-3	67.5	1.04	GOOD
BLACKMON ROAD	-4	68.3	1.05	GOOD
SWIFT MILL	-10	59.8	1.09	GOOD
FLAT ROCK ROAD	22	29.7	0.66	OKAY

J.R. ALLEN PARKWAY (US 80)

CONGESTION MANAGEMENT PROCESS SPRING 2009

US 280 TO FLAT ROCK ROAD

DISTANCE: 12.29 MILES

OFF PEAK HOURS WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
FLAT ROCK ROAD	STARTING POINT			
SWIFT MILL	17	31.6	0.70	OKAY
BLACKMON ROAD	1	64.9	1.00	GOOD
MOON ROAD	-4	68	1.05	GOOD
VETERANS PARKWAY	-2	67.1	1.03	GOOD
I-185	-2	69.4	1.07	GOOD
BRADLEY PARK DRIVE	-3	68.6	1.06	GOOD
RIVER ROAD	-3	67.1	1.03	GOOD
2ND AVENUE	0	65.9	1.01	GOOD
SUMMERVILLE ROAD	-4	66.7	1.03	GOOD
US 280	3	60.4	0.93	GOOD

OFF PEAK HOURS EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
US 280	STARTING POINT			
SUMMERVILLE ROAD	10	55.9	0.86	GOOD
2ND AVENUE	-2	66.5	1.02	GOOD
RIVER ROAD	0	65.7	1.01	GOOD
BRADLEY PARK DRIVE	-4	69.8	1.07	GOOD
I-185	-4	68.7	1.06	GOOD
VETERANS PARKWAY	-1	67.3	1.04	GOOD
MOON ROAD	-6	69.9	1.08	GOOD
BLACKMON ROAD	-4	68	1.05	GOOD
SWIFT MILL	-13	61.6	1.12	GOOD
FLAT ROCK ROAD	12	34.7	0.77	OKAY

J.R. ALLEN PARKWAY (US 80)

CONGESTION MANAGEMENT PROCESS SPRING 2009

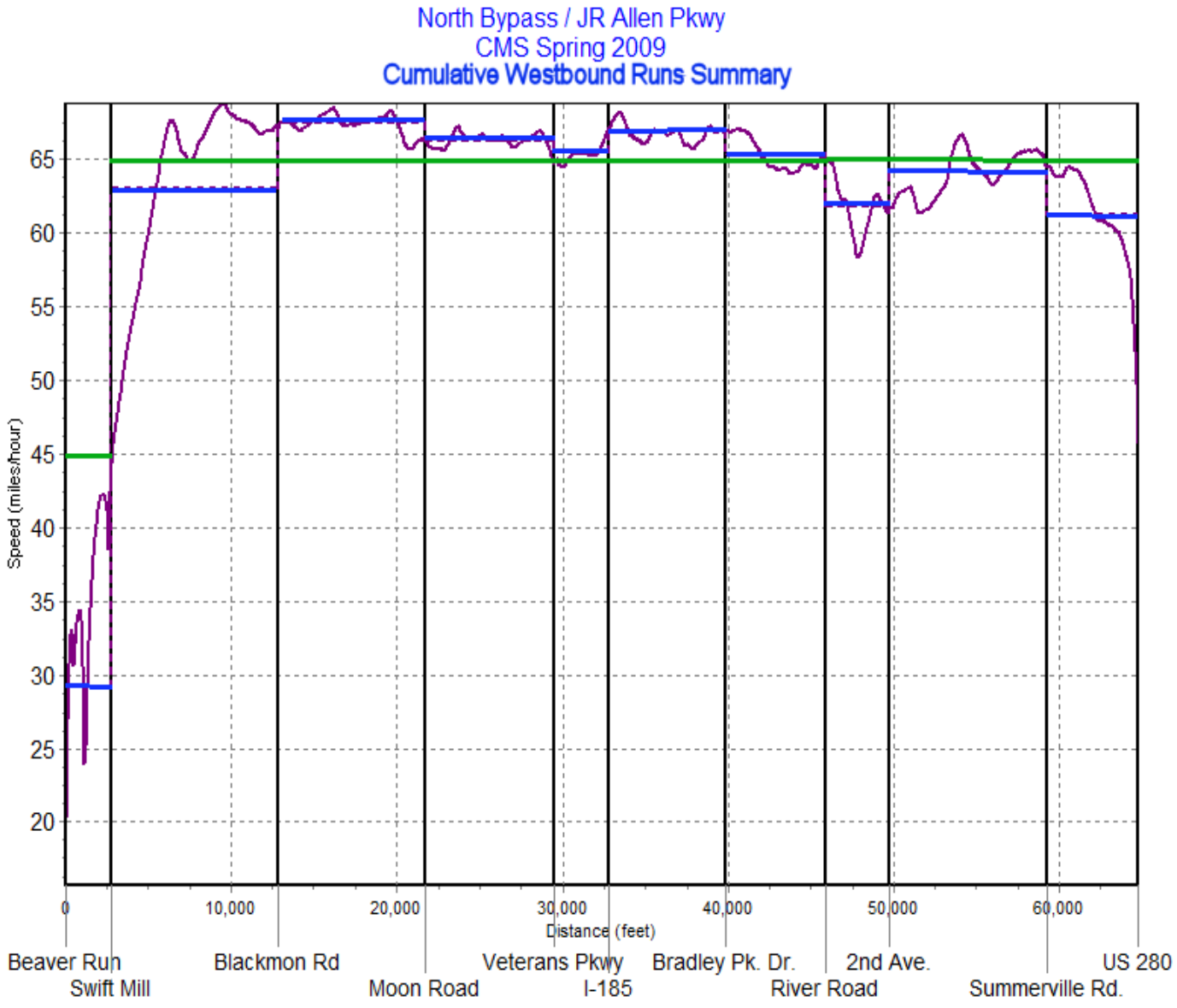
US 280 TO FLAT ROCK ROAD

DISTANCE: 12.29 MILES

PM PEAK HOUR WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
FLAT ROCK ROAD	STARTING POINT			
SWIFT MILL	31	25.9	0.58	MARGINAL
BLACKMON ROAD	7	61.8	0.95	GOOD
MOON ROAD	-2	66.2	1.02	GOOD
VETERANS PARKWAY	-2	66.5	1.02	GOOD
I-185	-1	66.7	1.03	GOOD
BRADLEY PARK DRIVE	-3	68.7	1.06	GOOD
RIVER ROAD	-2	66.1	1.02	GOOD
2ND AVENUE	1	64.5	0.99	GOOD
SUMMERVILLE ROAD	0	64.4	0.99	GOOD
US 280	1	62.3	0.96	GOOD

PM PEAK HOUR EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
US 280	STARTING POINT			
SUMMERVILLE ROAD	14	53.3	0.82	GOOD
2ND AVENUE	-1	66.2	1.02	GOOD
RIVER ROAD	0	65	1.00	GOOD
BRADLEY PARK DRIVE	-4	69.1	1.06	GOOD
I-185	-4	68.8	1.06	GOOD
VETERANS PARKWAY	-2	68.5	1.05	GOOD
MOON ROAD	-2	67	1.03	GOOD
BLACKMON ROAD	-2	66.3	1.02	GOOD
SWIFT MILL	12	50.5	0.92	GOOD
FLAT ROCK ROAD	15	33.8	0.75	OKAY

J.R. ALLEN PARKWAY (US 80)	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
US 280 TO FLAT ROCK ROAD	DISTANCE: 12.29 MILES

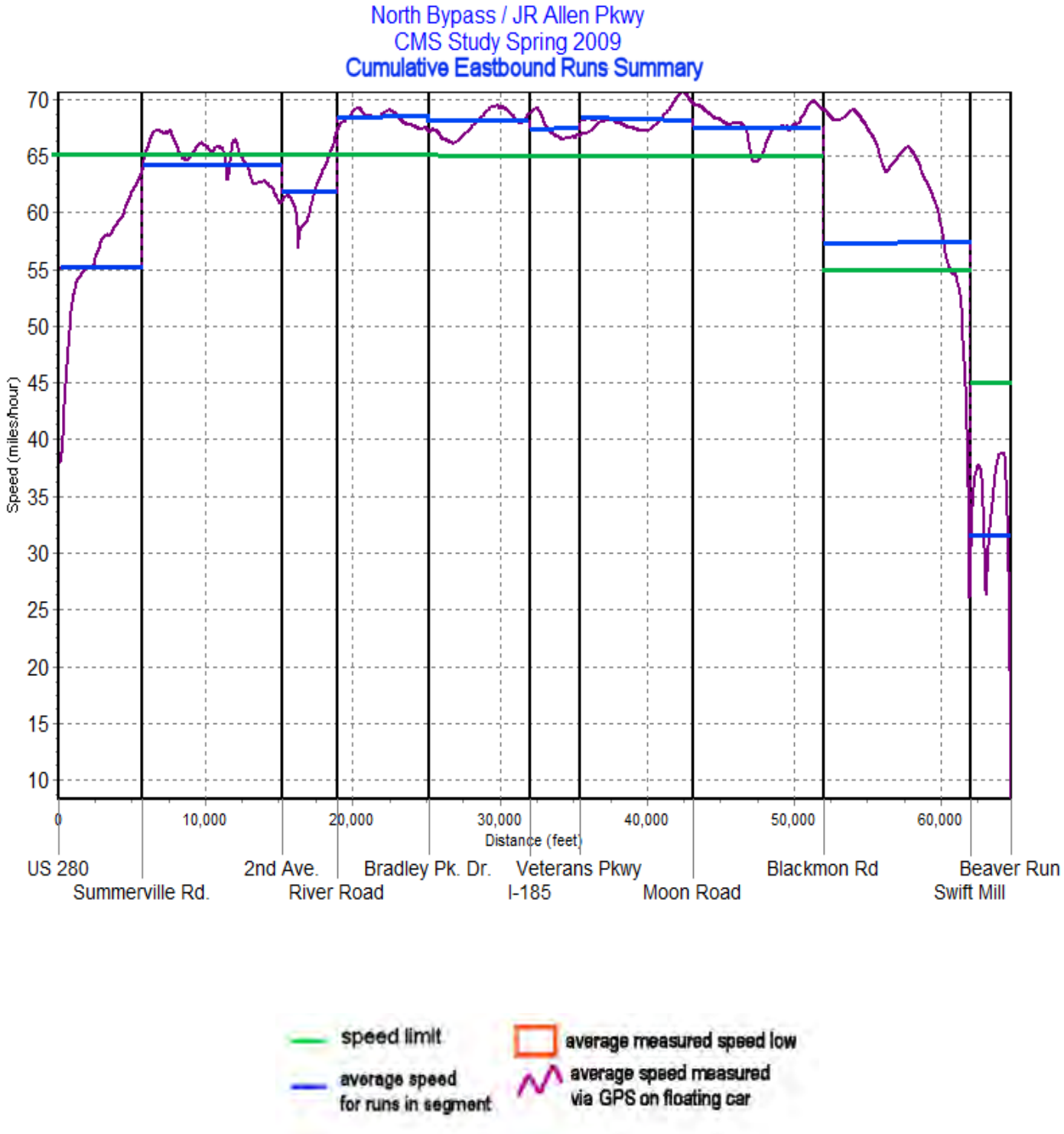


J.R. ALLEN PARKWAY (US 80)

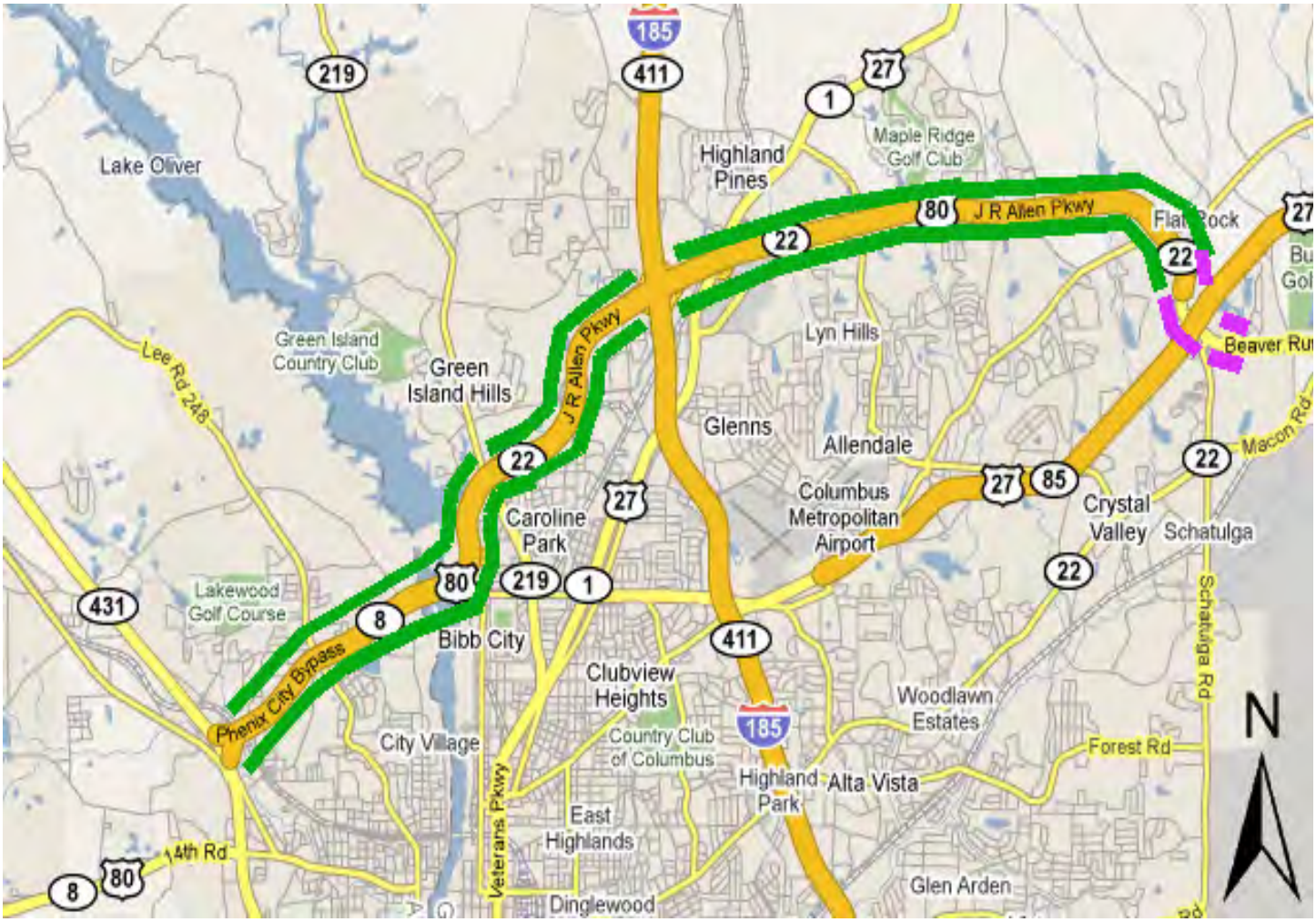
CONGESTION MANAGEMENT PROCESS SPRING 2009

US 280 TO FLAT ROCK ROAD

DISTANCE: 12.29 MILES



J.R. ALLEN PARKWAY (US 80)	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
US 280 TO FLAT ROCK ROAD	DISTANCE: 12.29 MILES



COLOR KEY AND RANKING CATEGORIES
FOR FREE FLOW TRAFFIC SPEED MEASUREMENTS

- SEVERE - Average traffic speed below 40% of the posted speed limit
- CONGESTED - Average traffic speed between 40% and 49% of the posted speed limit
- MARGINAL - Average traffic speed between 50% and 64% of the posted speed limit.
- OKAY - Average traffic speed between 65% and 80% of the posted speed limit.
- GOOD - Average traffic speed between 80% of to the posted speed limit.

J.R. ALLEN PARKWAY (US 80)

CONGESTION MANAGEMENT PROCESS SPRING 2009

US 280 TO FLAT ROCK ROAD

DISTANCE: 12.29 MILES

POSSIBLE CAUSES OF CONGESTION

-Close proximity of busy intersections (Flat Rock Road, Manchester Expressway ramps and Gateway Road causes some time delay for westbound US 80 traffic. These lights are coordinated and are running at best efficiency.

Roadway terminus in Phenix City will need some future resolution to replace existing signalized intersection with US 280.

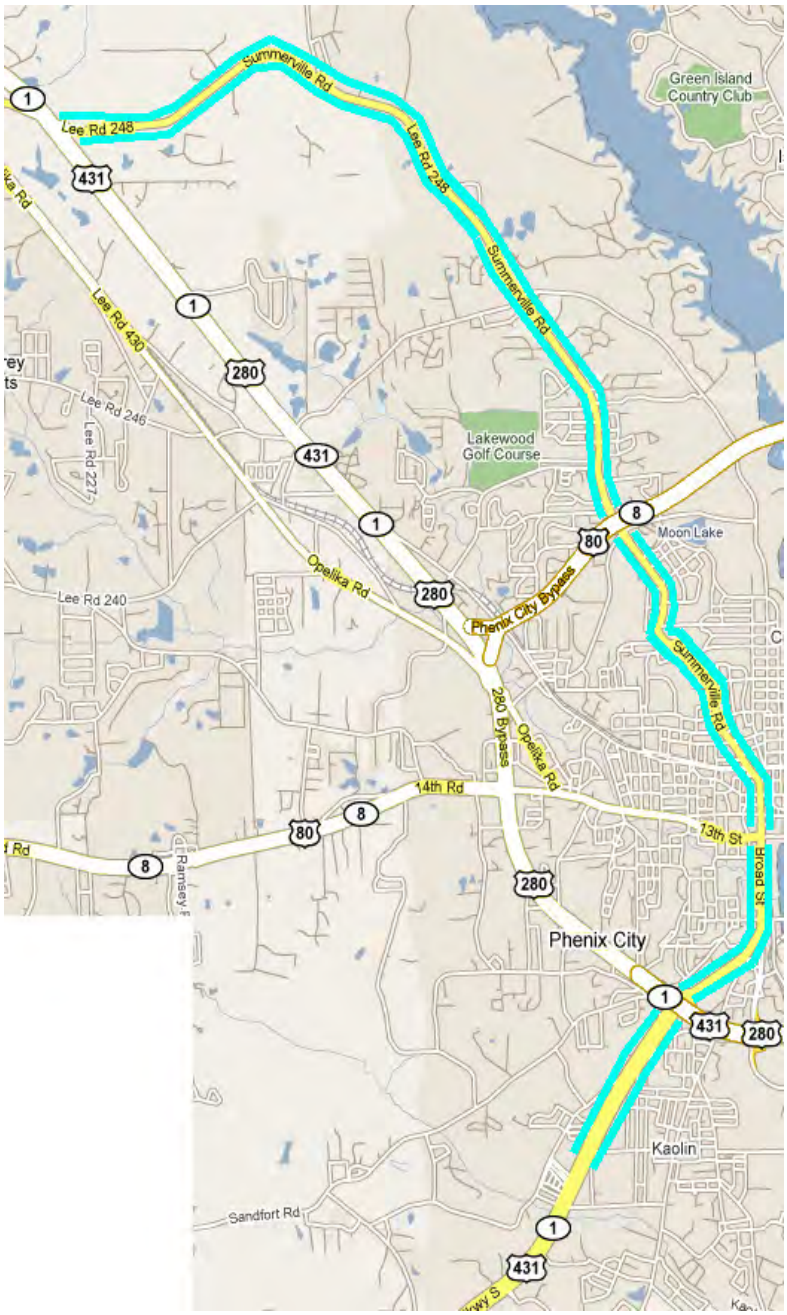
Afternoon rush hour traffic is prone to backing up from Chattahoochee River Bridge back towards Second Avenue and River Road. Future consideration should be given to adding an additional lane in this section.

Jr Allen Parkway (Us 80)	Travel Time	V/C Ratio	Arterial And Intersection LOS	Transit System Measures	Incident Management
Capacity Expansion	▲	▶	▲	▶	▲
Access Management	▲	▶	▲	▶	▶
Traffic Operational Improvement	▲	▲	▲	▶	▶
Non-Motorized Modes	▼	▲	▼	▲	▶

▲	Positive effect on congestion.
▶	No discernable effect on congestion.
▼	Negative effect on congestion.

LEE ROAD. 248 / SUMMERVILLE ROAD MLK JR. PARKWAY	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
5TH STREET SOUTH TO US 280	DISTANCE: 10.57 MILES

LOCATION MAP OF ROUTE MEASURED



LEE ROAD. 248 / SUMMERVILLE ROAD MLK JR. PARKWAY	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
5TH STREET SOUTH TO US 280	DISTANCE: 10.57 MILES

CUMULATIVE AVERAGE - ALL MEASURED TIME PERIODS OF DAY BOTH DIRECTIONS

INTERSECTION	AVERAGE NORTHBOUND SPEED	AVERAGE SOUTHBOUND SPEED	POSTED SPEED LIMIT
US 280	31	38	40
LEE ROAD 318	31	42	40
PIERCE ROAD	38	39	40
FLETCHER DRIVE	31	30	35
44TH STREET	33	27	35
US 80	28	27	35
30TH STREET	28	28	30
25TH STREET	31	32	30
21ST STREET	30	33	30
NORTH RAILROAD	30	32	30
14TH STREET	25	19	30
13TH STREET	18	14	30
DILLINGHAM STREET	18	20	30
BROAD STREET	11	28	30
US 280	38	38	45
3RD STREET SOUTH	52	51	45
5TH STREET SOUTH	54	54	45

LEE ROAD. 248 / SUMMERVILLE ROAD MLK JR. PARKWAY	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
5TH STREET SOUTH TO US 280	DISTANCE: 10.57 MILES

CUMULATIVE AVERAGE -
ALL MEASURED TIME PERIODS OF DAY
BOTH DIRECTIONS

INTERSECTION	FREE FLOW NORTHBOUND RATING	FREE FLOW SOUTHBOUND RATING	SEGMENT LENGTH (MILES)
US 280	OKAY	GOOD	0.12
LEE ROAD 318	OKAY	GOOD	1.90
PIERCE ROAD	GOOD	GOOD	1.89
FLETCHER DRIVE	GOOD	GOOD	0.77
44TH STREET	GOOD	MARGINAL	0.47
US 80	OKAY	MARGINAL	0.35
30TH STREET	GOOD	GOOD	0.73
25TH STREET	GOOD	GOOD	0.48
21ST STREET	GOOD	GOOD	0.33
NORTH RAILROAD	GOOD	GOOD	0.27
14TH STREET	GOOD	MARGINAL	0.31
13TH STREET	MARGINAL	CONGESTED	0.13
DILLINGHAM STREET	MARGINAL	MARGINAL	0.52
BROAD STREET	SEVERE	GOOD	0.08
US 280	GOOD	GOOD	0.71
3RD STREET SOUTH	GOOD	GOOD	1.08
5TH STREET SOUTH	GOOD	GOOD	0.43

LEE ROAD. 248 / SUMMERVILLE ROAD MLK JR. PARKWAY

CONGESTION MANAGEMENT PROCESS SPRING 2009

5TH STREET SOUTH TO US 280

DISTANCE: 10.57 MILES

AM PEAK HOUR NORTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
5TH STREET SOUTH	STARTING POINT			
3RD STREET SOUTH	-5	52.3	1.16	GOOD
US 280	-14	53.5	1.19	GOOD
BROAD STREET	11	38.3	0.85	GOOD
DILLINGHAM STREET	36	12.1	0.40	SEVERE
13TH STREET	27	21.5	0.72	OKAY
14TH STREET	6	22.1	0.74	OKAY
NORTH RAILROAD	11	24.6	0.82	GOOD
21ST STREET	-1	31.6	1.05	GOOD
25TH STREET	-1	30.8	1.03	GOOD
30TH STREET	-3	31.4	1.05	GOOD
US 80	7	32.5	0.93	GOOD
44TH STREET	7	29.9	0.85	GOOD
FLETCHER DRIVE	8	34.2	0.86	GOOD
PIERCE ROAD	40	25.8	0.65	MARGINAL
LEE ROAD 318	20	40	0.89	OKAY
US 280	34	38	0.84	OKAY

LEE ROAD. 248 / SUMMERVILLE ROAD MLK JR. PARKWAY

CONGESTION MANAGEMENT PROCESS SPRING 2009

5TH STREET SOUTH TO US 280

DISTANCE: 10.57 MILES

AM PEAK HOUR SOUTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
US 280	STARTING POINT			
LEE ROAD 318	5	43.7	0.97	GOOD
PIERCE ROAD	6	43.3	0.96	GOOD
FLETCHER DRIVE	2	38.7	0.97	GOOD
44TH STREET	17	30.7	0.77	OKAY
US 80	25	24.8	0.62	MARGINAL
30TH STREET	19	29	0.83	GOOD
25TH STREET	6	31.6	0.90	GOOD
21ST STREET	-3	32.9	1.10	GOOD
NORTH RAILROAD	1	30.6	1.02	GOOD
14TH STREET	22	20.9	0.70	OKAY
13TH STREET	25	18.6	0.62	MARGINAL
DILLINGHAM STREET	54	17	0.57	MARGINAL
BROAD STREET	4	27.3	0.61	MARGINAL
US 280	28	30.3	0.67	OKAY
3RD STREET SOUTH	-13	53	1.18	GOOD
5TH STREET SOUTH	-5	53.3	1.18	GOOD

LEE ROAD. 248 / SUMMERVILLE ROAD MLK JR. PARKWAY

CONGESTION MANAGEMENT PROCESS SPRING 2009

5TH STREET SOUTH TO US 280

DISTANCE: 10.57 MILES

OFF PEAK SOUTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
US 280	STARTING POINT			
LEE ROAD 318	148	27.2	0.60	MARGINAL
PIERCE ROAD	25	39.4	0.88	GOOD
FLETCHER DRIVE	0	39.8	1.00	GOOD
44TH STREET	17	30.4	0.76	OKAY
US 80	16	30.4	0.76	OKAY
30TH STREET	25	28.1	0.80	GOOD
25TH STREET	7	31	0.89	GOOD
21ST STREET	-4	33.4	1.11	GOOD
NORTH RAILROAD	-2	31.9	1.06	GOOD
14TH STREET	29	19.3	0.64	MARGINAL
13TH STREET	15	18.5	0.62	MARGINAL
DILLINGHAM STREET	40	20.8	0.69	OKAY
BROAD STREET	4	26.4	0.59	MARGINAL
US 280	8	40.5	0.90	GOOD
3RD STREET SOUTH	-8	49.6	1.10	GOOD
5TH STREET SOUTH	-4	50.4	1.12	GOOD

LEE ROAD. 248 / SUMMERVILLE ROAD MLK JR. PARKWAY

CONGESTION MANAGEMENT PROCESS SPRING 2009

5TH STREET SOUTH TO US 280

DISTANCE: 10.57 MILES

OFF PEAK NORTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
5TH STREET SOUTH	STARTING POINT			
3RD STREET SOUTH	-4	51.9	1.15	GOOD
US 280	-11	51.2	1.14	GOOD
BROAD STREET	9	39.3	0.87	GOOD
DILLINGHAM STREET	34	12.9	0.43	CONGESTED
13TH STREET	53	16.4	0.55	MARGINAL
14TH STREET	20	16.1	0.54	MARGINAL
NORTH RAILROAD	2	28.8	0.96	GOOD
21ST STREET	-2	32.7	1.09	GOOD
25TH STREET	1	30.1	1.00	GOOD
30TH STREET	-3	31.6	1.05	GOOD
US 80	35	25.9	0.74	OKAY
44TH STREET	11	28.6	0.82	GOOD
FLETCHER DRIVE	8	34	0.85	GOOD
PIERCE ROAD	13	34.1	0.85	GOOD
LEE ROAD 318	97	30	0.67	OKAY
US 280	182	23.5	0.52	MARGINAL

LEE ROAD. 248 / SUMMERVILLE ROAD MLK JR. PARKWAY

CONGESTION MANAGEMENT PROCESS SPRING 2009

5TH STREET SOUTH TO US 280

DISTANCE: 10.57 MILES

PM PEAK HOUR SOUTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
US 280	STARTING POINT			
LEE ROAD 318	68	38	0.84	GOOD
PIERCE ROAD	13	41.9	0.93	GOOD
FLETCHER DRIVE	2	39.4	0.99	GOOD
44TH STREET	22	29.6	0.74	OKAY
US 80	19	27.9	0.70	OKAY
30TH STREET	26	27.1	0.77	OKAY
25TH STREET	5	32	0.91	GOOD
21ST STREET	-4	33.5	1.12	GOOD
NORTH RAILROAD	-2	31.6	1.05	GOOD
14TH STREET	34	17.4	0.58	MARGINAL
13TH STREET	54	7.5	0.25	SEVERE
DILLINGHAM STREET	25	22.6	0.75	OKAY
BROAD STREET	3	29.2	0.65	MARGINAL
US 280	3	43	0.96	GOOD
3RD STREET SOUTH	-9	50.9	1.13	GOOD
5TH STREET SOUTH	-7	56	1.24	GOOD

LEE ROAD. 248 / SUMMERVILLE ROAD MLK JR. PARKWAY

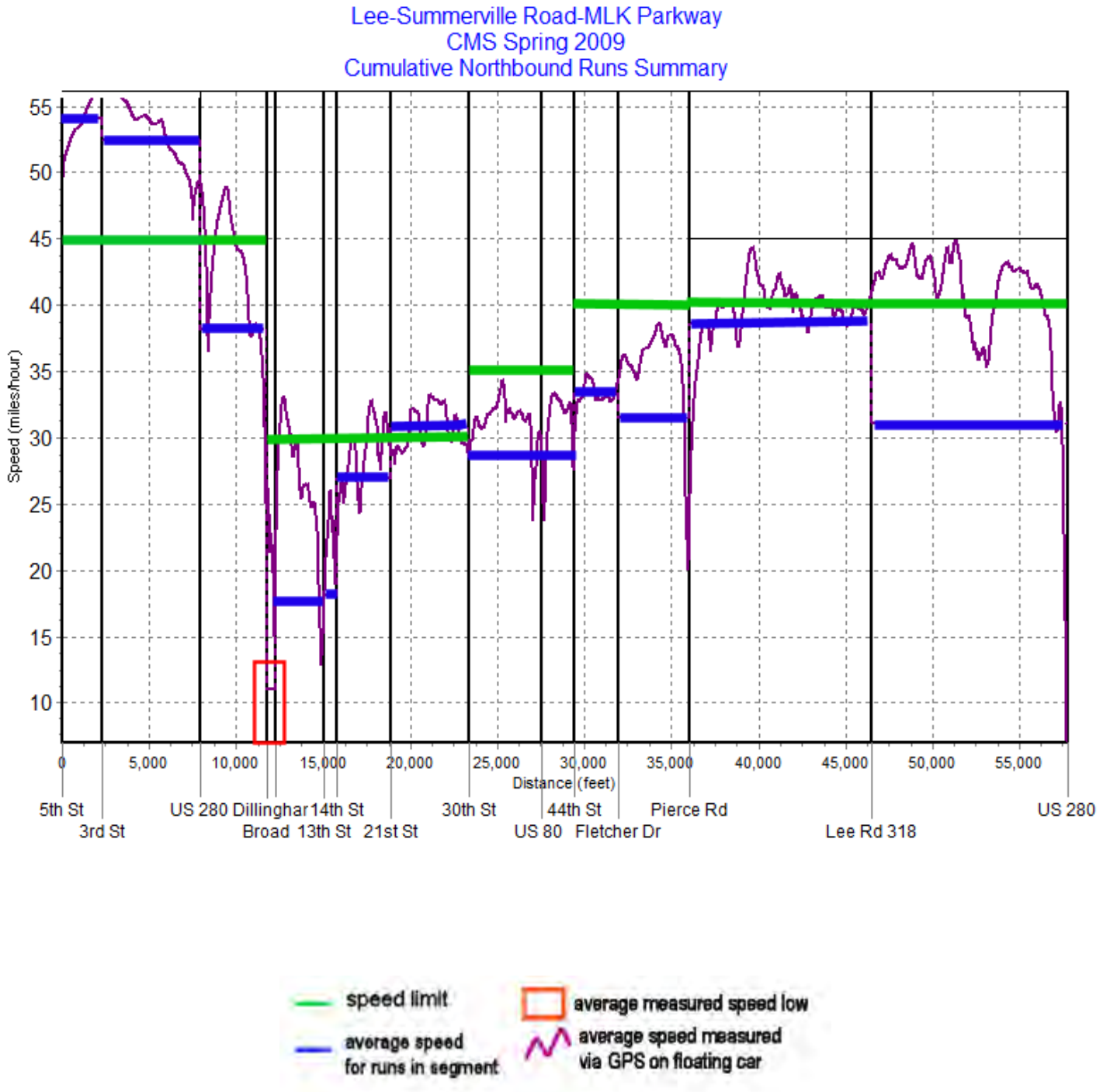
CONGESTION MANAGEMENT PROCESS SPRING 2009

5TH STREET SOUTH TO US 280

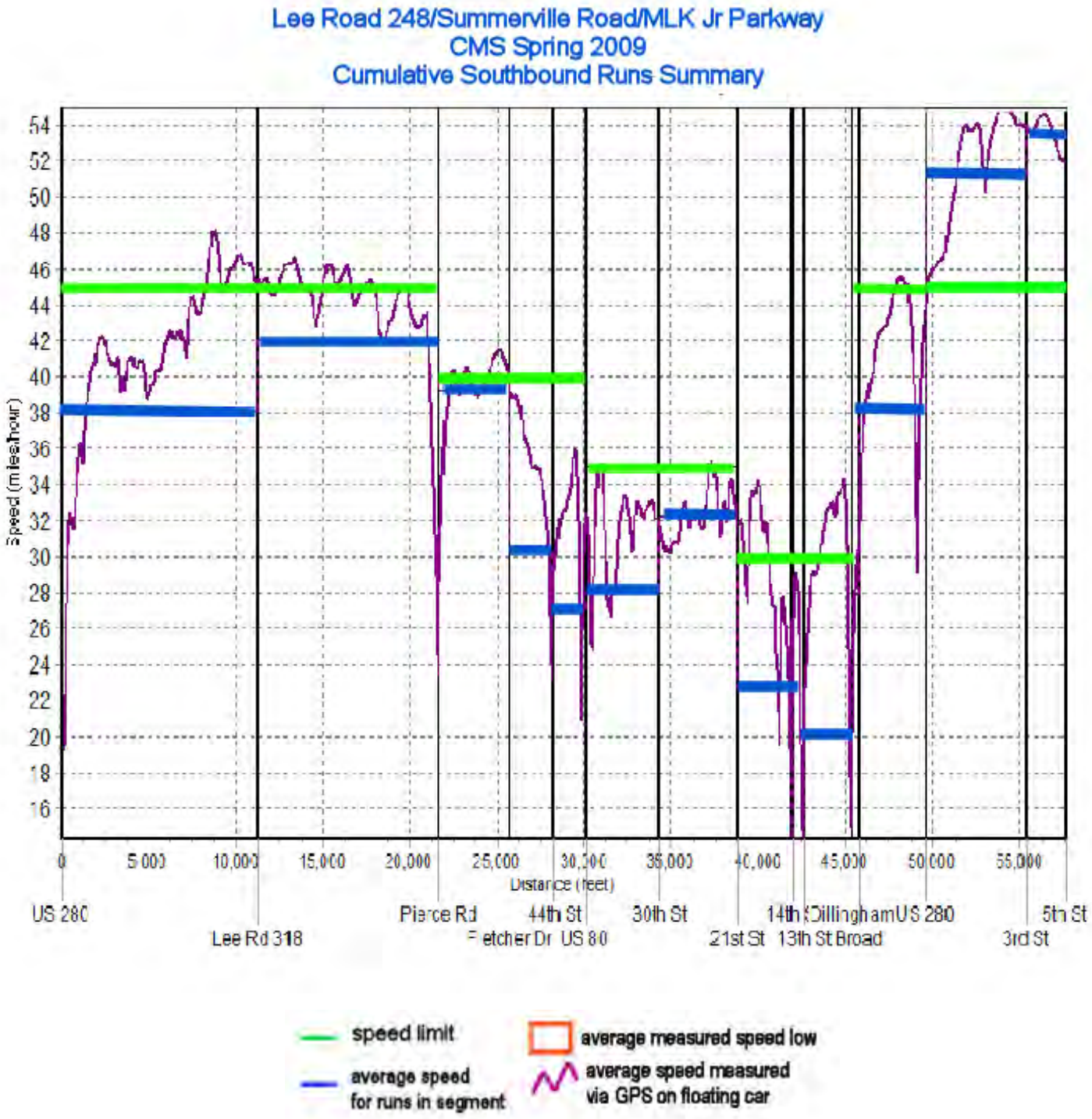
DISTANCE: 10.57 MILES

PM PEAK HOUR NORTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
5TH STREET SOUTH	STARTING POINT			
3RD STREET SOUTH	-7	56.4	1.25	GOOD
US 280	-12	52.6	1.17	GOOD
BROAD STREET	15	37.5	0.83	GOOD
DILLINGHAM STREET	48	9.3	0.31	SEVERE
13TH STREET	68	16.1	0.54	MARGINAL
14TH STREET	16	17.1	0.57	MARGINAL
NORTH RAILROAD	12	23.7	0.79	OKAY
21ST STREET	5	27.6	0.92	GOOD
25TH STREET	1	29.4	0.98	GOOD
30TH STREET	-3	31.2	1.04	GOOD
US 80	26	27.9	0.80	OKAY
44TH STREET	12	27.7	0.79	OKAY
FLETCHER DRIVE	10	32.5	0.81	GOOD
PIERCE ROAD	15	33.5	0.84	GOOD
LEE ROAD 318	8	42.9	0.95	GOOD
US 280	93	31.5	0.70	OKAY

LEE ROAD. 248 / SUMMERVILLE ROAD MLK JR. PARKWAY	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
5TH STREET SOUTH TO US 280	DISTANCE: 10.57 MILES

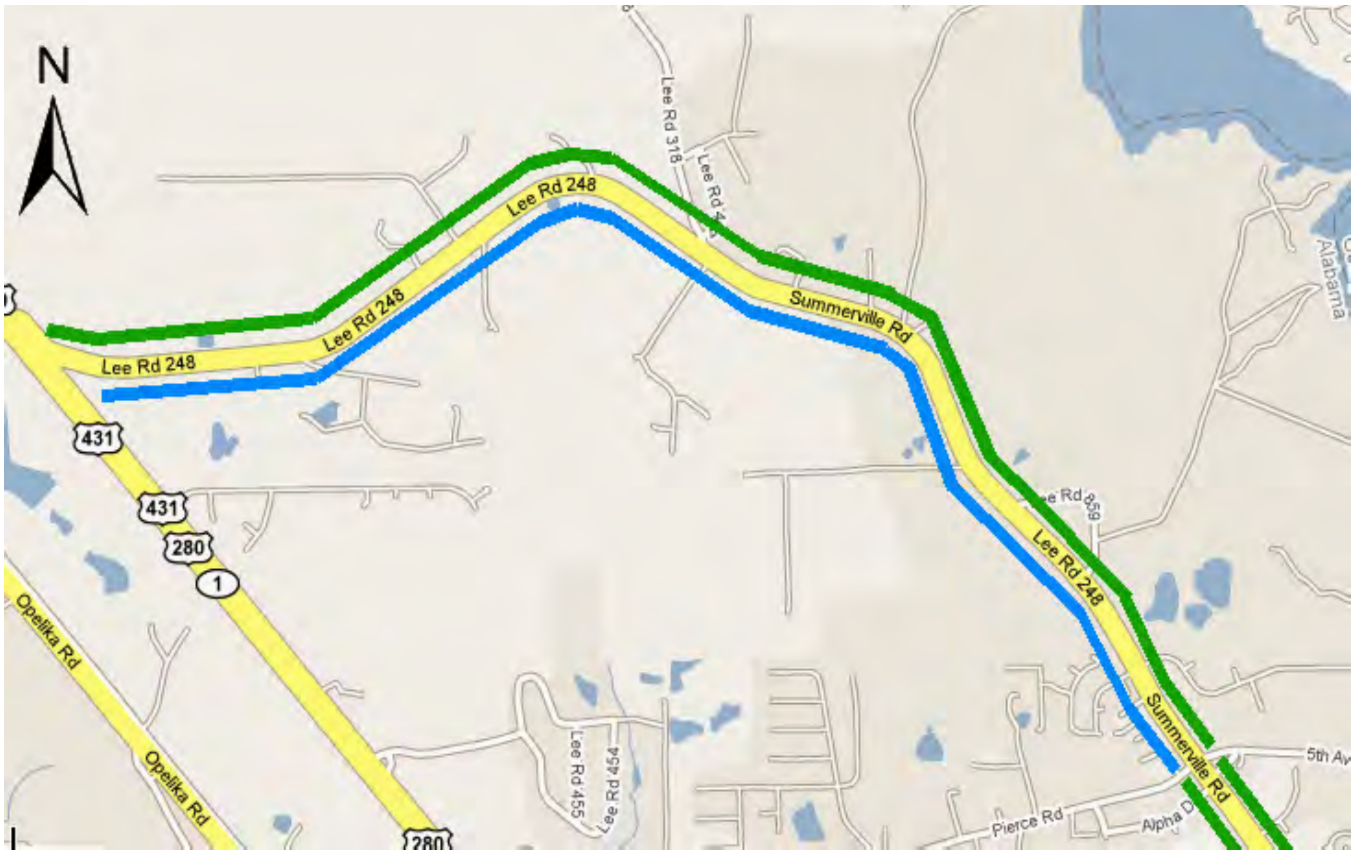


LEE ROAD. 248 / SUMMERVILLE ROAD MLK JR. PARKWAY	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
5TH STREET SOUTH TO US 280	DISTANCE: 10.57 MILES



LEE ROAD. 248 / SUMMERVILLE ROAD MLK JR. PARKWAY	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
5TH STREET SOUTH TO US 280	DISTANCE: 10.57 MILES

CUMULATIVE AVERAGE CONGESTION RATING FOR ALL THREE MEASURED TIME PERIODS BY DIRECTION TRAVELED

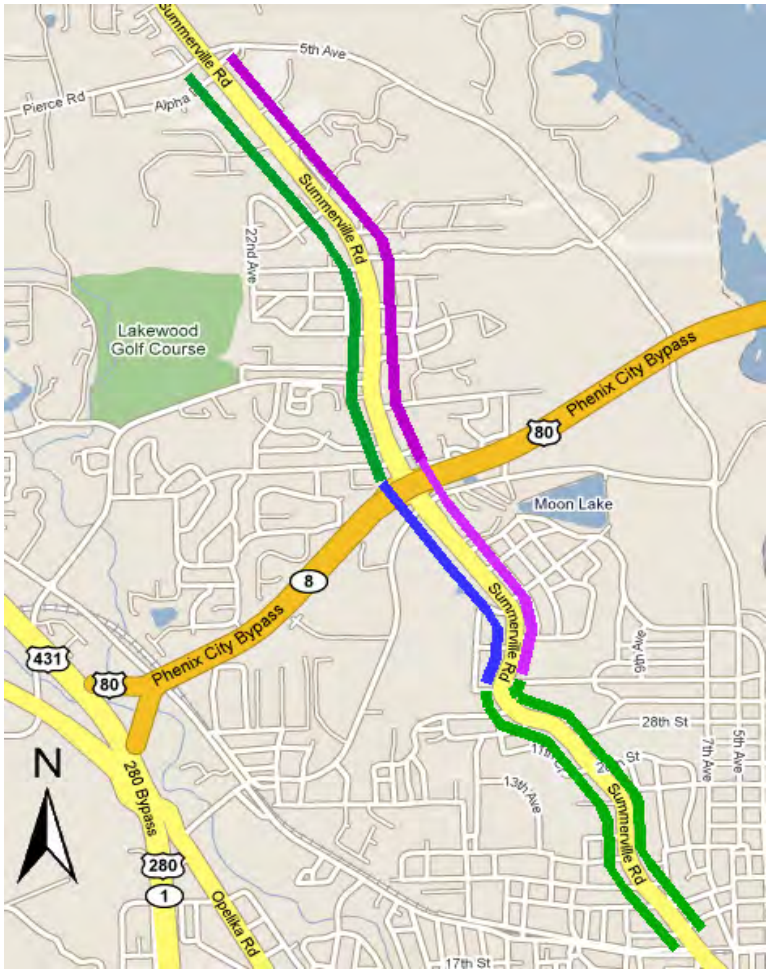


COLOR KEY AND RANKING CATEGORIES
FOR FREE FLOW TRAFFIC SPEED MEASUREMENTS

- SEVERE - Average traffic speed below 40% of the posted speed limit
- CONGESTED - Average traffic speed between 40% and 49% of the posted speed limit
- MARGINAL - Average traffic speed between 50% and 64% of the posted speed limit.
- OKAY - Average traffic speed between 65% and 80% of the posted speed limit.
- GOOD - Average traffic speed between 80% of to the posted speed limit.

LEE ROAD. 248 / SUMMERVILLE ROAD MLK JR. PARKWAY	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
5TH STREET SOUTH TO US 280	DISTANCE: 10.57 MILES

CUMULATIVE AVERAGE CONGESTION RATING FOR ALL THREE MEASURED TIME PERIODS BY DIRECTION TRAVELED



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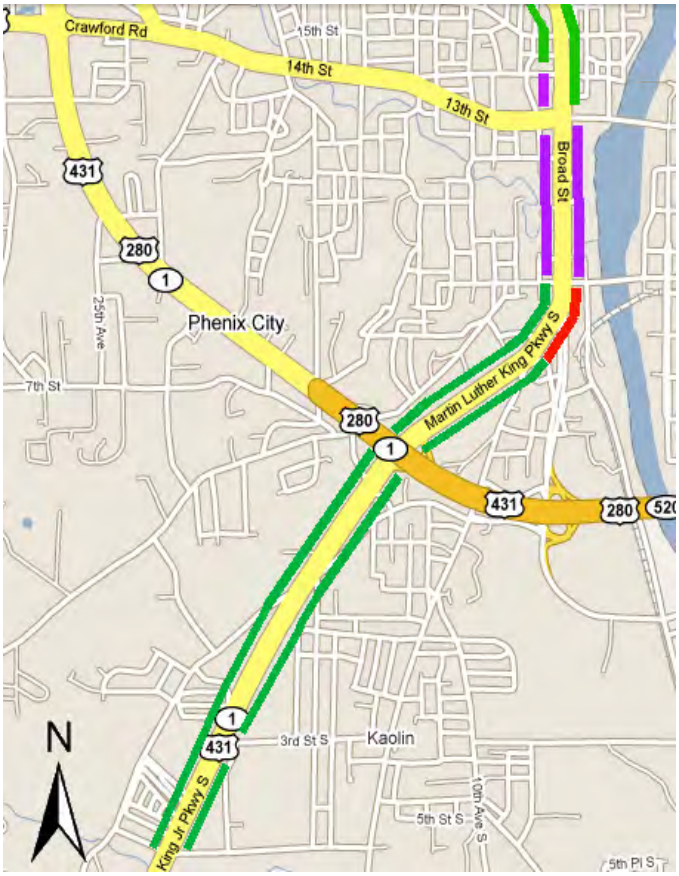
- GOOD - Average traffic speed between 80% of to the posted speed limit.

LEE ROAD. 248 / SUMMERVILLE ROAD MLK JR. PARKWAY	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
5TH STREET SOUTH TO US 280	DISTANCE: 10.57 MILES

CUMULATIVE AVERAGE CONGESTION RATING FOR ALL THREE MEASURED TIME PERIODS BY DIRECTION TRAVELED



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- OKAY - Average traffic speed between 65% and 80% of the posted speed limit.
- GOOD - Average traffic speed between 80% of to the posted speed limit.

LEE ROAD 248 / SUMMERVILLE ROAD / MLK JR. PARKWAY	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
5TH STREET SOUTH TO US 280	DISTANCE: 10.57 MILES

POSSIBLE CAUSES OF CONGESTION

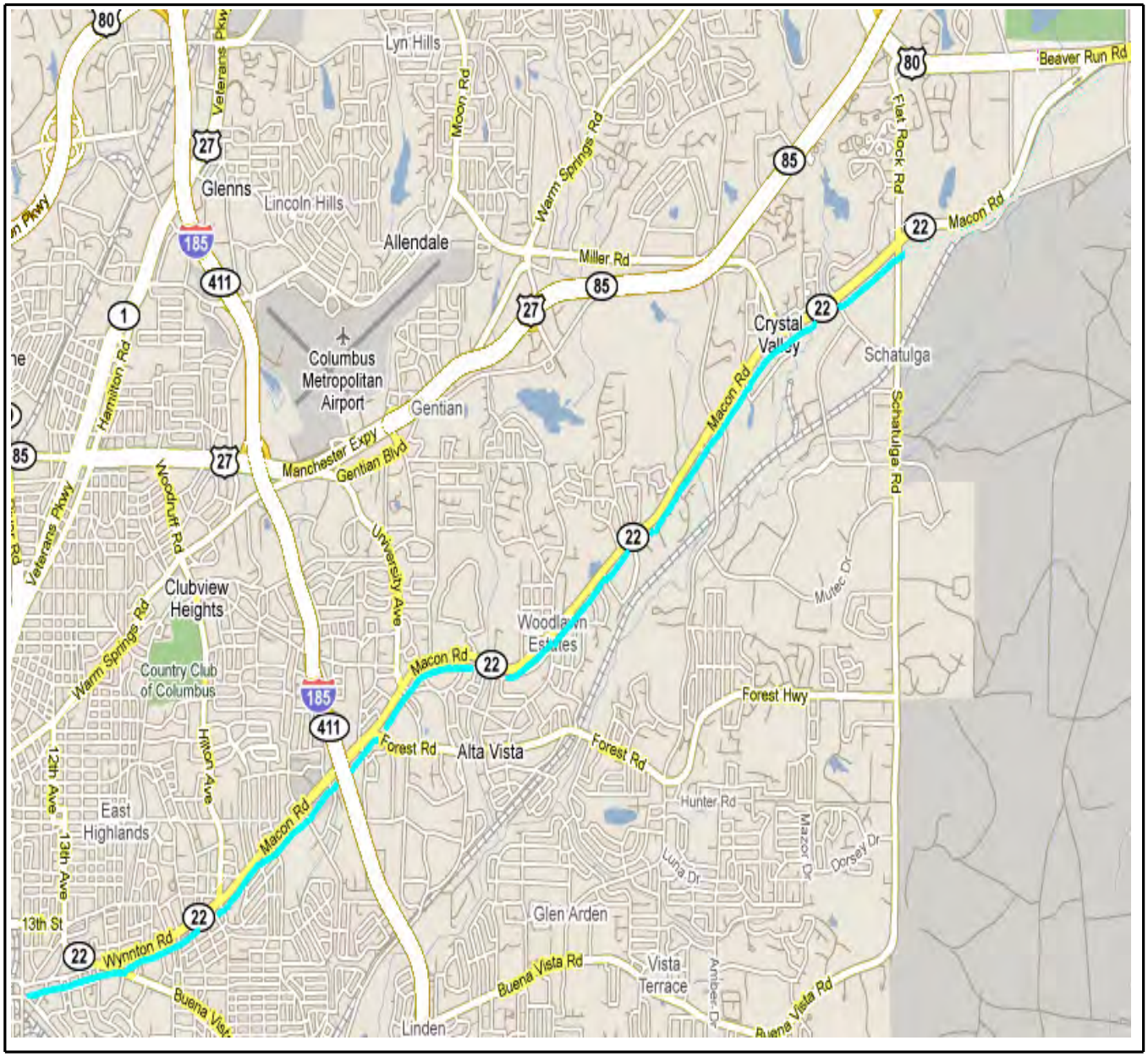
- **One school along the route adds to the traffic volume. The absence of turn lanes into the school creates travel time delays.**
- **Reduced capacity as 4 lanes are reduced into two lanes.**
- **Reconstruction occurring at the time of CMP Study between 13th Street and Dillingham had slowed traffic considerably. Traffic flow in this area has subsequently improved on completion of project.**
- **Poorly planned curb cuts.**
- **Heavy turning volumes onto US 80 from Stadium Drive.**
- **Heavy traffic volume between North Railroad Street and 13th Street.**

Lee Road 248/ Summerville Road ML King Jr Parkway	Travel Time	V/C Ratio	Arterial and Intersection LOS	Transit System Measures	Incident Management
TDM Measures	▲	▶	▲	▶	▶
Traffic Operational Improvements	▲	▲	▲	▶	▶
Non-Motorized Modes	▲	▲	▶	▶	▲
Growth Management	▲	▲	▲	▶	▶
Access Management	▲	▲	▲	▶	▶
Intelligent Transportation	▲	▲	▲	▶	▶

▲	Positive effect on congestion.
▶	No discernable effect on congestion.
▼	Negative effect on congestion.

MACON ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
10TH AVENUE TO FLAT ROCK ROAD	DISTANCE: 7.95 MILES

LOCATION MAP OF ROUTE MEASURED



MACON ROAD

CONGESTION MANAGEMENT PROCESS SPRING 2009

10TH AVENUE TO FLAT ROCK ROAD

DISTANCE: 7.95 MILES

CUMULATIVE AVERAGE - ALL MEASURED TIME PERIODS OF DAY BOTH DIRECTIONS

INTERSECTION	AVERAGE EASTBOUND SPEED	AVERAGE WESTBOUND SPEED	POSTED SPEED LIMIT
10TH AVE		30	35
BUENA VISTA ROAD	26	26	35
PEACOCK AVE	28	21	35
13TH STREET	25	28	35
I-185	29	14	35
FORREST ROAD	27	33	35
ELM DRIVE	23	31	40
REESE ROAD	35	43	40
WOODRUFF FARM	39	32	40
MILLER ROAD	36	38	45
FLAT ROCK	33		45

INTERSECTION	EASTBOUND FREE FLOW GRADE	WESTBOUND FREE FLOW GRADE	SEGMENT LENGTH (MILES)
10TH AVE		GOOD	0.58
BUENA VISTA ROAD	OK	OK	0.53
PEACOCK AVE	GOOD	MARGINAL	0.44
13TH STREET	OK	GOOD	1.15
I-185	GOOD	SEVERE	0.28
FORREST ROAD	OK	GOOD	0.34
ELM DRIVE	MARGINAL	OK	1.14
REESE ROAD	GOOD	GOOD	1.68
WOODRUFF FARM	GOOD	GOOD	0.64
MILLER ROAD	GOOD	GOOD	1.01
FLAT ROCK	OK		0.16

MACON ROAD

CONGESTION MANAGEMENT PROCESS SPRING 2009

10TH AVENUE TO FLAT ROCK ROAD

DISTANCE: 7.95 MILES

AM PEAK HOUR EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
10TH AVE	STARTING POINT			
BUENA VISTA ROAD	9	30.6	0.87	GOOD
PEACOCK AVE	3	33.8	0.97	GOOD
13TH STREET	19	25.8	0.74	OKAY
I-185	9	33.9	0.97	GOOD
FORREST ROAD	7	32.3	0.92	GOOD
ELM DRIVE	3	37.1	0.93	GOOD
REESE ROAD	-5	42.3	1.06	GOOD
WOODRUFF FARM	-8	42.4	1.06	GOOD
MILLER ROAD	20	33.4	0.74	OKAY
FLAT ROCK	57	27	0.60	MARGINAL

AM PEAK HOUR WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
FLAT ROCK	STARTING POINT			
MILLER ROAD	26	36.4	0.81	GOOD
WOODRUFF FARM	53	22.6	0.50	MARGINAL
REESE ROAD	1	44.4	0.99	GOOD
ELM DRIVE	57	26.6	0.67	OKAY
FORREST ROAD	4	35.3	0.88	GOOD
I-185	84	10.4	0.30	SEVERE
13TH STREET	12	31.9	0.91	GOOD
PEACOCK AVENUE	38	21.6	0.62	MARGINAL
BUENA VISTA ROAD	36	21.2	0.61	MARGINAL
10TH AVENUE	21	28.5	0.81	GOOD

MACON ROAD

CONGESTION MANAGEMENT PROCESS SPRING 2009

10TH AVENUE TO FLAT ROCK ROAD

DISTANCE: 7.95 MILES

OFF PEAK HOURS EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
10TH AVE	STARTING POINT			
BUENA VISTA ROAD	25	26	0.74	OKAY
PEACOCK AVE	17	26.9	0.77	OKAY
13TH STREET	8	29.5	0.84	GOOD
I-185	41	28.5	0.81	GOOD
FORREST ROAD	10	27	0.77	OKAY
ELM DRIVE	47	18.3	0.46	MARGINAL
REESE ROAD	32	32	0.80	GOOD
WOODRUFF FARM	10	37.8	0.95	GOOD
MILLER ROAD	12	37	0.82	GOOD
FLAT ROCK	18	37.6	0.84	GOOD
OFF PEAK HOURS WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
FLAT ROCK	STARTING POINT			
MILLER ROAD	13	39.3	0.87	GOOD
WOODRUFF FARM	6	41.9	0.93	GOOD
REESE ROAD	5	43.4	0.96	GOOD
ELM DRIVE	73	24.3	0.61	MARGINAL
FORREST ROAD	13	30.3	0.76	OKAY
I-185	38	16.4	0.47	CONGESTED
13TH STREET	25	29	0.83	GOOD
PEACOCK AVENUE	48	17.6	0.50	MARGINAL
BUENA VISTA ROAD	32	23.3	0.67	OKAY
10TH AVENUE	2	33.9	0.97	GOOD

MACON ROAD

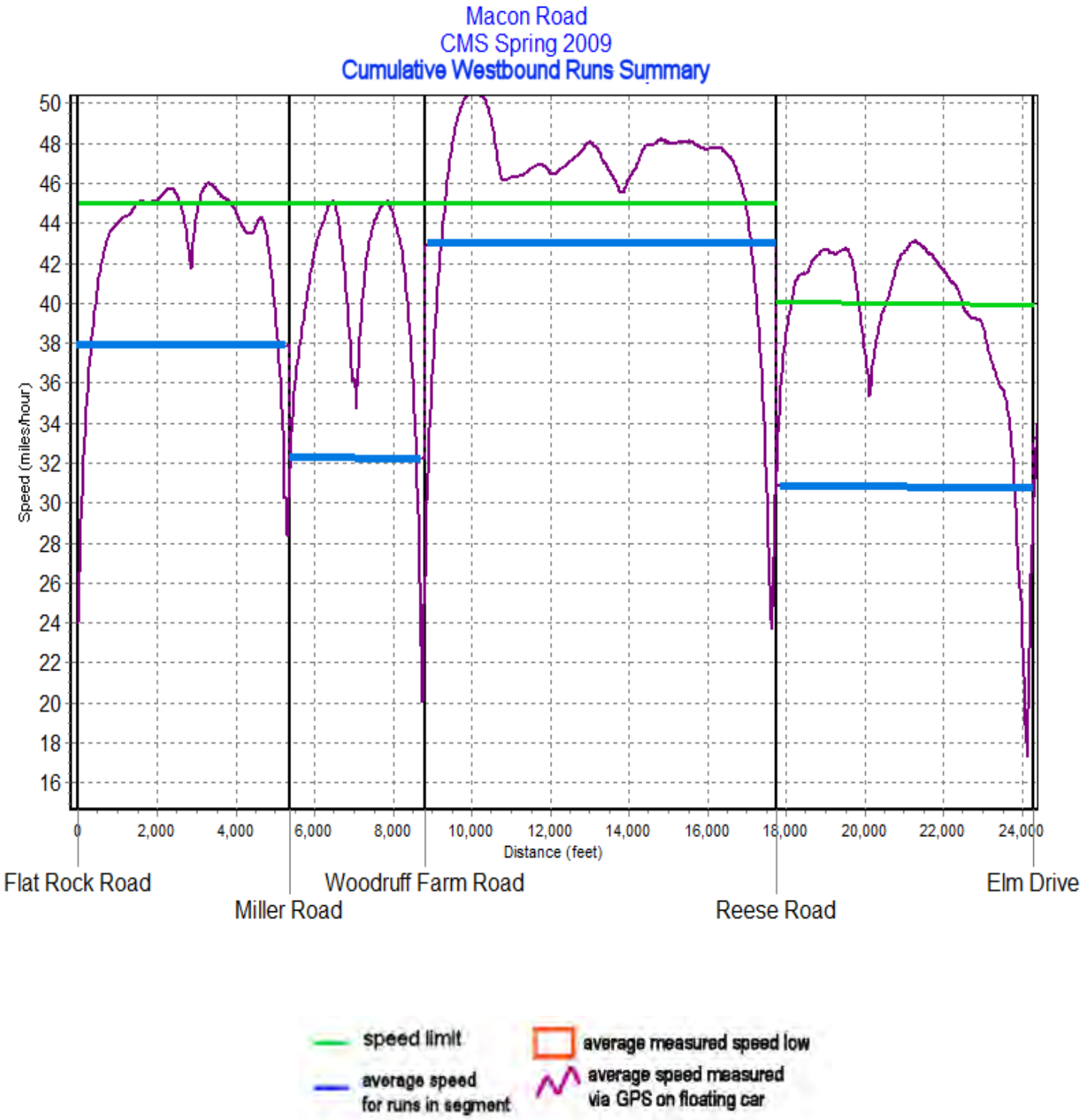
CONGESTION MANAGEMENT PROCESS SPRING 2009

10TH AVENUE TO FLAT ROCK ROAD

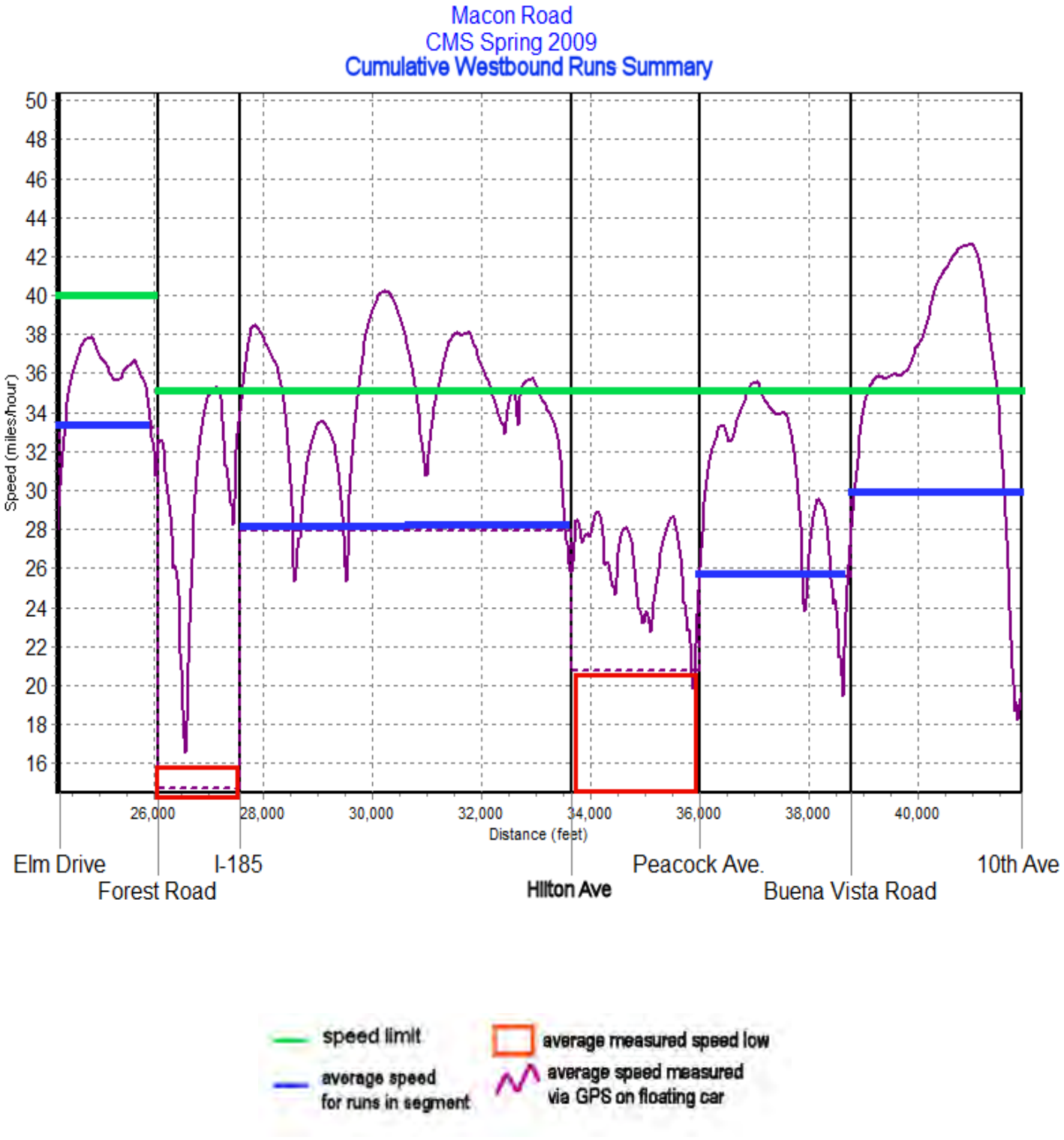
DISTANCE: 7.95 MILES

PM PEAK HOUR EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
10TH AVE	STARTING POINT			
BUENA VISTA ROAD	50	20.9	0.60	MARGINAL
PEACOCK AVE	28	23.4	0.67	OKAY
13TH STREET	48	19.6	0.56	MARGINAL
I-185	50	25	0.71	OKAY
FORREST ROAD	18	22.3	0.64	MARGINAL
ELM DRIVE	72	12.1	0.30	SEVERE
REESE ROAD	29	32	0.80	GOOD
WOODRUFF FARM	19	36.9	0.92	GOOD
MILLER ROAD	15	36.4	0.81	GOOD
FLAT ROCK	28	34	0.76	OKAY
PM PEAK HOUR WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
FLAT ROCK	STARTING POINT			
MILLER ROAD	16	38.1	0.85	GOOD
WOODRUFF FARM	39	29.1	0.65	MARGINAL
REESE ROAD	15	41.2	0.92	GOOD
ELM DRIVE	11	37	0.93	GOOD
FORREST ROAD	1	38.2	0.96	GOOD
I-185	73	13.1	0.37	SEVERE
13TH STREET	69	22.7	0.65	OKAY
PEACOCK AVENUE	44	18.3	0.52	MARGINAL
BUENA VISTA ROAD	8	30.5	0.87	GOOD
10TH AVENUE	19	28	0.80	GOOD

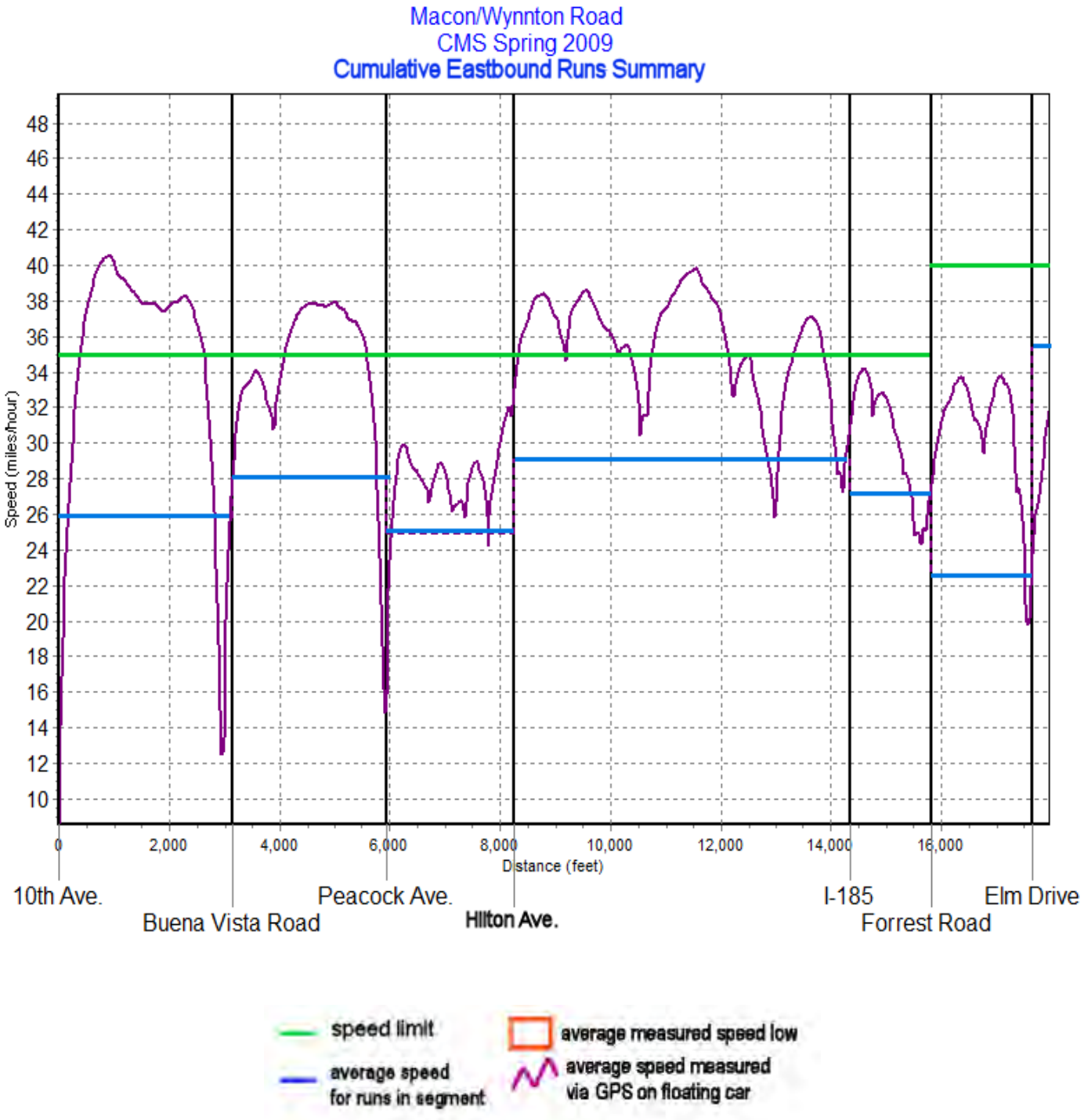
MACON ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
10TH AVENUE TO FLAT ROCK ROAD	DISTANCE: 7.95 MILES



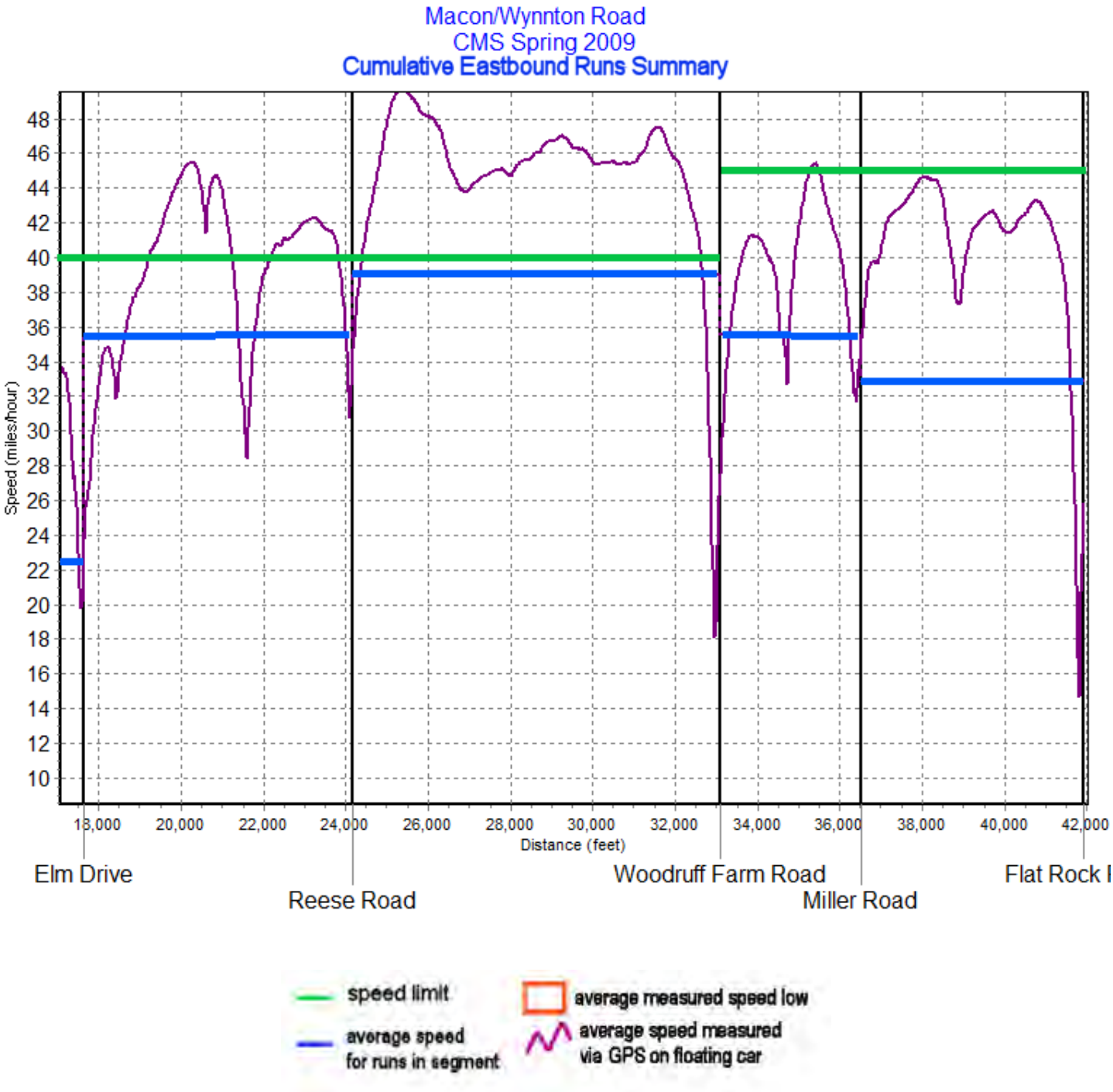
MACON ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
10TH AVENUE TO FLAT ROCK ROAD	DISTANCE: 7.95 MILES



MACON ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
10TH AVENUE TO FLAT ROCK ROAD	DISTANCE: 7.95 MILES

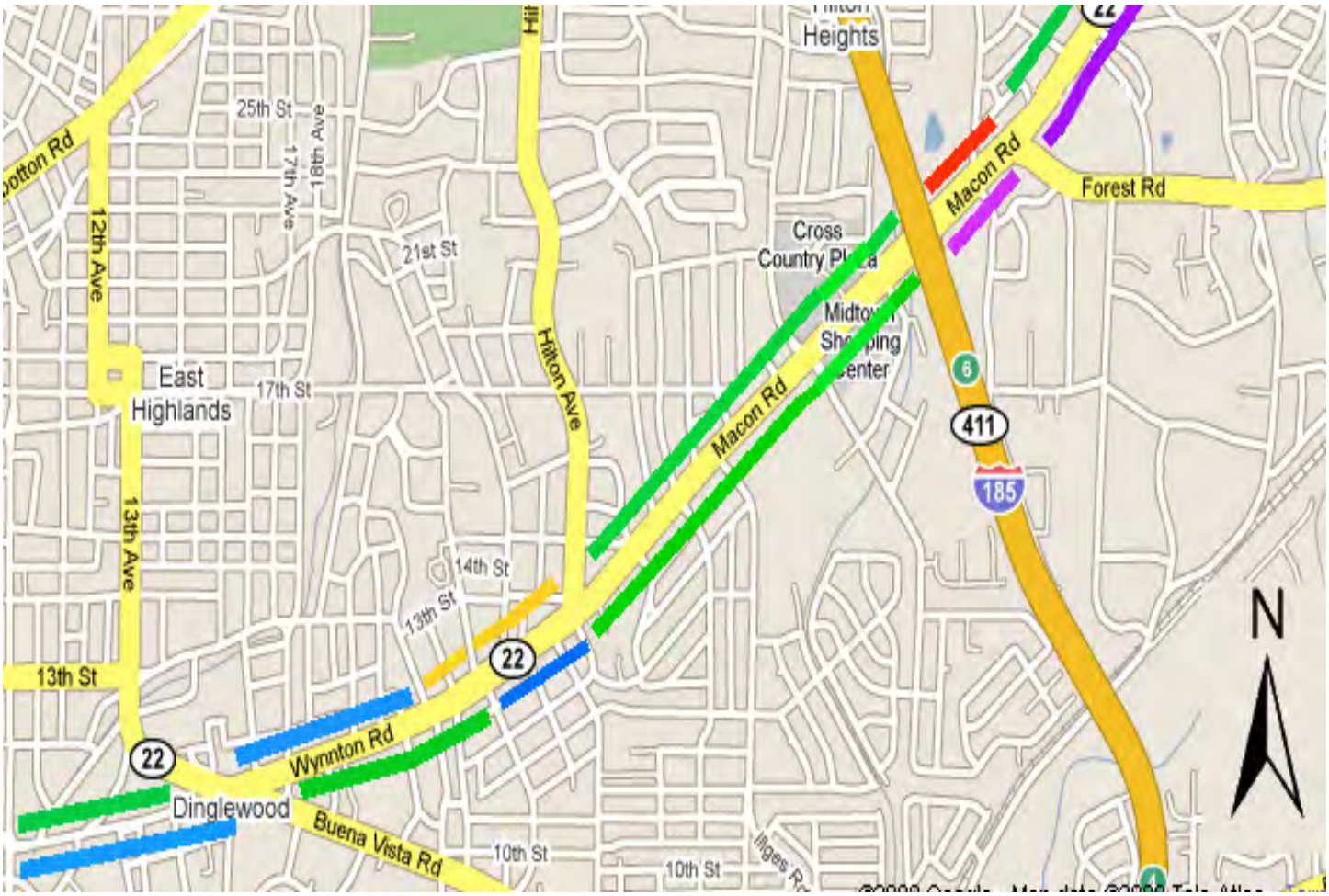


MACON ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
10TH AVENUE TO FLAT ROCK ROAD	DISTANCE: 7.95 MILES



MACON ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
10TH AVENUE TO FLAT ROCK ROAD	DISTANCE: 7.95 MILES

CUMULATIVE AVERAGE CONGESTION RATING FOR ALL THREE MEASURED TIME PERIODS BY DIRECTION TRAVELED

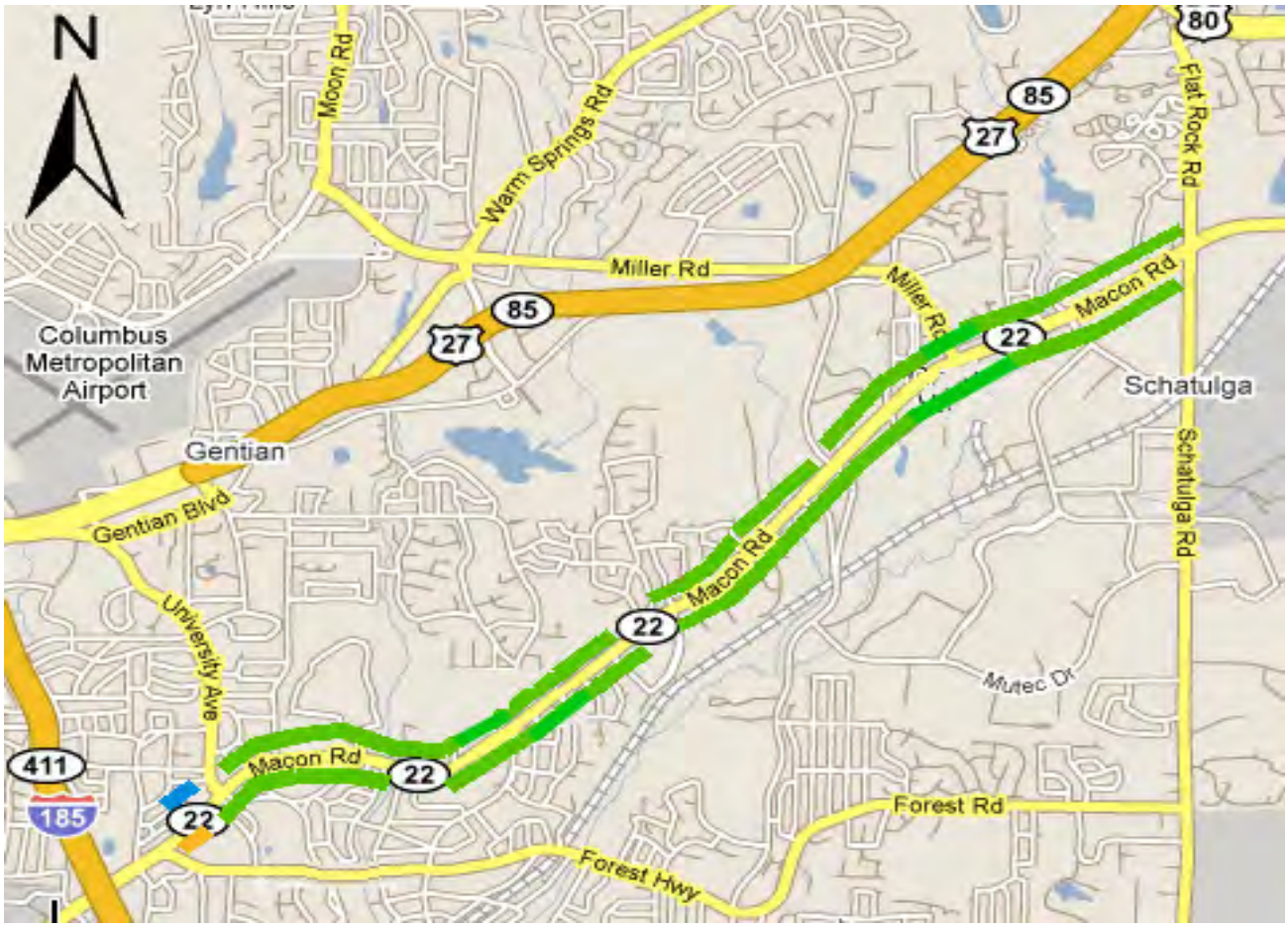


COLOR KEY AND RANKING CATEGORIES
FOR FREE FLOW TRAFFIC SPEED MEASUREMENTS

- SEVERE - Average traffic speed below 40% of the posted speed limit
- CONGESTED - Average traffic speed between 40% and 49% of the posted speed limit
- MARGINAL - Average traffic speed between 50% and 64% of the posted speed limit.
- OKAY - Average traffic speed between 65% and 80% of the posted speed limit.
- GOOD - Average traffic speed between 80% of to the posted speed limit.

MACON ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
10TH AVENUE TO FLAT ROCK ROAD	DISTANCE: 7.95 MILES

CUMULATIVE AVERAGE CONGESTION RATING FOR ALL THREE MEASURED TIME PERIODS BY DIRECTION TRAVELED



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- GOOD - Average traffic speed between 80% of to the posted speed limit.

MACON ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
10TH AVENUE TO FLAT ROCK ROAD	DISTANCE: 7.95 MILES

POSSIBLE CAUSES OF CONGESTION

- Absence of left turn lanes at some intersections causes queues to form in left hand through travel lane. turn left.
- Narrow lane widths from west of 13th Street/Hilton Avenue intersection slows traffic.
- Proximity of traffic signalized intersections between I-185 and Elm Drive leads to significant congestion problems westbound.

Macon Road	Travel Time	V/C Ratio	Arterial and Intersection LOS	Transit System Measures	Incident Management
TDM Measures	▶	▶	▶	▶	▶
Capacity Expansion	▲	▲	▲	▶	▶
Access Management	▶	▶	▲	▶	▶
Traffic Operational Improvement	▶	▲	▲	▶	▲
Non-Motorized Modes	▲	▶	▲	▶	▶

▲	Positive effect on congestion.
▶	No discernable effect on congestion.
▼	Negative effect on congestion.

MANCHESTER EXPRESSWAY	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
SECOND AVENUE TO JR ALLEN PARKWAY	DISTANCE: 8.33 MILES

LOCATION MAP OF ROUTE MEASURED

MANCHESTER EXPRESSWAY

CONGESTION MANAGEMENT PROCESS SPRING 2009

SECOND AVENUE TO JR ALLEN PARKWAY

DISTANCE: 8.33 MILES

INTERSECTION	AVERAGE SPEED EASTBOUND	AVERAGE SPEED WESTBOUND	POSTED SPEED LIMIT
SECOND AVENUE	-	26	40
RIVER ROAD	21	20	40
VETERANS PARKWAY	12	22	40
WOODRUFF FARM ROAD	20	29	45
ARMOUR ROAD	28	19	45
INTERSTATE 185	36	29	45
WARM SPRINGS ROAD	28	53	50
MILLER ROAD	57	62	65
JR ALLEN PARKWAY	61	-	65
INTERSECTION	FREE FLOW EASTBOUND RATING	FREE FLOW WESTBOUND RATING	SEGMENT LENGTH (MILES)
SECOND AVENUE	MARGINAL		0.55
RIVER ROAD	CONGESTED	MARGINAL	0.47
VETERANS PARKWAY	CONGESTED	CONGESTED	0.51
WOODRUFF FARM ROAD	CONGESTED	MARGINAL	0.62
ARMOUR ROAD	MARGINAL	MARGINAL	0.53
INTERSTATE 185	GOOD	CONGESTED	0.2
WARM SPRINGS ROAD	MARGINAL	MARGINAL	1.02
MILLER ROAD	GOOD	GOOD	2.7
JR ALLEN PARKWAY		GOOD	1.73

MANCHESTER EXPRESSWAY

CONGESTION MANAGEMENT PROCESS SPRING 2009

SECOND AVENUE TO JR ALLEN PARKWAY

DISTANCE: 8.33 MILES

AM PEAK HOUR EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
SECOND AVENUE	STARTING POINT			
RIVER ROAD	52	18.6	0.465	CONGESTED
VETERANS PARKWAY	170	8.9	0.22	SEVERE
WOODRUFF ROAD	57	22	0.49	CONGESTED
ARMOUR ROAD	27	28.6	0.64	MARGINAL
INTERSTATE 185	18	28.1	0.62	MARGINAL
WARM SPRINGS	82	24.5	0.49	CONGESTED
MILLER ROAD	22	56.5	0.87	GOOD
JR ALLEN PARKWAY	5	61.7	0.95	GOOD
AM PEAK HOUR WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
JR ALLEN PARKWAY	STARTING POINT			
MILLER ROAD	5	61.5	0.95	GOOD
WARM SPRINGS	47	49.6	0.76	OKAY
INTERSTATE 185	30	36	0.72	OKAY
ARMOUR ROAD	98	6.8	0.14	SEVERE
WOODRUFF ROAD	54	23.1	0.51	MARGINAL
VETERANS PARKWAY	20	32.7	0.73	OKAY
RIVER ROAD	43	20.9	0.52	MARGINAL
SECOND AVENUE	20	28.7	0.72	OKAY

MANCHESTER EXPRESSWAY

CONGESTION MANAGEMENT PROCESS SPRING 2009

SECOND AVENUE TO JR ALLEN PARKWAY

DISTANCE: 8.33 MILES

OFF PEAK EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
SECOND AVENUE	STARTING POINT			
RIVER ROAD	38	21.7	0.54	MARGINAL
VETERANS PARKWAY	109	12.1	0.30	SEVERE
WOODRUFF ROAD	46	27	0.60	MARGINAL
ARMOUR ROAD	35	29.2	0.65	MARGINAL
INTERSTATE 185	4	36.4	0.81	GOOD
WARM SPRINGS	15	41.7	0.83	GOOD
MILLER ROAD	21	56.9	0.88	GOOD
JR ALLEN PARKWAY	6	60.6	0.93	GOOD
OFF PEAK WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
JR ALLEN PARKWAY	STARTING POINT			
MILLER ROAD	2	63.4	0.98	GOOD
WARM SPRINGS	24	55.9	0.86	GOOD
INTERSTATE 185	68	26.4	0.53	MARGINAL
ARMOUR ROAD	89	7.5	0.15	SEVERE
WOODRUFF ROAD	18	32.8	0.73	OKAY
VETERANS PARKWAY	92	16.7	0.37	SEVERE
RIVER ROAD	43	21.8	0.55	MARGINAL
SECOND AVENUE	33	24.1	0.60	OKAY

MANCHESTER EXPRESSWAY

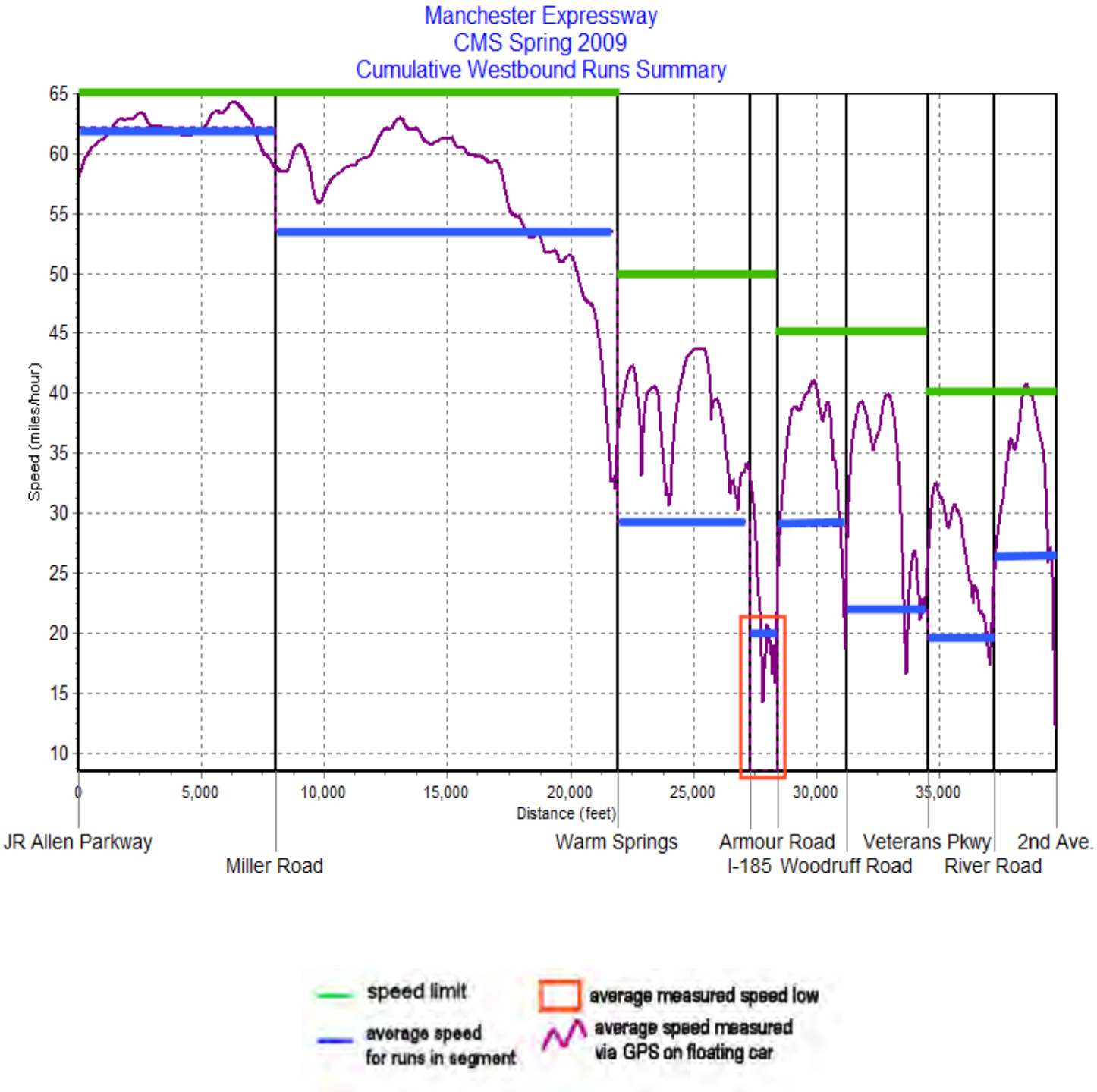
CONGESTION MANAGEMENT PROCESS SPRING 2009

SECOND AVENUE TO JR ALLEN PARKWAY

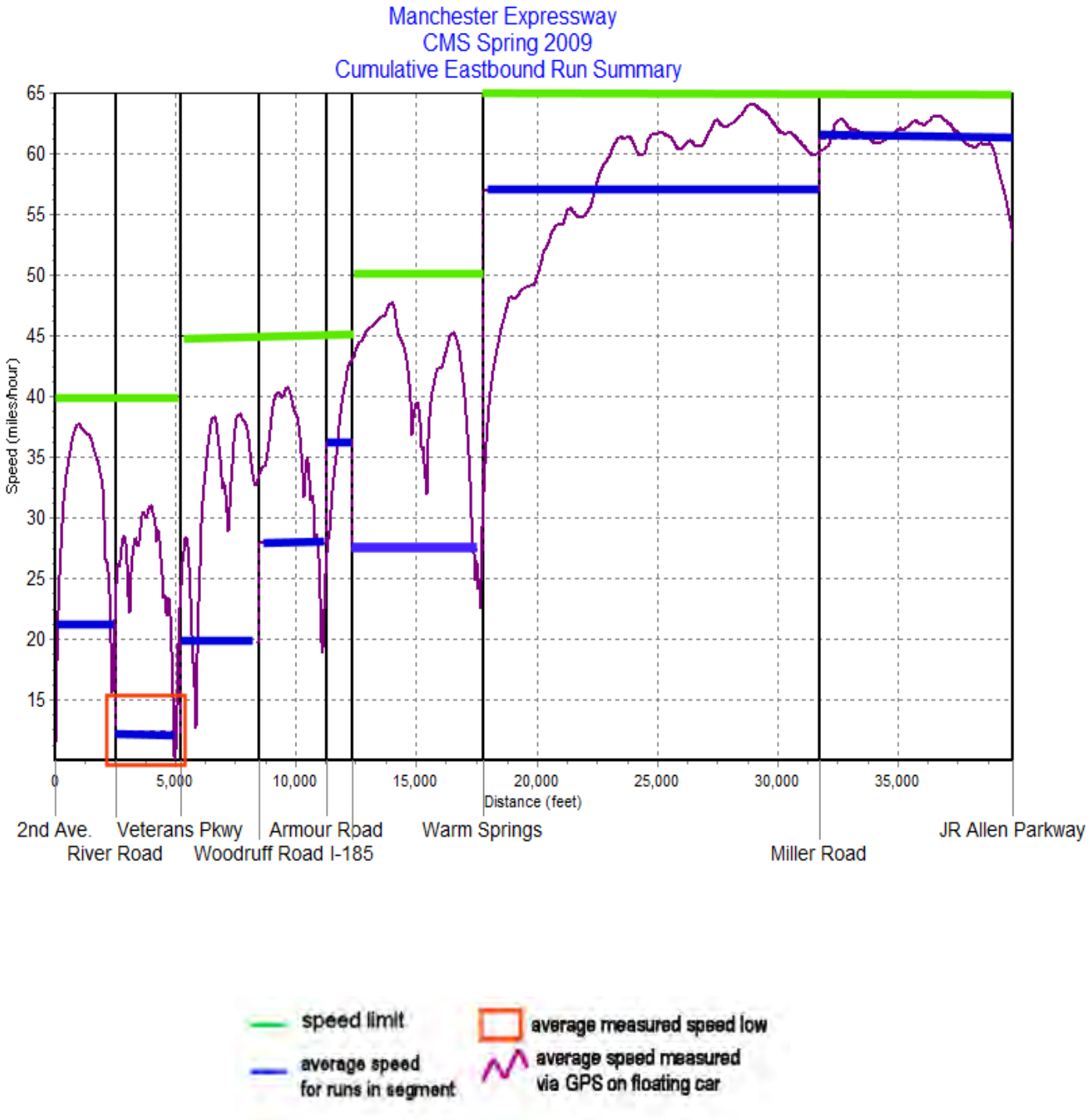
DISTANCE: 8.33 MILES

PM PEAK HOUR EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
SECOND AVENUE	STARTING POINT			
RIVER ROAD	23	26.3	0.65	OKAY
VETERANS PARKWAY	70	16	0.40	SEVERE
WOODRUFF ROAD	82	17.1	0.38	SEVERE
ARMOUR ROAD	78	19.7	0.44	CONGESTED
INTERSTATE 185	4	36	0.80	GOOD
WARM SPRINGS	122	18.9	0.38	SEVERE
MILLER ROAD	25	55.7	0.86	GOOD
JR ALLEN PARKWAY	6	61.1	0.94	GOOD
PM PEAK HOUR WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
JR ALLEN PARKWAY	STARTING POINT			
MILLER ROAD	5	61.5	0.95	GOOD
WARM SPRINGS	27	54.8	0.84	GOOD
INTERSTATE 185	73	25.3	0.51	MARGINAL
ARMOUR ROAD	71	11	0.22	SEVERE
WOODRUFF ROAD	22	30.6	0.68	OKAY
VETERANS PARKWAY	89	16.2	0.36	SEVERE
RIVER ROAD	82	15.6	0.39	SEVERE
SECOND AVENUE	33	22.1	0.55	MARGINAL

MANCHESTER EXPRESSWAY	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
SECOND AVENUE TO JR ALLEN PARKWAY	DISTANCE: 8.33 MILES

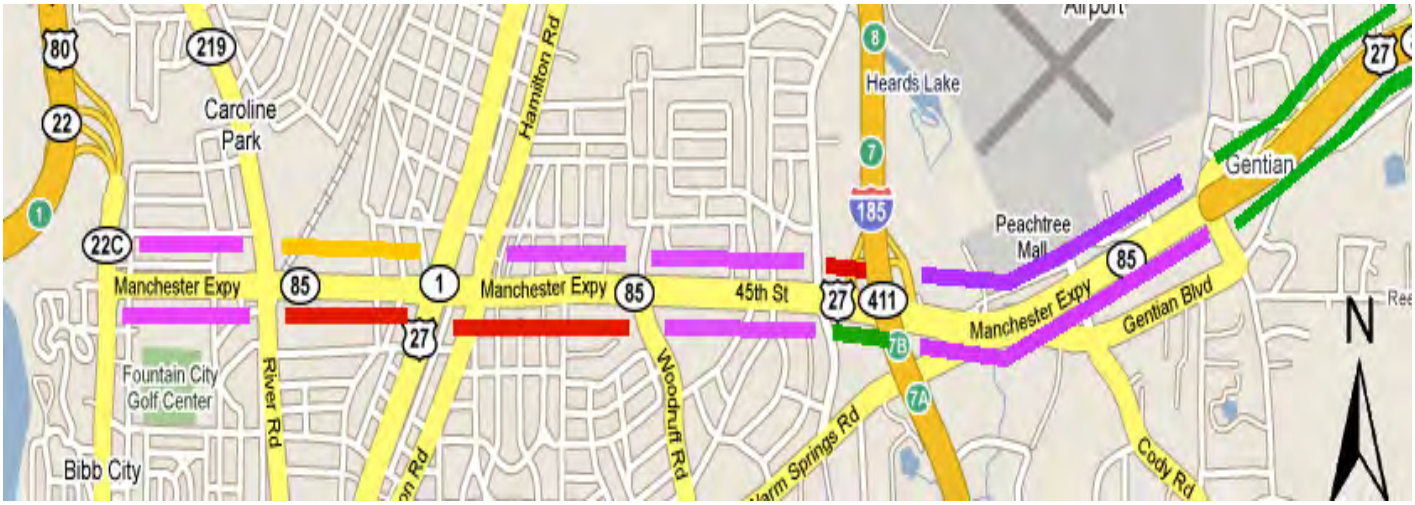


MANCHESTER EXPRESSWAY	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
SECOND AVENUE TO JR ALLEN PARKWAY	DISTANCE: 8.33 MILES



MANCHESTER EXPRESSWAY	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
SECOND AVENUE TO JR ALLEN PARKWAY	DISTANCE: 8.33 MILES

CUMULATIVE AVERAGE CONGESTION RATING FOR ALL THREE MEASURED TIME PERIODS BY DIRECTION TRAVELED



COLOR KEY AND RANKING CATEGORIES
FOR FREE FLOW TRAFFIC SPEED MEASUREMENTS

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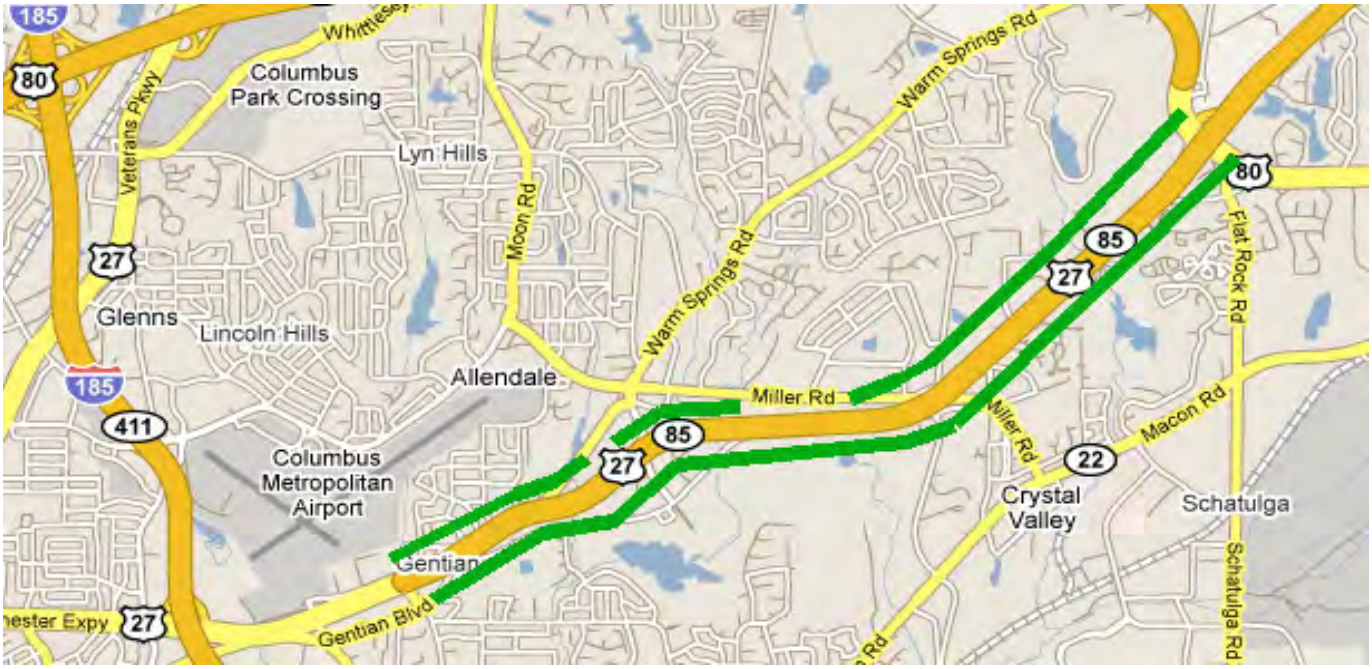
- GOOD - Average traffic speed between 80% of to the posted speed limit.

MANCHESTER EXPRESSWAY	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
SECOND AVENUE TO JR ALLEN PARKWAY	DISTANCE: 8.33 MILES

CUMULATIVE AVERAGE CONGESTION RATING FOR ALL THREE MEASURED TIME PERIODS BY DIRECTION TRAVELED



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- SEVERE - Average traffic speed below 40% of the posted speed limit
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- GOOD - Average traffic speed between 80% of to the posted speed limit.

MANCHESTER EXPRESSWAY	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
SECOND AVENUE TO JR ALLEN PARKWAY	DISTANCE: 8.33 MILES

POSSIBLE CAUSES OF CONGESTION

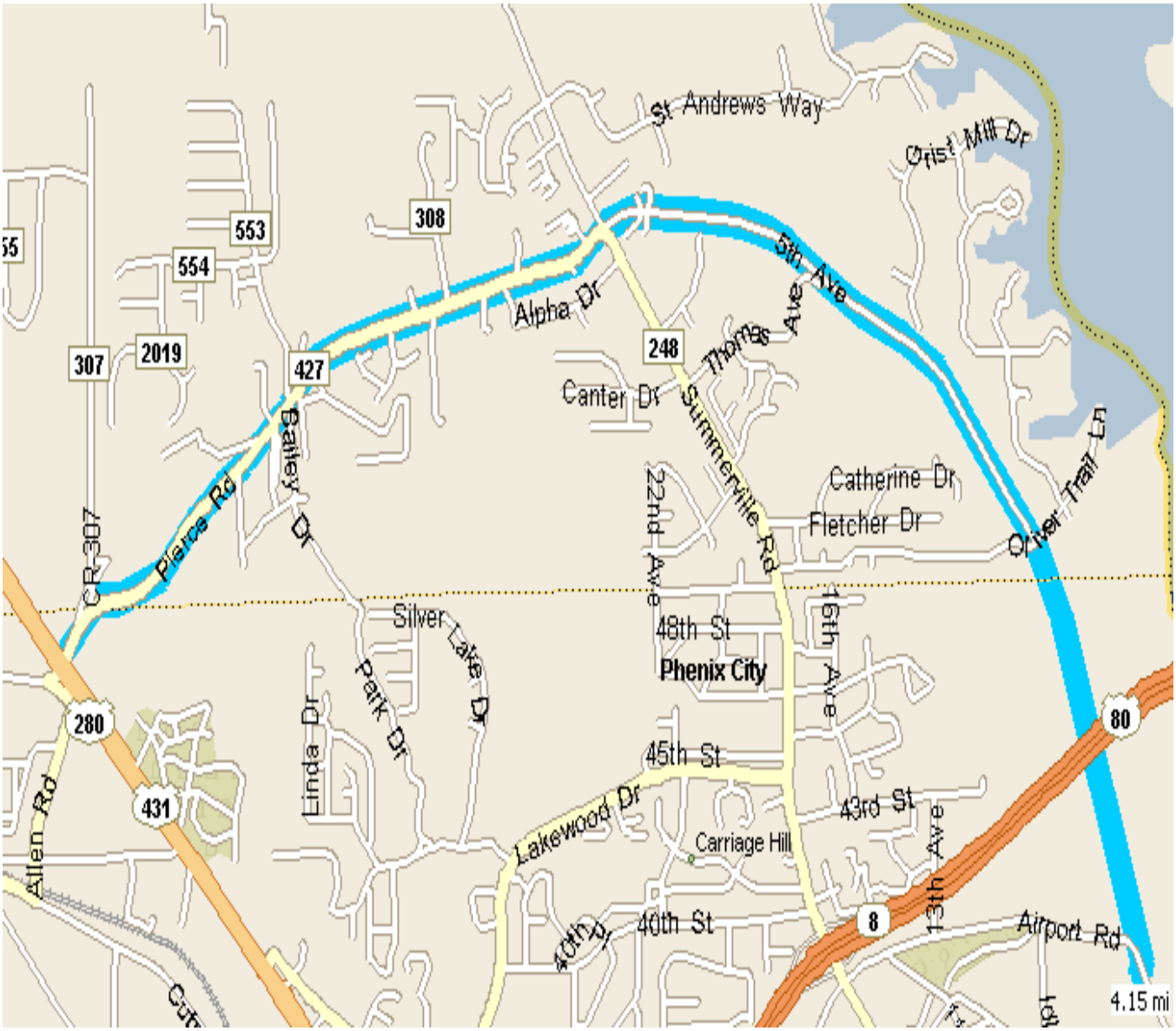
- **Road serves as primary east-west corridor for traffic across city.**
- **Several closely spaced signalized intersections between Armour Road and Warm Springs Road causes delays to through traffic.**
- **Absence of right turn lane from westbound Manchester Expressway onto River Road northbound leads to lengthy queues in the PM rush hour.**

Manchester Expressway	Travel Time	V/C Ratio	Arterial and Intersection LOS	Transit System Measures	Incident Management
Access Management	▲	▶	▲	▶	▶
Traffic Operational Improvement	▲	▶	▲	▶	▶
Intelligent Transportation	▲	▶	▲	▶	▶

▲	Positive effect on congestion.
▶	No discernable effect on congestion.
▼	Negative effect on congestion.

PIERCE ROAD & RIVER CHASE DRIVE	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
US HIGHWAY 280 TO STADIUM DRIVE	DISTANCE: 4.28 MILES

LOCATION MAP OF ROUTE MEASURED



PIERCE ROAD & RIVER CHASE DRIVE	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
US HIGHWAY 280 TO STADIUM DRIVE	DISTANCE: 4.28 MILES

CUMULATIVE AVERAGE - ALL MEASURED TIME PERIODS OF DAY BOTH DIRECTIONS

INTERSECTION	EASTBOUND AVERAGE SPEED	WESTBOUND AVERAGE SPEED	POSTED SPEED LIMIT
US 280	X	32	35
BAILEY DRIVE	32	40	40
SUMMERVILLE ROAD	30	40	40
OLIVER TRAIL	46	43	45
US 80 INTERCHANGE	46	37	45
STADIUM DRIVE	38	X	35

INTERSECTION	EASTBOUND FREE FLOW RATING	WESTBOUND FREE FLOW RATING	SEGMENT LENGTH (MILES)
US 280	GOOD	GOOD	0.28
BAILEY DRIVE	GOOD	GOOD	0.82
SUMMERVILLE ROAD	OK	GOOD	0.95
OLIVER TRAIL	GOOD	GOOD	1.36
US 80 INTERCHANGE	GOOD	GOOD	0.41
STADIUM DRIVE	GOOD	GOOD	0.46

PIERCE ROAD & RIVER CHASE DRIVE

CONGESTION MANAGEMENT PROCESS SPRING 2009

US HIGHWAY 280 TO STADIUM DRIVE

DISTANCE: 4.28 MILES

AM PEAK HOUR EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
US 280	STARTING POINT			
BAILEY DRIVE	9	31.7	0.91	GOOD
SUMMERVILLE ROAD	26	29	0.83	GOOD
OLIVER TRAIL	-2	45.6	1.01	GOOD
US 80 INTERCHANGE	0	45.2	1.00	GOOD
STADIUM DRIVE	8	37.8	0.84	GOOD

AM PEAK HOUR WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
STADIUM DRIVE	STARTING POINT			
US 80 INTERCHANGE	6	38.8	0.86	GOOD
OLIVER TRAIL	2	42.7	0.95	GOOD
SUMMERVILLE ROAD	15	40.7	0.90	GOOD
BAILEY DRIVE	-8	38.1	1.09	GOOD
US 280	7	32.5	0.93	GOOD

PIERCE ROAD & RIVER CHASE DRIVE

CONGESTION MANAGEMENT PROCESS SPRING 2009

US HIGHWAY 280 TO STADIUM DRIVE

DISTANCE: 4.28 MILES

OFF PEAK EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
US 280	STARTING POINT			
BAILEY DRIVE	13	31	0.89	GOOD
SUMMERVILLE ROAD	15	30.6	0.87	GOOD
OLIVER TRAIL	-4	46.7	1.04	GOOD
US 80 INTERCHANGE	-1	46.7	1.04	GOOD
STADIUM DRIVE	6	39	0.87	GOOD
OFF PEAK WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
STADIUM DRIVE	STARTING POINT			
US 80 INTERCHANGE	10	35.6	0.79	OKAY
OLIVER TRAIL	1	43.6	0.97	GOOD
SUMMERVILLE ROAD	14	40.7	0.90	GOOD
BAILEY DRIVE	-13	40.3	1.15	GOOD
US 280	29	27	0.77	OKAY

PIERCE ROAD & RIVER CHASE DRIVE

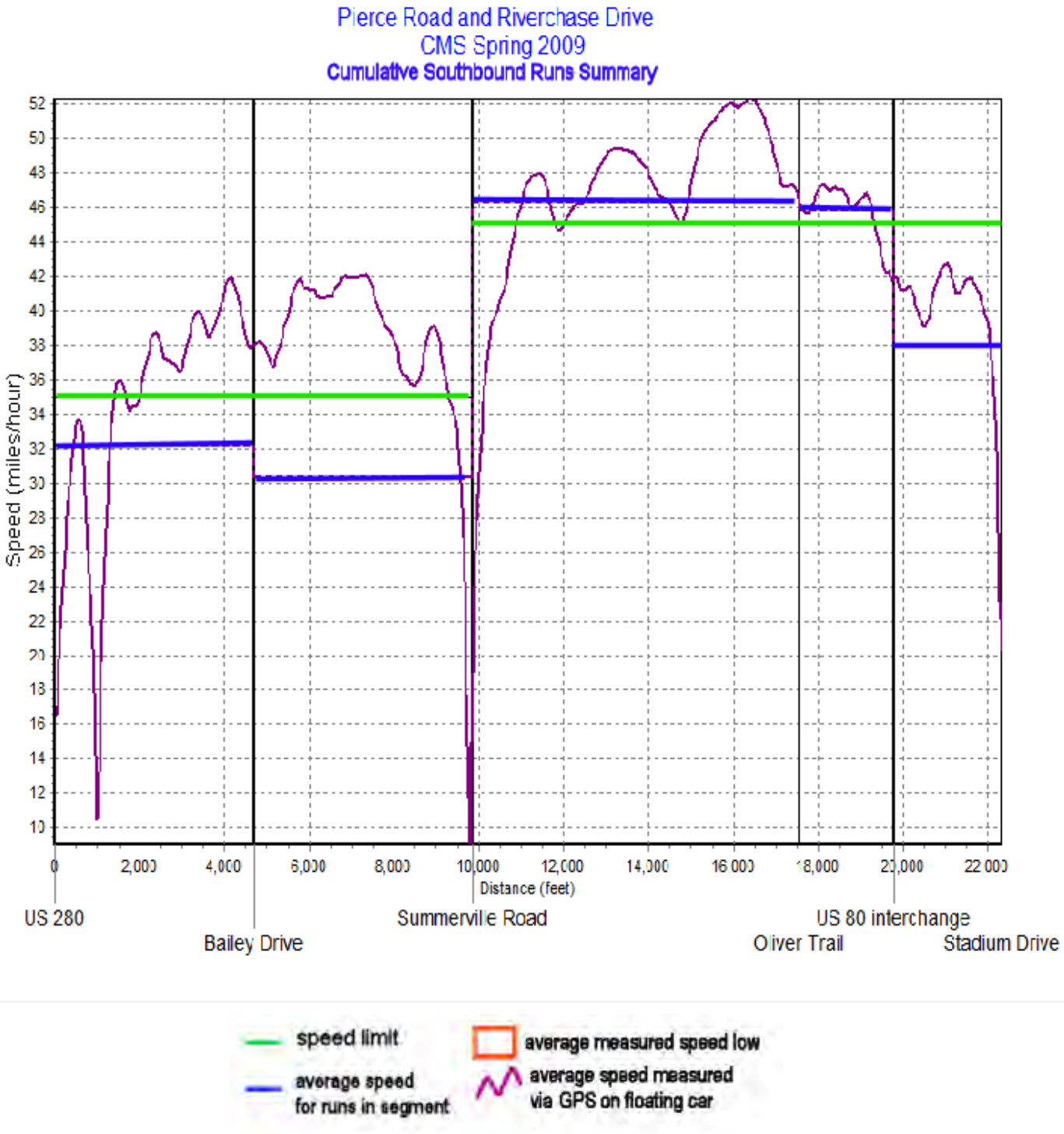
CONGESTION MANAGEMENT PROCESS SPRING 2009

US HIGHWAY 280 TO STADIUM DRIVE

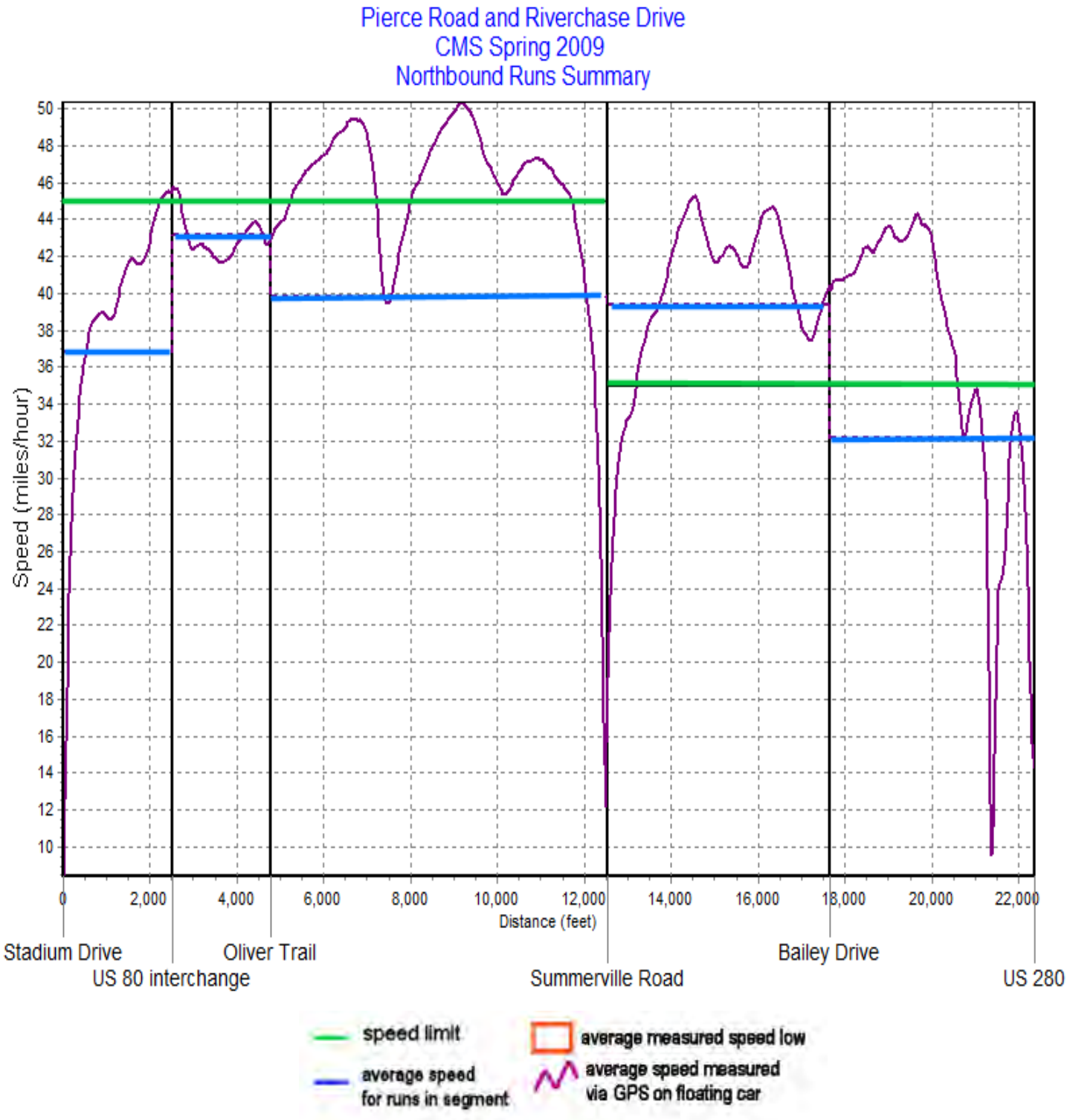
DISTANCE: 4.28 MILES

PM PEAK HOUR EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
US 280	STARTING POINT			
BAILEY DRIVE	3	34.1	0.97	GOOD
SUMMERVILLE ROAD	13	31.2	0.89	GOOD
OLIVER TRAIL	-4	46.4	1.03	GOOD
US 80 INTERCHANGE	0	45.4	1.01	GOOD
STADIUM DRIVE	10	36.8	0.82	GOOD
PM PEAK HOUR WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
STADIUM DRIVE	STARTING POINT			
US 80 INTERCHANGE	10	36	0.80	GOOD
OLIVER TRAIL	2	43	0.96	GOOD
SUMMERVILLE ROAD	24	38	0.84	GOOD
BAILEY DRIVE	-12	39.8	1.14	GOOD
US 280	4	33.5	0.96	GOOD

PIERCE ROAD & RIVER CHASE DRIVE	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
US HIGHWAY 280 TO STADIUM DRIVE	DISTANCE: 4.28 MILES

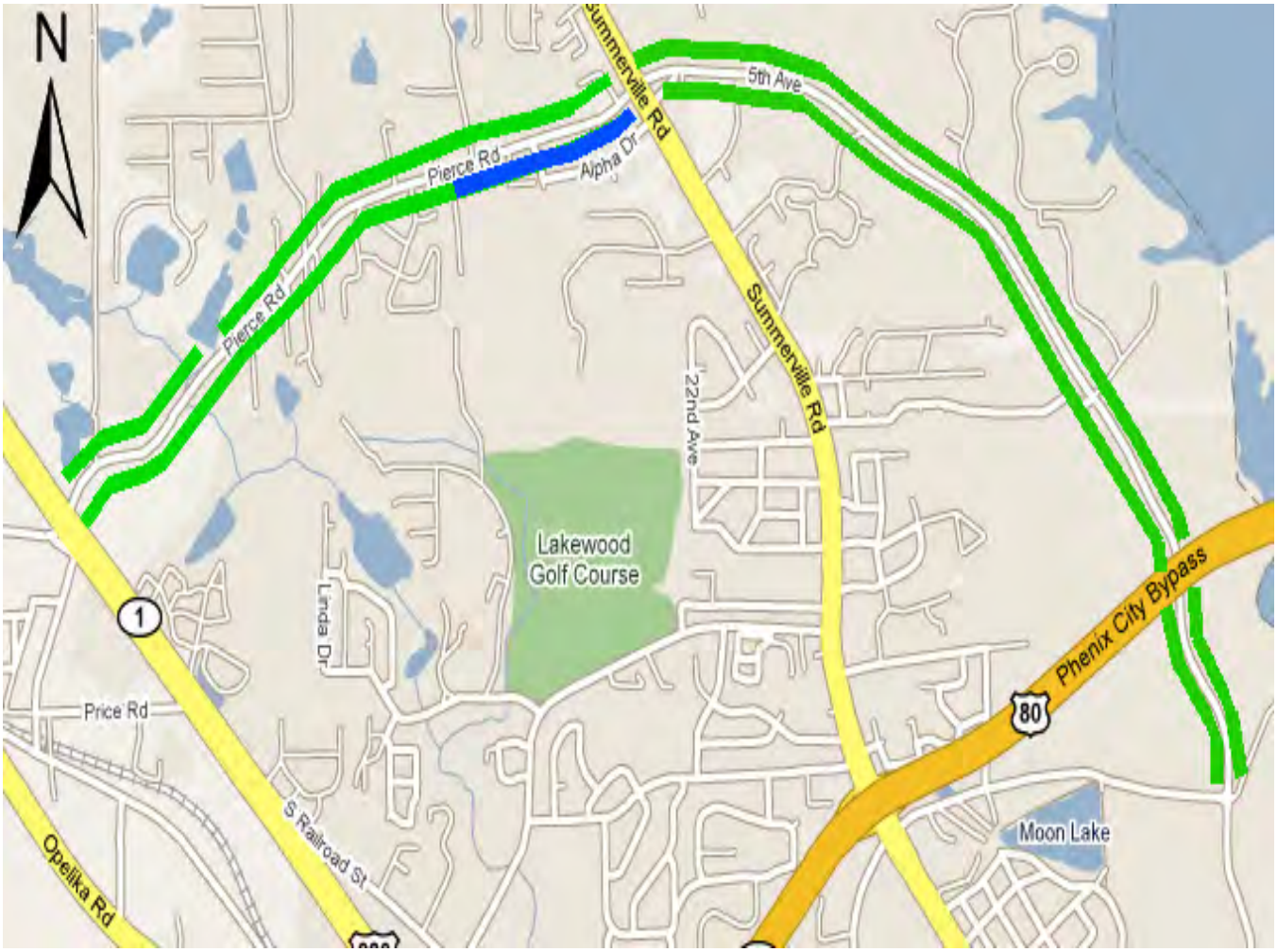


PIERCE ROAD & RIVER CHASE DRIVE	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
US HIGHWAY 280 TO STADIUM DRIVE	DISTANCE: 4.28 MILES



PIERCE ROAD & RIVER CHASE DRIVE	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
US HIGHWAY 280 TO STADIUM DRIVE	DISTANCE: 4.28 MILES

CUMULATIVE AVERAGE CONGESTION RATING FOR ALL THREE MEASURED TIME PERIODS BY DIRECTION TRAVELED



COLOR KEY AND RANKING CATEGORIES
FOR FREE FLOW TRAFFIC SPEED MEASUREMENTS

- SEVERE - Average traffic speed below 40% of the posted speed limit
- CONGESTED - Average traffic speed between 40% and 49% of the posted speed limit
- MARGINAL - Average traffic speed between 50% and 64% of the posted speed limit.
- OKAY - Average traffic speed between 65% and 80% of the posted speed limit.
- GOOD - Average traffic speed between 80% of to the posted speed limit.

PIERCE ROAD & RIVER CHASE DRIVE	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
US HIGHWAY 280 TO STADIUM DRIVE	DISTANCE: 4.28 MILES

POSSIBLE CAUSES OF CONGESTION

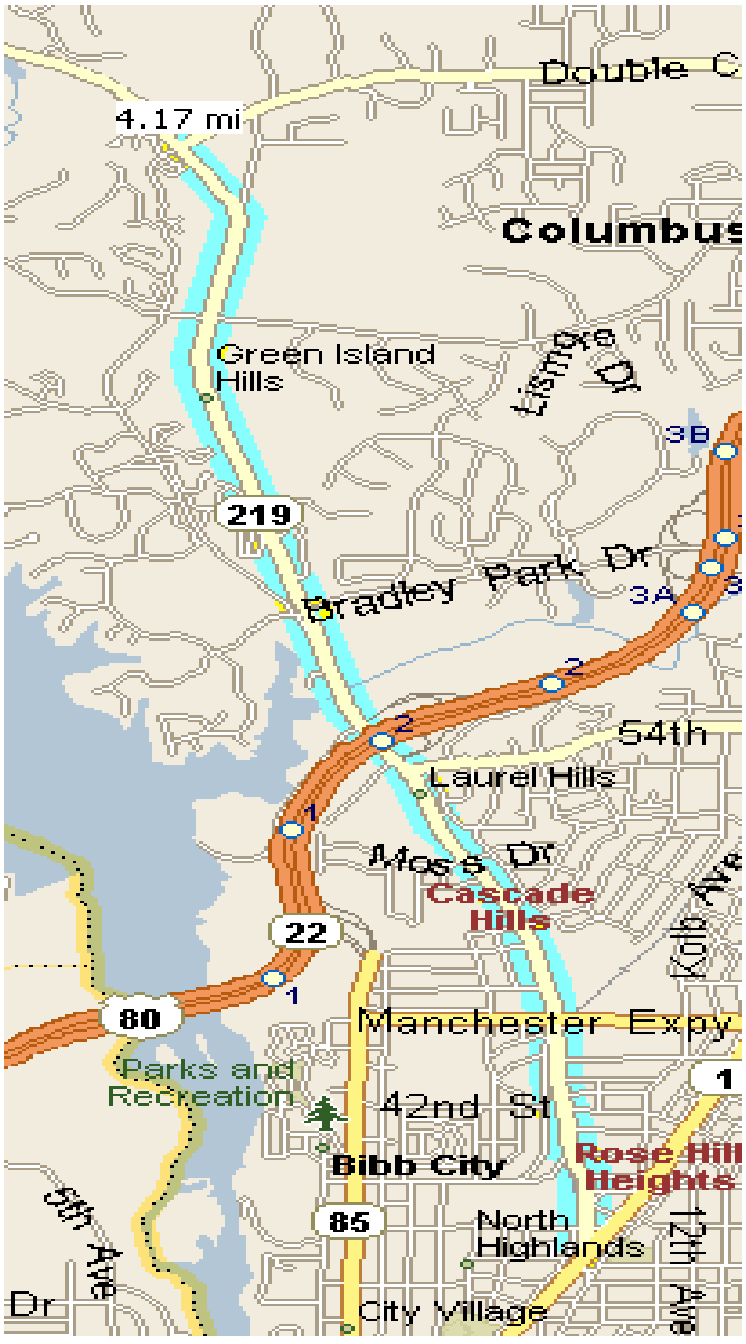
- **Left turn lanes may be needed on Pierce Road at Summerville Road.**
- **US 80 eastbound off ramps at River chase Drive sees lengthy delays in PM rush hour, due to River Chase traffic having priority.**

PIERCE ROAD & RIVER CHASE DRIVE	TRAVEL TIME	V/C RATIO	ARTERIAL AND INTERSECTION L.O.S.	TRANSIT SYSTEM MEASURES
CAPACITY EXPANSION	▶	▶	▲	▶
ACCESS MANAGEMENT	▲	▶	▲	▶
TRAFFIC OPERATIONAL IMPROVEMENT	▲	▼	▲	▶
NON-MOTORIZED MODES	▶	▲	▲	▶

▲	Positive effect on congestion.
▶	No discernable effect on congestion.
▼	Negative effect on congestion.

RIVER ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
VETERANS PARKWAY TO DOUBLE CHURCHES ROAD	DISTANCE: 4.2 MILES

LOCATION MAP OF ROUTE MEASURED



RIVER ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
VETERANS PARKWAY TO DOUBLE CHURCHES ROAD	DISTANCE: 4.2 MILES

CUMULATIVE AVERAGE - ALL MEASURED TIME PERIODS OF DAY BOTH DIRECTIONS

INTERSECTION	AVERAGE SPEED SOUTHBOUND	AVERAGE SPEED NORTHBOUND	POSTED SPEED LIMIT
VETERANS PARKWAY	21	x	40
39TH STREET	37	35	40
MANCHESTER EXPRESSWAY	36	31	40
BRADLEY PARK DRIVE	36	35	40
MOBLEY ROAD	41	43	45
DOUBLE CHURCHES ROAD	x	45	45

INTERSECTION	FREE FLOW SOUTHBOUND RATING	FREE FLOW NORTHBOUND RATING	SEGMENT LENGTH (MILES)
VETERANS PARKWAY	MARGINAL		
39TH STREET	GOOD	GOOD	0.3
MANCHESTER EXPRESSWAY	GOOD	OKAY	0.5
BRADLEY PARK DRIVE	GOOD	GOOD	1.6
MOBLEY ROAD	GOOD	GOOD	1.2
DOUBLE CHURCHES ROAD		GOOD	0.6

RIVER ROAD

CONGESTION MANAGEMENT PROCESS SPRING 2009

VETERANS PARKWAY TO DOUBLE CHURCHES ROAD

DISTANCE: 4.2 MILES

AM PEAK HOUR SOUTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
DOUBLE CHURCHES ROAD	STARTING POINT			
MOBLEY ROAD	13	38.5	0.77	OKAY
BRADLEY PARK DRIVE	37	35.1	0.78	OKAY
MANCHESTER EXPRESSWAY	46	33.5	0.74	OKAY
39TH STREET	6	36.1	0.90	GOOD
VETERANS PARKWAY	65	13.2	0.33	SEVERE
AM PEAK HOUR NORTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
VETERANS PARKWAY	STARTING POINT			
39TH STREET	3	36.9	0.92	GOOD
MANCHESTER EXPRESSWAY	11	32.7	0.82	GOOD
BRADLEY PARK DRIVE	30	33.8	0.85	GOOD
MOBLEY ROAD	7	42	0.93	GOOD
DOUBLE CHURCHES ROAD	2	42.3	0.94	GOOD

RIVER ROAD

CONGESTION MANAGEMENT PROCESS SPRING 2009

VETERANS PARKWAY TO DOUBLE CHURCHES ROAD

DISTANCE: 4.2 MILES

OFF PEAK SOUTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
DOUBLE CHURCHES ROAD	STARTING POINT			
MOBLEY ROAD	6	42.7	0.85	GOOD
BRADLEY PARK DRIVE	7	42.5	0.94	GOOD
MANCHESTER EXPRESSWAY	25	38.8	0.86	GOOD
39TH STREET	0	40.2	1.01	GOOD
VETERANS PARKWAY	23	26.2	0.66	OKAY
OFF PEAK NORTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
VETERANS PARKWAY	STARTING POINT			
39TH STREET	7	34.6	0.87	GOOD
MANCHESTER EXPRESSWAY	16	30.8	0.77	OKAY
BRADLEY PARK DRIVE	19	35.5	0.89	GOOD
MOBLEY ROAD	5	42.8	0.95	GOOD
DOUBLE CHURCHES ROAD	-1	45.1	1.00	GOOD

RIVER ROAD

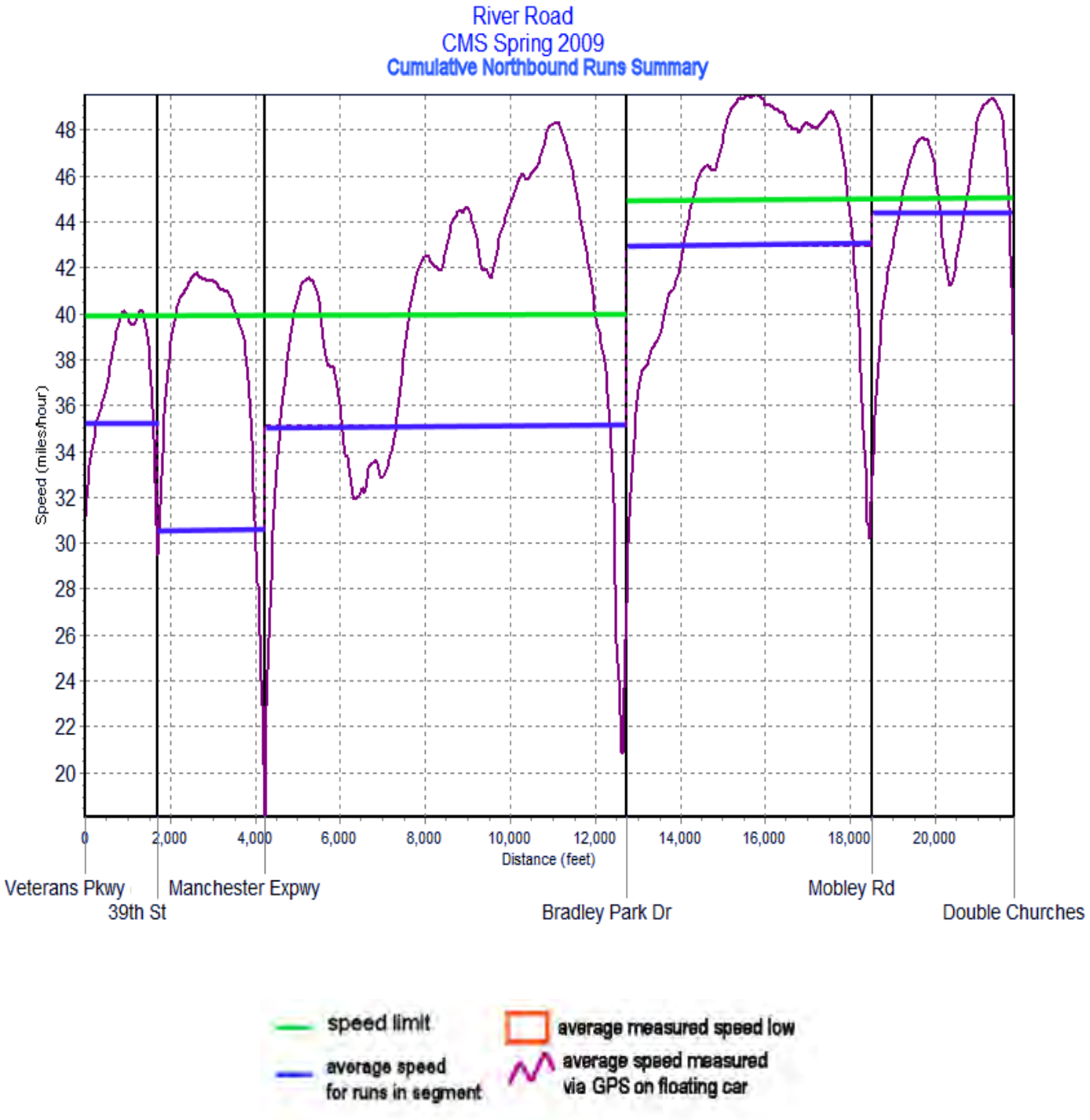
CONGESTION MANAGEMENT PROCESS SPRING 2009

VETERANS PARKWAY TO DOUBLE CHURCHES ROAD

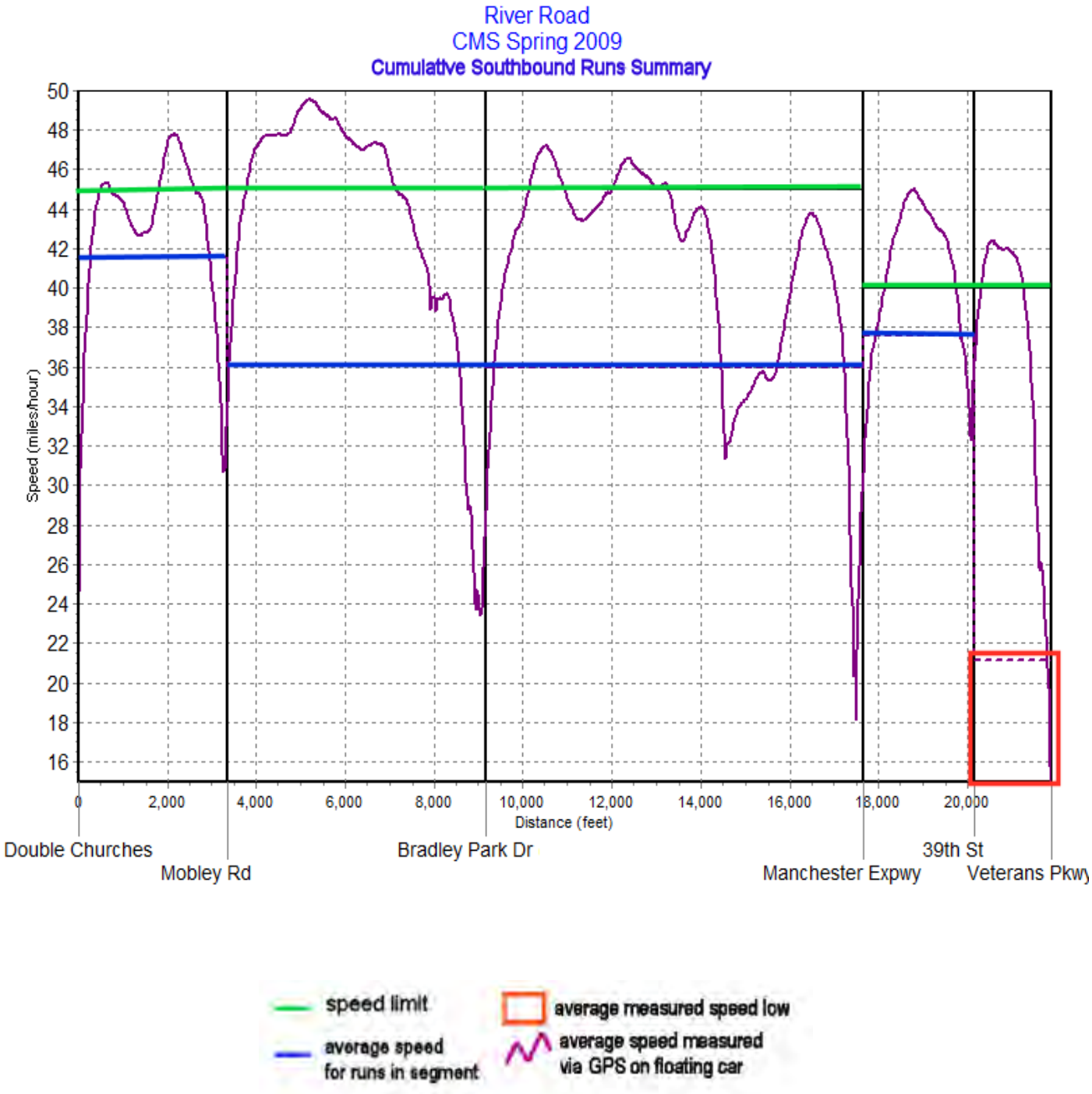
DISTANCE: 4.2 MILES

PM PEAK HOUR SOUTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
DOUBLE CHURCHES ROAD	STARTING POINT			
MOBLEY ROAD	4	44.5	0.89	GOOD
BRADLEY PARK DRIVE	42	30.8	0.68	OKAY
MANCHESTER EXPRESSWAY	33	36.4	0.81	GOOD
39TH STREET	7	37	0.93	GOOD
VETERANS PARKWAY	18	26.7	0.67	MARGINAL
PM PEAK HOUR NORTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
VETERANS PARKWAY	STARTING POINT			
39TH STREET	6	34.2	0.86	GOOD
MANCHESTER EXPRESSWAY	27	28.1	0.70	OKAY
BRADLEY PARK DRIVE	18	36	0.90	GOOD
MOBLEY ROAD	2	44.1	0.98	GOOD
DOUBLE CHURCHES ROAD	-2	45.8	1.02	GOOD

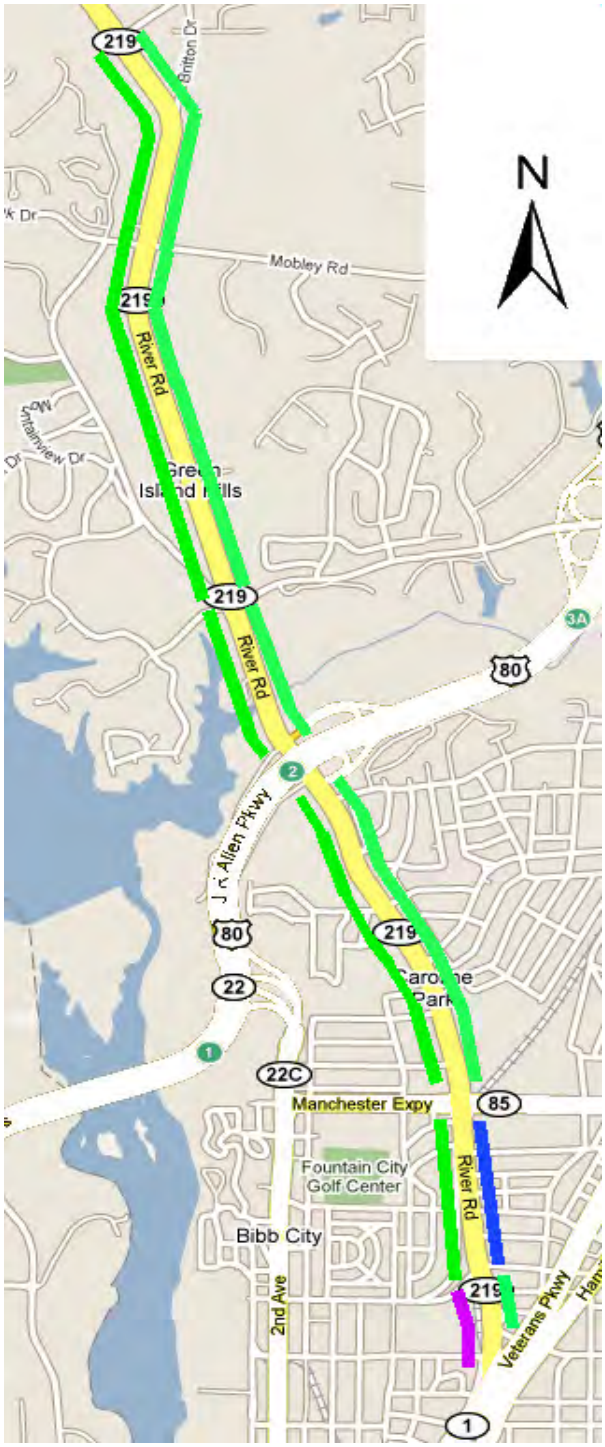
RIVER ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
VETERANS PARKWAY TO DOUBLE CHURCHES ROAD	DISTANCE: 4.2 MILES



RIVER ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
VETERANS PARKWAY TO DOUBLE CHURCHES ROAD	DISTANCE: 4.2 MILES



RIVER ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
VETERANS PARKWAY TO DOUBLE CHURCHES ROAD	DISTANCE: 4.2 MILES



CUMULATIVE AVERAGE CONGESTION RATING FOR ALL THREE MEASURED TIME PERIODS BY DIRECTION TRAVELED

COLOR KEY AND RANKING CATEGORIES
FOR FREE FLOW TRAFFIC SPEED MEASUREMENTS

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RIVER ROAD

CONGESTION MANAGEMENT PROCESS SPRING 2009

VETERANS PARKWAY TO DOUBLE CHURCHES ROAD

DISTANCE: 4.2 MILES

POSSIBLE CAUSES OF CONGESTION

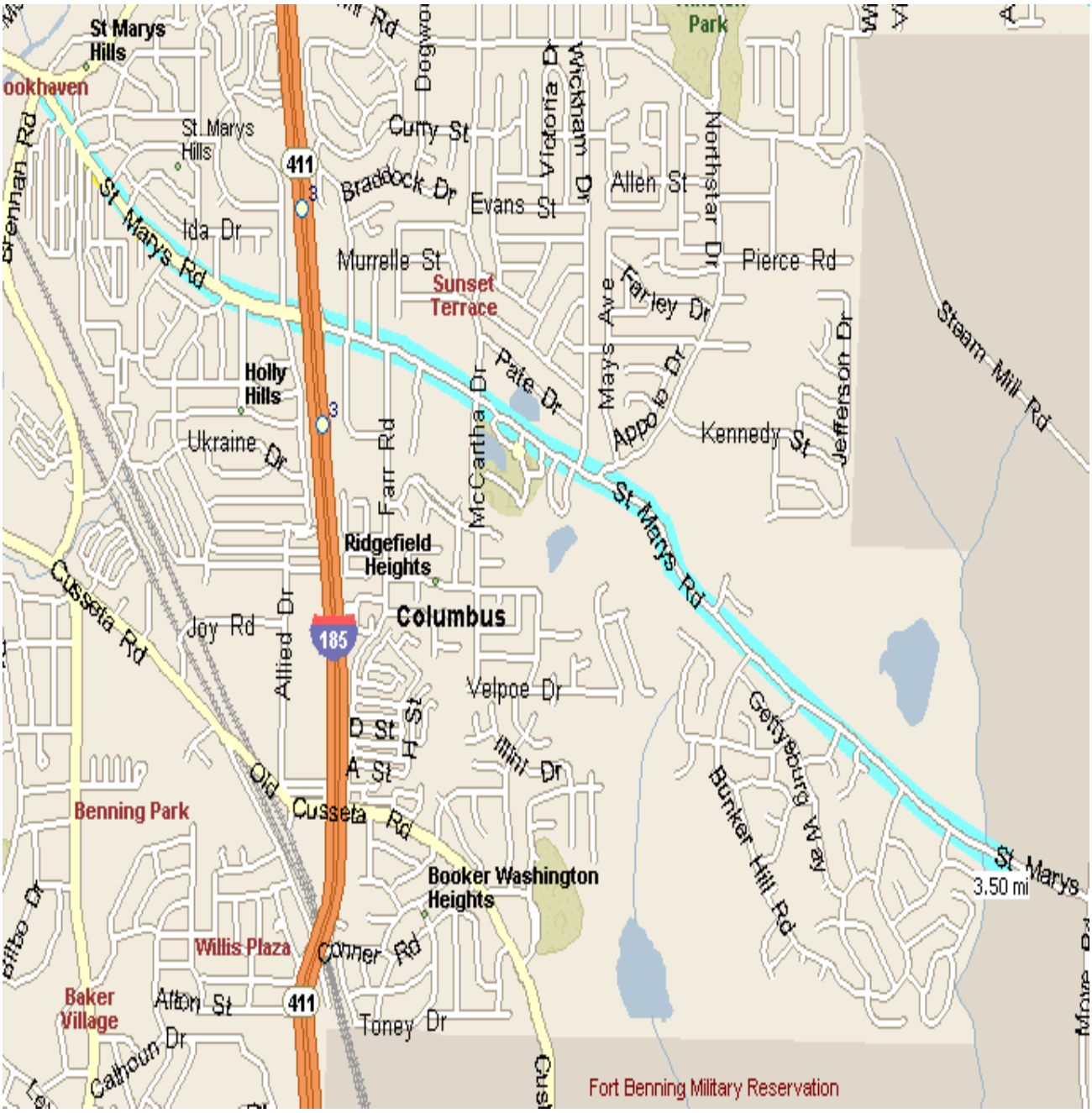
- Heavy traffic southbound on River Road and Bradley Park Drive in the AM Rush Hour period. This is particularly true when the school year is in session with congestion conditions alleviating in summer.

RIVER ROAD	Travel Time	V/C Ratio	Arterial and Intersection LOS	Transit System Measures	Incident Management
TRAFFIC OPERATIONAL IMPROVEMENT	▲	▶	▲	▶	▲
ACCESS MANAGEMENT	▲	▶	▲	▶	▶
TRANSIT IMPROVEMENTS	▲	▲	▲	▲	▶
NON-MOTORIZED MODES	▲	▶	▲	▶	▶

▲	Positive effect on congestion.
▶	No discernable effect on congestion.
▼	Negative effect on congestion.

SAINT MARYS ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
FT. BENNING BOUNDARY TO BUENA VISTA ROAD	DISTANCE: 3.56 MILES

LOCATION MAP OF ROUTE MEASURED



SAINT MARYS ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
FT. BENNING BOUNDARY TO BUENA VISTA ROAD	DISTANCE: 3.56 MILES

CUMULATIVE AVERAGE - ALL MEASURED TIME PERIODS OF DAY BOTH DIRECTIONS

INTERSECTION	AVERAGE SPEED EASTBOUND	AVERAGE SPEED WESTBOUND	POSTED SPEED LIMIT
END OF ROAD	35		35
WICKHAM DRIVE	25	36	35
INTERSTATE 185 INTERCHANGE	27	29	35
ROBIN DRIVE	37	26	35
BUENA VISTA ROAD		24	35
INTERSECTION	FREE FLOW EASTBOUND RATING	FREE FLOW WESTBOUND RATING	SEGMENT LENGTH (MILES)
END OF ROAD	GOOD		0.23
WICKHAM DRIVE	OKAY	GOOD	1.40
INTERSTATE 185 INTERCHANGE	OKAY	GOOD	0.90
ROBIN DRIVE	GOOD	OKAY	0.26
BUENA VISTA ROAD		OKAY	0.77

SAINT MARYS ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
FT. BENNING BOUNDARY TO BUENA VISTA ROAD	DISTANCE: 3.56 MILES

AM PEAK HOUR WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
FT BENNING BOUNDARY	STARTING POINT			
WICKHAM DRIVE	-6	36.6	1.05	GOOD
INTERSTATE 185	64	20.8	0.59	MARGINAL
ROBIN DRIVE	15	23	0.66	OKAY
BUENA VISTA ROAD	19	28	0.80	GOOD
AM PEAK HOUR EASTBOUND	AVERAGE DELAY	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
BUENA VISTA ROAD	STARTING POINT			
ROBIN DRIVE	-3	39.1	1.12	GOOD
INTERSTATE 185	29	27.6	0.79	OKAY
WICKHAM DRIVE	67	20.9	0.60	MARGINAL
FT BENNING BOUNDARY	-4	36.1	1.03	GOOD

SAINT MARYS ROAD

CONGESTION MANAGEMENT PROCESS SPRING 2009

FT. BENNING BOUNDARY TO BUENA VISTA ROAD

DISTANCE: 3.56 MILES

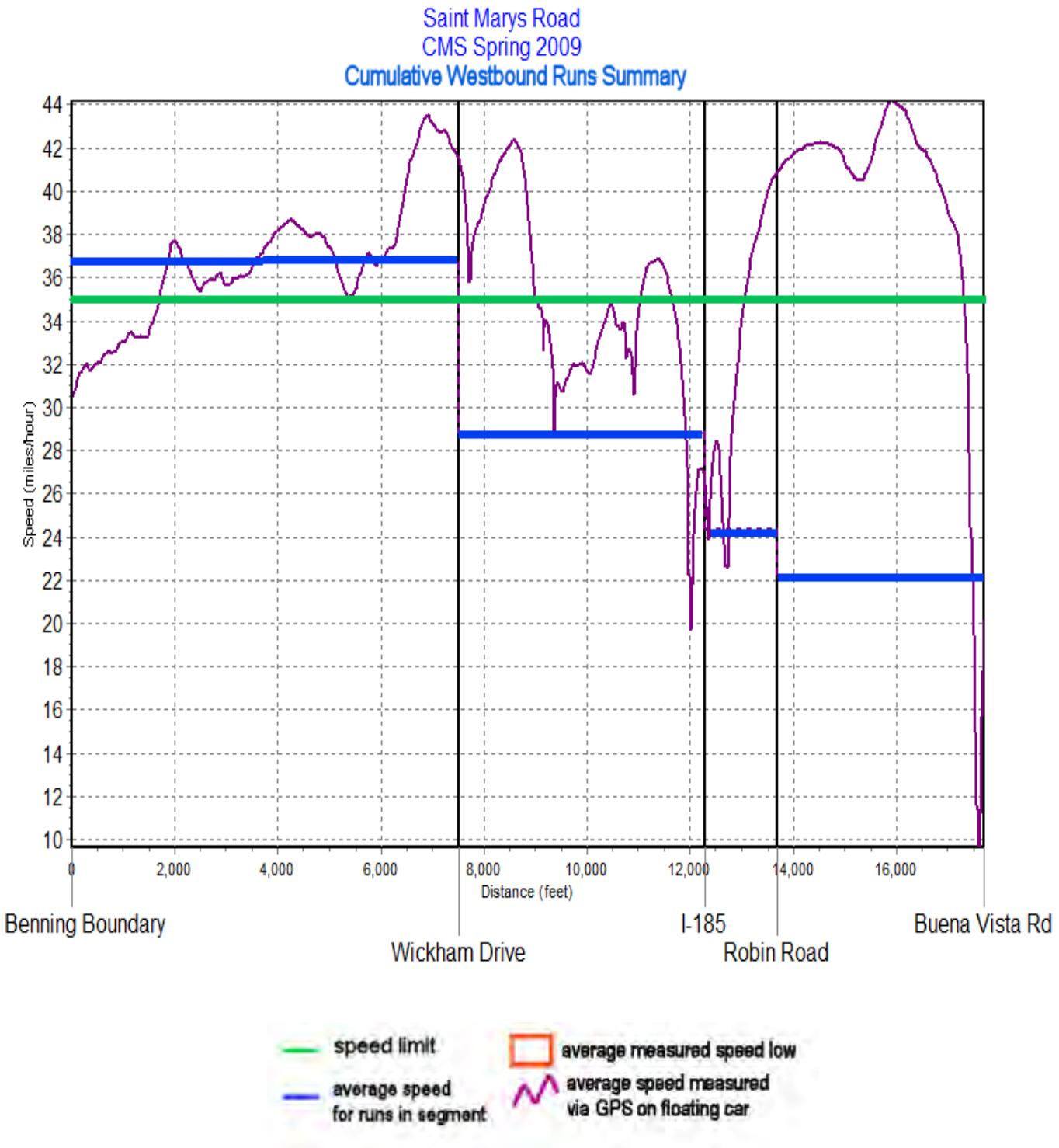
OFF PEAK HOURS WESTBOUND	AVERAGE DELAY	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
FT BENNING BOUNDARY	STARTING POINT			
WICKHAM DRIVE	-9	37.2	1.06	GOOD
INTERSTATE 185	4	33.9	0.97	GOOD
ROBIN DRIVE	15	27.6	0.79	OKAY
BUENA VISTA ROAD	101	15.5	0.44	MARGINAL

OFF PEAK HOURS EASTBOUND	AVERAGE DELAY	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
BUENA VISTA ROAD	STARTING POINT			
ROBIN DRIVE	17	28.2	0.81	GOOD
INTERSTATE 185	51	12.4	0.35	SEVERE
WICKHAM DRIVE	18	29.4	0.84	GOOD
FT BENNING BOUNDARY	-8	37.1	1.06	GOOD

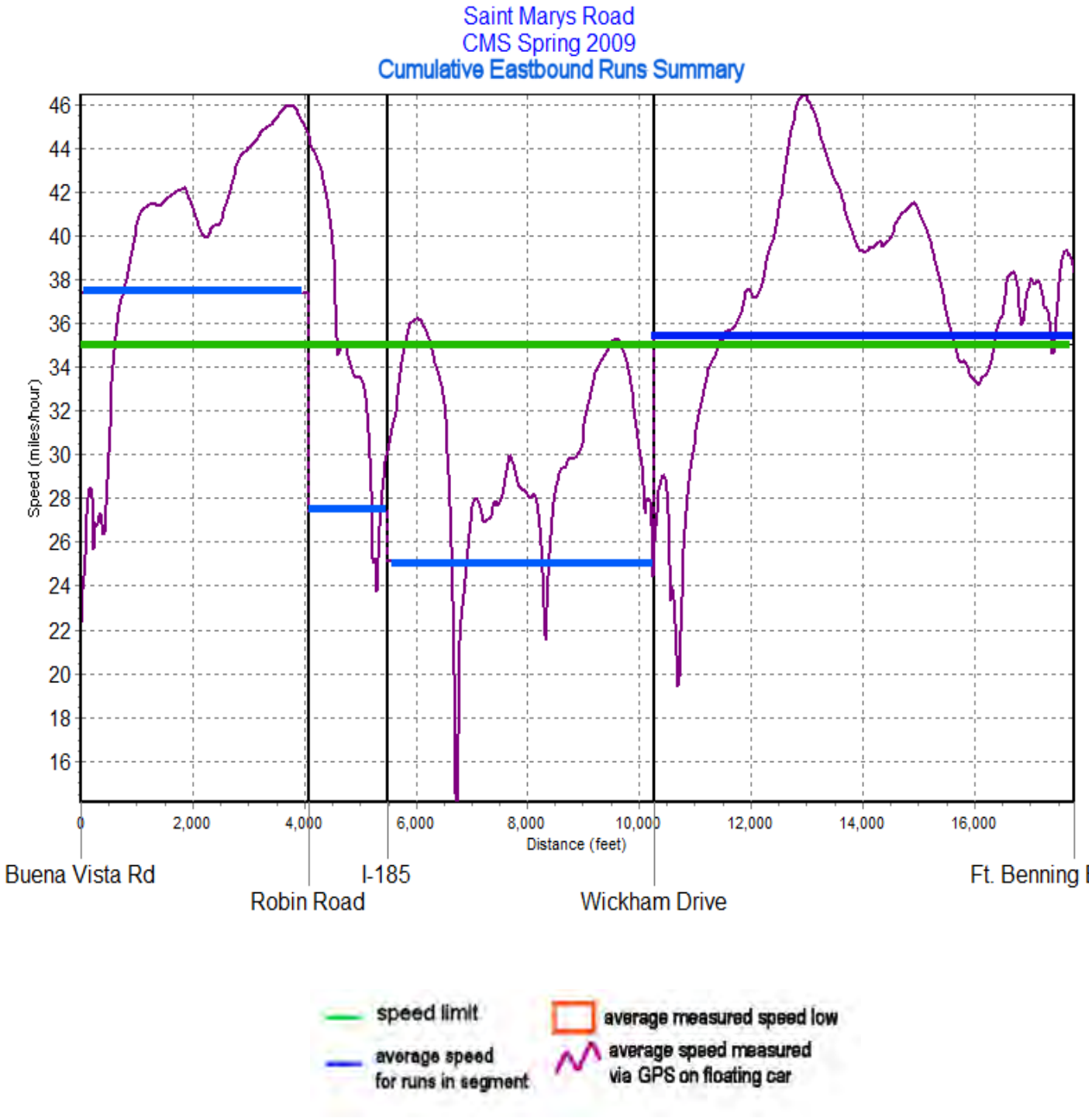
SAINT MARYS ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
FT. BENNING BOUNDARY TO BUENA VISTA ROAD	DISTANCE: 3.56 MILES

PM PEAK HOUR WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
FT BENNING BOUNDARY	STARTING POINT			
WICKHAM DRIVE	-5	36.3	1.04	GOOD
INTERSTATE 185	19	31.7	0.91	GOOD
ROBIN DRIVE	22	22.4	0.64	MARGINAL
BUENA VISTA ROAD	65	22.9	0.65	OKAY
PM PEAK HOUR EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
BUENA VISTA ROAD	STARTING POINT			
ROBIN DRIVE	-13	41.2	1.18	GOOD
INTERSTATE 185	46	13.4	0.38	SEVERE
WICKHAM DRIVE	52	22.5	0.64	MARGINAL
FT BENNING BOUNDARY	-3	35.8	1.02	GOOD

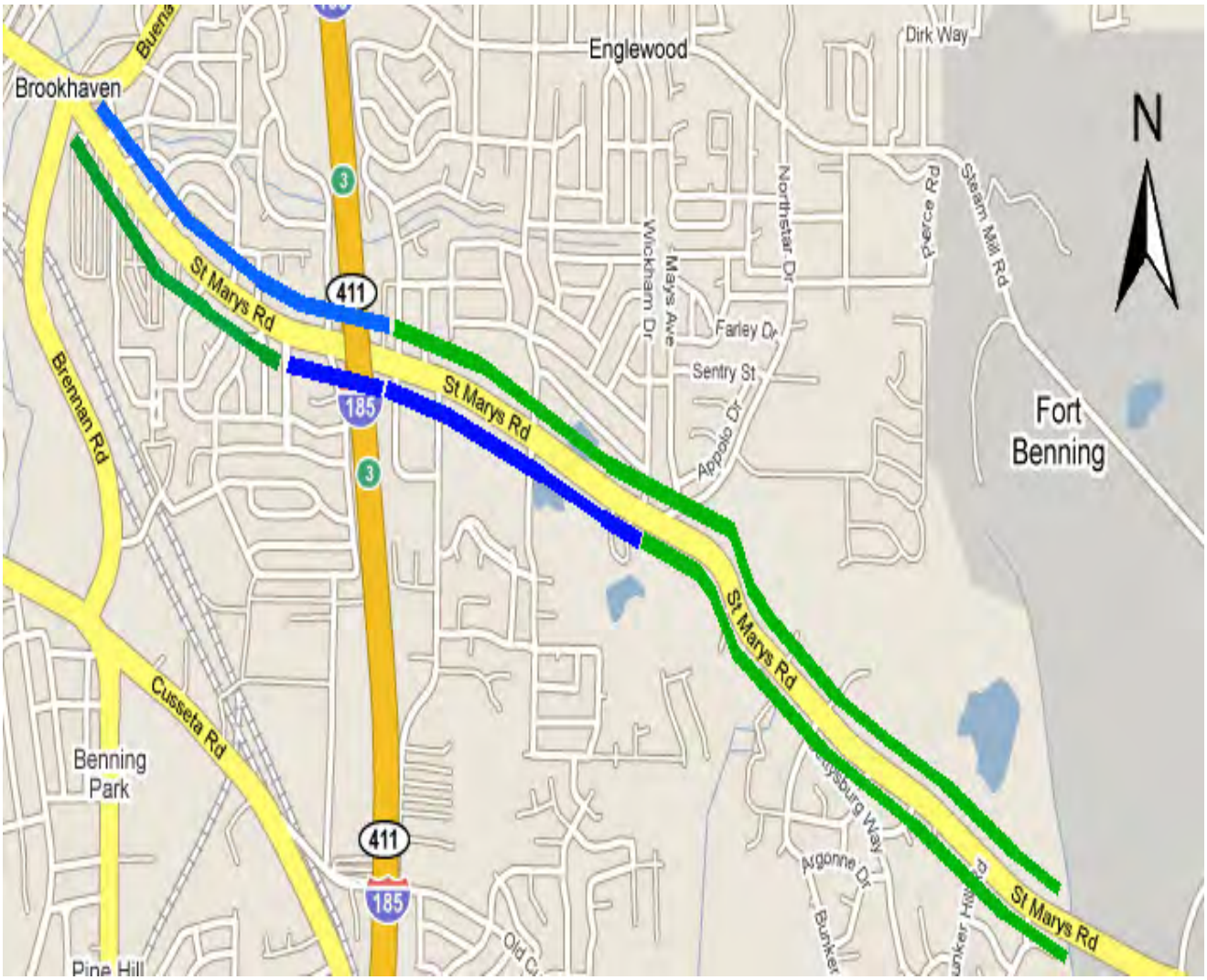
SAINT MARYS ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
FT. BENNING BOUNDARY TO BUENA VISTA ROAD	DISTANCE: 3.56 MILES



SAINT MARYS ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
FT. BENNING BOUNDARY TO BUENA VISTA ROAD	DISTANCE: 3.56 MILES



SAINT MARYS ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
FT. BENNING BOUNDARY TO BUENA VISTA ROAD	DISTANCE: 3.56 MILES



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- GOOD - Average traffic speed between 80% of to the posted speed limit.

SAINT MARYS ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
FT. BENNING BOUNDARY TO BUENA VISTA ROAD	DISTANCE: 3.56 MILES

POSSIBLE CAUSES OF CONGESTION

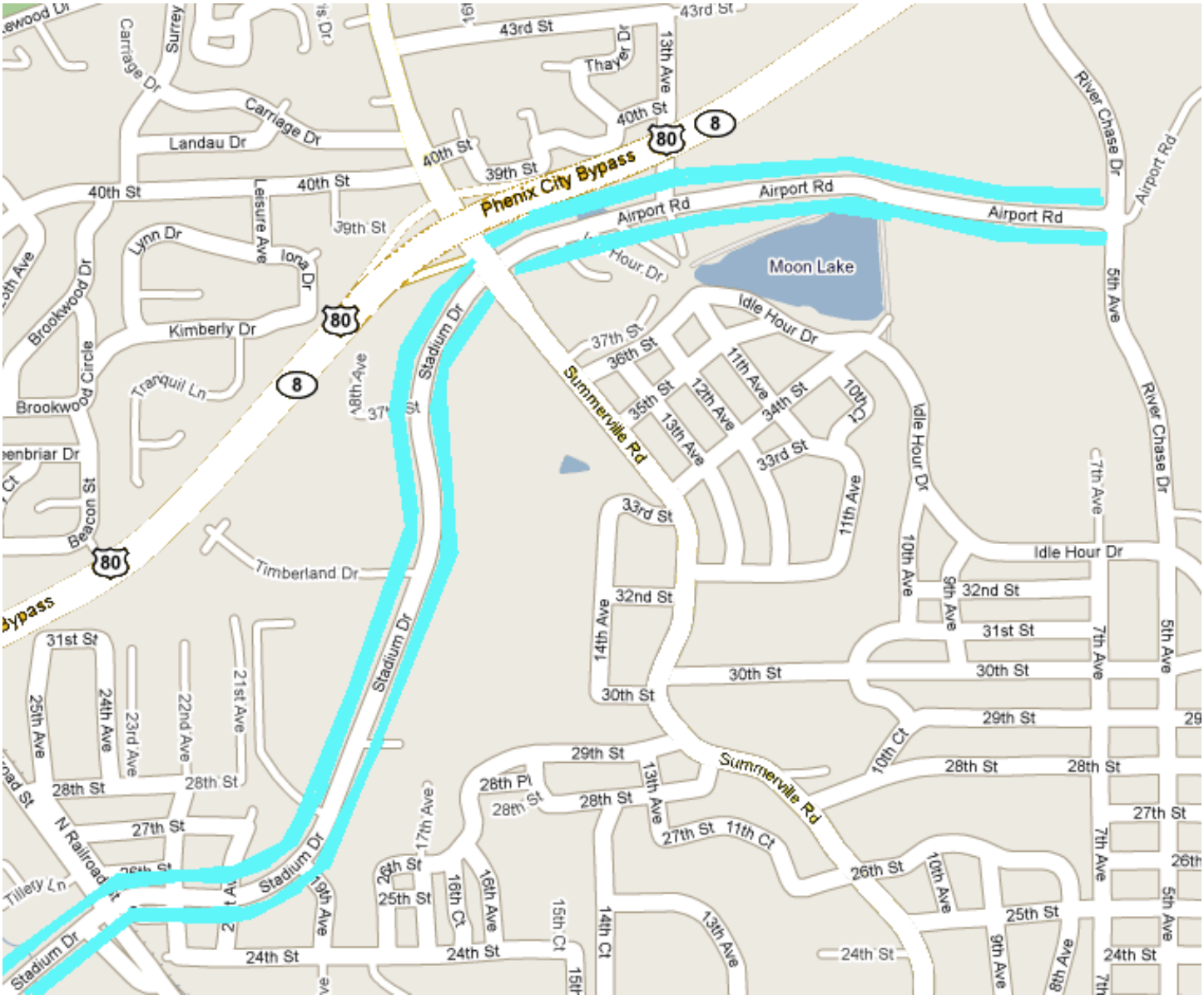
- Congestion is regularly occurring eastbound along route between Robin Road and Wickham Drive. There is a need for providing means for traffic to make left turns without hindering traffic.
- Existing and projected volumes for roadway will put roadway into detrimental levels of service.
- Interstate 185 interchange with St. Marys Road is in need of reconstruction.

Saint Marys Road	Travel Time	V/C Ratio	Arterial And Intersection LOS	Transit System Measures	Incident Management
Capacity Expansion	▲	▲	▲	▶	▲
Access Management	▲	▲	▲	▲	▶
Traffic Operational Improvement	▲	▲	▲	▶	▲

▲	Positive effect on congestion.
▶	No discernable effect on congestion.
▼	Negative effect on congestion.

STADIUM DRIVE	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
OPELIKA ROAD TO RIVER CHASE DRIVE	DISTANCE: 2.5 MILES

LOCATION MAP OF ROUTE MEASURED



STADIUM DRIVE	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
OPELIKA ROAD TO RIVER CHASE DRIVE	DISTANCE: 2.5 MILES

CUMULATIVE AVERAGE -
ALL MEASURED TIME PERIODS OF DAY
BOTH DIRECTIONS

INTERSECTION	EASTBOUND AVERAGE SPEED	WESTBOUND AVERAGE SPEED	POSTED SPEED LIMIT
OPELIKA ROAD	X	20	25
RAILROAD ST	18	24	35
TIMBERLAND DR.	32	33	35
SUMMERVILLE ROAD.	20	16	35
13TH AVENUE	31	33	35
RIVER CHASE DRIVE	32	X	35
INTERSECTION	EASTBOUND FREE FLOW RATING	WESTBOUND FREE FLOW RATING	SEGMENT LENGTH (MILES)
OPELIKA ROAD		GOOD	0.16
RAILROAD STREET	MARGINAL	OKAY	0.33
TIMBERLAND DRIVE	GOOD	GOOD	0.66
SUMMERVILLE ROAD	MARGINAL	MARGINAL	0.45
13TH AVENUE	GOOD	GOOD	0.26
RIVER CHASE DRIVE	GOOD		0.64

STADIUM DRIVE

CONGESTION MANAGEMENT PROCESS SPRING 2009

OPELIKA ROAD TO RIVER CHASE DRIVE

DISTANCE: 2.5 MILES

AM PEAK HOUR EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
OPELIKA ROAD	STARTING POINT			
RAILROAD STREET	53	12.8	0.37	SEVERE
TIMBERLAND DRIVE	8	31.8	0.91	GOOD
SUMMERVILLE ROAD	40	23.8	0.68	OKAY
13TH AVENUE	2	32.2	0.92	GOOD
RIVER CHASE DRIVE	3	33.6	0.96	GOOD
AM PEAK HOUR WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
RIVER CHASE DRIVE	STARTING POINT			
13TH AVENUE	2	33.8	0.97	GOOD
SUMMERVILLE ROAD	34	21.3	0.61	MARGINAL
TIMBERLAND DRIVE	4	32.7	0.93	GOOD
RAILROAD STREET	74	21.6	0.62	MARGINAL
OPELIKA ROAD	13	22.4	0.64	MARGINAL

STADIUM DRIVE

CONGESTION MANAGEMENT PROCESS SPRING 2009

OPELIKA ROAD TO RIVER CHASE DRIVE

DISTANCE: 2.5 MILES

OFF PEAK EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
OPELIKA ROAD	STARTING POINT			
RAILROAD STREET	37	14.5	0.41	CONGESTED
TIMBERLAND DRIVE	10	31.1	0.89	GOOD
SUMMERVILLE ROAD	34	22.6	0.65	OKAY
13TH AVENUE	5	29.4	0.84	GOOD
RIVER CHASE DRIVE	0	34.8	0.99	GOOD
OFF PEAK WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
RIVER CHASE DRIVE	STARTING POINT			
13TH AVENUE	3	33.7	0.96	GOOD
SUMMERVILLE ROAD	79	9.5	0.27	SEVERE
TIMBERLAND DRIVE	3	33.1	0.95	GOOD
RAILROAD STREET	19	29.2	0.83	GOOD
OPELIKA ROAD	17	20.8	0.59	MARGINAL

STADIUM DRIVE

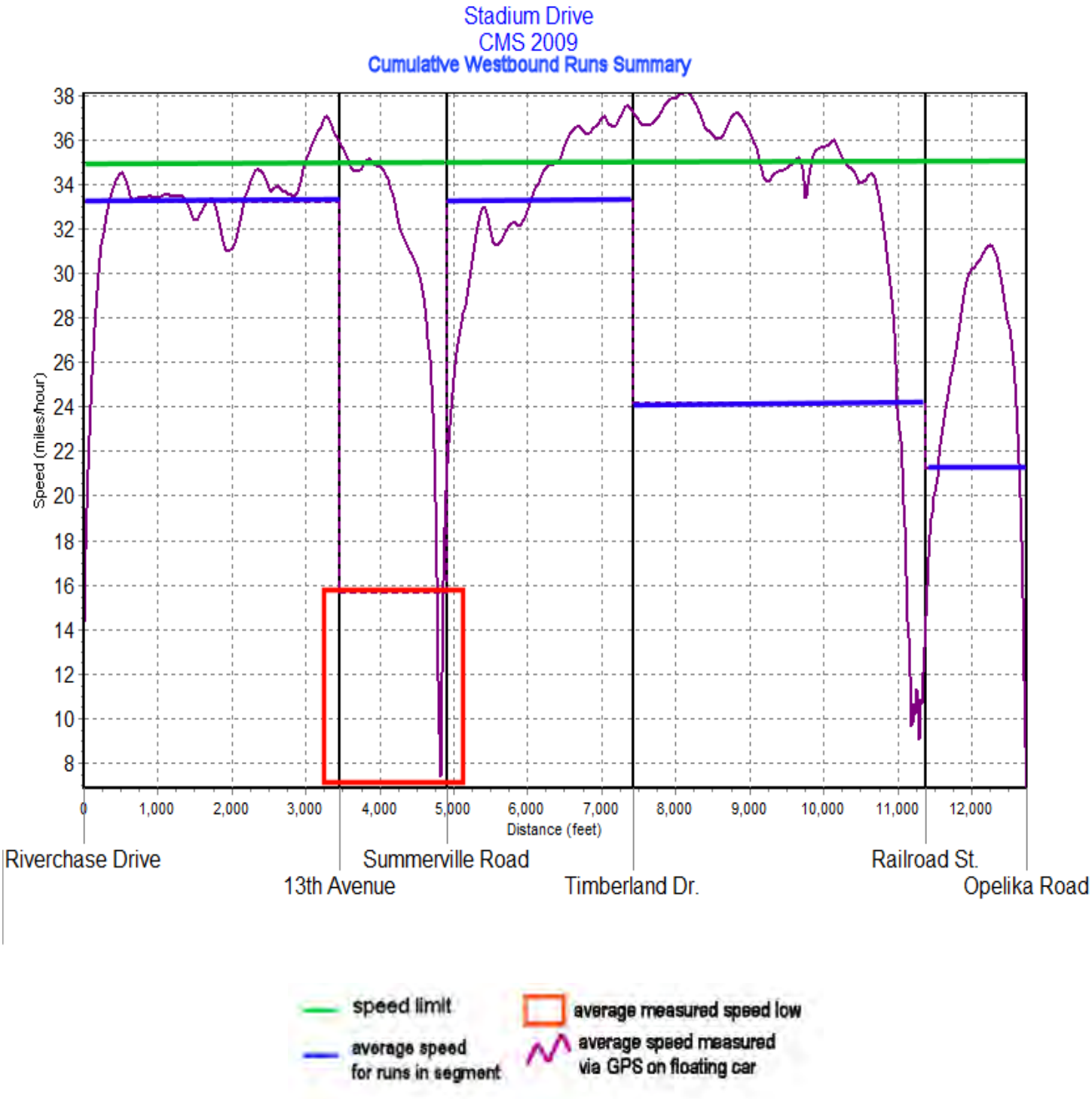
CONGESTION MANAGEMENT PROCESS SPRING 2009

OPELIKA ROAD TO RIVER CHASE DRIVE

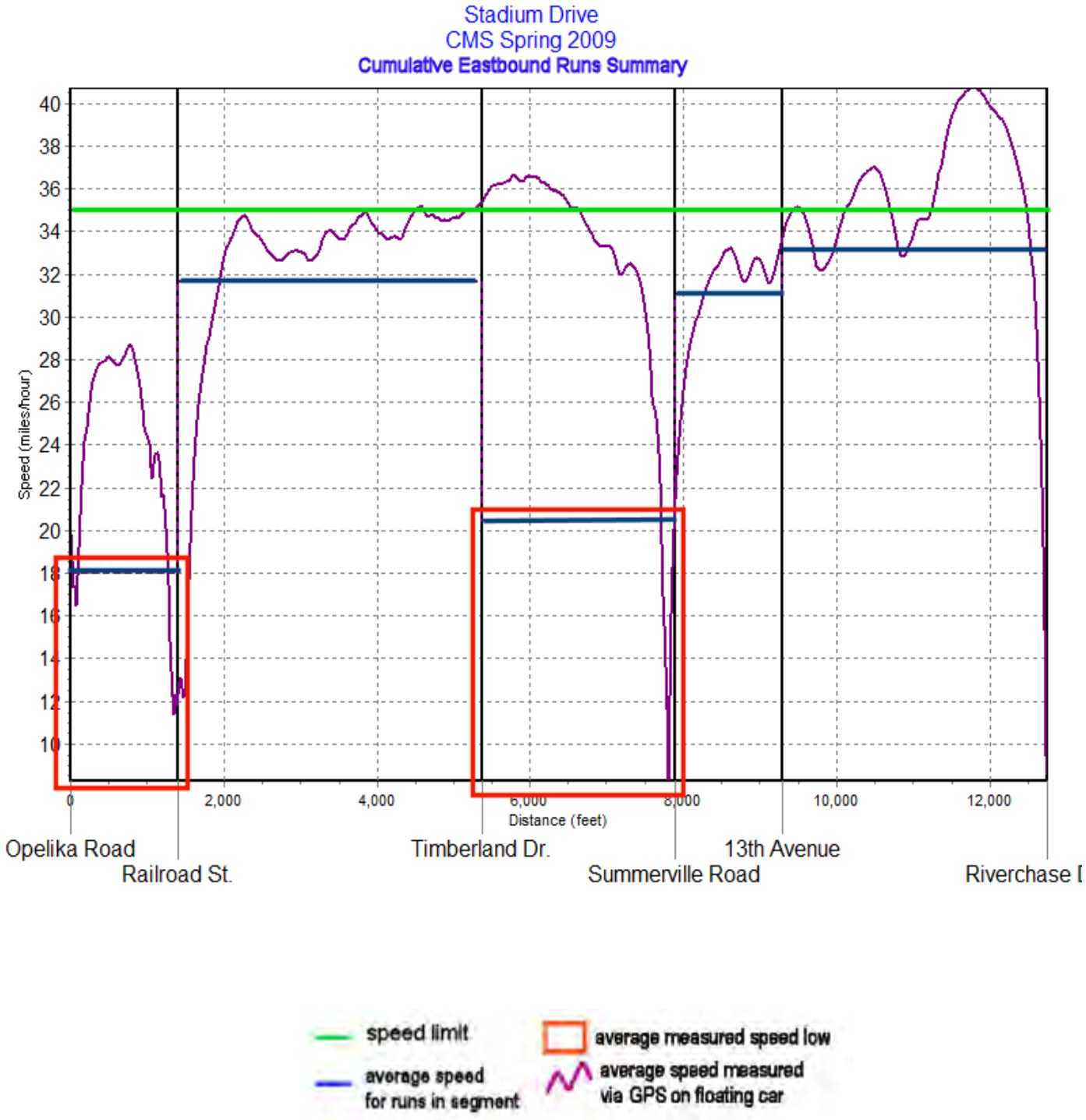
DISTANCE: 2.5 MILES

PM PEAK HOUR EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
OPELIKA ROAD	STARTING POINT			
RAILROAD STREET	5	26.8	0.77	OKAY
TIMBERLAND DRIVE	7	32.1	0.92	GOOD
SUMMERVILLE ROAD	66	15	0.43	CONGESTED
13TH AVENUE	3	31.4	0.90	GOOD
RIVER CHASE DRIVE	9	30.9	0.88	GOOD
PM PEAK HOUR WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
RIVER CHASE DRIVE	STARTING POINT			
13TH AVENUE	6	32	0.91	GOOD
SUMMERVILLE ROAD	65	16.2	0.46	CONGESTED
TIMBERLAND DRIVE	1	34	0.97	GOOD
RAILROAD STREET	51	21.6	0.62	MARGINAL
OPELIKA ROAD	18	20.5	0.59	MARGINAL

STADIUM DRIVE	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
OPELIKA ROAD TO RIVER CHASE DRIVE	DISTANCE: 2.5 MILES

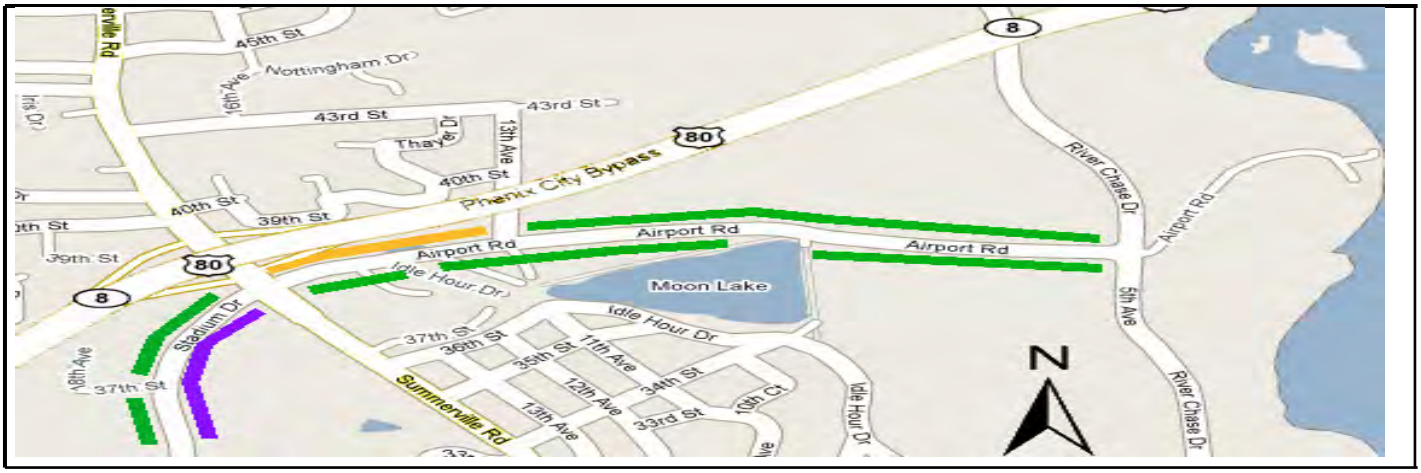


STADIUM DRIVE	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
OPELIKA ROAD TO RIVER CHASE DRIVE	DISTANCE: 2.5 MILES



STADIUM DRIVE	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
OPELIKA ROAD TO RIVER CHASE DRIVE	DISTANCE: 2.5 MILES

CUMULATIVE AVERAGE CONGESTION RATING FOR ALL THREE MEASURED TIME PERIODS BY DIRECTION TRAVELED



COLOR KEY AND RANKING CATEGORIES
FOR FREE FLOW TRAFFIC SPEED MEASUREMENTS

- SEVERE - Average traffic speed below 40% of the posted speed limit
- CONGESTED - Average traffic speed between 40% and 49% of the posted speed limit
- MARGINAL - Average traffic speed between 50% and 64% of the posted speed limit.
- OKAY - Average traffic speed between 65% and 80% of the posted speed limit.
- GOOD - Average traffic speed between 80% of to the posted speed limit.

STADIUM DRIVE	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
OPELIKA ROAD TO RIVER CHASE DRIVE	DISTANCE: 2.5 MILES

POSSIBLE CAUSES OF CONGESTION

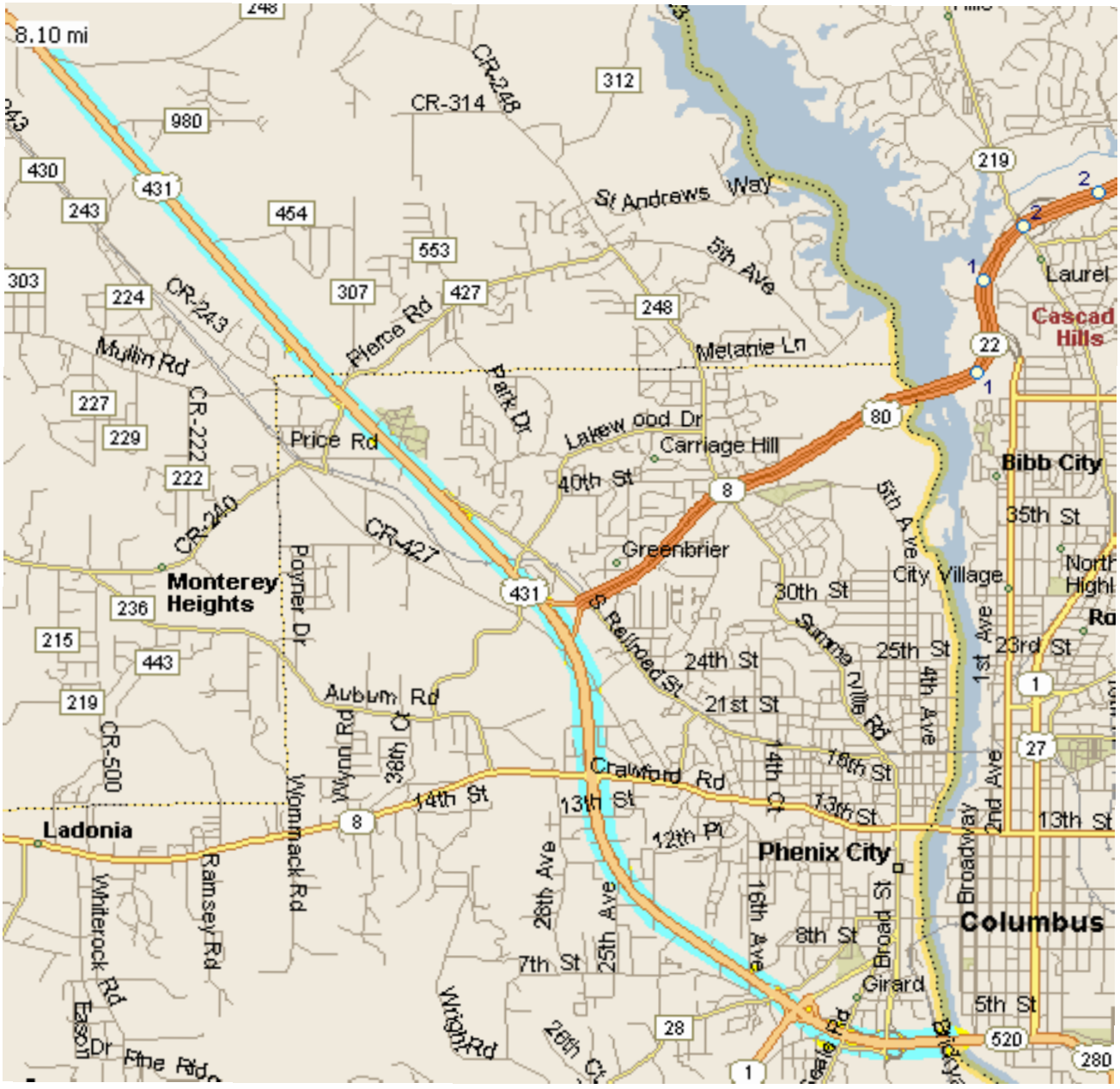
- Congestion occurs in area of intersection of Stadium Drive and Railroad Street. Factors responsible include absence of turn lanes at intersection and a railroad grade crossing that is awkwardly elevated. Turn lanes and rail crossing reconstruction projects are planned to correct this.
- Heavy left turning traffic from Stadium Drive onto northbound Summerville Road and US 80 East.

STADIUM DRIVE	TRAVEL TIME	V/C RATIO	ARTERIAL AND INTERSECTION L.O.S.	TRANSIT SYSTEM MEASURES
CAPACITY EXPANSION	▶	▶	▲	▶
ACCESS MANAGEMENT	▲	▶	▲	▶
TRAFFIC OPERATIONAL IMPROVEMENT	▲	▼	▲	▶
NON-MOTORIZED MODES	▶	▲	▲	▶

▲	Positive effect on congestion.
▶	No discernable effect on congestion.
▼	Negative effect on congestion.

US 280 - ALABAMA	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
LEE ROAD 248 TO VETERANS PARKWAY	DISTANCE: 8.70 MILES

LOCATION MAP OF ROUTE MEASURED



US 280 - ALABAMA

CONGESTION MANAGEMENT PROCESS SPRING 2009

LEE ROAD 248 TO VETERANS PARKWAY

DISTANCE: 8.70 MILES

CUMULATIVE AVERAGE - ALL MEASURED TIME PERIODS OF DAY BOTH DIRECTIONS

INTERSECTION	AVERAGE SPEED EASTBOUND	AVERAGE SPEED WESTBOUND	POSTED SPEED LIMIT
LEE ROAD 248		59	60
PIERCE ROAD	59	37	60
US 80 WEST	40	42	50
US 80 EAST	39	39	50
OPELIKA ROAD	22	28	45
CRAWFORD ROAD	24	25	45
13TH STREET	28	25	45
25TH AVE	26	27	45
16TH AVE	29	25	45
BRICKYARD ROAD	50	42	50
VETERANS PARKWAY	45		45

INTERSECTION	EASTBOUND FREE FLOW GRADE	WESTBOUND FREE FLOW GRADE	SEGMENT DISTANCE (MILES)
LEE ROAD 248		GOOD	0.60
PIERCE ROAD	GOOD	MARGINAL	2.64
US 80 WEST	OKAY	GOOD	1.68
US 80 EAST	OKAY	OKAY	0.28
OPELIKA ROAD	CONGESTED	MARGINAL	0.16
CRAWFORD ROAD	MARGINAL	MARGINAL	0.62
13TH STREET	MARGINAL	MARGINAL	0.24
25TH AVENUE	MARGINAL	MARGINAL	0.74
16TH AVENUE	OKAY	GOOD	0.90
BRICKYARD ROAD	GOOD	GOOD	0.53
VETERANS PARKWAY	GOOD		0.30

US 280 - ALABAMA

CONGESTION MANAGEMENT PROCESS SPRING 2009

LEE ROAD 248 TO VETERANS PARKWAY

DISTANCE: 8.70 MILES

AM RUSH HOUR WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
VETERANS PARKWAY	STARTING POINT			
BRICKYARD ROAD.	0	45.6	1.01	GOOD
16TH AVENUE	-2	45.6	1.01	GOOD
25TH AVENUE	23	34.3	0.76	OKAY
13TH STREET	16	31.6	0.70	OKAY
CRAWFORD ROAD.	22	24.4	0.54	MARGINAL
OPELIKA ROAD.	48	24.2	0.54	MARGINAL
US 80 WEST	12	39.8	0.80	GOOD
PIERCE ROAD	14	45.9	0.92	GOOD
LEE ROAD 248	-3	61.3	1.02	GOOD

AM RUSH HOUR EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
LEE ROAD 248	STARTING POINT			
PIERCE ROAD	8	57.2	0.95	GOOD
US 80 WEST	50	40.4	0.67	OKAY
OPELIKA ROAD	29	32.3	0.65	OKAY
CRAWFORD ROAD	62	26.4	0.53	MARGINAL
13TH STREET	10	31.8	0.71	OKAY
25TH AVENUE	34	22.7	0.50	MARGINAL
16TH AVENUE	38	30.9	0.69	OKAY
BRICKYARD ROAD	-13	51	1.13	GOOD
VETERANS PARKWAY	1	43.3	0.96	GOOD

US 280 - ALABAMA

CONGESTION MANAGEMENT PROCESS SPRING 2009

LEE ROAD 248 TO VETERANS PARKWAY

DISTANCE: 8.70 MILES

OFF PEAK HOURS WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
VETERANS PARKWAY	STARTING POINT			
BRICKYARD RD.	2	41.3	0.92	GOOD
16TH AVENUE	12	40.5	0.90	GOOD
25TH AVENUE	71	22.6	0.50	MARGINAL
13TH STREET	4	39.5	0.88	GOOD
CRAWFORD RD.	112	6.9	0.15	SEVERE
OPELIKA RD.	26	30.7	0.68	OKAY
US 80 WEST	4	45	0.90	GOOD
PIERCE ROAD	57	35	0.70	OKAY
LEE ROAD 248	15	55.2	0.92	GOOD
OFF PEAK HOURS EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
LEE ROAD 248	STARTING POINT			
PIERCE ROAD	2	59.2	0.99	GOOD
US 80 WEST	64	37.1	0.62	MARGINAL
OPELIKA ROAD	31	26.6	0.53	MARGINAL
CRAWFORD ROAD	103	15.3	0.31	SEVERE
13TH STREET	16	26.4	0.59	MARGINAL
25TH AVENUE	16	35.2	0.78	OKAY
16TH AVENUE	43	28.4	0.63	MARGINAL
BRICKYARD ROAD	-13	51	1.13	GOOD
VETERANS PARKWAY	0	45.7	1.02	GOOD

US 280 - ALABAMA

CONGESTION MANAGEMENT PROCESS SPRING 2009

LEE ROAD 248 TO VETERANS PARKWAY

DISTANCE: 8.70 MILES

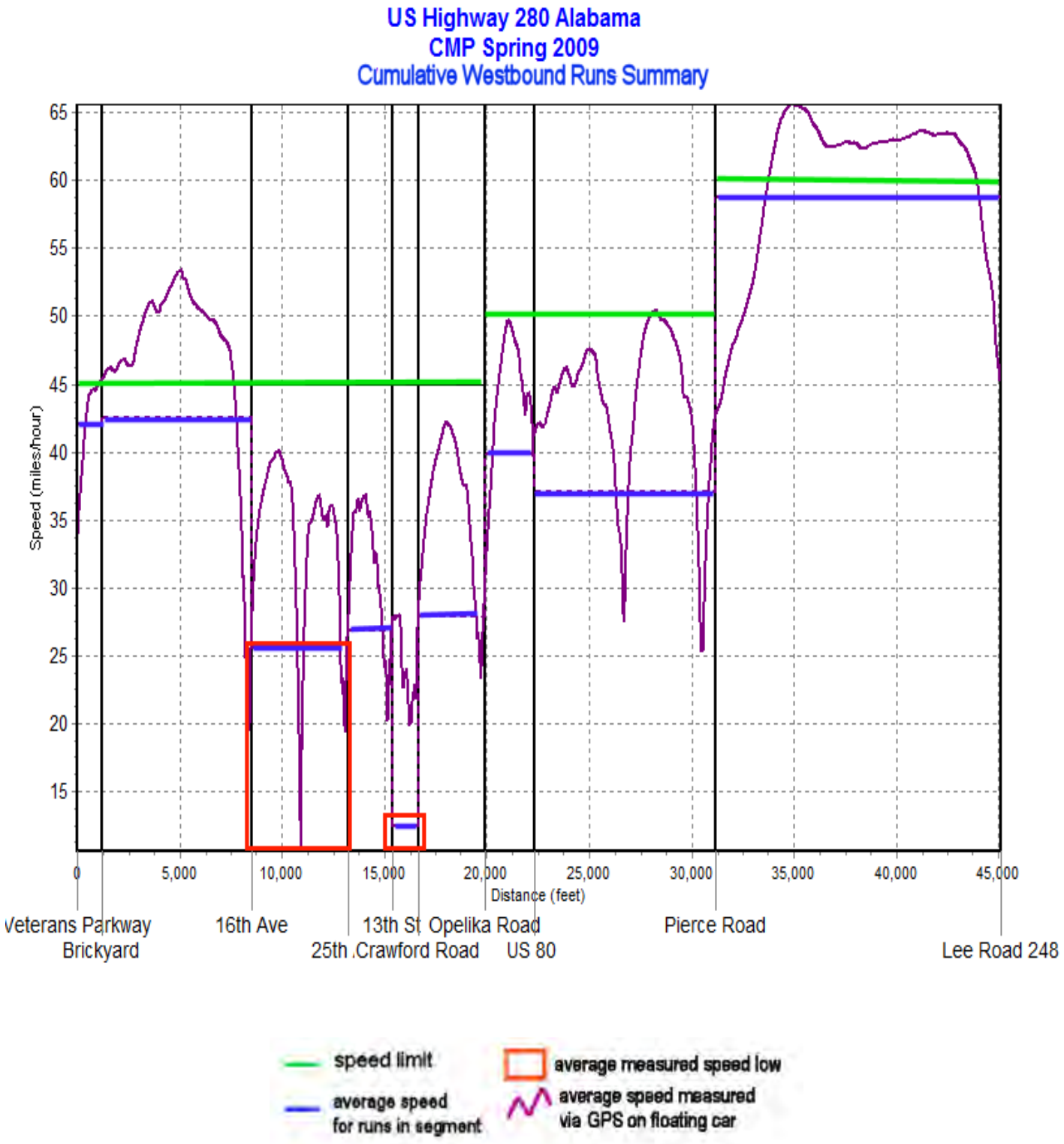
PM PEAK HOUR WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
VETERANS PARKWAY	STARTING POINT			
BRICKYARD ROAD.	3	39.3	0.87	GOOD
16TH AVENUE	9	41.4	0.92	GOOD
25TH AVENUE	101	19.7	0.44	CONGESTED
13TH STREET	144	9.4	0.21	SEVERE
CRAWFORD ROAD.	126	6	0.13	SEVERE
OPELIKA ROAD.	44	28.8	0.64	MARGINAL
US 80 WEST	17	34.7	0.69	OKAY
PIERCE ROAD	91	30.1	0.60	MARGINAL
LEE ROAD 248	1	59.8	1.00	GOOD
PM PEAK HOUR EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
LEE ROAD 248	STARTING POINT			
PIERCE ROAD	-3	61.3	1.02	GOOD
US 80 WEST	47	43.3	0.72	OKAY
OPELIKA ROAD	76	22.8	0.46	CONGESTED
CRAWFORD ROAD	32	29.5	0.59	MARGINAL
13TH STREET	15	26.9	0.60	MARGINAL
25TH AVENUE	38	21.4	0.48	CONGESTED
16TH AVENUE	41	29	0.64	MARGINAL
BRICKYARD ROAD	-13	51.2	1.14	GOOD
VETERANS PARKWAY	-1	48.3	1.07	GOOD

US 280 - ALABAMA

CONGESTION MANAGEMENT PROCESS SPRING 2009

LEE ROAD 248 TO VETERANS PARKWAY

DISTANCE: 8.70 MILES

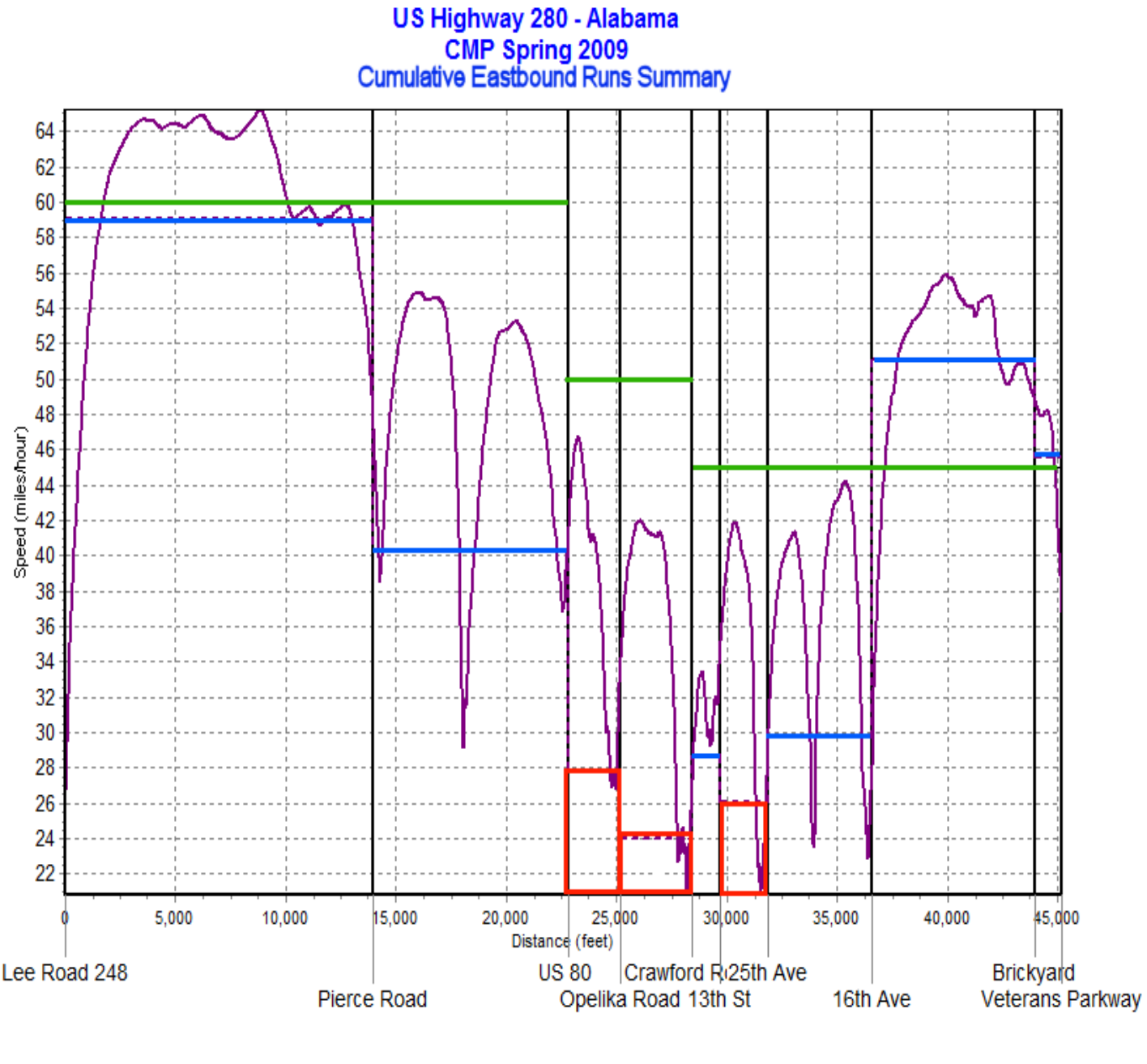


US 280 - ALABAMA

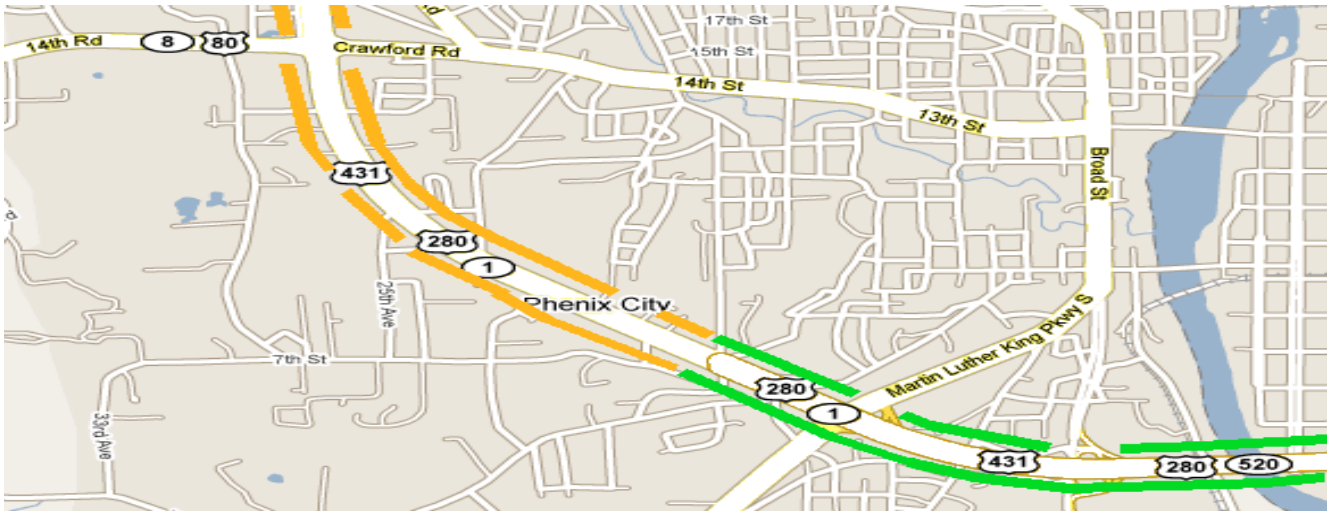
CONGESTION MANAGEMENT PROCESS SPRING 2009

LEE ROAD 248 TO VETERANS PARKWAY

DISTANCE: 8.70 MILES



US 280 - ALABAMA	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
LEE ROAD 248 TO VETERANS PARKWAY	DISTANCE: 8.70 MILES



COLOR KEY AND RANKING CATEGORIES
FOR FREE FLOW TRAFFIC SPEED MEASUREMENTS

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- OKAY - Average traffic speed between 65% and 80% of the posted speed limit.
- GOOD - Average traffic speed between 80% of to the posted speed limit.

US 280 - ALABAMA

CONGESTION MANAGEMENT PROCESS SPRING 2009

LEE ROAD 248 TO VETERANS PARKWAY

DISTANCE: 8.70 MILES

POSSIBLE CAUSES OF CONGESTION

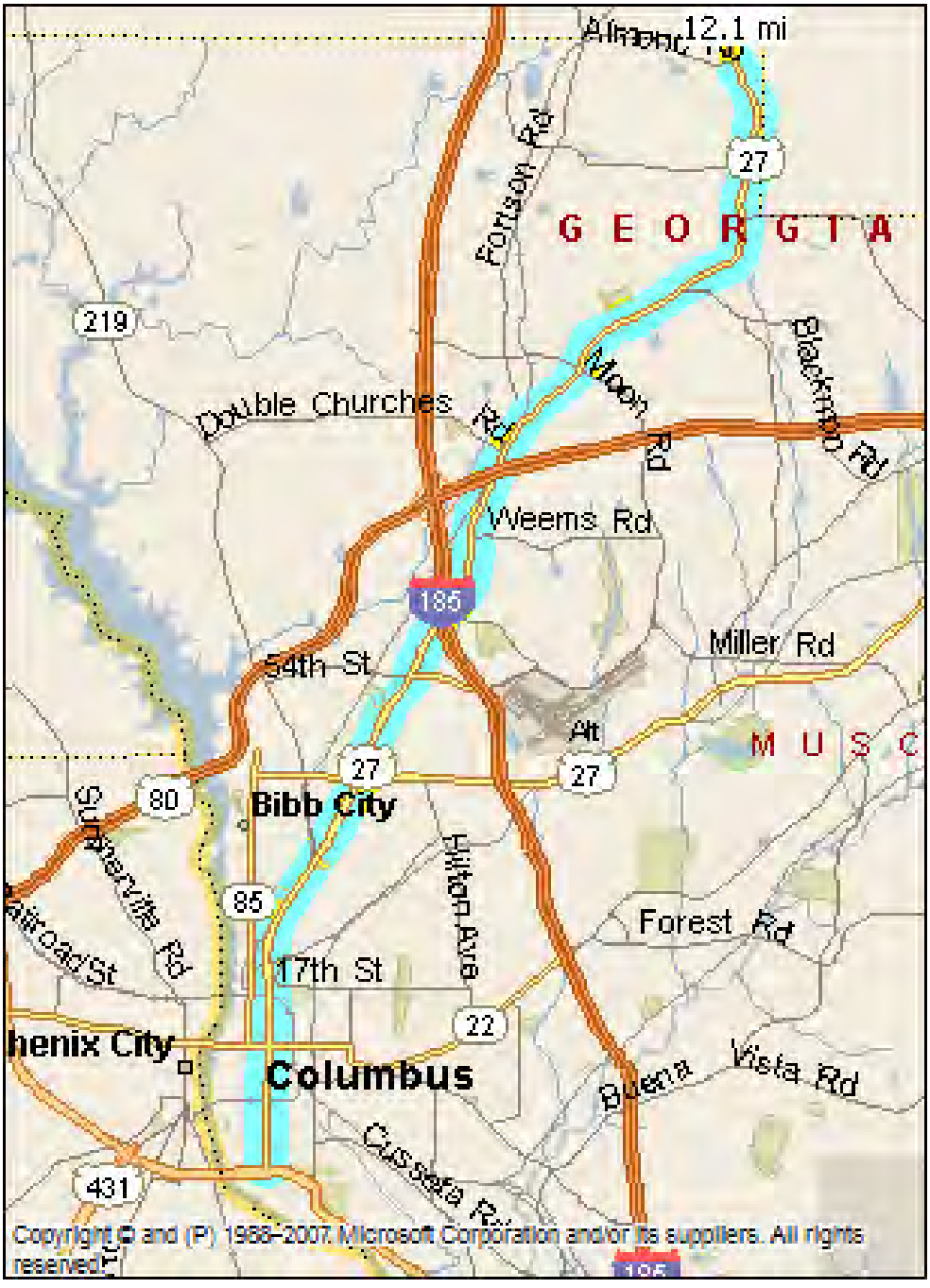
- **Continued delay in constructing remaining link of North Bypass between US 280 and Ladonia area means that US 80 east-west traffic is forced onto US 280 to complete dog-leg maneuver between current termini of bypass and Crawford Road (US 80). The resulting volume of traffic overwhelms this link and causes considerable backup delays at Opelika Road and Crawford Road intersections.**
- **Signals for surface streets at 13th Street, 25th Avenue and 16th Avenue have been difficult to synchronize and serve as an impediment to the easy flow of US 280 traffic.**
- **Access management needs more consideration and implementation as a method for limiting egress/ingress to/from the main travel lanes.**

US 280 in Alabama	Travel Time	V/C Ratio	Arterial and Intersection LOS	Transit System Measures	Incident Management
Capacity Expansion	▲	▲	▲	▶	▲
Access Management	▲	▲	▲	▲	▶
Traffic Operational Improvement	▲	▲	▲	▶	▲

▲	Positive effect on congestion.
▶	No discernable effect on congestion.
▼	Negative effect on congestion.

VETERANS PARKWAY	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
ALMOND ROAD TO VICTORY DRIVE	DISTANCE: 12.2 MILES

LOCATION MAP OF ROUTE MEASURED



VETERANS PARKWAY	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
ALMOND ROAD TO VICTORY DRIVE	DISTANCE: 12.2 MILES

CUMULATIVE AVERAGE - ALL MEASURED TIME PERIODS OF DAY BOTH DIRECTIONS

INTERSECTION	NORTHBOUND AVERAGE SPEED (MPH)	SOUTHBOUND AVERAGE SPEED (MPH)	POSTED SPEED LIMIT
ALMOND ROAD	48	49	55
WOOLDRIDGE ROAD	48	49	55
PIERCE CHAPEL ROAD	48	49	55
HANCOCK ROAD	44	38	55
COOPER CREEK	34	37	55
WILLIAMS ROAD	36	33	45
DOUBLE CHURCHES ROAD	36	33	45
US 80 EAST	22	36	45
WHITTLESEY ROAD	22	19	45
W. BRITT DAVID ROAD	22	36	45
WHITESVILLE ROAD	34	21	45
AIRPORT THRUWAY	22	35	45
ALEXANDER STREET	22	37	45
MANCHESTER EXPRESSWAY	40	31	45
39TH STREET	20	42	45
RIVER ROAD	32	29	45
TALBOTTON ROAD	40	34	30
13TH STREET	28	23	30
9TH STREET	22	24	30
VICTORY DRIVE	27	27	30

VETERANS PARKWAY

CONGESTION MANAGEMENT PROCESS SPRING 2009

ALMOND ROAD TO VICTORY DRIVE

DISTANCE: 12.2 MILES

CUMULATIVE AVERAGE - ALL MEASURED TIME PERIODS OF DAY BOTH DIRECTIONS

INTERSECTION	FREE FLOW GRADE NORTHBOUND	FREE FLOW GRADE SOUTHBOUND	SEGMENT LENGTH (MILEAGE)
ALMOND ROAD	GOOD	GOOD	0.83
WOOLDRIDGE ROAD	GOOD	GOOD	1.03
PIERCE CHAPEL ROAD	GOOD	GOOD	0.61
HANCOCK ROAD	GOOD	OK	0.86
COOPER CREEK	MARGINAL	OK	0.61
WILLIAMS ROAD	GOOD	OK	0.61
DOUBLE CHURCHES ROAD	GOOD	OK	1.06
US 80 EAST	CONGESTED	GOOD	0.33
WHITTLESEY ROAD	CONGESTED	CONGESTED	0.53
W. BRITT DAVID ROAD	CONGESTED	CONGESTED	0.73
WHITESVILLE ROAD.	OK	CONGESTED	0.30
AIRPORT THRUWAY	CONGESTED	OK	0.40
ALEXANDER STREET	CONGESTED	GOOD	0.64
MANCHESTER EXPRESSWAY	GOOD	OK	0.43
39TH STREET	CONGESTED	GOOD	0.59
RIVER ROAD	MARGINAL	MARGINAL	0.39
TALBOTTON ROAD	GOOD	GOOD	0.38
13TH STREET	GOOD	GOOD	0.49
9TH STREET	GOOD	GOOD	0.53
VICTORY DRIVE	GOOD	GOOD	0.65

VETERANS PARKWAY

CONGESTION MANAGEMENT PROCESS SPRING 2009

ALMOND ROAD TO VICTORY DRIVE

DISTANCE: 12.2 MILES

AM PEAK HOUR NORTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
VICTORY DRIVE	STARTING POINT			
9TH STREET	9	28.3	0.94	GOOD
13TH STREET	14	27.9	0.93	GOOD
TALBOTTON ROAD	19	30.6	1.02	GOOD
RIVER ROAD	0	45.3	1.01	GOOD
39TH STREET	-1	46.8	1.04	GOOD
MANCHESTER EXPRESSWAY	43	22.3	0.50	MARGINAL
ALEXANDER ST.	6	38.1	0.85	GOOD
AIRPORT THRUWAY	23	34.9	0.78	OKAY
WHITESVILLE ROAD	8	36.8	0.82	GOOD
W. BRITT DAVID ROAD	5	37.6	0.84	GOOD
WHITTLESEY ROAD	44	26.3	0.58	MARGINAL
US 80 EAST	32	28.1	0.62	MARGINAL
DOUBLE CHURCHES ROAD	29	24.6	0.55	MARGINAL
WILLIAMS ROAD	23	36.7	0.82	GOOD
COOPER CREEK	96	20.6	0.41	CONGESTED
HANCOCK ROAD	6	43.6	0.87	GOOD
PIERCE CHAPEL ROAD	12	46.1	0.84	GOOD
WOOLDRIDGE ROAD	7	44.8	0.81	GOOD
ALMOND ROAD	11	47.5	0.86	GOOD

VETERANS PARKWAY

CONGESTION MANAGEMENT PROCESS SPRING 2009

ALMOND ROAD TO VICTORY DRIVE

DISTANCE: 12.2 MILES

AM PEAK HOUR SOUTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
ALMOND ROAD	STARTING POINT			
WOOLDRIDGE ROAD	9	48.5	0.88	GOOD
PIERCE CHAPEL ROAD	4	49.2	0.89	GOOD
HANCOCK ROAD	6	50	0.91	GOOD
COOPER CREEK	52	22.9	0.46	MARGINAL
WILLIAMS ROAD	16	37.5	0.75	OKAY
DOUBLE CHURCHES ROAD	34	33.3	0.74	OKAY
U.S 80 EAST	4	39.2	0.87	GOOD
WHITTLESEY	60	19.2	0.43	CONGESTED
W BRITT DAVID	7	40	0.89	GOOD
WHITESVILLE ROAD	61	13.4	0.30	SEVERE
AIRPORT THRUWAY	27	25	0.56	MARGINAL
ALEXANDER STREET	20	33.7	0.75	OKAY
MANCHESTER EXPRESSWAY	36	23.6	0.52	MARGINAL
39TH STREET	1	43.5	0.97	GOOD
RIVER ROAD	35	21.9	0.49	CONGESTED
TALBOTTON ROAD	35	33.8	0.75	OKAY
13TH STREET	54	23.2	0.58	MARGINAL
9TH STREET	10	26.1	0.87	GOOD
VICTORY DRIVE	6	32.1	1.07	GOOD

VETERANS PARKWAY

CONGESTION MANAGEMENT PROCESS SPRING 2009

ALMOND ROAD TO VICTORY DRIVE

DISTANCE: 12.2 MILES

OFF PEAK HOUR NORTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
VICTORY DRIVE	STARTING POINT			
9TH STREET	6	28.8	0.96	GOOD
13TH STREET	61	15.4	0.51	MARGINAL
TALBOTTON ROAD	13	28.5	0.95	GOOD
RIVER ROAD	15	38.8	0.86	GOOD
39TH STREET	25	26.2	0.58	MARGINAL
MANCHESTER EXPRESSWAY	42	22.4	0.50	MARGINAL
ALEXANDER STREET	4	40.2	0.89	GOOD
AIRPORT THRUWAY	83	19.7	0.44	CONGESTED
WHITESVILLE ROAD	55	16.9	0.38	SEVERE
W. BRITT DAVID ROAD	10	32.6	0.72	OKAY
WHITTLESEY ROAD	84	19	0.42	CONGESTED
US 80 EAST	21	30.9	0.69	MARGINAL
DOUBLE CHURCHES ROAD	32	22.9	0.51	MARGINAL
WILLIAMS ROAD	35	32.3	0.72	OKAY
COOPER CREEK	5	44.8	0.90	GOOD
HANCOCK ROAD	1	49	0.98	GOOD
PIERCE CHAPEL ROAD	6	49.9	0.91	GOOD
WOOLDRIDGE ROAD	5	47.4	0.86	GOOD
ALMOND ROAD	12	48	0.87	GOOD

VETERANS PARKWAY

CONGESTION MANAGEMENT PROCESS SPRING 2009

ALMOND ROAD TO VICTORY DRIVE

DISTANCE: 12.2 MILES

OFF PEAK HOUR SOUTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
ALMOND ROAD	STARTING POINT			
WOOLDRIDGE ROAD	8	49.6	0.90	GOOD
PIERCE CHAPEL ROAD	2	52	0.95	GOOD
HANCOCK ROAD	4	51.9	0.94	GOOD
COOPER CREEK	-2	52.2	1.04	GOOD
WILLIAMS ROAD	21	39.4	0.79	OKAY
DOUBLE CHURCHES ROAD	50	28.7	0.64	MARGINAL
U.S 80 EAST	4	38.6	0.86	GOOD
WHITTLESEY ROAD	58	20.9	0.46	CONGESTED
W BRITT DAVID ROAD	26	32	0.71	OKAY
WHITESVILLE ROAD	38	19.3	0.43	CONGESTED
AIRPORT THRUWAY	5	38.8	0.86	GOOD
ALEXANDER STREET	21	32.5	0.72	OKAY
MANCHESTER EXPRESSWAY	18	30.8	0.68	OKAY
39TH STREET	1	44.1	0.98	GOOD
RIVER ROAD	21	31.5	0.70	OKAY
TALBOTTON ROAD	32	35.3	0.78	OKAY
13TH STREET	43	24.6	0.62	MARGINAL
9TH STREET	30	22.1	0.74	OKAY
VICTORY DRIVE	36	21.9	0.73	OKAY

VETERANS PARKWAY

CONGESTION MANAGEMENT PROCESS SPRING 2009

ALMOND ROAD TO VICTORY DRIVE

DISTANCE: 12.2 MILES

PM PEAK HOUR NORTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
VICTORY DRIVE	STARTING POINT			
9TH STREET	24	23.2	0.77	OKAY
13TH STREET	20	26.5	0.88	GOOD
TALBOTTON ROAD	9	29.1	0.97	GOOD
RIVER ROAD	22	36.7	0.82	GOOD
39TH STREET	24	29.2	0.65	OKAY
MANCHESTER EXPRESSWAY	78	15.8	0.35	SEVERE
ALEXANDER STREET	4	40.6	0.90	GOOD
AIRPORT THRUWAY	66	19.9	0.44	CONGESTED
WHITESVILLE ROAD	47	18.7	0.42	CONGESTED
W. BRITT DAVID ROAD	8	34.5	0.77	OKAY
WHITTLESEY ROAD	50	24.6	0.55	MARGINAL
US 80 EAST	82	15.7	0.35	SEVERE
DOUBLE CHURCHES ROAD	23	25.6	0.57	MARGINAL
WILLIAMS ROAD	19	37	0.82	GOOD
COOPER CREEK	41	27.9	0.56	MARGINAL
HANCOCK ROAD	8	42.4	0.85	GOOD
PIERCE CHAPEL ROAD	11	47.3	0.86	GOOD
WOOLDRIDGE ROAD	4	48.3	0.88	GOOD
ALMOND ROAD	12	47.5	0.86	GOOD

VETERANS PARKWAY

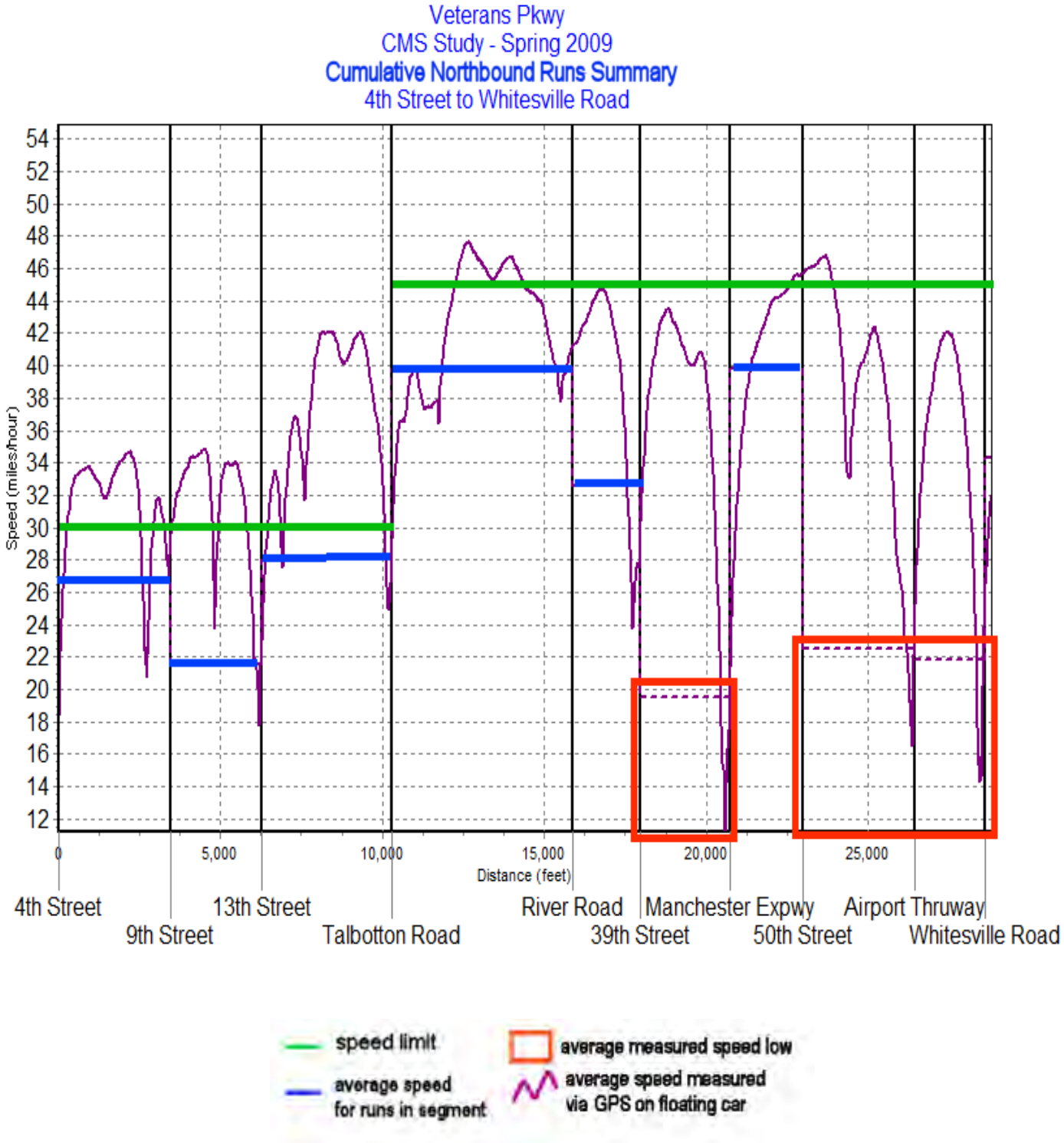
CONGESTION MANAGEMENT PROCESS SPRING 2009

ALMOND ROAD TO VICTORY DRIVE

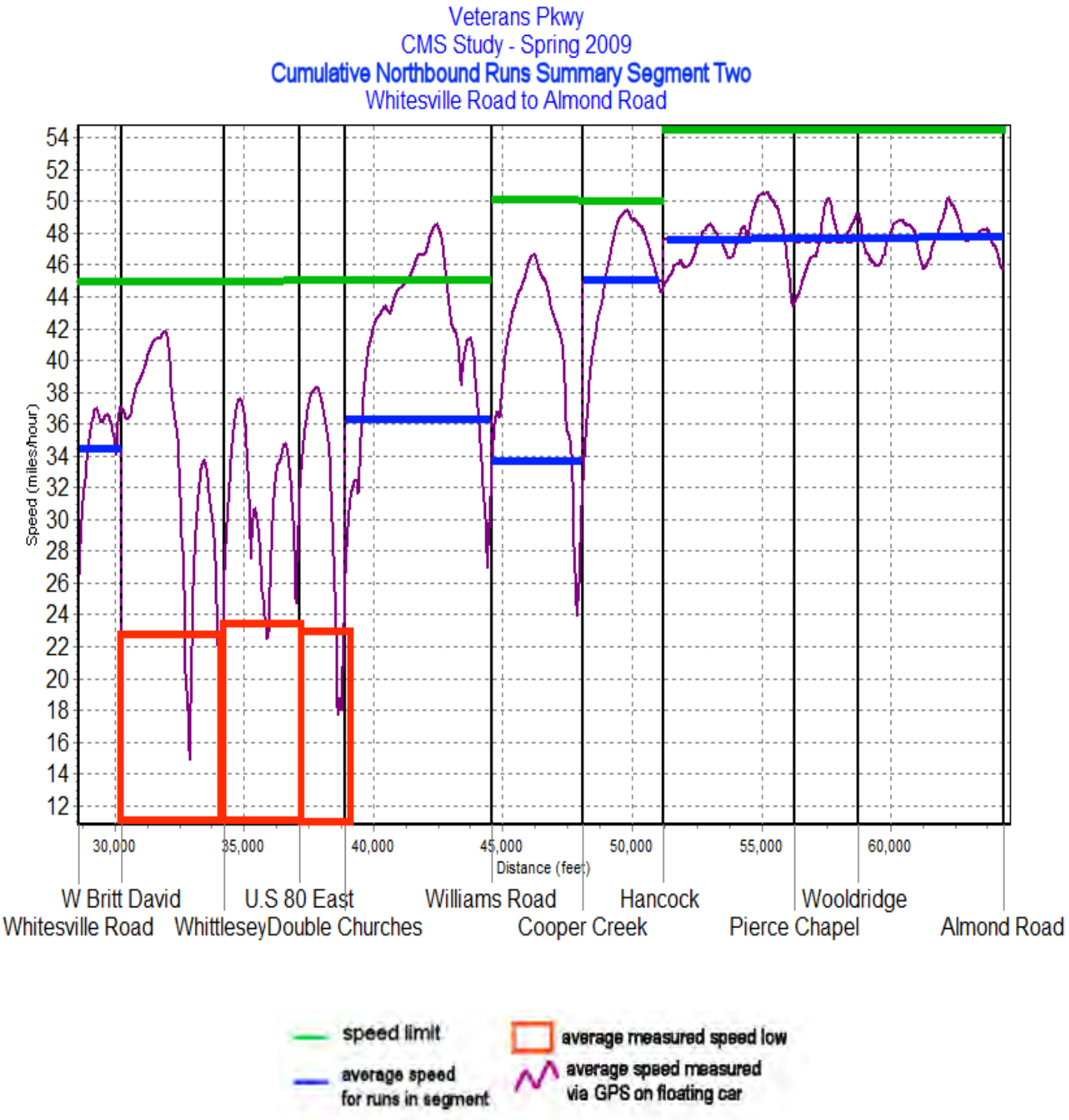
DISTANCE: 12.2 MILES

PM RUSH HOUR SOUTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
ALMOND ROAD	STARTING POINT			
WOOLDRIDGE ROAD	7	50.3	0.91	GOOD
PIERCE CHAPEL ROAD	4	48.9	0.89	GOOD
HANCOCK ROAD	13	45.9	0.83	GOOD
COOPER CREEK	13	39.9	0.80	GOOD
WILLIAMS ROAD	20	36.2	0.72	OKAY
DOUBLE CHURCHES ROAD	42	32.4	0.72	OKAY
U.S. 80 EAST	20	29.1	0.65	OKAY
WHITTLESEY ROAD	73	17.5	0.39	SEVERE
W BRITT DAVID ROAD	20	33.6	0.75	OKAY
WHITESVILLE ROAD	18	28.5	0.63	OKAY
AIRPORT THRUWAY	3	42.5	0.94	GOOD
ALEXANDER STREET	4	43.8	0.97	GOOD
MANCHESTER EXPRESSWAY	15	39.3	0.87	GOOD
39TH STREET	14	39.3	0.87	GOOD
RIVER ROAD	10	35.4	0.79	OKAY
TALBOTTON ROAD	31	36.5	0.81	GOOD
13TH STREET	65	21.6	0.54	OKAY
9TH STREET	30	23.3	0.78	OKAY
VICTORY DRIVE	28	25.5	0.85	GOOD

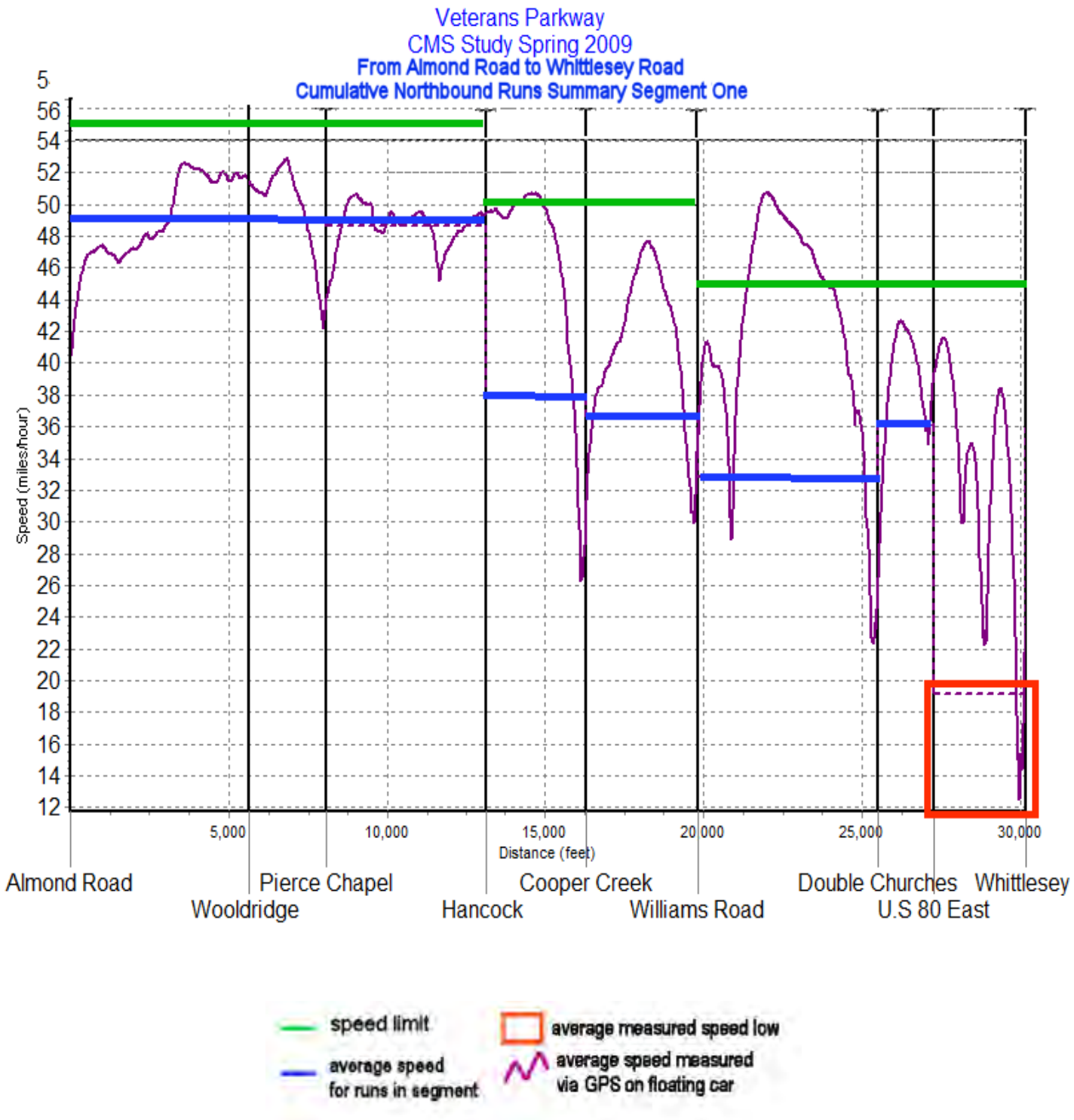
VETERANS PARKWAY	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
ALMOND ROAD TO VICTORY DRIVE	DISTANCE: 12.2 MILES



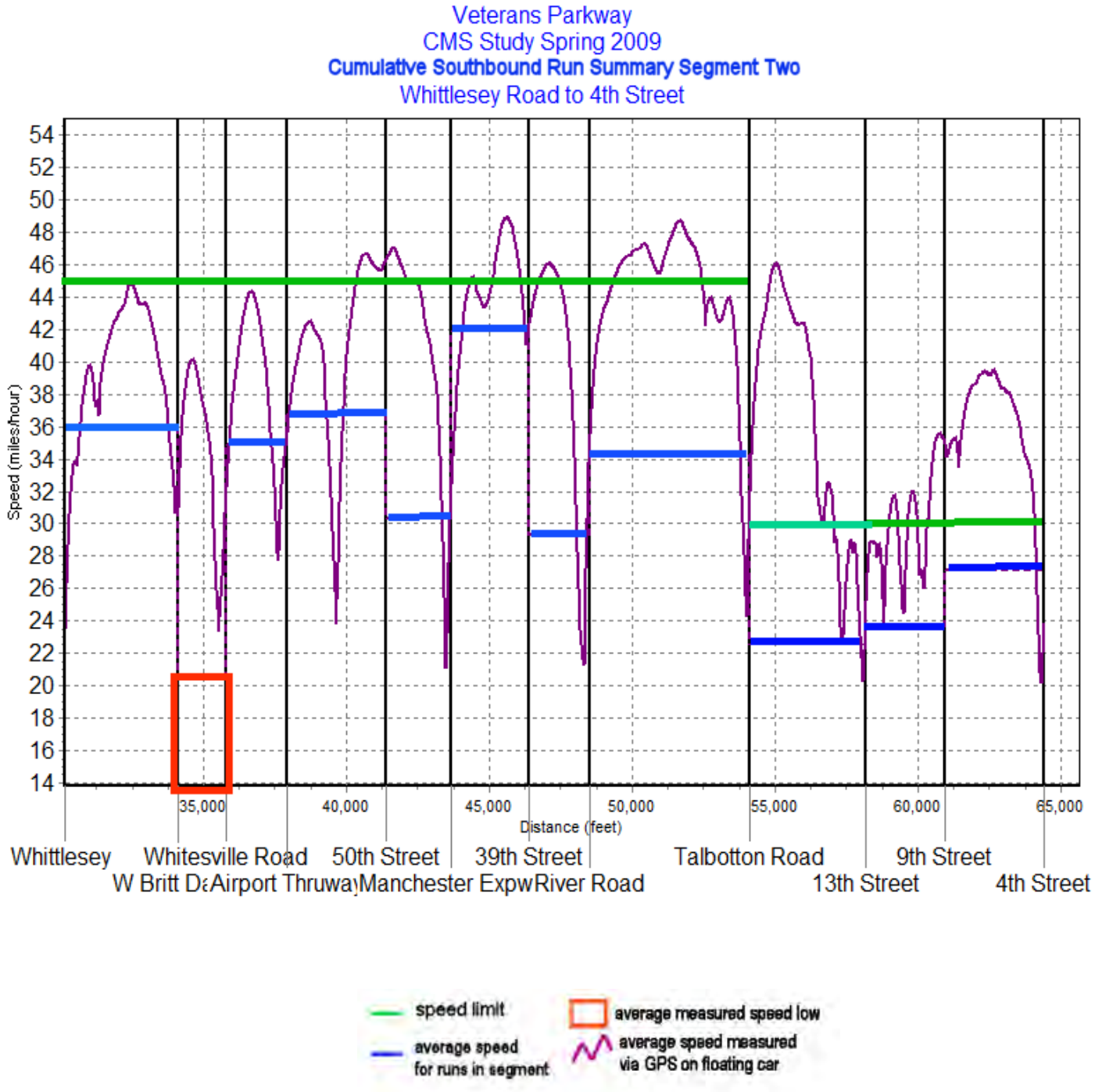
VETERANS PARKWAY	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
ALMOND ROAD TO VICTORY DRIVE	DISTANCE: 12.2 MILES



VETERANS PARKWAY	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
ALMOND ROAD TO VICTORY DRIVE	DISTANCE: 12.2 MILES

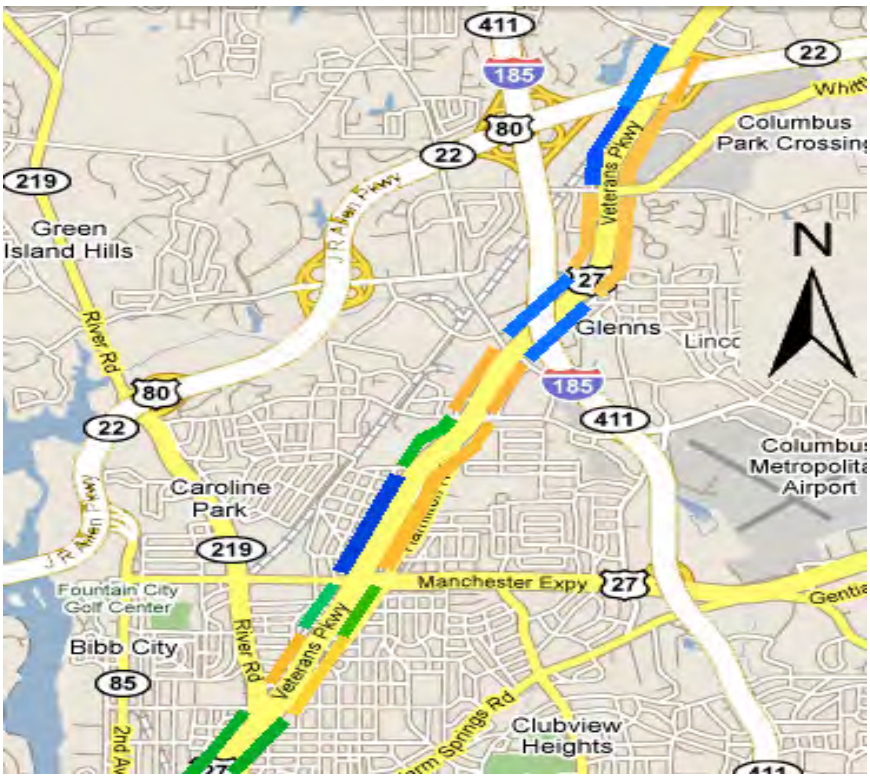


VETERANS PARKWAY	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
ALMOND ROAD TO VICTORY DRIVE	DISTANCE: 12.2 MILES



VETERANS PARKWAY	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
ALMOND ROAD TO VICTORY DRIVE	DISTANCE: 12.2 MILES

CUMULATIVE AVERAGE CONGESTION RATING FOR ALL THREE MEASURED TIME PERIODS BY DIRECTION TRAVELED

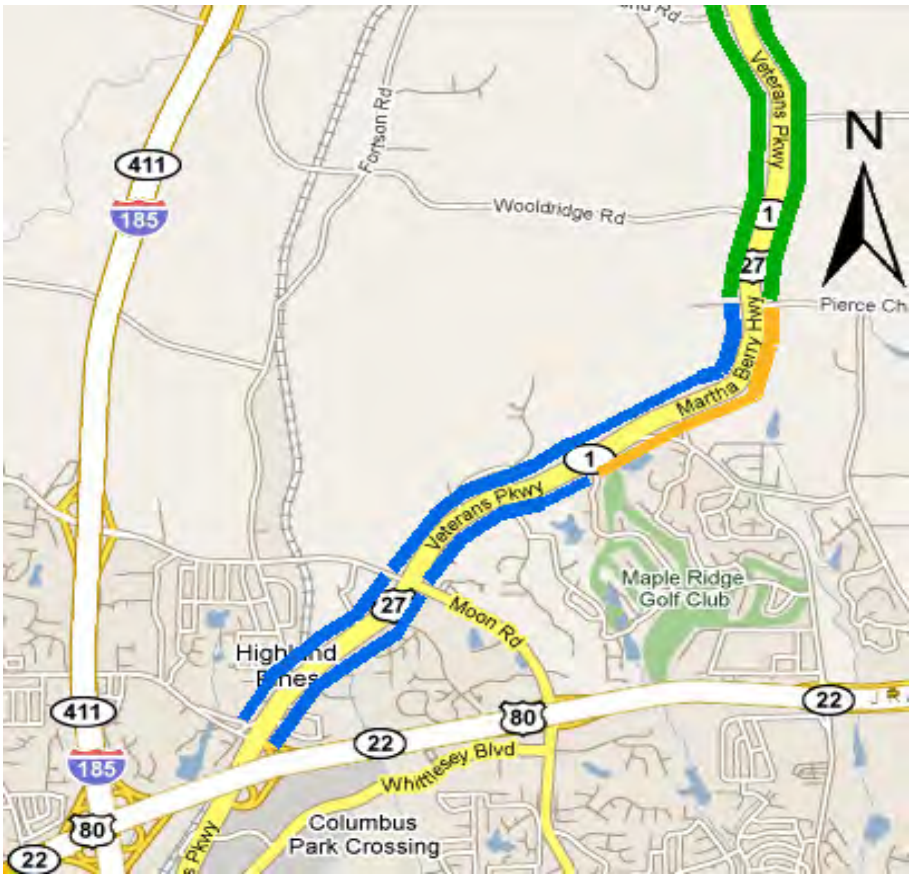


COLOR KEY AND RANKING CATEGORIES
FOR FREE FLOW TRAFFIC SPEED MEASUREMENTS

- SEVERE - Average traffic speed below 40% of the posted speed limit
- CONGESTED - Average traffic speed between 40% and 49% of the posted speed limit
- MARGINAL - Average traffic speed between 50% and 64% of the posted speed limit.
- OKAY - Average traffic speed between 65% and 80% of the posted speed limit.
- GOOD - Average traffic speed between 80% of to the posted speed limit.

VETERANS PARKWAY	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
ALMOND ROAD TO VICTORY DRIVE	DISTANCE: 12.2 MILES

CUMULATIVE AVERAGE CONGESTION RATING FOR ALL THREE MEASURED TIME PERIODS BY DIRECTION TRAVELED



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- OKAY - Average traffic speed between 65% and 80% of the posted speed limit.
- GOOD - Average traffic speed between 80% of to the posted speed limit.

VETERANS PARKWAY

CONGESTION MANAGEMENT PROCESS SPRING 2009

ALMOND ROAD TO VICTORY DRIVE

DISTANCE: 12.2 MILES

POSSIBLE CAUSES OF CONGESTION

- **Close proximity of signals between 15th Street and 8th Street makes for a challenge to synchronize signals.**
- **School traffic causes delays in segment between Moon Road and Turnberry in AM Peak Hour.**
- **Heavy volumes at Double Churches and Whittlesey Road intersections. Problems should be alleviated with construction of planned improvements to intersections.**

Veterans Parkway	Travel Time	V/C Ratio	Arterial And Intersection LOS	Transit System Measures	Incident Management
TDM Measures	▲	▲	▲	▶	▶
Traffic Operations Improvements	▲	▲	▲	▶	▶
Non-Motorized Modes	▲	▲	▲	▶	▶
Access Management	▲	▲	▲	▶	▲
Intelligent Transportation	▲	▶	▲	▶	▶

▲	Positive effect on congestion.
▶	No discernable effect on congestion.
▼	Negative effect on congestion.

VICTORY DRIVE	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
VETERANS PARKWAY TO INTERSTATE 185	DISTANCE: 5.40 MILES

LOCATION MAP OF ROUTE MEASURED

VICTORY DRIVE

CONGESTION MANAGEMENT PROCESS SPRING 2009

VETERANS PARKWAY TO INTERSTATE 185

DISTANCE: 5.40 MILES

CUMULATIVE AVERAGE - ALL MEASURED TIME PERIODS OF DAY BOTH DIRECTIONS

INTERSECTION	EASTBOUND AVERAGE SPEED (MPH)	WESTBOUND AVERAGE SPEED (MPH)	POSTED SPEED LIMIT
VETERANS PARKWAY		29	35
10TH AVENUE	41	45	45
N. LUMPKIN ROAD.	38	24	45
S. LUMPKIN ROAD.	32	34	45
FT. BENNING BLVD.	23	33	45
I-185 INTERCHANGE	34		45

INTERSECTION	FREE FLOW GRADE EASTBOUND	FREE FLOW GRADE WESTBOUND	SEGMENT LENGTH (MILES)
VETERANS PARKWAY		GOOD	0.36
10TH AVENUE	GOOD	GOOD	1.28
N. LUMPKIN ROAD.	GOOD	MARGINAL	1.03
S. LUMPKIN ROAD.	OKAY	OKAY	0.33
FT. BENNING BLVD.	MARGINAL	OKAY	2.07
I-185 INTERCHANGE	OKAY		0.47

VICTORY DRIVE

CONGESTION MANAGEMENT PROCESS SPRING 2009

VETERANS PARKWAY TO INTERSTATE 185

DISTANCE: 5.40 MILES

AM RUSH HOUR WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
I-185 INTERCHANGE	STARTING POINT			
FT. BENNING BLVD.	18	39.9	0.89	GOOD
S. LUMPKIN ROAD.	13	40.9	0.91	GOOD
N. LUMPKIN ROAD.	38	22.4	0.50	CONGESTED
10TH AVENUE	-8	47.4	1.05	GOOD
VETERANS PARKWAY	0	39.3	1.12	GOOD

AM RUSH HOUR EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
VETERANS PARKWAY	STARTING POINT			
10TH AVENUE	1	43	1.08	GOOD
N. LUMPKIN ROAD.	-2	45.6	1.01	GOOD
S. LUMPKIN ROAD.	4	40.1	0.89	GOOD
FT. BENNING BLVD.	38	32.4	0.72	OKAY
I-185 INTERCHANGE	-7	48.6	1.08	GOOD

VICTORY DRIVE

CONGESTION MANAGEMENT PROCESS SPRING 2009

VETERANS PARKWAY TO INTERSTATE 185

DISTANCE: 5.40 MILES

OFF PEAK HOUR WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
I-185 INTERCHANGE	STARTING POINT			
FT. BENNING BLVD.	18	39.9	0.89	GOOD
S. LUMPKIN ROAD.	13	40.9	0.91	GOOD
N. LUMPKIN ROAD.	38	22.4	0.50	CONGESTED
10TH AVENUE	-8	47.4	1.05	GOOD
VETERANS PARKWAY	0	39.3	1.12	GOOD
OFF PEAK HOUR EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
VETERANS PARKWAY	STARTING POINT			
10TH AVENUE	3	40.8	0.91	GOOD
N. LUMPKIN ROAD.	18	41.1	0.91	GOOD
S. LUMPKIN ROAD.	33	26.5	0.59	MARGINAL
FT. BENNING BLVD.	68	27.2	0.60	MARGINAL
I-185 INTERCHANGE	48	31.9	0.71	OKAY

VICTORY DRIVE

CONGESTION MANAGEMENT PROCESS SPRING 2009

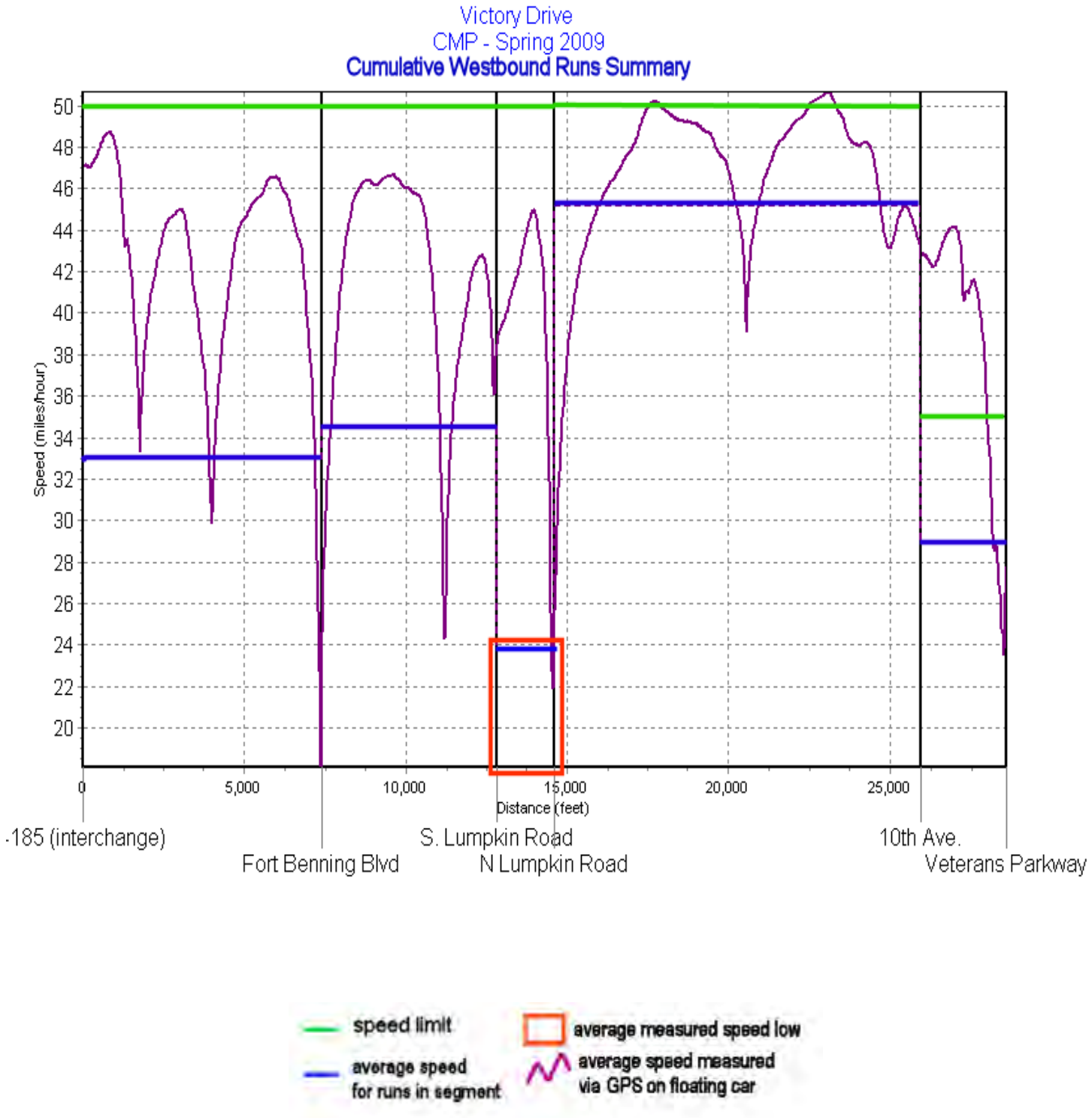
VETERANS PARKWAY TO INTERSTATE 185

DISTANCE: 5.40 MILES

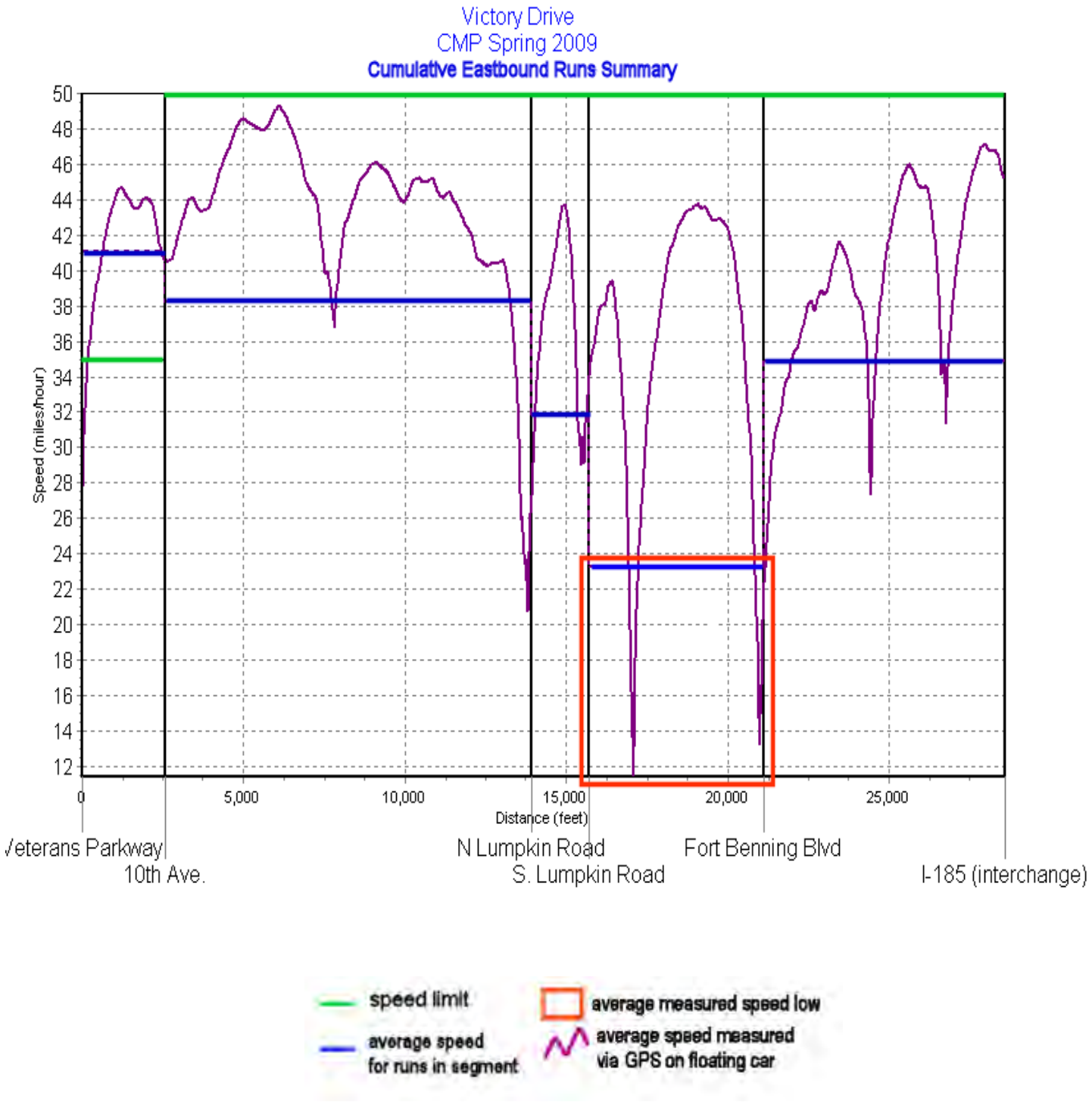
PM PEAK HOUR WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
I-185 INTERCHANGE	STARTING POINT			
FT. BENNING BLVD.	71	27.6	0.61	MARGINAL
S. LUMPKIN ROAD.	45	30.6	0.68	OKAY
N. LUMPKIN ROAD.	44	19.9	0.44	CONGESTED
10TH AVENUE	15	41.6	0.92	GOOD
VETERANS PARKWAY	60	23.6	0.67	OKAY

PM PEAK HOUR EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
VETERANS PARKWAY	STARTING POINT			
10TH AVENUE	5	38.9	0.86	GOOD
N. LUMPKIN ROAD.	72	32	0.71	OKAY
S. LUMPKIN ROAD.	3	39.8	0.88	GOOD
FT. BENNING BLVD.	93	21.2	0.47	CONGESTED
I-185 INTERCHANGE	15	40.8	0.91	GOOD

VICTORY DRIVE	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
VETERANS PARKWAY TO INTERSTATE 185	DISTANCE: 5.40 MILES

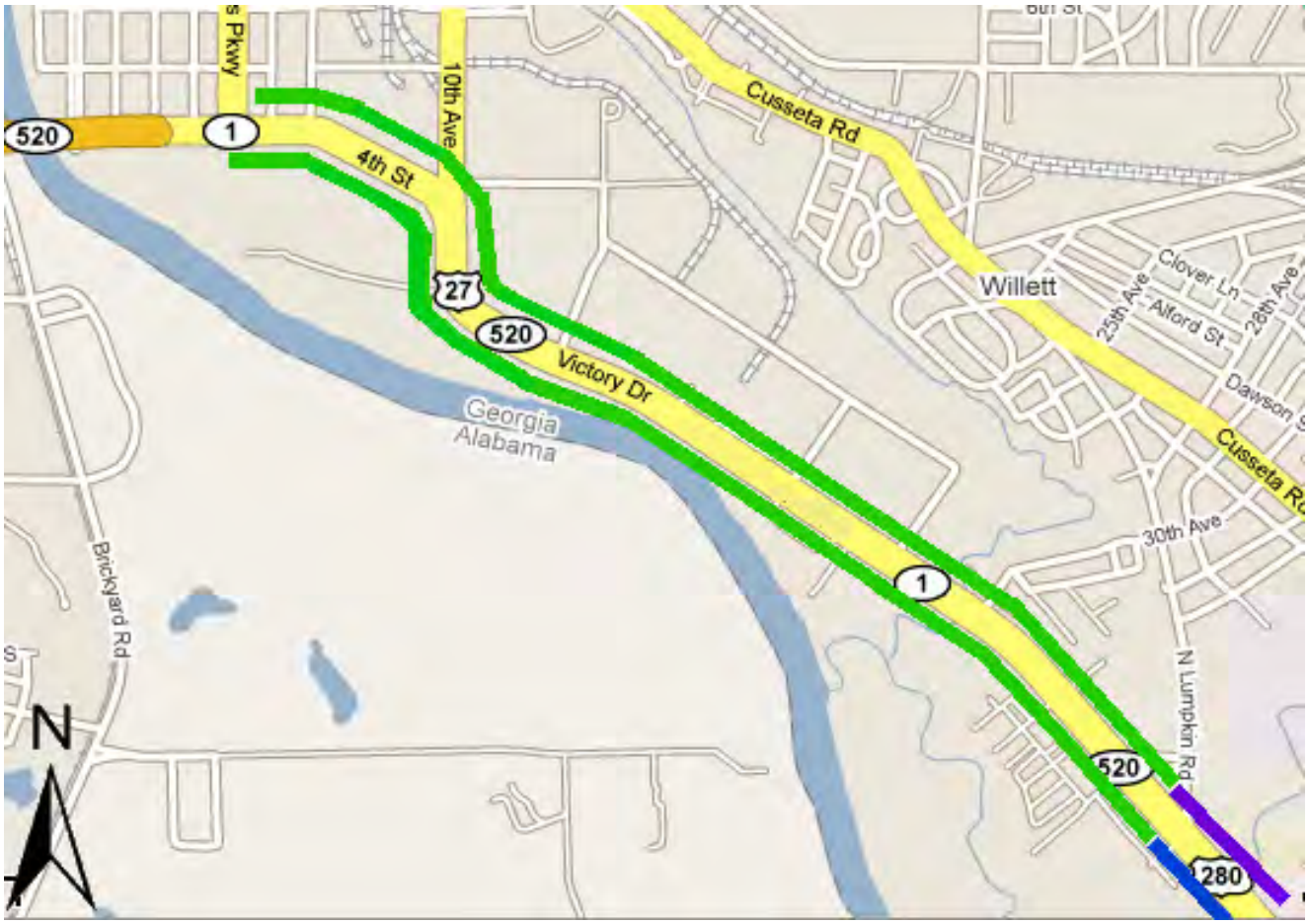


VICTORY DRIVE	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
VETERANS PARKWAY TO INTERSTATE 185	DISTANCE: 5.40 MILES



VICTORY DRIVE	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
VETERANS PARKWAY TO INTERSTATE 185	DISTANCE: 5.40 MILES

CUMULATIVE AVERAGE CONGESTION RATING FOR ALL THREE MEASURED TIME PERIODS BY DIRECTION TRAVELED



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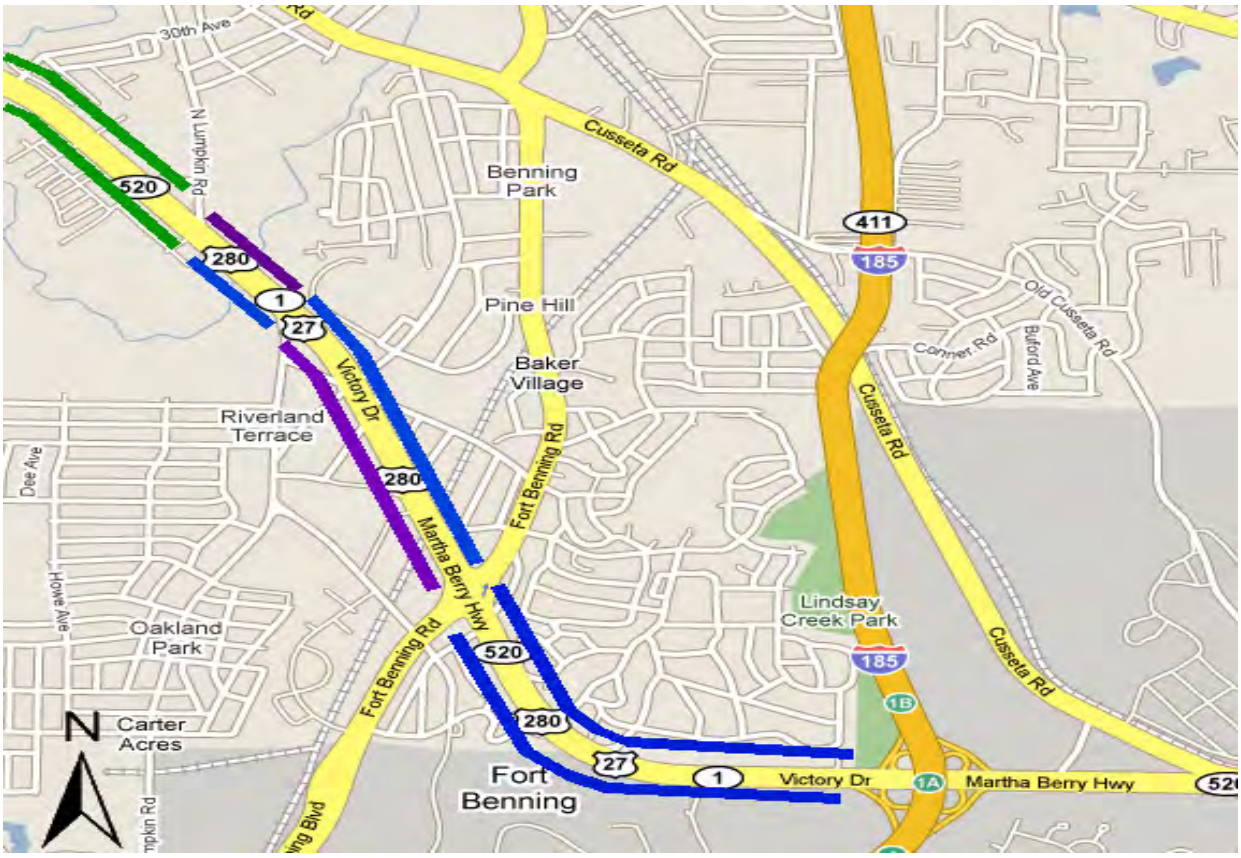
VICTORY DRIVE	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
VETERANS PARKWAY TO INTERSTATE 185	DISTANCE: 5.40 MILES

CUMULATIVE AVERAGE CONGESTION RATING FOR ALL THREE MEASURED TIME PERIODS BY DIRECTION TRAVELED



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- GOOD - Average traffic speed between 80% of to the posted speed limit.

VICTORY DRIVE	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
VETERANS PARKWAY TO INTERSTATE 185	DISTANCE: 5.40 MILES

POSSIBLE CAUSES OF CONGESTION

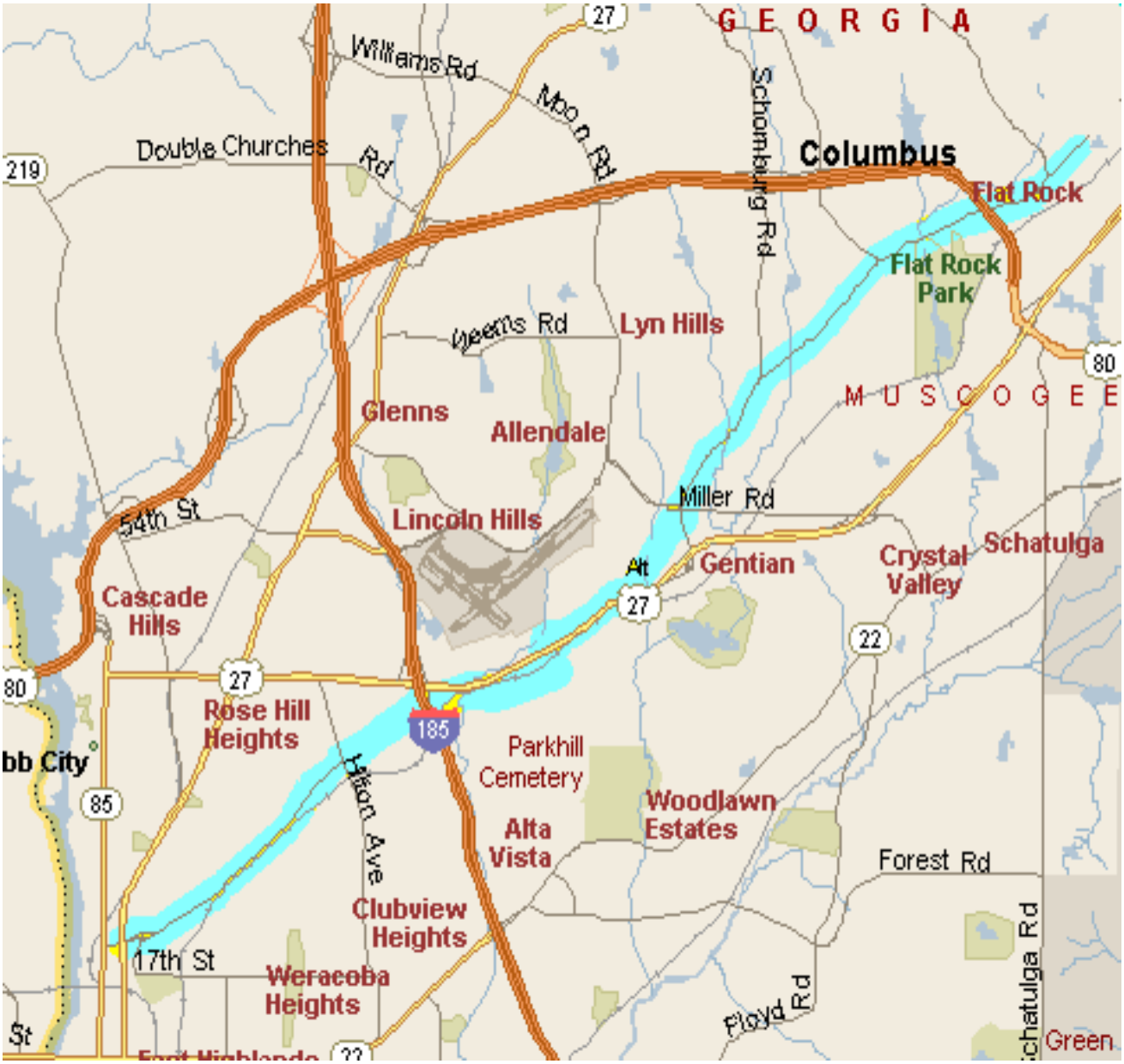
- **Heavy peak hour volumes, associated primarily with traffic to/from Fort Benning.**
- **Some geometric issues involving intersections (e.g. split of North Lumpkin and South Lumpkin Road.)**

US 280 - Victory Drive	Travel Time	V/C Ratio	Arterial & Intersection Level of Service	Transit System Measures	Incident Management
TDM Measures	▲	▶	▶	▶	▶
Traffic Operations Improvements	▲	▶	▲	▶	▶
Growth Management	▲	▶	▲	▶	▲
Access Management	▶	▲	▲	▶	▲
Non-Motorized Modes of Travel	▲	▶	▲	▶	▶

▲	Positive effect on congestion.
▶	No discernable effect on congestion.
▼	Negative effect on congestion.

WARM SPRINGS ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
COUNTY LINE ROAD TO VETERANS PARKWAY	DISTANCE: 11.8 MILES

LOCATION MAP OF ROUTE MEASURED



WARM SPRINGS ROAD

CONGESTION MANAGEMENT PROCESS SPRING 2009

COUNTY LINE ROAD TO VETERANS PARKWAY

DISTANCE: 11.8 MILES

CUMULATIVE AVERAGE - ALL MEASURED TIME PERIODS OF DAY BOTH DIRECTIONS

INTERSECTION	AVERAGE SPEED EASTBOUND	AVERAGE SPEED WESTBOUND	POSTED SPEED LIMIT
COUNTY LINE ROAD	39	42	45
LYNCH ROAD	39	41	45
PIERCE CHAPEL ROAD	41	37	40
US 80 OVERPASS	40	39	40
BLACKMON ROAD	41	35	40
SCHOMBURG ROAD	39	30	40
MILLER ROAD	38	27	40
COOPER CREEK ROAD	24	27	40
REESE ROAD	29	28	35
I-185 OVERPASS	24	31	40
ARMOUR ROAD	29	19	40
HILTON AVENUE	25	21	40
17TH AVENUE	17	25	35
12TH AVENUE	21	17	35
VETERANS PARKWAY	17	21	35

WARM SPRINGS ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
COUNTY LINE ROAD TO VETERANS PARKWAY	DISTANCE: 11.8 MILES

CUMULATIVE AVERAGE - ALL MEASURED TIME PERIODS OF DAY BOTH DIRECTIONS

INTERSECTION	EASTBOUND FREE FLOW RATING	WESTBOUND FREE FLOW RATING	SEGMENT LENGTH (MILES)
COUNTY LINE ROAD	GOOD	GOOD	0.37
LYNCH ROAD	GOOD	GOOD	0.7
PIERCE CHAPEL ROAD	GOOD	GOOD	1.4
US 80 OVERPASS	GOOD	GOOD	0.49
BLACKMON ROAD	GOOD	GOOD	0.85
SCHOMBURG ROAD	GOOD	OK	1.18
MILLER ROAD	GOOD	OK	1.06
WARM SPRINGS CONNECTOR	MARGINAL	OK	0.71
REESE ROAD	GOOD	GOOD	1.24
I-185 OVERPASS	MARGINAL	OK	1.01
ARMOUR ROAD	OK	CONGESTED	0.3
HILTON AVENUE	MARGINAL	MARGINAL	0.48
17TH AVENUE	CONGESTED	OK	0.61
12TH AVENUE	MARGINAL	CONGESTED	0.69
VETERANS PARKWAY	CONGESTED	MARGINAL	0.77

WARM SPRINGS ROAD

CONGESTION MANAGEMENT PROCESS SPRING 2009

COUNTY LINE ROAD TO VETERANS PARKWAY

DISTANCE: 11.8 MILES

AM PEAK HOUR EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
VETERANS PARKWAY	STARTING POINT			
12TH AVENUE	11	13.4	0.44	CONGESTED
17TH AVENUE	42	20.9	0.70	OKAY
HILTON AVENUE	19	25.8	0.86	GOOD
ARMOUR ROAD	2	38	0.95	GOOD
I-185 OVERPASS	15	31.2	0.78	OKAY
REESE ROAD	79	22.6	0.57	MARGINAL
WARM SPRINGS CONNECTOR	25	33	0.83	GOOD
MILLER ROAD	29	26.8	0.67	MARGINAL
SCHOMBURG ROAD	6	37.6	0.94	GOOD
BLACKMON ROAD	3	39	0.98	GOOD
US 80 OVERPASS	0	40	1.00	GOOD
PIERCE CHAPEL ROAD	1	38.9	0.97	GOOD
LYNCH ROAD	36	37	0.82	OKAY

WARM SPRINGS ROAD

CONGESTION MANAGEMENT PROCESS SPRING 2009

COUNTY LINE ROAD TO VETERANS PARKWAY

DISTANCE: 11.8 MILES

AM PEAK HOUR WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
COUNTY LINE ROAD	STARTING POINT			
LYNCH ROAD	8	41.1	0.91	GOOD
PIERCE CHAPEL ROAD	42	36.9	0.82	GOOD
US 80 OVERPASS	18	30.1	0.75	OKAY
BLACKMON ROAD	0	40.2	1.01	GOOD
SCHOMBURG ROAD	14	36	0.90	GOOD
MILLER ROAD	39	29.3	0.73	OKAY
WARM SPRINGS CONNECTOR	18	30.3	0.76	OKAY
REESE ROAD	68	26.4	0.66	OKAY
I-185 OVERPASS	23	28.8	0.82	GOOD
ARMOUR ROAD	29	21.6	0.54	MARGINAL
HILTON AVE	24	26.6	0.67	OKAY
17TH AVE	38	24.3	0.61	MARGINAL
12TH AVE	79	16.2	0.54	MARGINAL
VETERANS PARKWAY	18	24.8	0.83	GOOD

WARM SPRINGS ROAD

CONGESTION MANAGEMENT PROCESS SPRING 2009

COUNTY LINE ROAD TO VETERANS PARKWAY

DISTANCE: 11.8 MILES

OFF PEAK WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
COUNTY LINE ROAD	STARTING POINT			
LYNCH ROAD	8	41.4	0.92	GOOD
PIERCE CHAPEL ROAD	14	42.9	0.95	GOOD
US 80 OVERPASS	-2	42.5	1.06	GOOD
BLACKMON ROAD	1	39.6	0.99	GOOD
SCHOMBURG ROAD	7	37.8	0.95	GOOD
MILLER ROAD	15	35.3	0.88	GOOD
WARM SPRINGS CONNECTOR	34	25.7	0.64	MARGINAL
REESE ROAD	40	31	0.78	OKAY
I-185 OVERPASS	19	30.4	0.87	GOOD
ARMOUR ROAD	50	15.1	0.38	SEVERE
HILTON AVE	47	19.1	0.48	OKAY
17TH AVE	33	25.4	0.64	MARGINAL
12TH AVE	69	16.5	0.55	MARGINAL
VETERANS PARKWAY	49	19.2	0.64	MARGINAL

WARM SPRINGS ROAD

CONGESTION MANAGEMENT PROCESS SPRING 2009

COUNTY LINE ROAD TO VETERANS PARKWAY

DISTANCE: 11.8 MILES

OFF PEAK EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
VETERANS PARKWAY	STARTING POINT			
12TH AVENUE	31	22.6	0.75	OKAY
17TH AVENUE	49	18.6	0.62	MARGINAL
HILTON AVENUE	45	19	0.48	CONGESTED
ARMOUR ROAD	8	31.3	0.78	OKAY
I-185 OVERPASS	82	21.5	0.54	MARGINAL
REESE ROAD	44	29.6	0.74	OKAY
COOPER CREEK ROAD	27	27.1	0.68	MARGINAL
MILLER ROAD	6	37.6	0.94	GOOD
SCHOMBURG ROAD	5	38.1	0.95	GOOD
BLACKMON ROAD	2	39	0.98	GOOD
US 80 OVERPASS	-1	41.2	1.03	GOOD
PIERCE CHAPEL ROAD	23	39.5	0.88	GOOD
LYNCH ROAD	11	39.7	0.88	GOOD

WARM SPRINGS ROAD

CONGESTION MANAGEMENT PROCESS SPRING 2009

COUNTY LINE ROAD TO VETERANS PARKWAY

DISTANCE: 11.8 MILES

PM PEAK HOUR WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
COUNTY LINE	STARTING POINT			
LYNCH ROAD	9	40.3	0.90	GOOD
PIERCE CHAPEL	15	42.7	0.95	GOOD
US 80	1	40.4	1.01	GOOD
BLACKMON ROAD	8	36.8	0.92	GOOD
SCHOMBURG ROAD	46	28.3	0.71	OKAY
MILLER ROAD	75	23	0.58	MARGINAL
WARM SPRINGS CONNECTOR	43	24.3	0.61	MARGINAL
REESE ROAD	83	24.3	0.61	MARGINAL
I-185 OVERPASS	6	33.1	0.95	GOOD
ARMOUR ROAD	37	20.6	0.52	MARGINAL
HILTON AVE	80	13.6	0.34	SEVERE
17TH AVE	29	26.5	0.66	OKAY
12TH AVE	64	17.3	0.58	MARGINAL
VETERANS PARKWAY	58	19.8	0.66	OKAY

WARM SPRINGS ROAD

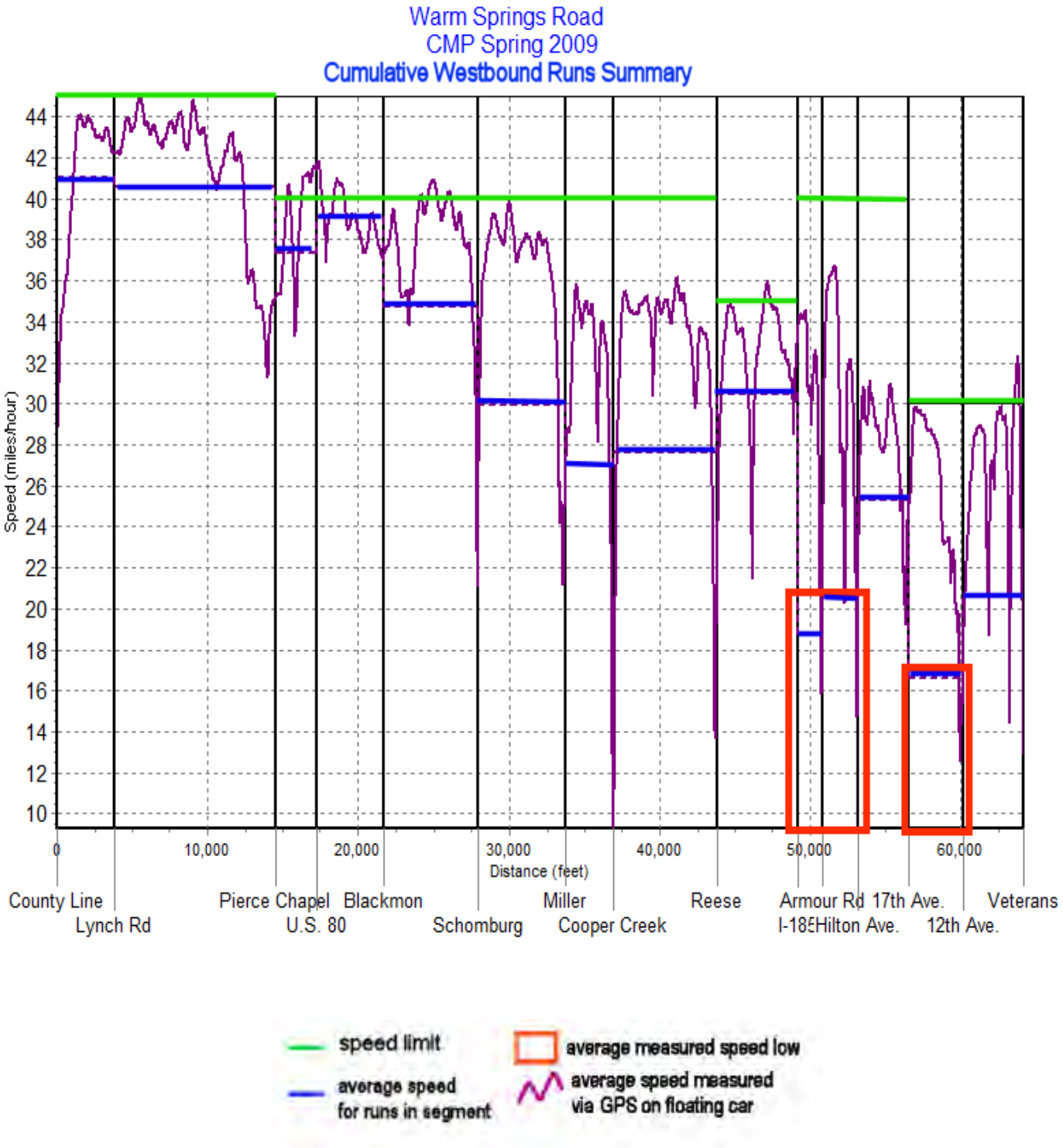
CONGESTION MANAGEMENT PROCESS SPRING 2009

COUNTY LINE ROAD TO VETERANS PARKWAY

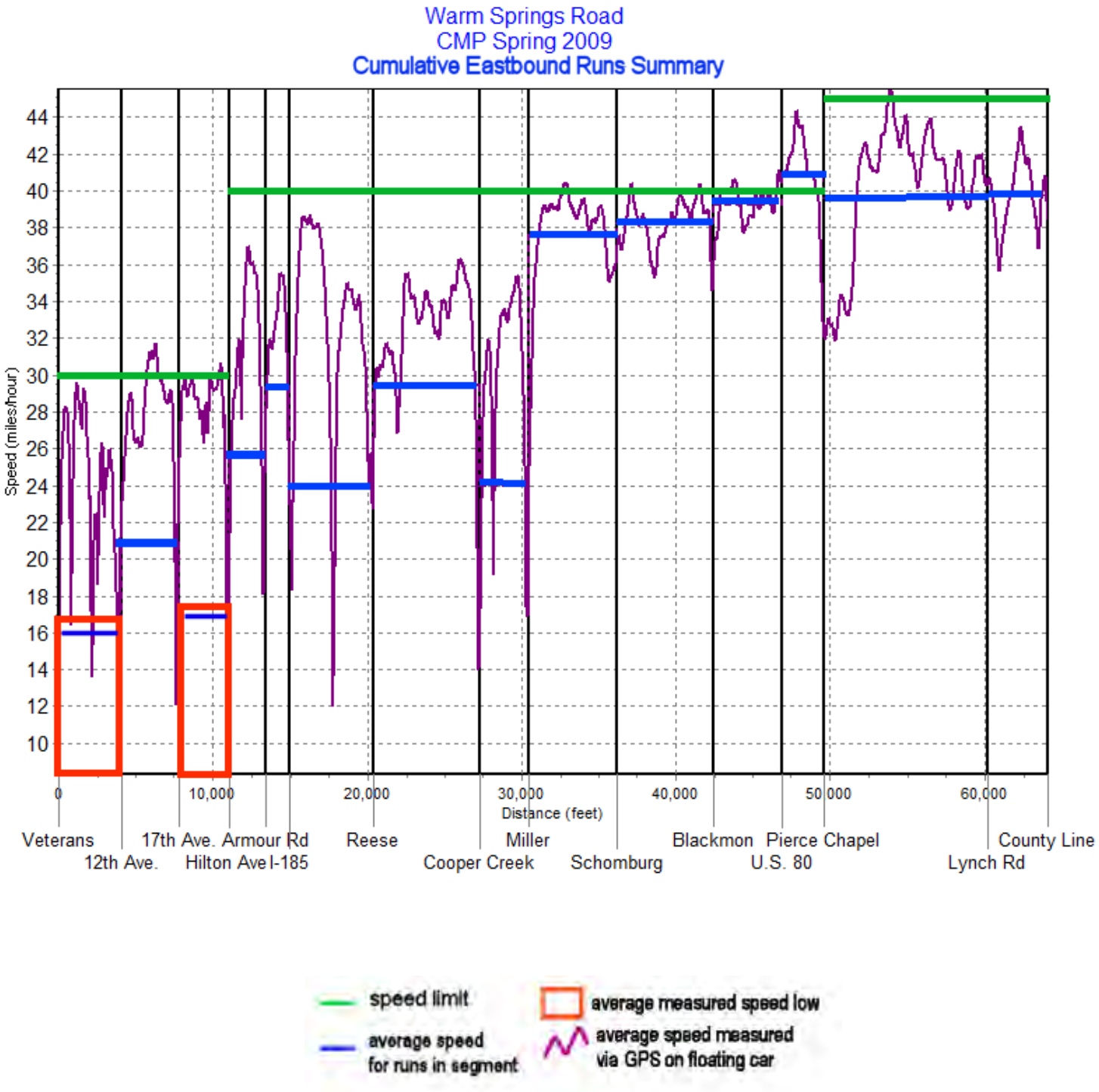
DISTANCE: 11.8 MILES

PM PEAK HOUR EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
VETERANS PARKWAY	STARTING POINT			
12TH AVENUE	40	20.6	0.69	MARGINAL
17TH AVENUE	57	18.1	0.60	MARGINAL
HILTON AVENUE	14	29.4	0.74	OKAY
ARMOUR ROAD	24	21.2	0.53	MARGINAL
I-185	52	26.1	0.65	OKAY
REESE ROAD	77	25.3	0.63	MARGINAL
WARM SPRINGS CONNECTOR	69	17.7	0.44	CONGESTED
MILLER ROAD	8	37.4	0.94	GOOD
SCHOMBURG ROAD	9	37.2	0.93	GOOD
BLACKMON ROAD	1	39.7	0.99	GOOD
US 80 OVERPASS	1	40.4	1.01	GOOD
PIERCE CHAPEL ROAD	22	41.1	0.91	GOOD
LYNCH ROAD	6	42.4	0.94	GOOD

WARM SPRINGS ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
COUNTY LINE ROAD TO VETERANS PARKWAY	DISTANCE: 11.8 MILES

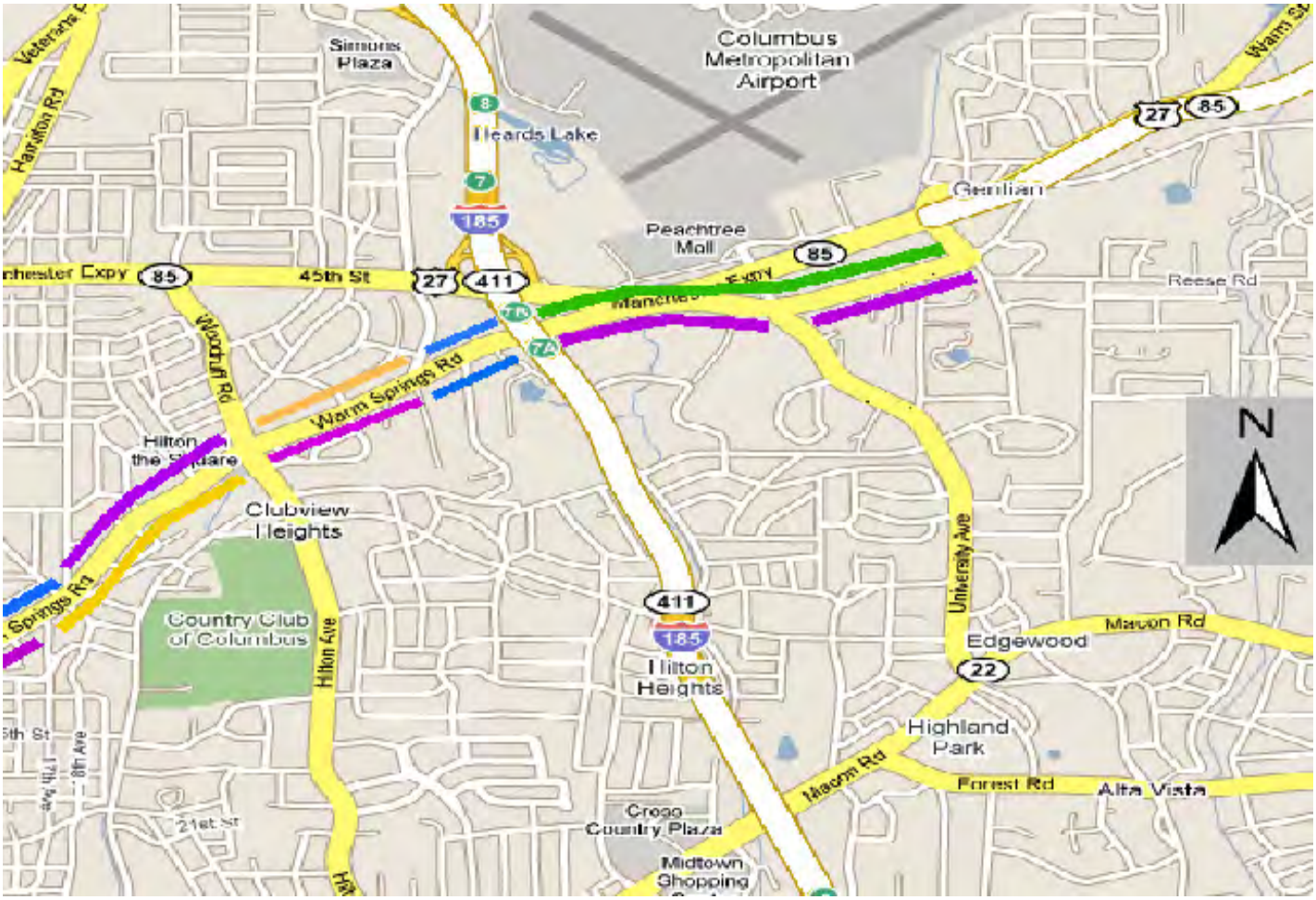


WARM SPRINGS ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
COUNTY LINE ROAD TO VETERANS PARKWAY	DISTANCE: 11.8 MILES



WARM SPRINGS ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
COUNTY LINE ROAD TO VETERANS PARKWAY	DISTANCE: 11.8 MILES

CUMULATIVE AVERAGE CONGESTION RATING FOR ALL THREE MEASURED TIME PERIODS BY DIRECTION TRAVELED

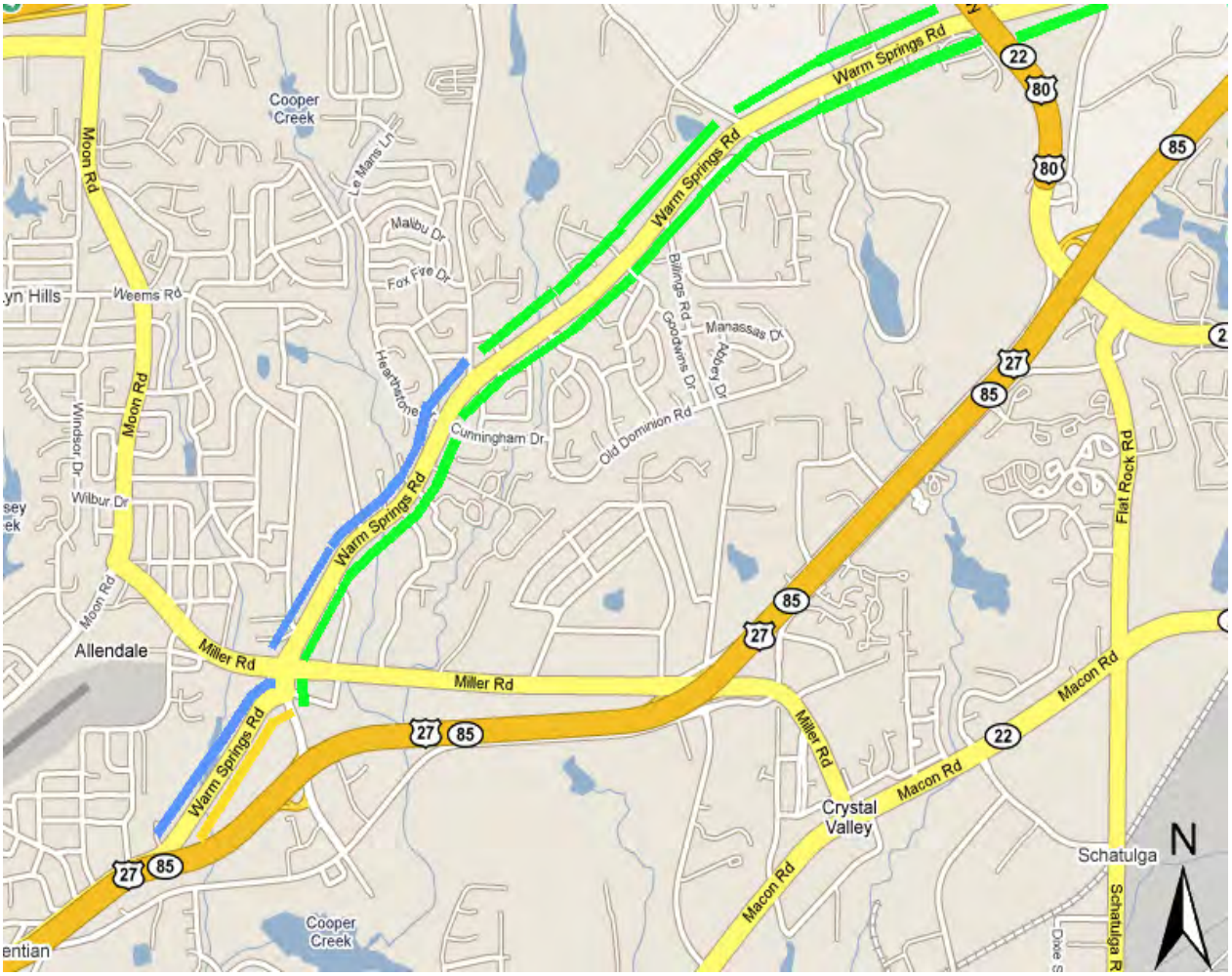


COLOR KEY AND RANKING CATEGORIES
FOR FREE FLOW TRAFFIC SPEED MEASUREMENTS

- SEVERE - Average traffic speed below 40% of the posted speed limit
- CONGESTED - Average traffic speed between 40% and 49% of the posted speed limit
- MARGINAL - Average traffic speed between 50% and 64% of the posted speed limit.
- OKAY - Average traffic speed between 65% and 80% of the posted speed limit.
- GOOD - Average traffic speed between 80% of to the posted speed limit.

WARM SPRINGS ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
COUNTY LINE ROAD TO VETERANS PARKWAY	DISTANCE: 11.8 MILES

CUMULATIVE AVERAGE CONGESTION RATING FOR ALL THREE MEASURED TIME PERIODS BY DIRECTION TRAVELED



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WARM SPRINGS ROAD

CONGESTION MANAGEMENT PROCESS SPRING 2009

COUNTY LINE ROAD TO VETERANS PARKWAY

DISTANCE: 11.8 MILES

POSSIBLE CAUSES OF CONGESTION

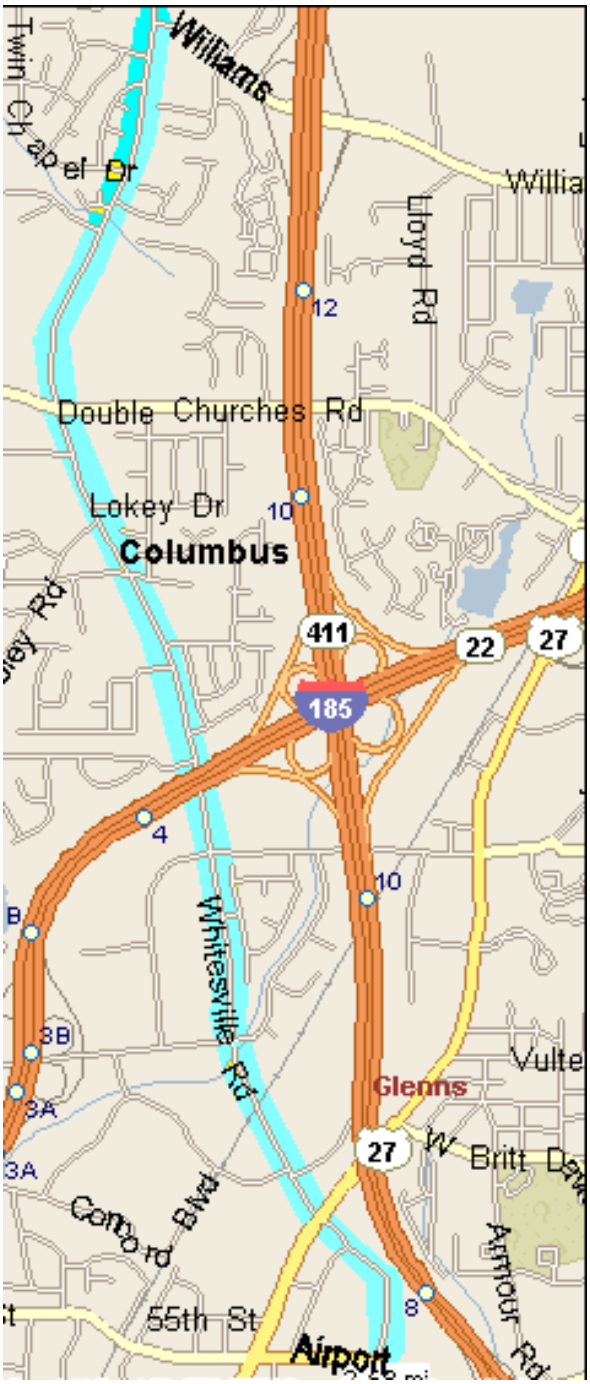
- **Roadway geometry, multiple changes in lanes from 2 to 4 and vice versa, disrupt smooth traffic flow.**
- **High volumes of traffic travel on route.**
- **No turn lanes on two lane segments of road.**
- **Road is programmed for widening project between 10th Avenue and Hilton Avenue.**

Warm Springs Road	Travel Time	V/C Ratio	Arterial and Intersection L.O.S.	Transit System Measures	Incident Management
Traffic Operational Improvements	▲	▶	▲	▶	▲
Non-Motorized Modes	▲	▲	▶	▶	▶
Access Management	▶	▲	▲	▶	▲
Intelligent Transportation	▲	▶	▲	▶	▶

▲	Positive effect on congestion.
▶	No discernable effect on congestion.
▼	Negative effect on congestion.

WHITESVILLE ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
WILLIAMS ROAD TO AIRPORT THRUWAY	DISTANCE: 3.76 MILES

LOCATION MAP OF ROUTE MEASURED



WHITESVILLE ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
WILLIAMS ROAD TO AIRPORT THRUWAY	DISTANCE: 3.76 MILES

CUMULATIVE AVERAGE - ALL MEASURED TIME PERIODS OF DAY BOTH DIRECTIONS

INTERSECTION	AVERAGE SPEED SOUTHBOUND	AVERAGE SPEED NORTHBOUND	POSTED SPEED LIMIT
WHITESVILLE ROAD		26	40
DOUBLE CHURCHES ROAD	29	33	40
MOBLEY ROAD	22	42	40
US 80 OVERPASS	24	27	40
WHITTLESEY ROAD	27	24	40
BRADLEY PARK DRIVE	42	22	40
VETERANS PARKWAY	33	29	40
AIRPORT THRUWAY	26		30

INTERSECTION	FREE FLOW GRADE SOUTHBOUND	FREE FLOW GRADE NORTHBOUND	SEGMENT LENGTH (MILES)
WHITESVILLE ROAD	GOOD		0.14
DOUBLE CHURCHES ROAD	MARGINAL	GOOD	1.02
MOBLEY ROAD	GOOD	MARGINAL	0.30
US 80 OVERPASS	GOOD	MARGINAL	0.69
WHITTLESEY ROAD	OKAY	OKAY	0.22
BRADLEY PARK DRIVE	MARGINAL	GOOD	0.48
VETERANS PARKWAY	CONGESTED	GOOD	0.51
AIRPORT THRUWAY		MARGINAL	0.40

WHITESVILLE ROAD

CONGESTION MANAGEMENT PROCESS SPRING 2009

WILLIAMS ROAD TO AIRPORT THRUWAY

DISTANCE: 3.76 MILES

AM PEAK HOUR NORTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
54TH STREET	STARTING POINT			
VETERANS PARKWAY	21	23.5	0.78	OKAY
BRADLEY PARK	10	33	0.83	GOOD
WHITTLESEY ROAD	23	28.1	0.70	OKAY
US 80 OVERPASS	3	35.4	0.89	GOOD
MOBLEY ROAD	3	39.3	0.98	GOOD
DOUBLE CHURCHES	16	26.2	0.66	OKAY
WILLIAMS ROAD	13	35.5	0.89	GOOD

AM PEAK HOUR SOUTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
WILLIAMS ROAD	STARTING POINT			
DOUBLE CHURCHES ROAD	54	26.1	0.65	OKAY
MOBLEY ROAD	7	31.8	0.80	GOOD
US 80 OVERPASS	-3	42.2	1.06	GOOD
WHITTLESEY ROAD	17	26.8	0.67	OKAY
BRADLEY PARK	6	37.1	0.93	GOOD
VETERANS PARKWAY	42	21.9	0.55	MARGINAL
54TH STREET	7	28.3	0.94	GOOD

WHITESVILLE ROAD

CONGESTION MANAGEMENT PROCESS SPRING 2009

WILLIAMS ROAD TO AIRPORT THRUWAY

DISTANCE: 3.76 MILES

OFF PEAK NORTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
54TH STREET	STARTING POINT			
VETERANS PARKWAY	62	16.2	0.54	MARGINAL
BRADLEY PARK DRIVE	42	22	0.55	MARGINAL
WHITTLESEY ROAD	17	34.2	0.86	GOOD
US 80 OVERPASS	0	41.9	1.05	GOOD
MOBLEY ROAD	-5	43.8	1.10	GOOD
DOUBLE CHURCHES ROAD	22	22.8	0.57	MARGINAL
WILLIAMS ROAD	13	35.5	0.89	GOOD
OFF PEAK SOUTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
WILLIAMS ROAD	STARTING POINT			
DOUBLE CHURCHES ROAD	24	32.7	0.82	GOOD
MOBLEY ROAD	5	34.3	0.86	GOOD
US 80 OVERPASS	-6	44.8	1.12	GOOD
WHITTLESEY ROAD	11	32.3	0.81	GOOD
BRADLEY PARK DRIVE	44	20.2	0.51	MARGINAL
VETERANS PARKWAY	21	30.4	0.76	OKAY
54TH STREET	3	30.2	1.01	GOOD

WHITESVILLE ROAD

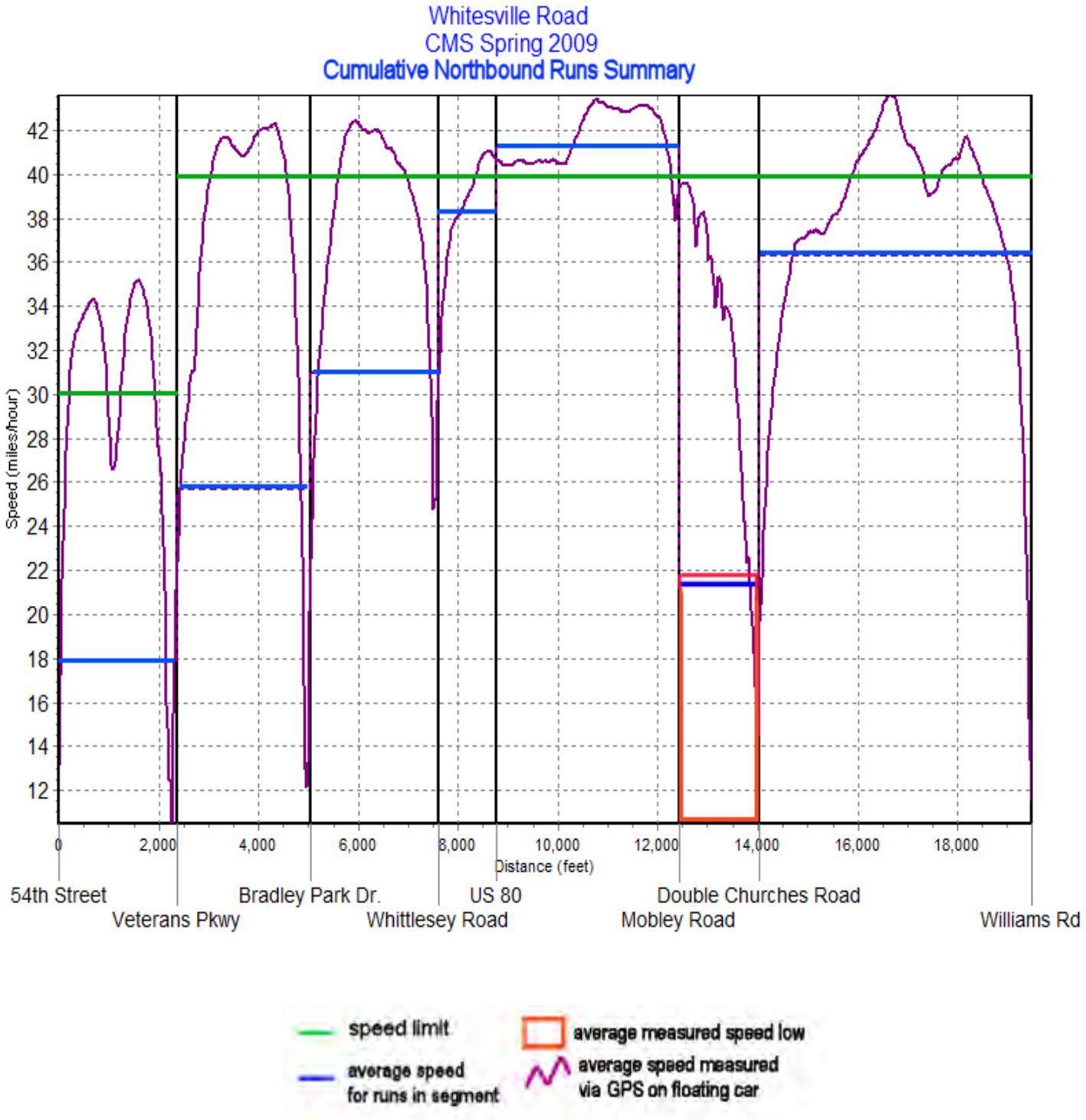
CONGESTION MANAGEMENT PROCESS SPRING 2009

WILLIAMS ROAD TO AIRPORT THRUWAY

DISTANCE: 3.76 MILES

PM PEAK HOUR NORTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
54TH STREET	STARTING POINT			
VETERANS PARKWAY	87	12	0.40	CONGESTED
BRADLEY PARK DRIVE	46	20.3	0.51	MARGINAL
WHITTLESEY ROAD	19	30.3	0.76	OKAY
US 80 OVERPASS	2	36.8	0.92	GOOD
MOBLEY ROAD	0	40.2	1.01	GOOD
DOUBLE CHURCHES ROAD	99	11.7	0.29	SEVERE
WILLIAMS ROAD	1	39.7	0.99	GOOD
PM PEAK HOUR SOUTHBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
WILLIAMS ROAD	STARTING POINT			
DOUBLE CHURCHES ROAD	67	23.6	0.59	MARGINAL
MOBLEY ROAD	5	33.8	0.85	GOOD
US 80 OVERPASS	-1	41.1	1.03	GOOD
WHITTLESEY ROAD	15	24.7	0.62	MARGINAL
BRADLEY PARK DRIVE	81	14.1	0.35	SEVERE
VETERANS PARKWAY	71	16.7	0.42	CONGESTED
54TH STREET	1	31	1.03	GOOD

WHITESVILLE ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
WILLIAMS ROAD TO AIRPORT THRUWAY	DISTANCE: 3.76 MILES

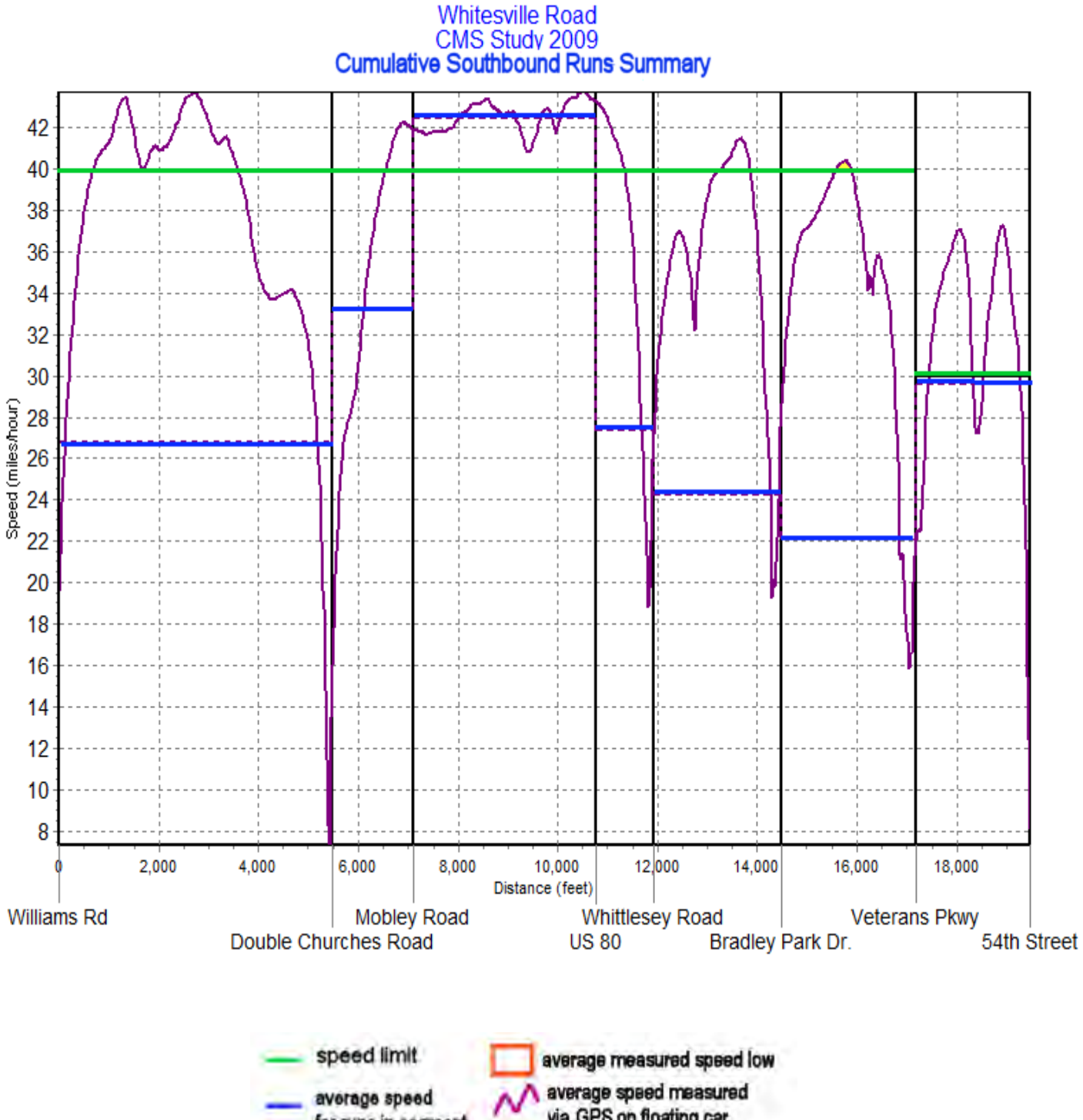


WHITESVILLE ROAD

CONGESTION MANAGEMENT PROCESS SPRING 2009

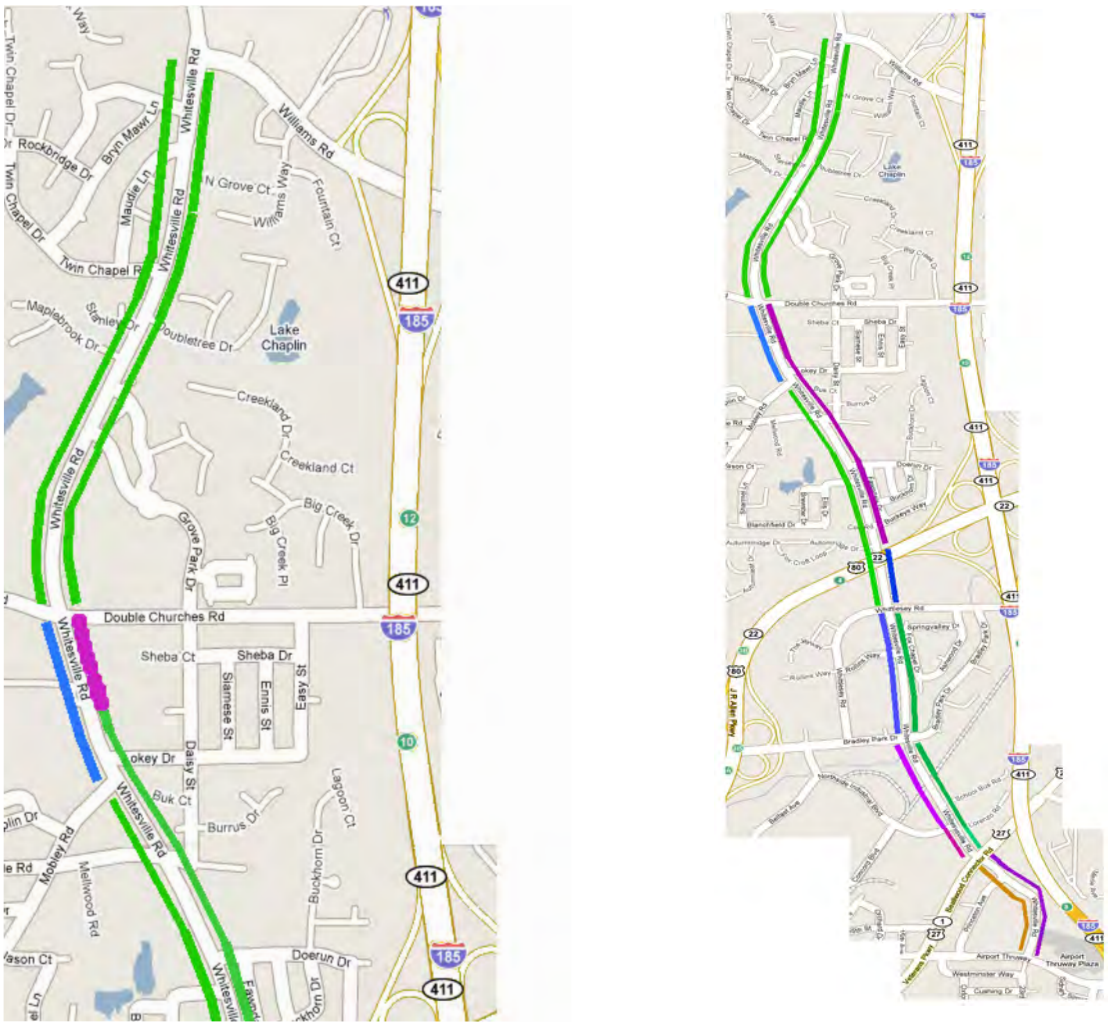
WILLIAMS ROAD TO AIRPORT THRUWAY

DISTANCE: 3.76 MILES



WHITESVILLE ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
WILLIAMS ROAD TO AIRPORT THRUWAY	DISTANCE: 3.76 MILES

CUMULATIVE AVERAGE CONGESTION RATING FOR ALL THREE MEASURED TIME PERIODS BY DIRECTION TRAVELED



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WHITESVILLE ROAD

CONGESTION MANAGEMENT PROCESS SPRING 2009

WILLIAMS ROAD TO AIRPORT THRUWAY

DISTANCE: 3.76 MILES

POSSIBLE CAUSES OF CONGESTION

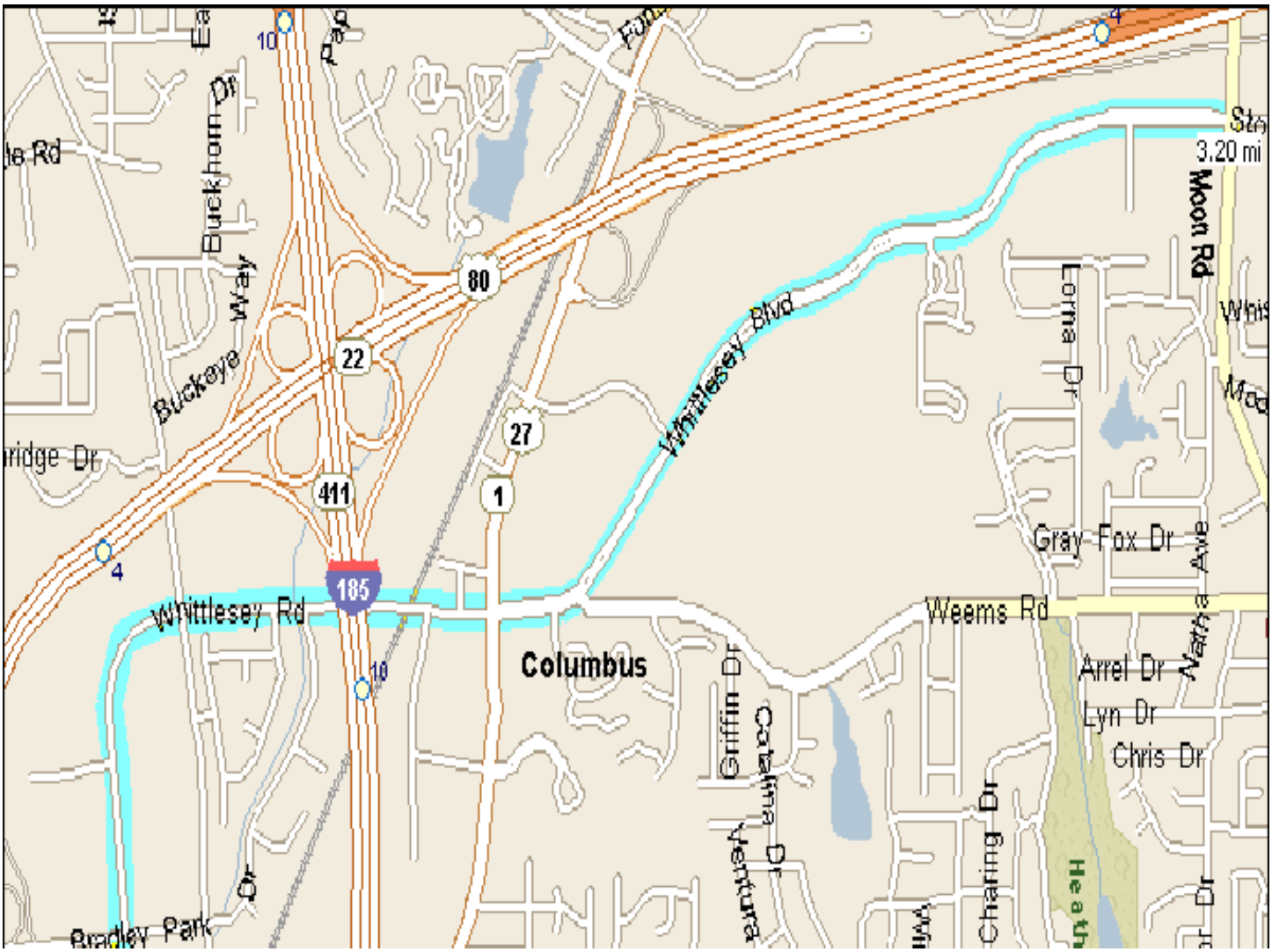
- **Heavy peak hour volumes in section between Veterans Parkway and Airport Thruway due to commercial businesses in area.**
- **Absence of left turn lane on section leads to delays and poses safety hazard for through traffic.**

Whitesville Road	Travel Time	Volume/ Capacity Ratio	Arterial LOS	Transit System Measures	Incident Management
Transportation Demand Management	▲	▶	▲	▶	▶
Transportation Operational Improvement	▲	▶	▲	▶	▶
Non-Motorized Modes	▲	▶	▲	▶	▶
Access Management	▲	▶	▲	▶	▶
Intelligent Transportation	▲	▶	▲	▶	▶

▲	Positive effect on congestion.
▶	No discernable effect on congestion.
▼	Negative effect on congestion.

WHITTLESEY ROAD AND BOULEVARD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
BRADLEY PARK DRIVE TO MOON ROAD	DISTANCE: 3.36 MILES

LOCATION MAP OF ROUTE MEASURED



WHITTLESEY ROAD AND BOULEVARD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
BRADLEY PARK DRIVE TO MOON ROAD	DISTANCE: 3.36 MILES

CUMULATIVE AVERAGE -
ALL MEASURED TIME PERIODS OF DAY
BOTH DIRECTIONS

INTERSECTION	AVERAGE SPEED EASTBOUND	AVERAGE SPEED WESTBOUND	POSTED SPEED LIMIT
BRADLEY PARK DRIVE	–	28 mph	
WHITESVILLE ROAD	28 mph	21 mph	35 mph
BRADLEY PARK DRIVE	28 mph	33 mph	35 mph
VETERANS PARKWAY	15 mph	11 mph	35 mph
WEEMS ROAD	23 mph	17 mph	35 mph
ADAMS FARM ROAD	33 mph	25 mph	35 mph
CPC #3	31 mph	28 mph	40 mph
CPC #5	33 mph	35 mph	40 mph
MOON ROAD	24 mph	–	40 mph

WHITTLESEY ROAD AND BOULEVARD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
BRADLEY PARK DRIVE TO MOON ROAD	DISTANCE: 3.36 MILES

CUMULATIVE AVERAGE -
ALL MEASURED TIME PERIODS OF DAY
BOTH DIRECTIONS

INTERSECTION	FREE FLOW EASTBOUND RATING	FREE FLOW WESTBOUND RATING	SEGMENT LENGTH (MILES)
BRADLEY PARK DRIVE	_	OKAY	0.60
WHITESVILLE ROAD	OKAY	MARGINAL	0.27
BRADLEY PARK DRIVE	OKAY	GOOD	0.41
VETERANS PARKWAY	CONGESTED	SEVERE	0.19
WEEMS ROAD	MARGINAL	CONGESTED	0.31
ADAMS FARM ROAD	GOOD	MARGINAL	0.21
CPC #3	OKAY	OKAY	0.22
CPC #5	GOOD	GOOD	0.22
MOON ROAD	MARGINAL	_	0.95

WHITTLESEY ROAD AND BOULEVARD

CONGESTION MANAGEMENT PROCESS SPRING 2009

BRADLEY PARK DRIVE TO MOON ROAD

DISTANCE: 3.36 MILES

AM PEAK HOURS EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
BRADLEY PARK DRIVE	STARTING POINT			
ROLLINS WAY	27	30.4	0.87	GOOD
WHITESVILLE ROAD	28	29.3	0.84	GOOD
BRADLEY PARK DRIVE	28	30	0.86	GOOD
VETERANS PARKWAY	43	21.3	0.61	MARGINAL
WEEMS ROAD	18	28.4	0.81	GOOD
ADAMS FARM ROAD	28	37	1.06	GOOD
CPC #3	19	30.8	0.77	OKAY
CPC #5	20	35.8	0.90	GOOD
MOON ROAD	86	32.2	0.81	GOOD
AM PEAK HOURS WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
MOON ROAD				
CPC #5	12	36.3	0.91	GOOD
CPC #3	1	38.6	0.97	GOOD
ADAMS FARM ROAD	17	24.3	0.61	MARGINAL
WEEMS ROAD	24	26	0.65	MARGINAL
VETERANS PARKWAY	53	11	0.28	SEVERE
BRADLEY PARK DRIVE	3	33	0.94	GOOD
WHITESVILLE ROAD	38	18.4	0.53	MARGINAL
ROLLINS WAY	9	31.7	0.91	GOOD
BRADLEY PARK DRIVE	24	25.3	0.72	OKAY

WHITTLESEY ROAD AND BOULEVARD

CONGESTION MANAGEMENT PROCESS SPRING 2009

BRADLEY PARK DRIVE TO MOON ROAD

DISTANCE: 3.36 MILES

OFF PEAK HOURS EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
BRADLEY PARK DRIVE	STARTING POINT			
ROLLINS WAY	4	31	0.89	GOOD
WHITESVILLE ROAD	7	32.9	0.94	GOOD
BRADLEY PARK DRIVE	6	29.6	0.85	GOOD
VETERANS PARKWAY	120	12.9	0.37	SEVERE
WEEMS ROAD	34	18.2	0.46	CONGESTED
ADAMS FARM ROAD	17	30.6	0.77	OKAY
CPC #3	10	27.1	0.68	OKAY
CPC #5	11	27.6	0.69	OKAY
MOON ROAD	57	25.2	0.63	MARGINAL

OFF PEAK HOURS WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
MOON ROAD	STARTING POINT			
CPC #5	17	34.7	0.87	GOOD
CPC #3	22	19.8	0.50	MARGINAL
ADAMS FARM ROAD	4	28.9	0.72	OKAY
WEEMS ROAD	64	12.5	0.31	SEVERE
VETERANS PARKWAY	46	12.7	0.32	SEVERE
BRADLEY PARK DRIVE	3	33	0.94	GOOD
WHITESVILLE ROAD	26	23.4	0.67	OKAY
ROLLINS WAY	9	32.8	0.94	GOOD
BRADLEY PARK DRIVE	24	21	0.60	MARGINAL

WHITTLESEY ROAD AND BOULEVARD

CONGESTION MANAGEMENT PROCESS SPRING 2009

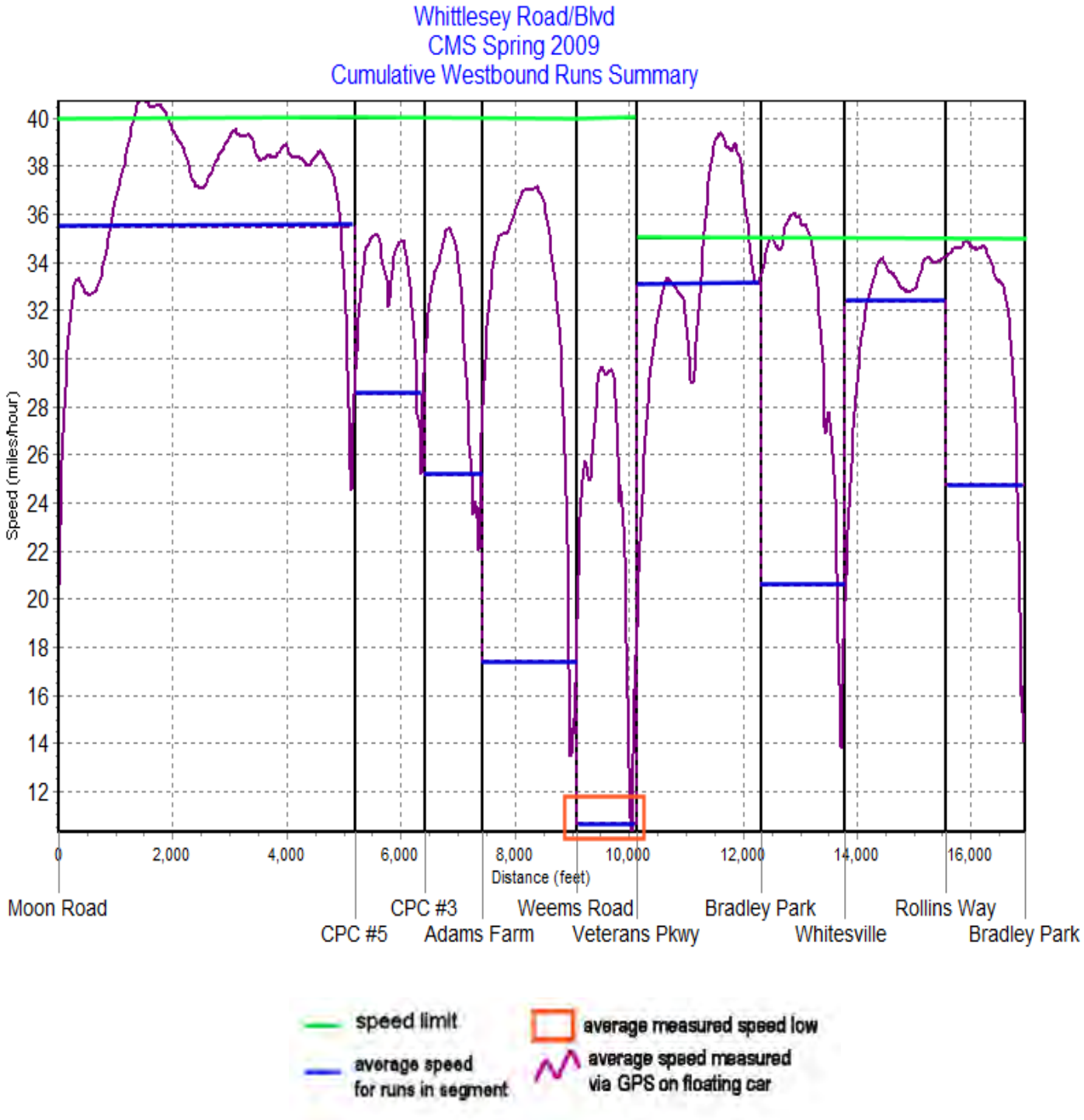
BRADLEY PARK DRIVE TO MOON ROAD

DISTANCE: 3.36 MILES

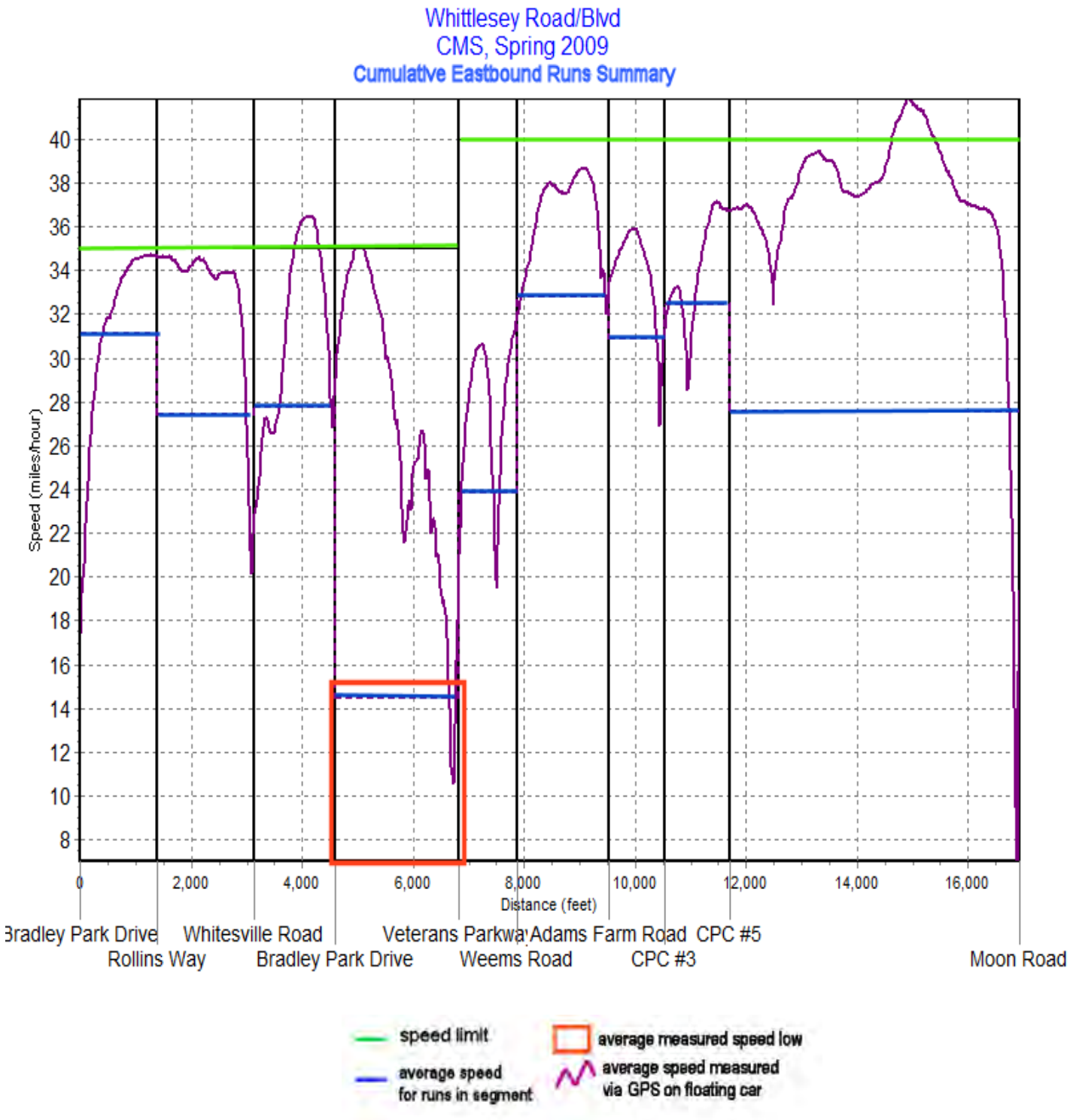
PM PEAK HOUR EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
BRADLEY PARK DRIVE	STARTING POINT			
ROLLINS WAY	3	32	0.91	GOOD
WHITESVILLE ROAD	50	19.9	0.57	MARGINAL
BRADLEY PARK DRIVE	18	23.6	0.67	OKAY
VETERANS PARKWAY	133	9.3	0.27	SEVERE
WEEMS ROAD	12	24.8	0.62	MARGINAL
ADAMS FARM ROAD	17	30.7	0.77	OKAY
CPC #3	0	34.8	0.87	GOOD
CPC #5	5	33.9	0.85	GOOD
MOON ROAD	61	25.2	0.63	MARGINAL

PM PEAK HOUR WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
MOON ROAD	STARTING POINT			
CPC #5	15	35.5	0.89	GOOD
CPC #3	17	27.1	0.68	OKAY
ADAMS FARM ROAD	16	22.3	0.56	MARGINAL
WEEMS ROAD	56	13.7	0.34	SEVERE
VETERANS PARKWAY	71	8.1	0.20	SEVERE
BRADLEY PARK DRIVE	3	33.3	0.95	GOOD
WHITESVILLE ROAD	35	19.8	0.57	MARGINAL
ROLLINS WAY	8	32.5	0.93	GOOD
BRADLEY PARK DRIVE	7	27.9	0.80	GOOD

WHITTLESEY ROAD AND BOULEVARD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
BRADLEY PARK DRIVE TO MOON ROAD	DISTANCE: 3.36 MILES

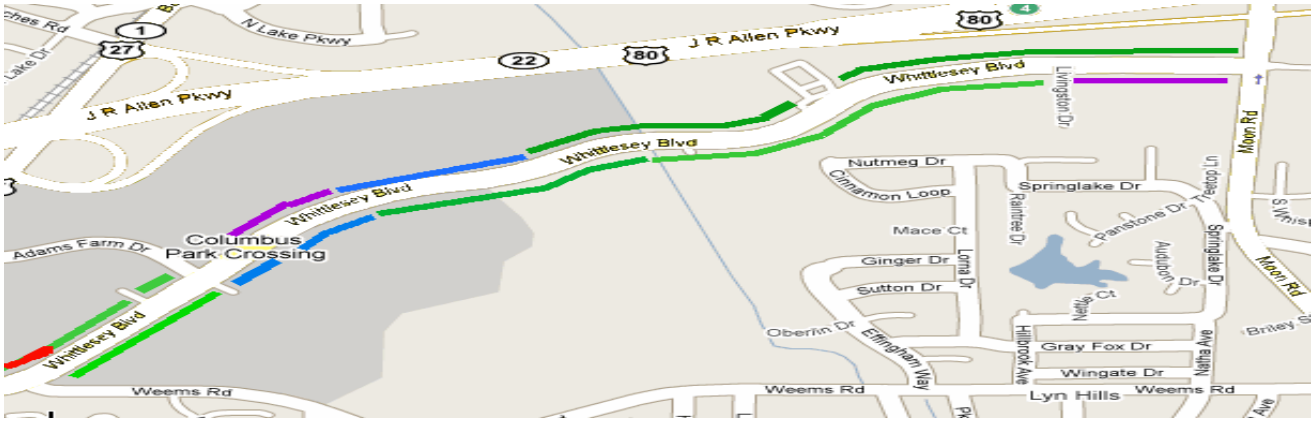


WHITTLESEY ROAD AND BOULEVARD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
BRADLEY PARK DRIVE TO MOON ROAD	DISTANCE: 3.36 MILES



WHITTLESEY ROAD AND BOULEVARD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
BRADLEY PARK DRIVE TO MOON ROAD	DISTANCE: 3.36 MILES

CUMULATIVE AVERAGE CONGESTION RATING FOR ALL THREE MEASURED TIME PERIODS BY DIRECTION TRAVELED



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FOR FREE FLOW TRAFFIC SPEED MEASUREMENTS

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- CONGESTED - Average traffic speed between 40% and 49% of the posted speed limit
- MARGINAL - Average traffic speed between 50% and 64% of the posted speed limit.
- OKAY - Average traffic speed between 65% and 80% of the posted speed limit.
- GOOD - Average traffic speed between 80% of to the posted speed limit.

WHITTLESEY ROAD AND BOULEVARD

CONGESTION MANAGEMENT PROCESS SPRING 2009

BRADLEY PARK DRIVE TO MOON ROAD

DISTANCE: 3.36 MILES

POSSIBLE CAUSES OF CONGESTION

- Additional capacity due to be constructed along corridor between Whitesville Road and Veterans Parkway which will resolve existing single line queue problems eastbound on Whittlesey Road approaching Veterans Parkway intersection.
- Area is a high volume retail commercial zone with numerous points of egress/ingress from shopping centers.
- Corridor is programmed for widening from 2 to 4 lanes between Bradley Park Drive and Veterans Parkway.
- Westbound Whittlesey Blvd experiences some delay at closely spaced signals of Weems Road, Main Street and Veterans Parkway

Whittlesey Road And Boulevard	Travel Time	V/C Ratio	Arterial and Intersection LOS	Transit System Measures	Incident Management
Capacity Expansion	▲	▶	▲	▶	▲
Access Management	▲	▶	▲	▶	▶
Traffic Operational Improvement	▲	▲	▲	▶	▶
Non-Motorized Modes	▶	▲	▶	▲	▶

▲	Positive effect on congestion.
▶	No discernable effect on congestion.
▼	Negative effect on congestion.

WILLIAMS ROAD / MOON ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
WHITESVILLE ROAD TO MILLER ROAD	DISTANCE: 5.0 MILES

LOCATION MAP OF ROUTE MEASURED

WILLIAMS ROAD / MOON ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
WHITESVILLE ROAD TO MILLER ROAD	DISTANCE: 5.0 MILES

CUMULATIVE AVERAGE -
ALL MEASURED TIME PERIODS OF DAY
BOTH DIRECTIONS

INTERSECTION	AVERAGE SPEED EASTBOUND	AVERAGE SPEED WESTBOUND	POSTED SPEED LIMIT
WHITESVILLE ROAD		20	45
INTERSTATE 185	28	38	45
FORTSON ROAD	26	30	45
VETERANS PARKWAY	22	17	45
WHITTLESEY BLVD.	27	28	35
SPRING LAKE DR.	34	32	35
WEEMS ROAD	21	28	35
MILLER ROAD	32		35

WILLIAMS ROAD / MOON ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
WHITESVILLE ROAD TO MILLER ROAD	DISTANCE: 5.0 MILES

CUMULATIVE AVERAGE -
ALL MEASURED TIME PERIODS OF DAY
BOTH DIRECTIONS

INTERSECTION	FREE FLOW SPEED EASTBOUND	FREE FLOW SPEED WESTBOUND	SEGMENT LENGTH (miles)
WHITESVILLE ROAD		CONGESTED	0.32
INTERSTATE 185	MARGINAL	GOOD	0.46
FORTSON ROAD	MARGINAL.	MARGINAL	0.78
VETERANS PARKWAY	CONGESTED	SERIOUS	0.7
WHITTLESEY BLVD.	OK	GOOD	1.05
SPRING LAKE DR.	GOOD	GOOD	0.38
WEEMS ROAD	MARGINAL	GOOD	0.41
MILLER ROAD	GOOD		0.81

WILLIAMS ROAD / MOON ROAD

CONGESTION MANAGEMENT PROCESS SPRING 2009

WHITESVILLE ROAD TO MILLER ROAD

DISTANCE: 5.0 MILES

AM PEAK HOUR WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
MILLER ROAD	STARTING POINT			
WEEMS ROAD	24	28.2	0.81	GOOD
SPRING LAKE	2	33.6	0.96	GOOD
WHITTLESEY BLVD	5	30.8	0.88	GOOD
VETERANS PARKWAY	145	18	0.51	MARGINAL
FORTSON ROAD	40	27.8	0.62	MARGINAL
I-185	13	37.8	0.84	GOOD
WHITESVILLE ROAD	49	20.1	0.45	CONGESTED

AM PEAK HOUR EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
WHITESVILLE ROAD	STARTING POINT			
I-185	18	30.5	0.68	OKAY
FORTSON ROAD	129	19.6	0.44	MARGINAL
VETERANS PARKWAY	157	12.4	0.28	SEVERE
WHITTLESEY BLVD	32	33.6	0.75	OKAY
SPRING LAKE DRIVE	0	34.5	0.99	GOOD
WEEMS ROAD	17	25.7	0.73	OKAY
MILLER ROAD	0	34.5	0.99	GOOD

WILLIAMS ROAD / MOON ROAD

CONGESTION MANAGEMENT PROCESS SPRING 2009

WHITESVILLE ROAD TO MILLER ROAD

DISTANCE: 5.0 MILES

OFF PEAK EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
WHITESVILLE ROAD	STARTING POINT			
I-185	18	30.5	0.68	OKAY
FORTSON RD	15	32.4	0.72	OKAY
VETERANS PARKWAY	35	29.3	0.65	OKAY
WHITTLESEY BLVD	89	18	0.51	MARGINAL
SPRING LAKE DRIVE	89	23	0.66	OKAY
WEEMS ROAD	0	34.3	0.98	GOOD
MILLER ROAD	16	25.4	0.73	OKAY

OFF PEAK WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
MILLER ROAD	STARTING POINT			
WEEMS RD	41	23.7	0.68	OKAY
SPRING LAKE DRIVE	3	32.7	0.93	GOOD
WHITTLESEY BLVD	1	33.5	0.96	GOOD
VETERANS PARKWAY	118	20.2	0.58	MARGINAL
FORTSON ROAD	36	27.9	0.62	MARGINAL
I-185	14	37.4	0.83	GOOD
WHITESVILLE ROAD	50	19.9	0.44	CONGESTED

WILLIAMS ROAD / MOON ROAD

CONGESTION MANAGEMENT PROCESS SPRING 2009

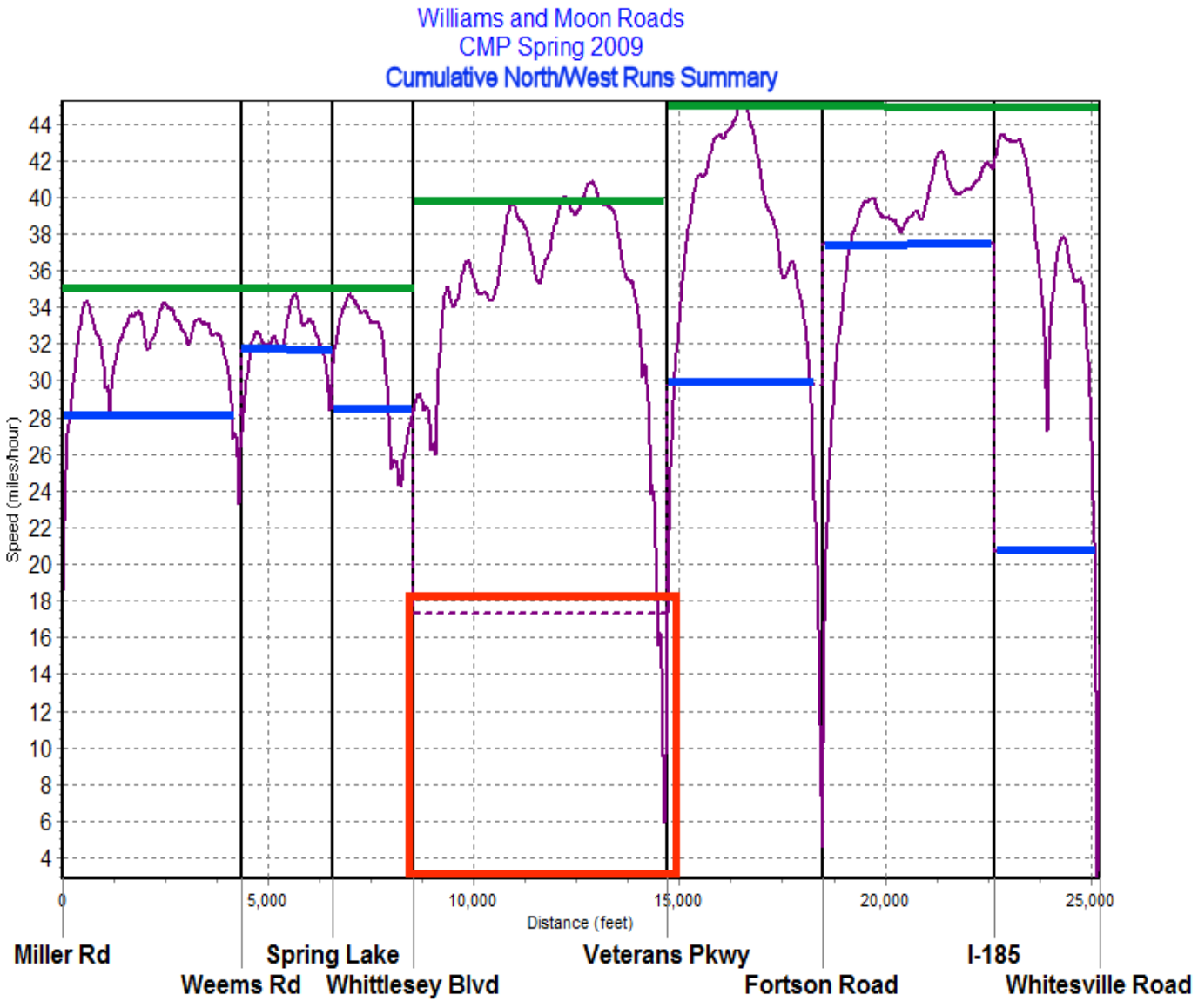
WHITESVILLE ROAD TO MILLER ROAD

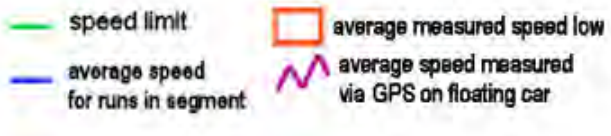
DISTANCE: 5.0 MILES

PM PEAK HOUR EASTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
WHITESVILLE ROAD	STARTING POINT			
I-185	38	23.4	0.61	MARGINAL
FORTSON ROAD	42	27.5	0.53	MARGINAL
VETERANS PARKWAY	56	23.7	0.52	MARGINAL
WHITTLESEY BLVD	100	23.2	0.97	GOOD
SPRING LAKE DRIVE	0	33.8	0.42	CONGESTED
WEEMS ROAD	66	14.7	0.89	GOOD
MILLER ROAD	10	31.3	0.89	GOOD

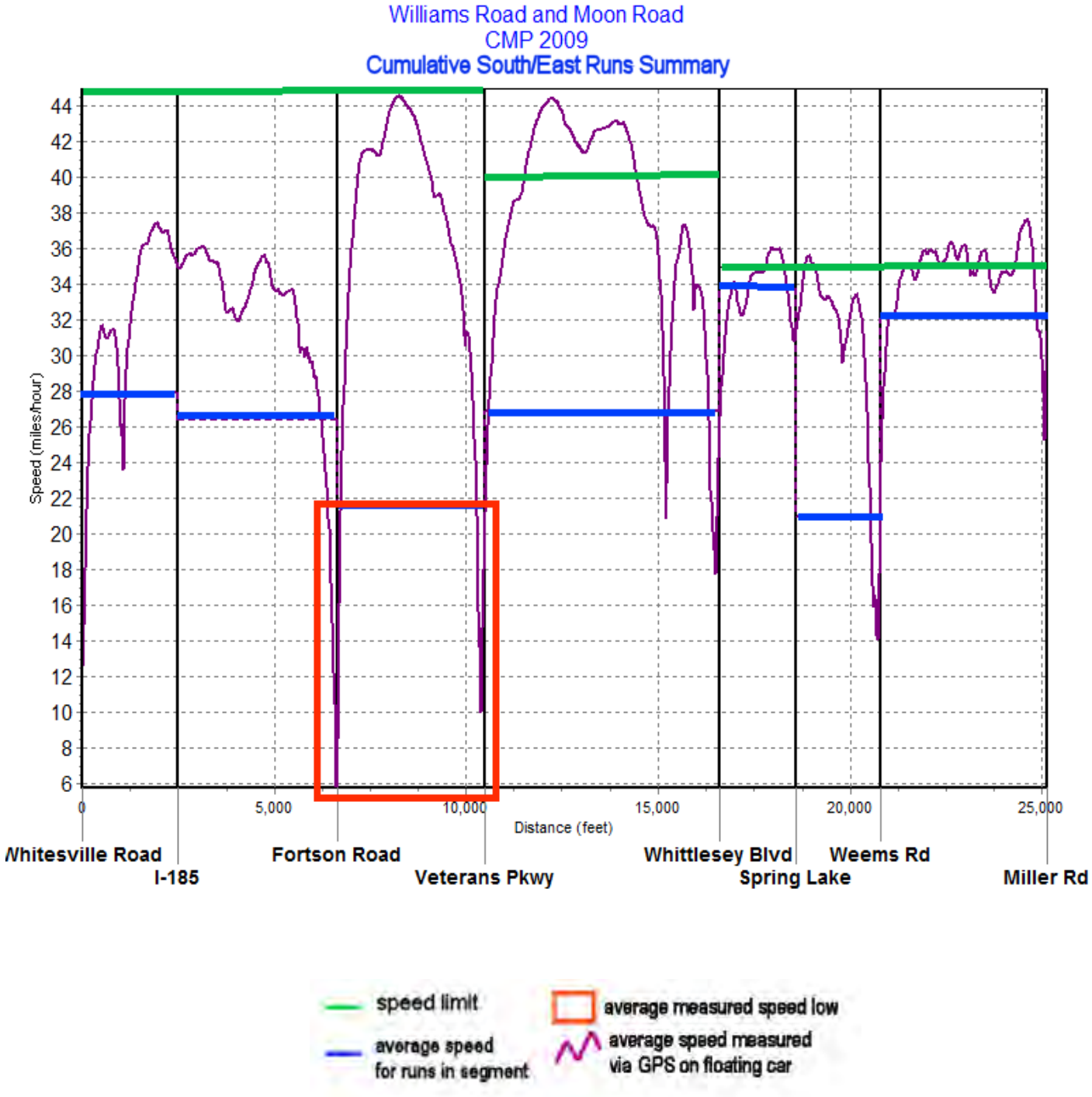
PM PEAK HOUR WESTBOUND	AVERAGE DELAY (SECONDS)	AVERAGE SPEED (MPH)	FREE FLOW RATING	FREE FLOW GRADE
MILLER ROAD	STARTING POINT			
WEEMS ROAD	15	29.9	0.85	GOOD
SPRING LAKE DRIVE	12	27.9	0.80	GOOD
WHITTLESEY BLVD.	24	21.9	0.63	MARGINAL
VETERANS PARKWAY	191	15.6	0.45	CONGESTED
FORTSON ROAD	19	34.1	0.76	OKAY
I-185	15	36.8	0.82	GOOD
WHITESVILLE ROAD	42	22.1	0.49	CONGESTED

WILLIAMS ROAD / MOON ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
WHITESVILLE ROAD TO MILLER ROAD	DISTANCE: 5.0 MILES



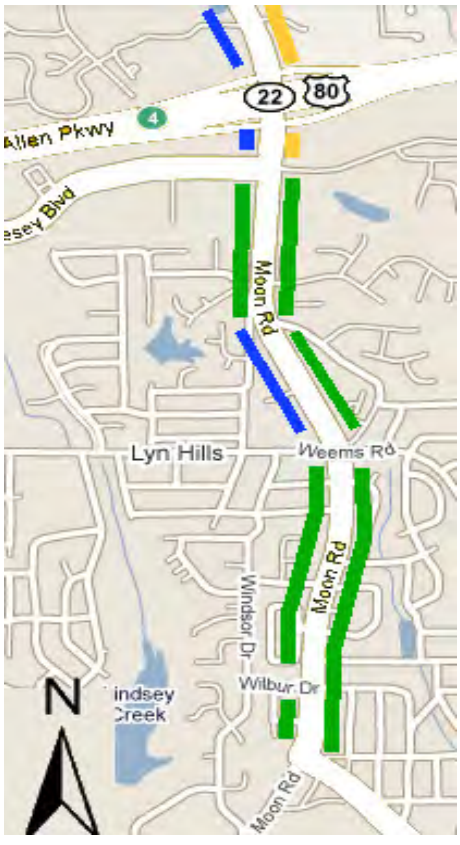


WILLIAMS ROAD / MOON ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
WHITESVILLE ROAD TO MILLER ROAD	DISTANCE: 5.0 MILES



WILLIAMS ROAD / MOON ROAD	*CONGESTION MANAGEMENT PROCESS SPRING 2009*
WHITESVILLE ROAD TO MILLER ROAD	DISTANCE: 5.0 MILES

CUMULATIVE AVERAGE CONGESTION RATING FOR ALL THREE MEASURED TIME PERIODS BY DIRECTION TRAVELED



COLOR KEY AND RANKING CATEGORIES
FOR FREE FLOW TRAFFIC SPEED MEASUREMENTS

- SEVERE - Average traffic speed below 40% of the posted speed limit
- CONGESTED - Average traffic speed between 40% and 49% of the posted speed limit
- MARGINAL - Average traffic speed between 50% and 64% of the posted speed limit.
- OKAY - Average traffic speed between 65% and 80% of the posted speed limit.
- GOOD - Average traffic speed between 80% of to the posted speed limit.

WILLIAMS ROAD / MOON ROAD

CONGESTION MANAGEMENT PROCESS SPRING 2009

WHITESVILLE ROAD TO MILLER ROAD

DISTANCE: 5.0 MILES

CUMULATIVE AVERAGE CONGESTION RATING FOR ALL THREE MEASURED TIME PERIODS BY DIRECTION TRAVELED

POSSIBLE CAUSES OF CONGESTION

- Lack of left turn lanes along route. Such capacity will be constructed with forthcoming widening project between Whittlesey Boulevard and Wilbur Drive.
- Volume to capacity ratio is very high along Moon Road.
- Lengthy delays at intersection of Williams Road and Veterans Parkway.
- No sidewalks or bicycle friendly shoulders along route.

Williams Road and Moon Road	Travel Time	V/C Ratio	Arterial Intersection Level of Service	Transit Service	Incident Management
Traffic Operational Improvement	▲	▶	▲	▶	▲
Growth Management	▲	▲	▲	▶	▲
Non-Motorized Modes	▲	▶	▲	▶	▲

▲	Positive effect on congestion.
▶	No discernable effect on congestion.
▼	Negative effect on congestion.

CHAPTER 7 -
SUMMARY OF FINDINGS AND RECOMMENDATIONS

INTRODUCTION

The Congestion Management Process study has categorized the extent of congestion for the individual sections of roadway along 24 routes in the Columbus-Phenix City area. Of the surveyed routes, in the AM Peak Hours and % in the PM Peak Hours experiences a “congested” or “serious” rating.

Recommended Strategies

Recommended strategies to address the congestion found along the routes in the Columbus-Phenix City area were identified in each route evaluation in Chapter 6. These recommendations, based on local knowledge and engineering judgment, are intended to highlight those strategies considered to be most appropriate to the location and situation where congestion was identified. All recommendations will require further study and evaluation before programming and implementation could occur. The recommended strategies listed here are not intended to limit the scope of further studies.

The recommended strategies are summarized in this chapter, according to the strategy classes and strategy groups described in Chapter 5.

Traffic Operational Improvements

The strategy recommended most frequently is that of traffic operational improvements. This strategy group consists of:

A) Traffic signal improvements
B) Roadway geometric improvements
C} Time of day restrictions
D) Ramp metering
E) Commercial vehicle improvements
F) Construction management

This strategy is generally more efficient using a combination of strategies along specific corridors. For example, in the Veterans Expressway section between Eighth Street and Fifteenth Street, the implementation of centralized traffic control through the Automatic Traffic Management Center will allow for better coordination of signals and thus smoother progression.

FIGURE 7-1
SUMMARY OF RECOMMENDED CONGESTION MANAGEMENT STRATEGIES

ROUTES	Transportation Demand Management	Transportation Operational Improvements	Transit Operational Improvements	Non-Motorized Modes	Growth Management	Access Management	Intelligent Transportation Systems	Capacity Expansion
2nd Avenue	▲	▲		▲		▲		
54th St./Airport Thruway	▲	▲			▲	▲	▲	
Bradley Park Drive	▲	▲			▲	▲	▲	
Buena Vista Road	▲	▲	▲			▲		▲
Double Churches	▲	▲						▲
Forrest Road	▲	▲				▲		▲
Fort Benning/Brennan	▲	▲				▲		▲
Interstate 185		▲					▲	▲
Lee/Summerville Rd/MLK Jr. Pkwy	▲	▲		▲	▲	▲		▲
Macon Road	▲	▲		▲	▲	▲		▲
Manchester Expwy		▲				▲	▲	
River Road		▲		▲		▲		
River Chase Drive		▲				▲		
Stadium Drive		▲				▲		
St. Marys Road								
US 280	▲	▲			▲	▲	▲	
US 80 (13th St.)	▲	▲				▲		
US 80 (J.R. Allen Pkwy)	▲				▲	▲	▲	
Veterans Parkway	▲	▲		▲		▲	▲	
Victory Drive	▲	▲		▲	▲	▲		
Warm Springs		▲		▲		▲	▲	
Whitesville Road	▲	▲		▲		▲	▲	
Whittlesey Road/Blvd.	▲			▲	▲			
Williams/Moon Road	▲	▲		▲				▲

▲ Denotes recommendation for implementation as to have a positive effect on traffic congestion.

FIGURE 7-2
AM PEAK HOUR CONGESTION LEVELS
AS MEASURED DURING 2009 CMP DATA COLLECTION PROCESS

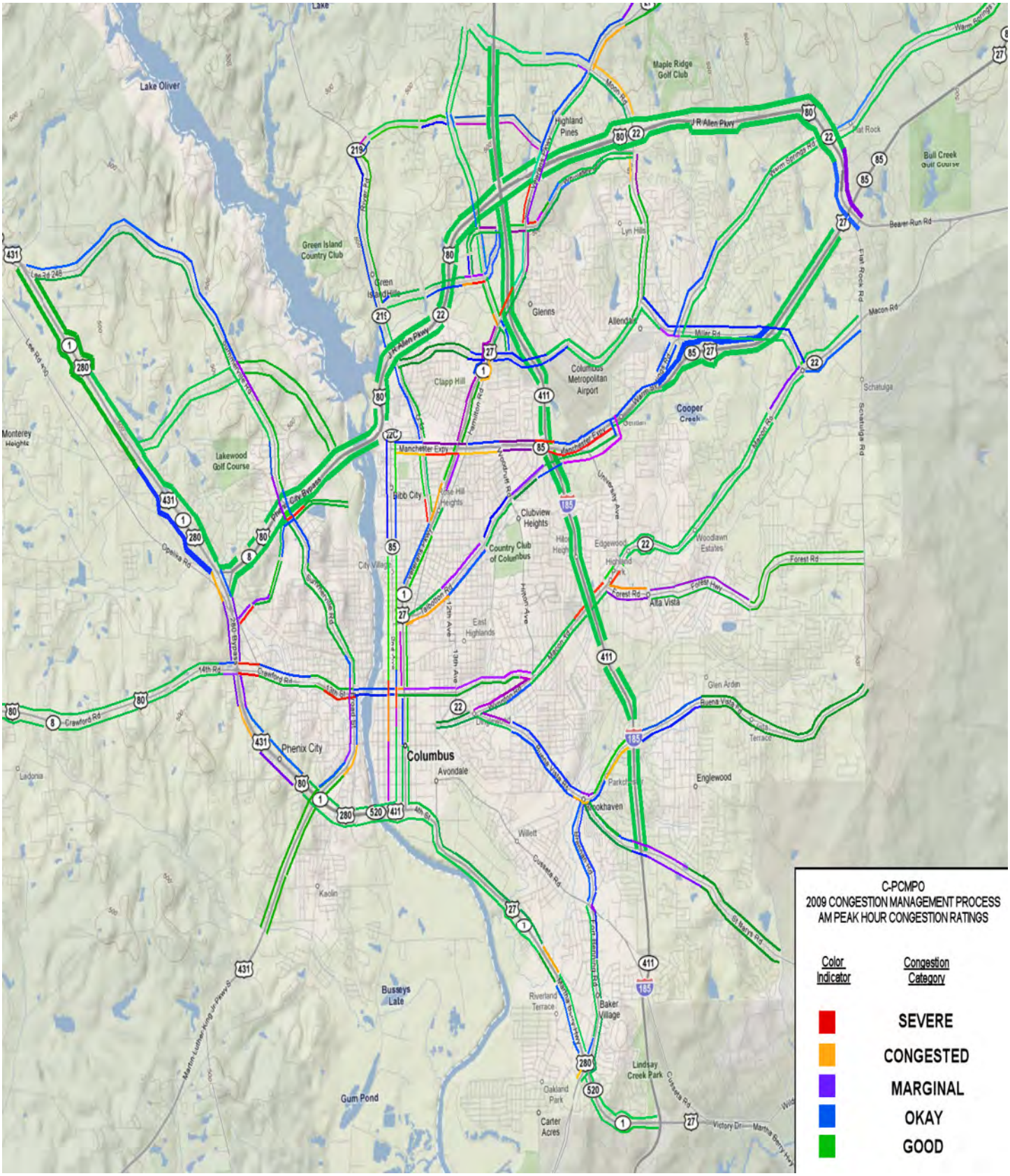


FIGURE 7-3
PM PEAK HOUR CONGESTION LEVELS
AS MEASURED DURING 2009 CMP DATA COLLECTION PROCESS

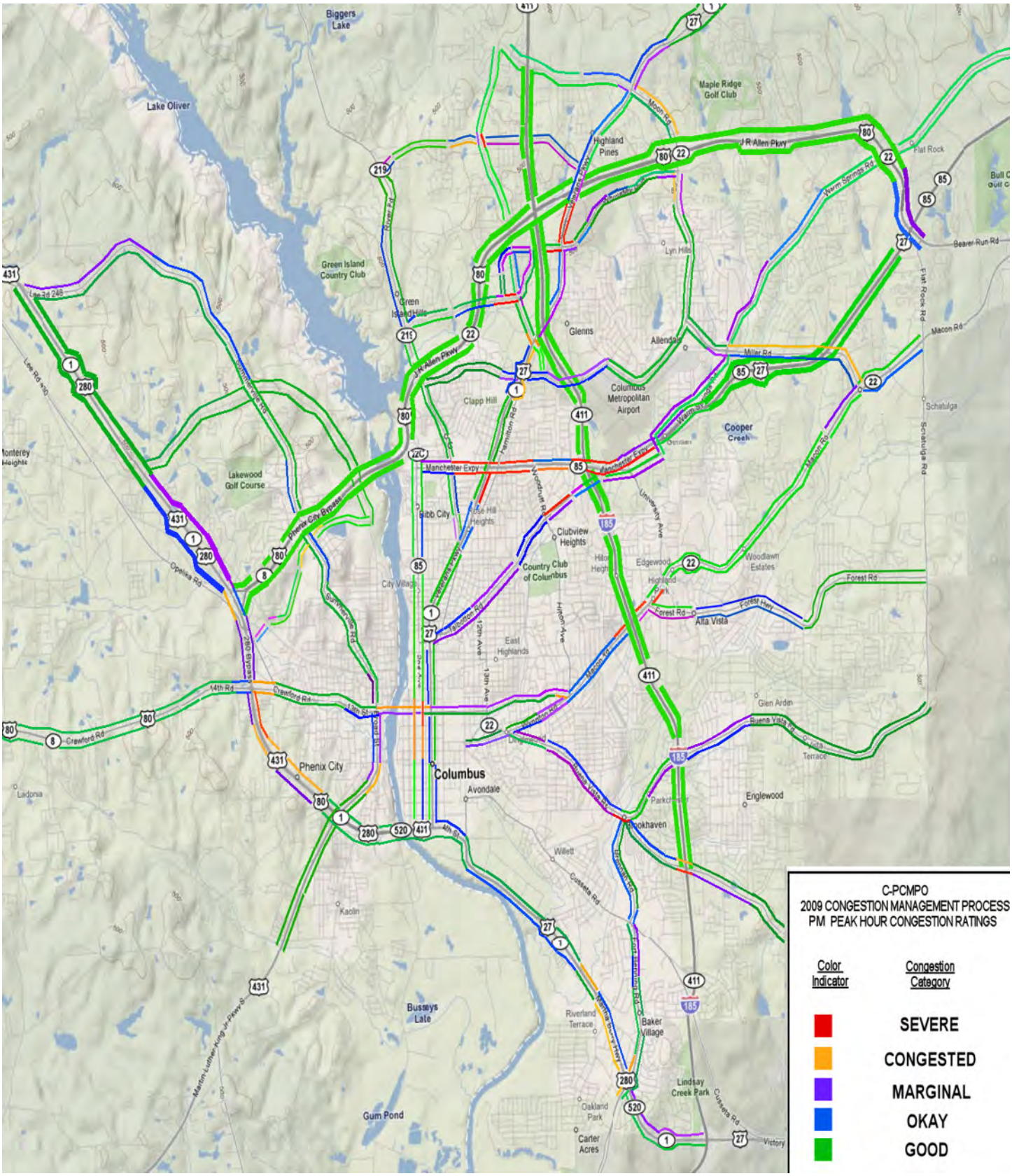


FIGURE 7-4:
DISTRIBUTION OF FREE FLOW
CONGESTION RATINGS ALONG
ROUTES MEASURED IN 2009
CONGESTION MANAGEMENT PROCESS
(AVERAGE PER SEGMENT)

CONGESTION RATING CATEGORY	PERCENTAGE OF ROUTES MEASURED IN CMP NETWORK	MILEAGE OF ROADWAY IN CMP NETWORK
"GOOD"	46%	72.07
"OKAY"	22%	34.3
"MARGINAL"	25%	38.8
"CONGESTED"	8%	12
"SEVERE"	1%	1.1
TOTAL SEGMENT MILEAGE	100%	158.3

This took the cumulative average of the three time periods traveled by the CPCMPO floating car in each direction of the route. The worse of the two directional ratings averages was then applied as the rating for that segment of road. Thus if a one mile segment of Moon Road had an average rating of “Good” in the northbound direction and “Marginal” in the southbound direction, “Marginal” would be counted as the existing condition measured on that segment of roadway.

Free Flow Congestion Rating Key:

Good = Average travel speeds recorded by the floating car on route were between 80% and 100% of the posted speed limit
Okay = Average travel speeds recorded by the floating car on route were between 65% and 80% of the posted speed limit.
Marginal = Average travel speeds recorded by the floating car on route were between 50% and 65% of the posted speed limit.
Congested = Average travel speeds recorded by the floating car on route were between 40% and 50% of the posted speed limit.
Severe = Average travel speeds recorded by the floating car on route were below 40% of the posted speed limit.

FIGURE 7-5:
DISTRIBUTION OF FREE FLOW
RATINGS DURING A.M. PEAK HOUR ALONG
ROUTES MEASURED IN 2009
CONGESTION MANAGEMENT PROCESS
(AVERAGE PER LANE MILE)

FREE FLOW CATEGORY	PERCENTAGE OF NETWORK	BI-DIRECTIONAL MILEAGE
"GOOD"	62%	197.52
"OKAY"	20%	61.9
"MARGINAL"	13%	41.16
"CONGESTED"	3%	9.29
"SEVERE"	2%	6.72
TOTAL LANE MILEAGE	100%	316.6

This took the A.M. Peak Hour congestion rating from each direction of travel for each segment of roadway, which was determined by the C-PCMPO floating car. Thus if a one mile segment of River Road had a rating of “Good” in the northbound direction and “Marginal” in the southbound direction, each of those rankings and their associated distances were added into the overall lane mileage ranking, which is twice as long as the overall segment mileage.

Free Flow Congestion Rating Key:

Good = Average travel speeds recorded by the floating car on route were between 80% and 100% of the posted speed limit
Okay = Average travel speeds recorded by the floating car on route were between 65% and 80% of the posted speed limit.
Marginal = Average travel speeds recorded by the floating car on route were between 50% and 65% of the posted speed limit.
Congested = Average travel speeds recorded by the floating car on route were between 40% and 50% of the posted speed limit.
Severe = Average travel speeds recorded by the floating car on route were below 40% of the posted speed limit.

FIGURE 7-6:
DISTRIBUTION OF FREE FLOW
RATINGS DURING P.M. PEAK HOUR ALONG
ROUTES MEASURED IN 2009
CONGESTION MANAGEMENT PROCESS
(AVERAGE PER LANE MILE)

FREE FLOW CATEGORY	PERCENTAGE OF NETWORK	BI-DIRECTIONAL MILEAGE
"GOOD"	58%	184.21
"OKAY"	18%	57.5
"MARGINAL"	15%	47.14
"CONGESTED"	4%	11.82
"SEVERE"	5%	15.12
TOTAL LANE MILEAGE	100%	316.6

This took the P.M. Peak Hour congestion rating from each direction of travel for each segment of roadway, which was determined by the C-PCMPO floating car. Thus if a one mile segment of Summerville Road had a rating of “Congested” in the northbound direction and “Good” in the southbound direction, each of those rankings and their associated distances were added into the overall lane mileage ranking, which is twice as long as the overall segment mileage.

Free Flow Congestion Rating Key:

Good = Average travel speeds recorded by the floating car on route were between 80% and 100% of the posted speed limit
Okay = Average travel speeds recorded by the floating car on route were between 65% and 80% of the posted speed limit.
Marginal = Average travel speeds recorded by the floating car on route were between 50% and 65% of the posted speed limit.
Congested = Average travel speeds recorded by the floating car on route were between 40% and 50% of the posted speed limit.
Severe = Average travel speeds recorded by the floating car on route were below 40% of the posted speed limit.

Potential Relief Measures for Identified Conditions:

Access Management -

Access management is the second most recommended strategy group. This strategy encompasses such recommendations as shared access and inter-parcel connectivity. Access management techniques strive to preserve the functionality of a facility by controlling movement onto and off a facility to specified locations, and provide inter parcel access without compelling motorists to re-enter the primary roadway facility.

Travel Demand Management -

Travel Demand Management (TDM) is another highly recommended group of strategies. TDM generally consists of strategies aimed at moving trip making from the peak hours by offering alternate work schedules, telecommuting options and transit/carpooling incentives.

Transit Operational Improvements -

Transit operational improvements are recommended in the Veterans Parkway and Buena Vista road corridors and would consist of service related improvements for transit services.

Non-Motorized Modes-

Bicycle and pedestrian infrastructure improvements have been recommended for five corridors and could incorporate the form of adding sidewalks or bicycle lanes as well as signals for bicyclists and pedestrians.

Growth Management -

Growth management is an appropriate strategy in developing areas. Techniques such as land use and corridor transportation coordination could potentially address areas where congestion might eventually occur.

Intelligent Transportation Systems -

Intelligent Transportation System (ITS) strategies are designed to inform motorists of traffic and travel conditions before their arrival in congested areas. The objective is, by giving timely notice to motorists, they may be able to adjust their routes to avoid these areas.

A planned deployment of ITS in this area s the planned traffic management center, which is to be installed in the Annex building of the Columbus Consolidated Government. It would allow for the direct monitoring of traffic conditions and control over devices in the field (such as traffic signal timing and variable message boards) when necessary.

Capacity Expansion -

Problems appear to be with the functionality of individual nodes (or intersections, such as Double Churches and Veterans, Williams and Veterans) where projects are programmed to make improvements to the intersections to improve the throughput of vehicles.

Widening of the segment of Whittlesey Road, between Whitesville Road and Veterans Parkway is planned to occur following the completion of right of way acquisition early next year.

Moon Road is scheduled to be widened from 2 to 4 lanes between Veterans Parkway and the J.R. Allen Parkway interchange and the addition of a center two-way turn lane for the segment from Whittlesey Road to Wilbur Drive.

Additional areas which should be considered for capacity expansion - segments of Buena Vista Road in Columbus, Forrest Road and segments of Summerville Road in Phenix City.

In the longer term, some of the major corridors, such as US 280 in Alabama, JR Allen Parkway between Bradley Park Drive and Summerville Road, Veterans Parkway between Double Churches and Whitesville, should be considered for widening. US 280 and J.R. Allen Parkway have been measured at a Levels of Service E, in terms of volume to capacity. Future increasing traffic volumes from regional population growth will not be able to be accommodated on the existing facilities.

Overall Congestion Rating:

On the preceding pages are the cumulative ratings for the roads measured as part of the Congestion Management Process study for this year. As mentioned at the beginning of this report, we quantified the measured reduction in speed into five different categorical classifications .

What do these figures say about the congestion situation in Columbus?

Generally, Columbus remains a town where most travel can be accomplished crosstown within "15 to 20 minutes". Indeed, we are fortunate not to have many substantial segments of roadway that are grid locked. Traffic may run heavy at times, but rush hour is still limited to a 30 minute window in the mornings and evenings. Problems appear to be with the functionality of individual nodes (or intersections, such as Double Churches and Veterans) where improvements need to be made to improve the throughput of vehicles.

Certain corridors of the city will be experiencing population growth. Attention will have to be addressed to ensuring that there are adequate facilities, in terms of road, sidewalk and transit to provide better mobility. As BRAC development begins to take hold, increased population growth in the Alabama side of the MPO may be such that expansion of existing river crossings may need to be considered to handle increased traffic.

This document, along with the Long Range Transportation Plan and the traffic model, serves the purpose of informing the community about the true extent of transportation demand at present and what is likely in the future. Being able to inventory our current system of roads and their resulting congestion helps planners and engineers prioritize what needs to be done in the near future as well as longer term for providing better transportation options into the future.

COLUMBUS-PHENIX CITY
METROPOLITAN PLANNING ORGANIZATION

FIGURE 7-7
IMPACTS OF STRATEGIES ON TRANSPORTATION SYSTEM

▭ No Impact/Not A Measure
▲ Likely Potential Benefit
▼ Likely Potential Disbenefit
◀▶ Mixed Impact

STRATEGY CLASS/GROUP	Reduce Total Vehicle Trips	Increase HOV Trips	Increase Non-Auto Trips	Improve Vehicular Travel Time	Improve HOV Travel Times	Improve Transit Travel Times	Reduce Vehicle Miles Traveled (VMT)	Shift Trip Timing	Safety	Air Quality	Other Socioeconomic and Environmental Factors
1. TDM Measures											
A. Ridesharing Programs	▲	▲	◀▶				▲	◀▶		▲	▲
B. Alternative Work Arrangements	▲						▲	▲		▲	
C. Transit/Carpool Incentives	▲	▲	▲				▲			▲	
D. Parking Management	▲	▲	▲				▲			▲	
E. Guaranteed Ride Home Programs	▲	▲	▲				▲			▲	
2. Traffic Operational Improvements											
A. Traffic Signal Improvements				▲	▲	▲					
B. Roadway Geometric Improvements				▲	▲	▲					
C. Time-of-Day Restrictions				◀▶	◀▶	▲					
D. Ramp Metering				◀▶	▲	▲					
E. Commercial Vehicle Improvements				▲	▲	▲					
F. Construction Management				▲	▲	▲					
3. HOV Measures											
A. HOV Priority Systems	▲	▲	▲		▲	▲	▲			▲	▼
B. HOV Support Systems	▲	▲	▲		▲		▲			▲	
4. Transit Capital Improvements											
A. Exclusive Right-of-Way Facilities	▲		▲			▲	▲		▲	▲	
B. Fleet Improvements	▲		▲				▲		▲	▲	
C. Transit Support Facilities	▲		▲	◀▶			▲			▲	
5. Transit Operational Improvements											
A. Transit Service Improvements	▲		▲			▲	▲		▲	▲	
B. Transit Marketing/Information	▲		▲			▲	▲			▲	
C. Fare Incentives	▲		▲				▲			▲	
D. Traffic Operations for Transit	▲		▲	◀▶		▲	▲		▲	▲	
6. Non-Motorized Modes											
A. Bike/Ped Infrastructure Improvements	▲		▲				▲		▲	▲	▲
B. Bike/Ped Support Services	▲		▲				▲			▲	
7. Congestion Pricing											
A. Road Use Fees	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	
B. Parking Fees	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	

COLUMBUS-PHENIX CITY METROPOLITAN PLANNING ORGANIZATION

FIGURE 7-7
IMPACTS OF STRATEGIES ON TRANSPORTATION SYSTEM

No Impact/Not A Measure
▲ Likely Potential Benefit
▼ Likely Potential Disbenefit
◀▶ Mixed Impact

	Reduce Total Vehicle Trips	Increase HOV Trips	Increase Non-Auto Trips	Improve Vehicular Travel Time	Improve HOV Travel Times	Improve Transit Travel Times	Reduce Vehicle Miles Traveled (VMT)	Shift Trip Timing	Safety	Air Quality	Other Socioeconomic and Environmental Factors
8. Growth Management											
A. Compact Development	▲		▲				▲			▲	◀▶
B. Redevelopment and Infill Development	▲		▲				▲			▲	◀▶
C. Mixed Use Development	▲		▲				▲			▲	▲
D. Jobs/Housing Balance	▲						▲			▲	
E. Transit Oriented Development	▲		▲			▲	▲			▲	
F. Corridor Land Use and Transportation Coordination	▲			▲	▲		▲		▲	▲	
9. Access Management											
A. Driveway Management				▲	▲	▲	▼				
B. Median Management				▲	▲	▲	▼				
C. Frontage Roads				▲	▲	▲	▼				
10. Incident Management											
A. Incident Detection/Verification				▲	▲	▲	▲		▲	▲	
B. Incident Response				▲	▲	▲	▲		▲	▲	▲
C. Incident Clearance				▲	▲	▲	▲		▲	▲	▲
D. Incident Information/Routing				▲	▲	▲	◀▶	▲		▲	
11. Intelligent Transportation Systems											
A. Advanced Traffic Management Systems	◀▶		◀▶	▲	▲	▲		▲	▲	▲	
B. Advanced Traveler Information Systems	▲		▲				▲	▲		▲	
C. Advanced Public Transportation Systems	▲		▲			▲	▲		▲	▲	
D. Commercial Vehicle Operations				▲	▲	▲	◀▶		▲	▲	
E. Advanced Vehicle Control Systems	◀▶		▼	▲	▲	▲	◀▶		▲	▲	
12. Capacity Expansion											
A. Expressway Lanes	▼	▼	▼	▲	▲	▲	◀▶	▼	▲	◀▶	▼
B. Arterial Lanes	▼	▼	▼	▲	▲	▲	◀▶	▼	▲	◀▶	▼

COLUMBUS-PHENIX CITY
METROPOLITAN PLANNING ORGANIZATION

FIGURE 7-8
IMPACTS SPECIFIC TO CONGESTION MANAGEMENT PROCESS PERFORMANCE MEASURES

▭ No Impact/Not A Measure
▲ Likely Potential Benefit
▼ Likely Potential Disbenefit
◀▶ Mixed Impact

STRATEGY CLASS/GROUP	Travel Time	Travel Speed	V/C Ratio	Expressway Vehicle Density	Arterial/Intersection LOS	Duration of Congestion	Person Throughput	Vehicle Occupancy	Modal Shares	Transit System Measures	Incident Measures
1. TDM Measures											
A. Ridesharing Programs			▲	▲	▲		▲	▲	▲	◀▶	▲
B. Alternative Work Arrangements			▲	▲	▲	▲					
C. Transit/Carpool Incentives			▲	▲			▲	▲	▲	▲	
D. Parking Management			▲	▲			▲	▲	▲	▲	
E. Guaranteed Ride Home Programs			▲	▲			▲	▲	▲	▲	
2. Traffic Operational Improvements											
A. Traffic Signal Improvements	▲	▲			▲		▲			▲	▲
B. Roadway Geometric Improvements	▲	▲			▲	▲	▲			▲	▲
C. Time-of-Day Restrictions	◀▶	▲			▲	▲					▲
D. Ramp Metering	◀▶	◀▶		▲	◀▶	▲	▲				▲
E. Commercial Vehicle Improvements	▲	▲			▲		▲				▲
F. Construction Management	▲	▲				▲	▲				▲
3. HOV Measures											
A. HOV Priority Systems	▲			▲	◀▶	▲	▲	▲	▲	◀▶	
B. HOV Support Systems				▲	▲		▲	▲	▲	◀▶	
4. Transit Capital Improvements											
A. Exclusive Right-of-Way Facilities	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	
B. Fleet Improvements		▲	▲	▲	▲	▲	▲	▲	▲		
C. Transit Support Facilities			▲	▲	▲	▲	▲	▲		▲	
5. Transit Operational Improvements											
A. Transit Service Improvements	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	
B. Transit Marketing/Information	▲		▲	▲	▲		▲	▲	▲	▲	
C. Fare Incentives			▲	▲	▲		▲	▲	▲	◀▶	
D. Traffic Operations for Transit	▲	▲	▲	▲	◀▶		▲	▲		▲	▲
6. Non-Motorized Modes											
A. Bike/Ped Infrastructure Improvements									▲		▲
B. Bike/Ped Support Services									▲		
7. Congestion Pricing											
A. Road Use Fees	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	
B. Parking Fees	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	

COLUMBUS-PHENIX CITY
METROPOLITAN PLANNING ORGANIZATION

FIGURE 7-9
IMPACTS SPECIFIC TO CMP PERFORMANCE MEASURES

No Impact/Not A Measure
Likely Potential Benefit
Likely Potential Disbenefit
Mixed Impact

	Travel Time	Travel Speed	V/C Ratio	Expressway Vehicle Density	Arterial/Intersection LOS	Duration of Congestion	Person Throughput	Vehicle Occupancy	Modal Shares	Transit System Measures	Incident Measures	% Near Bus Stop	% Near Expressway
8. Growth Management													
A. Compact Development	▲		▲	▲		▲			▲	▲		▲	
B. Redevelopment and Infill Development	▲		▲	▲		▲			▲	▲		▲	▲
C. Mixed Use Development	▲		▲	▲		▲			▲				
D. Jobs/Housing Balance	▲		▲	▲		▲			▲	▲			
E. Transit Oriented Development	▲		▲	▲		▲			▲	▲		▲	▲
F. Corridor Land Use and Transportation Coordination	▲	▲	▲		▲	▲						▲	▲
9. Access Management													
A. Driveway Management	◀▶	▲	▲		◀▶						▲		
B. Median Management	◀▶	▲	▲		◀▶						▲		
C. Frontage Roads	▲	▲	▲	▲	◀▶						▲		
10. Incident Management													
A. Incident Detection/Verification	▲	▲				▲					▲		
B. Incident Response	▲	▲				▲					▲		
C. Incident Clearance	▲	▲				▲					▲		
D. Incident Information/Routing	▲	▲				▲					▲		
11. Intelligent Transportation Systems													
A. Advanced Traffic Management Systems	▲	▲	▲				▲		▼	◀▶	▲		
B. Advanced Traveler Information Systems	▲	▲				▲		◀▶	◀▶	▲			
C. Advanced Public Transportation Systems	▲	▲	▲				▲	▲	▲	▲	▲		
D. Commercial Vehicle Operations	▲	▲	▲								▲		
E. Advanced Vehicle Control Systems	▲	▲	▲				▲				▲		
12. Capacity Expansion													
A. Expressway Lanes	▲	▲	▲	▲	▲	▲							▲
B. Arterial Lanes	▲	▲	▲		▲	▲							

DISCLAIMER:

The contents of this Congestion Management Process report document do not necessarily reflect the official views or policy of the U.S. Department of Transportation.