



Austell Road Access Management Plan



Austell Road Access Management Plan



Cobb County...Expect the Best!

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1 Executive Summary

Introduction

The Austell Road Corridor Access Management Plan (AMP) is a distinct, yet complementary component of the original Austell Road Livable Centers Initiative Study (LCI) adopted by the Cobb County Board of Commissioners in June 2007. As with the original study, the AMP was funded partially by the Atlanta Regional Commission (ARC) as part of an ongoing effort designed to create a broad consensus about future transportation and redevelopment patterns. As such, the AMP provides comprehensive recommendations for the implementation of future access management strategies ranging from alternative roadway networks to safer pedestrian connectivity. Figure 1-1 shows the location of the study area.

Access Management (AM) is the systematic control of the location, spacing, design, and operation of driveways, median openings, interchanges, and street connections to a roadway. Access Management involves roadway design applications, such as median treatments and auxiliary lanes, and the appropriate spacing of traffic signals. The purpose of access management is to provide vehicular access to land development in a manner that preserves the safety and efficiency of the transportation network. In particular, the Austell Road Corridor Access Management Plan focuses on creating a systematic way to carry out the roadway functional hierarchy implicit in Cobb County documents such as the Comprehensive Transportation Plan (CTP), Comprehensive Plan and Livable Centers Initiative (LCI) Plans.

Roadways are classified traditionally by function on the basis of the priority given to land access versus through-traffic movement. Access management is particularly important along facilities such as Austell Road which need to provide safe and efficient movement of traffic, as well as access to existing property and future property development. Complicating access management is the fact that the appropriate degree of access control varies according to the functions and traffic characteristics of a roadway, the character of abutting land, and long-term planning objectives. As property is redeveloped in south Cobb County and along the corridor, the appropriate amount and type of access needs to be decided ultimately on the basis of policy. Georgia Department of Transportation (GDOT), Cobb County and local jurisdictions such as the City



FIGURE 1-1 Austell Road Corridor

of Austell will need to choose the level of arterial performance, safety, and driver ease on this roadway in exchange for more frequent and direct site access.

Through the management of roadway access, the Cobb County Department of Transportation can extend the life of the road, increase public safety, reduce traffic congestion and improve the quality and appearance of the built environment. Access management not only preserves the transportation functions of roadways, but it also helps preserve long term property values and the economic viability of existing development. Safety will also be enhanced in that pedestrians will face fewer and less frequent access points where motorists enter and exit the roadway, and transit riders will experience reduced delay and reduced travel times. Moreover, more convenient access occurs as pedestrian paths are improved and communities form more attractive roadway corridors and a safer transportation network.

Approach

The Austell Road Access Management study moved beyond traditional roadway improvement analyses to address access management considerations in relation to land development. The primary goal of the study is to produce a versatile planning tool that can be used to prevent future access problems and to provide solutions to current access dilemmas. The purpose of this planning effort is to evaluate roadway design and access characteristics and propose access changes that improve the safety and operation of the corridor. Considerations included median closures and improvements, signal location, auxiliary lanes, site access, land use concepts and improvements to the supporting roadway network. The defining characteristic of Cobb County's effort has been the level of cooperation achieved among affected area residents and businesses and internal departments involved in carrying out the study. With many stakeholders influencing the process and the trade-offs involved, accomplishing a set of implementation measures was a challenge. The County worked diligently to establish a process for early and continuing public involvement in the development of this study. Public involvement set forth a process for sharing information, airing concerns, and discussing issues of importance to the community in the Austell Road corridor study area, which is bounded by Perkerson Mill Road / Leila Street on the south and Callaway Road on the north. It also provided a process for obtaining general agreement as to guiding principles and objectives for the corridor. Since the corridor traverses several types of land uses and design characteristics, it is critical that each government entity participates fully.

Framework

The regulatory framework for the Austell Road corridor encourages the implementation of a blueprint for addressing transportation, land use, economic development and community design issues in a integrated fashion. The original LCI study effort vision was to revive the spirit and strength of this street and the neighborhoods, businesses and activity centers that it links together. The study supports the implementation of elements of the

Cobb County Comprehensive Plan and Comprehensive Transportation Plan by encouraging partnerships between the public and private sectors in planning and implementation, linking land use and transportation to improve mobility and economic health in the corridor, identifying multi-modal transportation enhancements, improving land use access and transportation system efficiency.

Existing zoning and land use regulations encourage a development pattern geared towards a more vibrant community. The AMP proposes several important transportation enhancements to encourage more appropriate pattern for the area while providing for increased automobile and pedestrian safety, improved mobility, and a more efficient circulation network. The implementation of these enhancements, with the support of the Cobb County government agencies, will provide the necessary incentives and controls to ensure the development/redevelopment of the area into an attractive place to live, work and play.

The success of the County's efforts hinges on stakeholder acceptance of the need for action and a common future vision for the corridor. The County developed a need statement that articulates clearly the purpose of the study and the issues requiring resolution. This was accomplished through a combination of corridor analysis and stakeholder interviews after which a vision statement and supporting goals and objectives were developed to guide the overall effort. Before initiating the public visioning process, a preliminary corridor analysis was prepared including an overview of transportation and land use trends and conditions. The analysis addressed both current and forecasted trends, as well as the overall role of the corridor in carrying vehicular traffic in the county and region. Also, general access characteristics were identified, including obvious access problems, such as high-crash locations or poorly designed development sites, as well as examples of good access design and site development.

The study also examined a range of traffic operations solutions to development/redevelopment opportunities to create solutions that can enhance value for property owners and the County. The study overlaid potential solutions on aerial photographs to perform an assessment of implementation opportunities and barriers. These were refined and combined with treatments on the Austell Road right-of-way to develop a preferred set of access management recommendations. The study is consistent with many land use and transportation standards in the corridor with some variances to provide needed flexibility so as to ensure a win-win plan for property owners and residents.

An initial step in the study development involved mapping the geographic boundaries of Austell Road through aerial photography and field observation. The study effort was supplemented with a series of closer segment photographs that depicted physical attributes more precisely; dividing

Vision

Study Area

the corridor into subareas on the basis of shared characteristics. Separate subareas were established for land that is commercial versus areas that are residential in character. The core of the study area is commercial and required and benefited from special attention in the development of different access management strategies.

Policy Analysis

The study reflects an evaluation of existing public planning efforts and overall policy framework affecting the corridor. This assessment provided insight into needed changes, as well as any existing policies and standards that became part of access management alternatives. Embedded in the work effort was a review and critique of comprehensive plans, corridor studies, and relevant ordinances and other regulations of the County. Each document was reviewed to identify strengths and weaknesses of existing planning and regulatory programs with regard to access management.

Land Use Analysis

The study effort included an inventory of land use characteristics, including existing land use, zoning, numbers of driveways and spatial distances, transit stop locations and spatial distances, types of businesses, internal circulation and locations of auxiliary roadways and paths, planned developments and parcel boundaries. The data was used to examine potential scenarios against the capacity and operation of the transportation system through peak hour traffic analyses. Every attempt was made to create a refined analysis of the relationship between corridor development and the ability of the road network to meet current and projected traffic demand, as well alternative modes of travel including walking, bicycling, and using transit. Maps were generated to highlight functional areas of key intersections where access management strategies could be implemented.

Transportation Analysis

The Austell Road Access Management study builds upon standards developed by Cobb County and tailored, specific recommendations to address the needs of the corridor. This required an understanding of travel patterns along the corridor for current conditions as well as potential future conditions. The access management plan considered the future use of all travel modes and provides for trips within the corridor, those traveling to and from destinations along the corridor, and those traveling through the corridor. Certain aspects of the access management plan recommendations should be uniformly applied along the corridor. Implementing standards for driveway spacing and design, signal spacing, management of turning movements to reduce conflicts, as well as standards for application off the physical Austell Road, such as interparcel connections and parallel frontage and reverse frontage (backside access) are examples. However, the timing of these enhancements may need to be staggered based on current and anticipated development, geometric constraints and funding. For example, the commercial core of the study area may start with improved interparcel connections with a parallel facility to be added later as redevelopment occurs.

According to the original LCI study, the Austell Road Corridor faces several challenges that are addressed in this study, including:

- Severe traffic congestion – Due to commuting patterns and the roadway’s intersection with the East-West Connector, the corridor experiences high levels of traffic congestion and delay during morning and evening rush hours.
- Traffic safety – The intersection of Austell Road and East-West Connector has the highest accident rate in the state of Georgia and is challenging for both autos and pedestrians.
- Economic decline – As the corridor’s importance as a transportation route has increased, the vibrancy of many of the older strip shopping centers along it has decreased.
- Lack of community identity – Austell Road has large, unattractive signs; featureless parking lots; vacant storefronts; neglected maintenance of rights-of-way; a barren concrete median; overhead power lines; and chain-link-fenced detention ponds in front yards.

At the same time, this corridor has several important assets that are opportunities for redevelopment:

- Stable residential neighborhoods – The residential areas located just behind the corridor are, for the most part, strong, well-maintained neighborhoods.
- Community institutions – WellStar Cobb Hospital is in the center of the study area with 347 beds and 2,264 employees. The South Cobb Government Center is located in the southern portion of the corridor.
- The Silver Comet Trail – The Trail passes through the southern end of the study area; however, there is currently no access to this recreational amenity provided in the Austell Road Corridor.
- Development opportunities – There are several well-placed tracts of vacant land, a number of aging commercial centers, and other underutilized tracts (such as the two (2) mobile home parks) that should provide ample opportunities for development and redevelopment in this corridor.

An accurate assessment of existing conditions along Austell Road was a key to determining how the corridor serves a variety of travel patterns. The Average Annual Daily Traffic (AADT) volumes along the corridor were obtained from GDOT to determine the overall traffic demand on various segments of the roadway throughout the corridor. A peak hour traffic analysis was conducted for a segment of the most congested, central part of the corridor. In addition to traffic and crash data, the roadway network along Austell Road and connecting roads were inventoried to determine driveway locations, roadway and intersection configuration, and presence of sidewalk, bicycle and transit facilities.

Existing Conditions

Traffic Analysis

For the peak hour traffic analysis, the methodology used for evaluating traffic operations at intersections is based on the criteria that is set forth in the Transportation Research Board's *Highway Capacity Manual 2000* (*HCM 2000*). Synchro 6 software, which emulates the *HCM 2000* methodology, was used for the analysis to determine the level of service (LOS) of specific intersections within the study area. Four alternatives were analyzed as a part of the peak hour traffic analysis. These include the following:

- 2009 Existing Conditions
- 2009 With Access Management Recommendations
- 2019 Without Access Management Recommendations
- 2019 With Access Management Recommendations

AM and PM peak hour traffic counts were conducted at three signalized intersections and four unsignalized intersection within the study area. These were used to conduct the 2009 traffic analyses. Existing signal cycle length and other parameters were incorporated into the intersection analysis to provide an accurate assessment of current operations. This analysis showed that while traffic congestion exists at the signalized intersections, no intersections have a failing LOS. However, the unsignalized intersections experienced a failing LOS at a number of left turn movements from cross streets and driveways onto Austell Road.

After this analysis was complete, preliminary access management recommendations were developed. Implementation of these recommendations impacted traffic patterns in the area and required redistribution of some turning movements. These recommendations were analyzed in the "2009 With Access Management Recommendations" alternative to determine any impact these projects could have if they are implemented in the short term.

A simple annual growth rate of three percent (3%) was applied to the 2009 traffic counts to increase the background traffic volumes to 2019 levels. This growth rate was developed using historic AADT volumes provided by GDOT. Additional trip generation was conducted at two sites along the corridor where additional development or redevelopment is anticipated. Methodology from the *ITE Trip Generation Handbook, 7th Edition* was followed to conduct trip generation for each of these sites. The 2019 alternatives compared traffic operations with and without the implementation of the access management recommendations to determine how the roadway will operate based on these two different alternatives.

Bicycle / Pedestrian Analysis

The locations of sidewalks along the Austell Road corridor and major cross streets were identified using Geographic Information Systems (GIS) data provided by Cobb County. This data was field-verified to determine if any additional sidewalk infrastructure existed but was not represented in this data. The revised data is a sidewalk inventory of

the study area that identifies not only the locations of sidewalks but also all roadway segments that do not have sidewalks. The Cobb County Board of Commissioners adopted the County's Sidewalk Program Implementation Plan in April 2006 to select a methodology for allocating funds to sidewalk projects from the 2005 SPLOST. Criteria from this methodology were applied to the Austell Road sidewalk inventory to prioritize future sidewalk projects within the study area.

While identifying and prioritizing pedestrian projects helps to direct future infrastructure development, it should also be noted that all reductions in driveways and median openings are beneficial to bicyclists and pedestrians in a similar way as they are beneficial to automobiles. Closure of driveways and median openings reduces the number of conflict points between bicyclists and automobiles and between pedestrians and automobiles. This increases safety and reduces delay for bicyclists and pedestrians, making these alternative travel modes more viable.

The study arrived at a set of transportation enhancement and land use suggestions identified in Table 1-1 at the end of this section. The alternatives identified existing and future access locations, the type of access to be provided, modifications to existing access, additional paths and roadways, and minor changes to development regulations. The process culminated in a series of very specific, preferred access management strategies for the commercial core of the corridor and generalized improvements for the other, defined subareas.

As alternative recommendations emerged a hierarchy of recommendations was selected with a range of choices including:

- A supporting street system including back streets, parallel roads, and interparcel circulation access.
- Median closures that restrict cross-street turning and through movements.
- The inclusion of a raised and planted (non-traversable) median. See Figure 1-2.
- Additional signal location and spacing requirements to include uniform spacing of traffic signals that will improve traffic flow capacity, reduce crash rates, improve fuel efficiency and reduce vehicular emissions.
- Access location and spacing including a map identifying the preferred reduction of driveways.

Each alternative arrived at in the study was applied and evaluated in detail to clarify potential redevelopment impacts, as well as specific impacts on roadway safety, roadway efficiency and operation, alternative transportation modes, the supporting street network, accessibility of neighborhoods and commercial areas, and continued prevention of non-local

The Access Management Plan

Alternatives

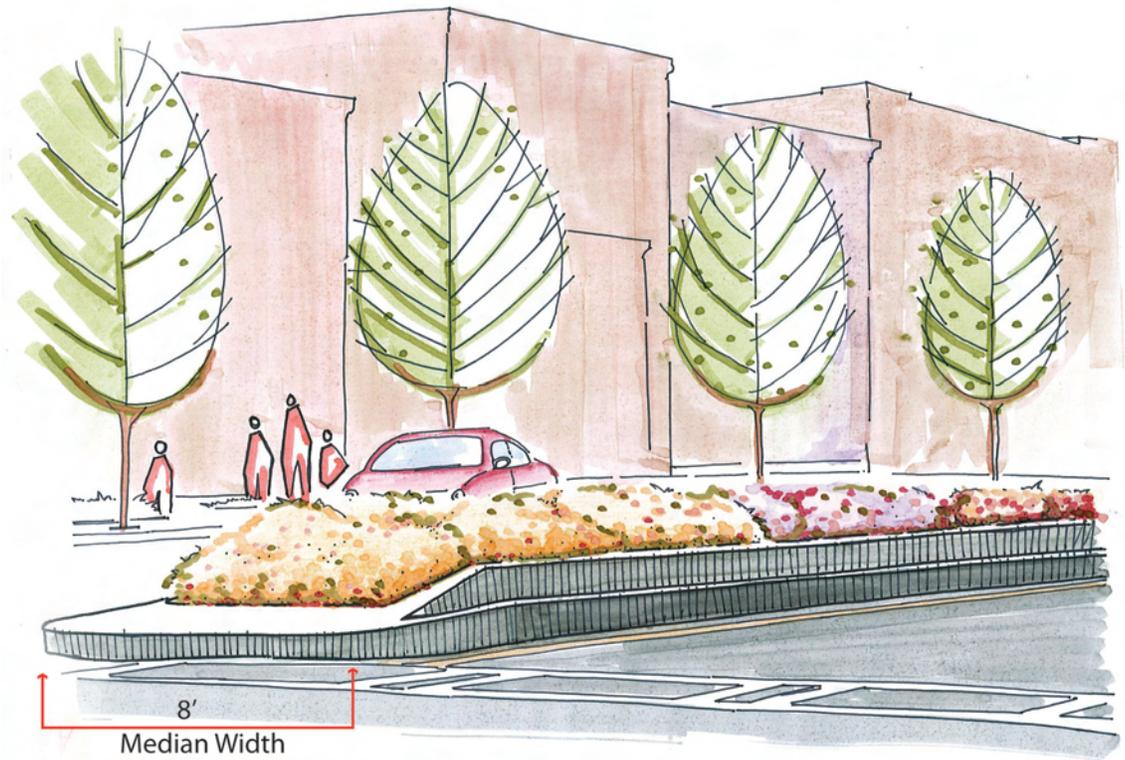


FIGURE 1-2 Rendering of proposed median heights

trips through an existing residential area. Considerations also included financial feasibility (short-term construction costs, long-term operation and maintenance costs), vehicular and pedestrian safety, traffic progression and roadway efficiency, aesthetics, or other criteria established by stakeholders and the general public.

Creating the priority and timing among alternatives required careful evaluation and coordination among the consultant, Cobb County and the public. On a broad level, the study determined the extent to which each alternative is consistent with the established vision for the corridor. The costs and benefits of each alternative were weighed against a set of common evaluation criteria before final selection to ensure that the hierarchy of access management activities reflects priorities of the County and groups involved in the study process.

Study Adoption and Implementation

The Project Team crafted a plan that includes a map and report establishing desired access outcomes. The maps display existing access points, temporary and future access points, zoning, lot ownership, building outlines, and related information. The following report will address future land use, design concepts, implementation strategies, policies and standards, necessary interagency agreements, and other pertinent information. The adopted plan will serve as a guide for Cobb DOT permitting and roadway improvement decisions. It will also guide prospective property owners/developers on approved access locations and areas where service roads or shared access may be required.

To conform to ARC standards and to assist the County in moving the study results forward, the study contains an Action Plan identifying short-term, mid-term and long-term implementation strategies and the respective roles for several County departments and other governmental entities. As conditions along Austell Road change over time, it will be important to establish government entity roles and responsibilities, identify funding sources, create a phasing plan to implement recommendations, provide information to property owners, and establish all necessary monitoring systems.

An implementation schedule was developed to help ensure that improvements are carried out systematically. The plan may have immediate rapid-response components, and it may incorporate long-term components, such as major capital improvements or changes to state and local policy. Full implementation of recommended improvements may take several years and depend on the availability of local, state, private, or federal funding, as well as on the support and action of different levels of government. The implementation schedule also takes into account design and construction of other County committed projects, such as those identified as needed for immediate improvements to safety; design and construction of roadway and driveway projects; design and construction of pedestrian, bicycle, or transit improvements; design and placement of visual amenities including signs and landscaping features; land use plan amendments and changes to land development regulations; and funding sources and options.

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TABLE 1-1 Recommended Projects

Project ID	Description	Type of Improvement	Engineering Year	Engineering Costs	ROW Year	ROW Costs	Construction Year	Construction Costs	Total Project Costs	Responsible Party	Funding Source	Local Source	Match Amount
I1	Austell Road at Story Place - Close existing median opening, replace left turn lane storage bays with raised, landscaped median; add wide shoulder for southbound U-turn movement at Austell Road at Mulkey Road	Roadway Operations	2012	\$30,000	2013	\$20,000	2014	\$294,000	\$344,000	Cobb County DOT	SPLOST	N/A	N/A
I2	Austell Road at Blue Ridge Drive/Brookwood Drive - Partially close/channelize the median opening to allow northbound and southbound left turn movements but no other left turn or U-turn movements; convert concrete median to raised, landscaped median	Roadway Operations	2012	\$8,000	N/A	\$0	2013	\$80,000	\$88,000	Cobb County DOT	SPLOST	N/A	N/A
I3	Austell Road at Cobb Marketfair/Park Trail Townhomes - Signalize Intersection	Safety	2014	\$75,000	N/A	\$0	2015	\$750,000	\$825,000	Cobb County DOT	SPLOST	N/A	N/A
M1	Raised, Landscaped Median on Austell Road from Mulkey Road to Hurt Road	Safety	2012	\$28,800	2013	\$669,600	2014	\$288,000	\$986,400	Cobb County DOT	TE/SPLOST	SPLOST	\$197,280
M2	Raised, Landscaped Median on Austell Road from Hurt Road to Amy Lane	Safety	2014	\$44,800	2015	\$1,041,600	2016	\$448,000	\$1,534,400	Cobb County DOT	TE/SPLOST	SPLOST	\$306,880
M3	Raised, Landscaped Median on Austell Road from East-West Connector to Mulkey Road	Safety	2015	\$27,200	2016	\$632,400	2017	\$272,000	\$931,600	Cobb County DOT	TE/SPLOST	SPLOST	\$186,320
M4	Raised, Landscaped Median on Austell Road from Anderson Mill Road to East-West Connector	Safety	2016	\$36,800	2017	\$855,600	2018	\$368,000	\$1,260,400	Cobb County DOT	TE/SPLOST	SPLOST	\$252,080
M5	Raised, Landscaped Median on the East-West Connector from Lipson Drive/Kohl's Shopping Center to Brookwood Drive	Safety	2017	\$51,200	2018	\$1,190,400	2019	\$512,000	\$1,753,600	Cobb County DOT	TE/SPLOST	SPLOST	\$350,720
R1	Backage Road, Kohl's Shopping Center - Connects Austell Road and the East-West Connector with a 2-lane urban roadway that has 11-ft travel lanes and a 5-ft sidewalk on one side of the roadway; Project Length: 1,400 ft	Roadway Capacity	2013	\$74,000	2014	\$520,800	2015	\$740,000	\$1,334,800	Cobb County DOT	LCI/SPLOST	SPLOST	\$266,960
R2	Backage Road, Target/Lowe's Shopping Center - Connects Austell Road and the East-West Connector with a 2-lane urban roadway that has 11-ft travel lanes and a 5-ft sidewalk on one side of the roadway; Project Length: 3,800 ft	Roadway Capacity	2015	\$193,800	2016	\$1,413,600	2017	\$1,938,000	\$3,545,400	Cobb County DOT	LCI/SPLOST	SPLOST	\$709,080
R4	Stallion Road Gate - Unlock gate between the South Cobb Government Center and the South Cobb High School fields at all times when the fields are in use	Internal Access	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Cobb County DOT	Local	N/A	N/A
R3	Parallel Roadway at Hurt Road - Connects Hurt Road, Reed Drive, and the Park Trail townhomes on the west side of Austell Road with a 2-lane urban roadway that has 11-ft travel lanes and a 5-ft sidewalk on one side of the roadway. Two new roads will connect this roadway to Austell Road. Total Project Length: 2,450 ft	Roadway Capacity	2014	\$118,825	2015	\$911,400	2016	\$1,188,250	\$2,218,475	Cobb County DOT	LCI/SPLOST	SPLOST	\$443,695

Project ID	Description	Type of Improvement	Engineering Year	Engineering Costs	ROW Year	ROW Costs	Construction Year	Construction Costs	Total Project Costs	Responsible Party	Funding Source	Local Source	Match Amount
P1	5-ft sidewalk on the south side of the East-West Connector from Brookwood Drive to 100 feet west of Floyd Road	Pedestrian	2012	22,000	2013	44,000	2014	143,000	\$209,000	Cobb County DOT	LCI/SPLOST	SPLOST	\$41,800
P2	5-ft sidewalk on the west side of Austell Road from Leila Street to Clay Road	Pedestrian	2012	\$20,000	2013	\$40,000	2014	\$130,000	\$190,000	Cobb County DOT	LCI/SPLOST	SPLOST	\$38,000
P3	5-ft sidewalk on the east side of Austell Road from 550 feet north of Seayes Road to 100 feet south of Anderson Mill Road	Pedestrian	2013	\$24,000	2014	\$48,000	2015	\$156,000	\$228,000	Cobb County DOT	LCI/SPLOST	SPLOST	\$45,600
P4	5-ft sidewalk on the east side of Austell Road from Seayes Road to 400 feet north of Seayes Road	Pedestrian	2013	\$4,100	2014	\$8,200	2015	\$26,700	\$39,000	Cobb County DOT	LCI/SPLOST	SPLOST	\$7,800
P7	5-ft sidewalk on the south side of the East-West Connector from Davis-Struempf Funeral Home to 150 feet west of Kohl's Shopping Center driveway	Pedestrian	2014	\$6,000	2015	\$12,000	2016	\$39,000	\$57,000	Cobb County DOT	LCI/SPLOST	SPLOST	\$11,400
P8	5-ft sidewalk on the north side of the East-West Connector from the Krystal driveway to 100 feet west of the Marshalls/Staples driveway	Pedestrian	2014	\$4,700	2015	\$9,400	2016	\$30,550	\$44,650	Cobb County DOT	LCI/SPLOST	SPLOST	\$8,930
P9	5-ft sidewalk on the south side of the East-West Connector from Mesa Valley Way to 500 feet east of Mesa Valley Way	Pedestrian	2015	\$4,900	2016	\$9,700	2017	\$31,500	\$46,100	Cobb County DOT	LCI/SPLOST	SPLOST	\$9,220
P10	5-ft sidewalk on the south side of the East-West Connector from west of study area boundary to 50 feet west of Mesa Valley Way	Pedestrian	2015	\$9,300	2016	\$18,600	2017	\$60,500	\$88,400	Cobb County DOT	LCI/SPLOST	SPLOST	\$17,680
P11	5-ft sidewalk on the north side of the East-West Connector from west of study area boundary to 750 feet west of Lipson Drive	Pedestrian	2015	\$20,000	2016	\$40,000	2017	\$130,000	\$190,000	Cobb County DOT	LCI/SPLOST	SPLOST	\$38,000
P5	5-ft sidewalk on the east side of Brookwood Drive from Anderson Mill Road to the East-West Connector	Pedestrian	2016	\$25,000	2017	\$50,000	2018	\$162,500	\$237,500	Cobb County DOT	LCI/SPLOST	SPLOST	\$47,500
P6	5-ft sidewalk on the south side of Callaway Road from Austell Road to Hicks Road	Pedestrian	2016	\$17,000	2017	\$34,000	2018	\$110,500	\$161,500	Cobb County DOT	LCI/SPLOST	SPLOST	\$32,300
A1	Review existing development codes to determine if interparcel access and driveway spacing requirements are sufficient	Land Use	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Cobb County Department of Community Development	Local	N/A	N/A
A2	Revise county zoning review forms to include category for access management	Land Use	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Cobb County Department of Community Development	Local	N/A	N/A
		Totals		\$845,425		\$7,569,300		\$7,898,500	\$16,313,225				

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2 Introduction

Effective Access Management

The key to effective access management is linking appropriate access design to roadway function. Successful access management protects and enhances property values while preserving the public investment in our roads. Access management strategies help reduce crashes, increase roadway capacity, increase road safety, and reduce travel time and delay. With improved accessibility, land values increase and real estate development is stimulated. Gradually, older, developed areas like the Austell Road corridor begin to deteriorate because of access and aesthetic problems, and investment moves to newer, better-managed corridors. That is the reason why access management needs to take place in this area to improve vehicular and pedestrian safety, increase mobility, and improve aesthetics.

Figure 2-1 shows that through traffic movement increases when access to property decreases, and vice versa.

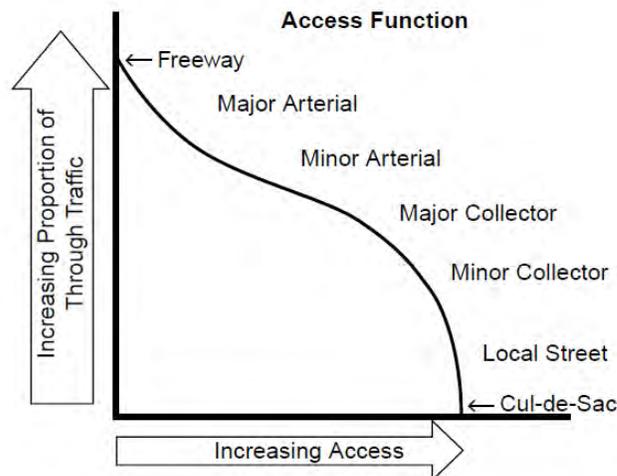


FIGURE 2-1 Relationship between through traffic movement and access to property (Source: *Access Management Manual, 2003 from TRB*)

Austell Road is classified as an urban minor arterial roadway. Based on this characterization, it operates under lower traffic volumes, serves trips of shorter distances, and provides a higher degree of property access than major arterials.

The primary design techniques used in this access management study focused on the control and regulation of the spacing and design of the following:

- Driveways and streets.
- Medians and median openings.
- Turning movements.

Ancillary elements of the study included:

- Sidewalk inventory and condition.
- Limiting conflict points.

As articulated in the Goals and Objectives of the study, there is an interest in access management because of increasing traffic congestion, traffic safety issues, and the rising costs of road improvements. Good access management can accomplish the following:

- Reduce crashes and crash potential.
- Preserve roadway capacity and the useful life of roads.
- Decrease travel time and congestion.
- Improve access to properties.
- Coordinate land use and transportation decisions.
- Maintain travel efficiency and related economic prosperity.

Benefits of Access Management

Basic Principles of Access Management

Six (6) basic principles are observed in achieving the benefits of access management.

- Limit the number of conflict points.
- Separate conflict points.
- Separate turning volumes from through movements.
- Locate traffic signals to facilitate traffic movement.
- Maintain appropriate functional hierarchy of roadways to function.
- Limit direct access on higher-speed roads.

Consequences of Not Managing Access

- The efficiency of Cobb County's transportation system will deteriorate, and traffic and land use conflicts will also increase.
- Poorly planned strip commercial development will be encouraged.
- The number of private driveways will proliferate.
- The existence of more driveways means more traffic conflicts, crashes, and congestion.
- The public's investment in Cobb County's roadways will be diminished.
- Roads will have to be widened at great public expense to make up for capacity lost to inefficient traffic operations.
- The incompatibility of providing land service and traffic service will become more severe.
- Neighborhood streets will be used to bypass congested intersections.

Access management balances mobility and access. The need for better access management is most obvious in corridors such as Austell Road where parts of the roadway have far too many driveways. Too many driveways often confuse drivers, who become uncertain as to when turns into or out of driveways will be made. As can be observed, their existence results in a large number of turning movements and conflict points increasing the potential for traffic accidents. Unfortunately, once an access management problem is obvious, it is often too late to correct. By managing access on Austell Road before project redevelopment activities take place, safe, and sometimes enhanced, access can be provided while preserving traffic flow.

Study Area

This corridor is located in the southwestern portion of Cobb County between the City of Marietta to the north and the City of Austell to the south. Specifically, the corridor study area is bordered by the intersection of Austell and Callaway Roads on the north, and the intersection of Austell Road and Leila Street on the south (see Figure 2-2). The corridor is approximately four (4) miles in length and one-half (1/2) mile in width. The functional classification of Austell Road is a minor urban arterial roadway and is primarily a commuter roadway, carrying traffic between Marietta to the north and the Thornton Road area in Douglas County to the south, providing access to Interstate 20.



FIGURE 2-2 Study Area

This study effort represents the practical application of access management techniques and tools gleaned from a variety of sources including the Transportation Research Board (TRB), the Center for Urban Transportation Research (CUTR), as well as best practices from other states. This study is developed for the Cobb County Department of Transportation and is the first Access Management Plan in the region.

In July 2007, Cobb County completed a LCI Study for the Austell Road Corridor in which several recommendations were given. One of the results of the prior LCI study effort was the inclusion of a transportation systems recommendation to develop an Access Management Plan.

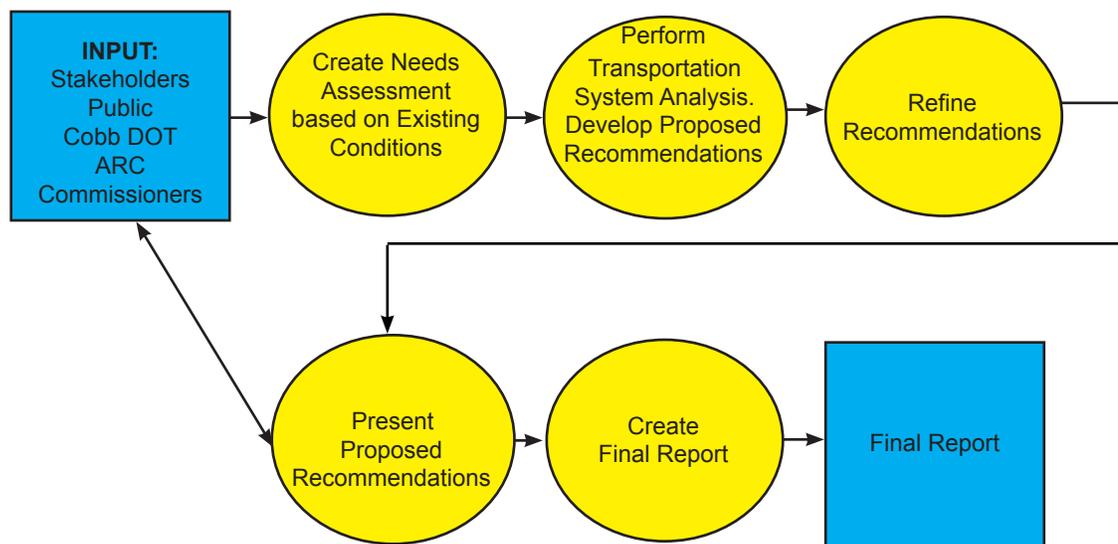
The LCI Study identified five (5) primary benefits to implementing an AMP:

1. Improvement of traffic safety and vehicular crash rates;
2. Shorter travel times and reduced travel costs;
3. Increased capacity of roadways;
4. Enhancement of the value of private land development and improvements to access to property;
5. Improvements to the overall aesthetics of the community.

Cobb County decided to undertake an Access Management Plan (AMP) for the Austell Road corridor, putting the County at the forefront of the region in this area.

For Austell Road, the consultant team undertook a methodology depicted in Figure 2-3 to develop the Access Management Plan. Information was gathered from stakeholders, the general public, Cobb DOT officials and staff, Atlanta Regional Commission, and County Board of Commissioners to create a Needs Assessment based on Existing Conditions for the corridor. The next step was to perform a traffic analysis and develop proposed recommendations. These recommendations were presented to the public, Cobb DOT officials, and the Board of Commissioners for approval. The public participation process included three (3) general meetings, as well as a survey.

FIGURE 2-3
Study
Methodology



3 Outreach and Participation

The strategies and techniques used for the Planning Process of the study enabled the consultant team to gather information from a variety of people. In this way, the consultant team was able to get input from different perspectives and interests that may be applied to access management. Figure 3-1 illustrates the planning process used. The techniques used in this study were as follows:

- Interviews with elected officials and County staff
- Project management meetings (with Cobb County DOT)
- Stakeholder meetings
- Public meetings
- Online survey

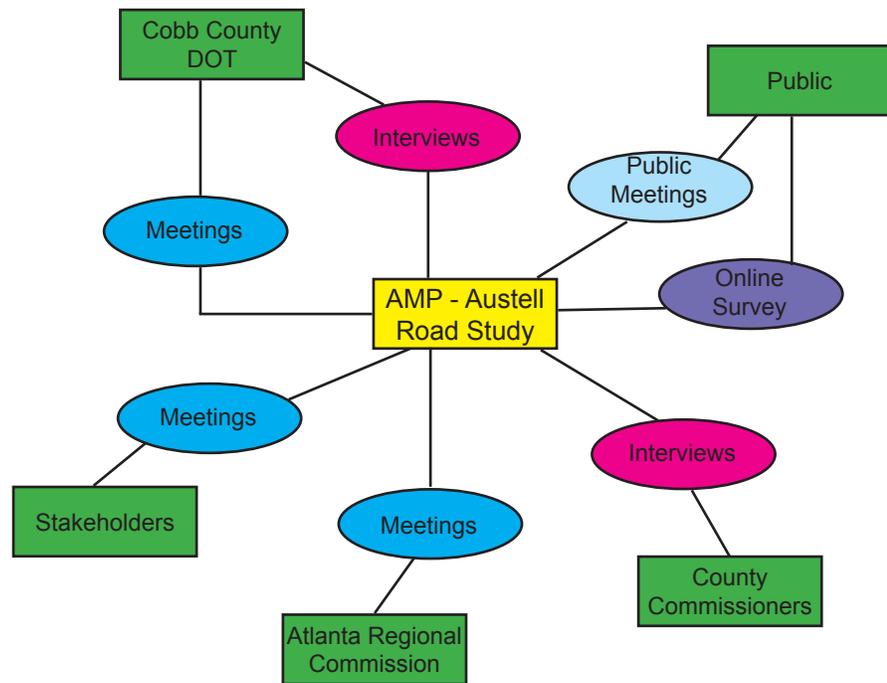


FIGURE 3-1 Illustration of Planning Process

In addition to these techniques, the consultant team had several meetings with the Cobb DOT Project Management Team to discuss issues related to the study. At the same time, the consultant team made several presentations to the Commissioner of the District in which the study area is located, the Director of Cobb DOT, representatives from ARC, the Board of Commissioners' work session, and the Board of Commissioners' regular meeting. The purpose of the presentations was to discuss the project and introduce the Access Management components.

As part of the Austell Road corridor AMP process, the consultant team performed a wide variety of data gathering and public participation tasks. These tasks involved outreach efforts to contact as many stakeholders as possible, as well as numerous meetings and presentations. Elements of the planning process included:

- **Steering Committee:** A steering committee was created representative of the broad Austell Road Corridor area including residential commercial and institutional interest. The consultant team met with the Steering Committee regularly to provide project updates and receive input.
- **Stakeholder Interviews:** The consultant team conducted several stakeholder interviews with key constituents within the project area; these interviews included neighborhood organizations, business interests, government officials and property owners.
- **Field Assessments:** The consultant team conducted several field surveys to verify existing transportation and land use features.
- **Review of Existing Resources:** The consultant team reviewed a variety of existing documents including transportation and land use policy documents, land use plans and area zoning and previous studies.
- **Community Outreach:** The consultant team conducted three (3) public forums and undertook a survey to solicit suggestions and garner feedback for the Access Management Plan.

The attached Appendix A contains minutes from meetings and interviews.

For the Austell Road AMP, the consultant team, in collaboration with Cobb County, created a list of key people to interview and to gain input about the project. A total of six (6) people were interviewed, including County Commissioner Woody Thompson; the Director of Cobb County DOT, David Montanye; and the Director of Cobb County Community Development, Rob Hosack.

There was a group of Project Managers (PM) from the Cobb County office that helped on the evolution of the study. The PM team included personnel from the

Methodology and Public Participation

Implementation Overview

Project Management Meetings

traffic operations, transportation planning, economic development, and planning departments. These people participated in several meetings to discuss the project before the information was presented to stakeholders and general public.

Steering Committee A group of stakeholders determined by Cobb County DOT was invited to three (3) meetings during the development of the project. This stakeholder group was gave crucial input on the different alternatives and issues of the study.

Community Outreach

The objective of the public involvement process was to achieve outcomes that are both acceptable to the public and technically sound. The development of the project was presented to the public through three (3) public meetings. These meetings were advertised by Cobb County through flyers, water bills, and the internet. In these meetings, the public was well informed about the status of the project, and the consultant team gave them the opportunity to ask questions, write comments on provided comment cards, and to discuss issues related to the study in a face-to-face manner. Also, each of the PowerPoint presentations was uploaded to the Cobb DOT website.

Cobb County Austell Road Access Management Study

The Cobb County Department of Transportation invites the public to learn more about an access management study along Austell Road. We want your input on opportunities and constraints in the area.

Tuesday February 17th, 2009
6:00 p.m. to 8:00 p.m.*
South Cobb County Government Service Center
4700 Austell Road
Austell, GA 30106-2004

- Access management methods are designed to improve operational efficiency of roadways without adding lane capacity.
- The study also has potential benefits for pedestrians, bicyclists and transit users.

***An open-house format will be followed by a short presentation.**

For more information, please contact:
Cobb County Department of Transportation - Planning Division
 1890 County Services Parkway
 Marietta, GA 30008-4014
 Phone: 770-528-1679
 Email: planning@cobbcounty.org
 Website: www.cobbdot.org/AustellRoadLCI/index.htm

Examples of materials provided to inform the public about the AMP.

Access Management Plan
 June 2009

Access Management Plan is one of the **results** of the original **LCI study (Completed on July, 2007)**

The purpose of **access management** is to design roadways that balance access and mobility that reduces vehicular conflict and is safe and sensitive to business and property owners.

Results of LCI Study:
 Transportation Improvements: **Access Management Plan**
 Better Land Use regulation and incentives
 Community design features
 Neighborhood preservation and housing
 Community Organization Strategies

The consultant team developed a survey to gather input from the general public related to the perception of issues that the community had for the corridor. The survey consisted of twelve (12) questions and a section for additional comments (see Appendix B for a copy of the online survey). The survey was advertised at the second public meeting and was posted for about two (2) months. The questions asked for information on an array of issues and were designed to ensure that answers were consistent. There were forty-nine (49) surveys submitted. The issues mentioned most were:

- Congestion
- Pedestrian friendly design
- Intersection design
- Aesthetics.

The results of the surveys are as follows:

- 66% agree with mixed use development
- 96% are concerned about congestion
- 63% would encourage new access among large commercial properties
- 92% are concerned about commercial development
- 96% support Cobb County building sidewalks.

4 Goals and Objectives

General Access Management Goals

Access management is accomplished through the systematic application of planning, regulatory, and design strategies. The basic methods to accomplish access management are as follows:

- State and local policies, directives, and guidelines
- Enforceable access management regulations, codes and guidelines
- Acquisition of access rights
- Land development regulations
- Development review and impact assessment
- Good geometric design criteria
- Understanding of access implications by business and property owners.

The benefits of access management can be divided in different areas as follows:

- Safety
- Operations
- Economics
- Land use and the environment.

Safety can be benefited by improving access design, fewer traffic conflict locations, and increased driver response time to potential conflicts. These conflicts include vehicles, pedestrians and bicyclists.

Operation effects show that access management helps to maintain desired speeds and reduce delays. Increasing the number of access points and signals along a roadway, result in increased delay.

Economic effects on market area and property values show that having poorly design vehicular access could reduce the economic vitality of the corridor. Property values tend to increase rapidly during commercial development, but can decline after the area is built out, if the character and efficiency of that corridor have been damaged in the process. However, research to date has not systematically examined the potential long-term economic benefits of access management.

Land use and environmental effects of access management show that the aesthetics and development can be influenced. Minimizing curb cuts, consolidating driveways, constructing landscaped medians, and buffering parking lots can create a visually pleasing and more functional corridor, and it can attract new investment. In addition, well-designed road and access systems further the orderly layout and use of land and help improve design of residential subdivisions and commercial circulation system.

Access management can be achieved through land use strategies that discourage strip development and promote clustering of land used into unified activity centers. This advances local planning and growth management policies, and it enhances bicycle, pedestrian, and transit mobility. Finally, protecting capacity on a corridor reduces the need for new major roadways of bypass facilities and their adverse environmental impacts, and the corridor can better the air quality due to less emissions because it reduces the number of vehicles accelerating and decelerating in response to turning vehicles.

The goals and objectives of this effort were determined through an interactive public process. At the first public meeting held on February 17, 2009, the set of goals listed below were adopted after initial approval by the stakeholder committee.

Goals & Objectives

- Improve traffic safety and vehicular crash rates
- Shorten travel times and reduced travel costs
- Increase capacity of roadways
- Enhance value of private land development and improve access to property
- Improve overall aesthetics of the community
- Connect sidewalks and examine bicycle path feasibility

Similarly, a list of issues and opportunities were suggested by the consultant team and were agreed upon by the stakeholder committee and the general public. Five of the seven issues and opportunities are addressed in this study.

Issues & Opportunities

- Examine Party City and Lowe's shopping center connectivity
- Examine ingress/egress at Target and at other shopping centers
- Create more corridors to get in and out of Hospital area without using Austell Road
- Close sidewalk gaps along corridor
- Create better streetscapes
- The Silver Comet Trail – there is currently no access provided from Austell Road
- Improve continuity of signage

5 Existing Conditions

A number of existing studies, plans, and other documents have been conducted that focus on the study area of the Austell Road Access Management Plan or on unincorporated Cobb County. The Austell Road Corridor LCI Study is the primary document that focuses on this study area. This document identified the need for creating an access management plan for Austell Road. This study provides a significant amount of data specific to Austell Road and the surrounding study area. Other relevant documents and data sources include the following:

- Cobb Community Transit
- GRTA Xpress Bus Service
- Cobb County Bicycle/Transportation Plan
- Cobb County Bicycle and Pedestrian Improvement Plan
- Atlanta Regional Commission (ARC) Regional Transportation Plan (RTP)
- Cobb County SPLOST Project List
- Cobb County 2030 Comprehensive Transportation Plan
- Cobb County Zoning Ordinance

In addition to reviewing the documents listed above, a field review of the corridor was conducted. The field review focused on existing traffic operations, bike/pedestrian facilities, transit service, and existing development.

Austell Road Corridor LCI Study

The Austell Road Corridor LCI Study focused on a four-mile long segment of Austell Road from Leila Street to Callaway Road. The study area is approximately one-half (0.5) mile in width, although the exact boundaries vary based on the location of property and other roadways. The purpose of the Austell Road Corridor LCI Study was to develop an implementable plan that will serve as a blueprint for addressing transportation, land use, economic development and community design issues in a holistic way. The following goals were developed as a part of the study process:

- Engage all stakeholders in the planning process and encourage partnerships between the public and private sectors in both planning and implementation.
- Link land use and transportation to improve mobility and economic efficiency in the corridor.

- Identify multi-modal transportation enhancements to balance the transportation system.
- Arrest economic decline and encourage redevelopment of vacant and underutilized commercial centers.
- Encourage appropriate infill opportunities.
- Increase the diversity of housing and support housing choices for current and future residents.
- Improve land use balance and transportation system efficiency in the corridor by creating vibrant, mixed-use development.
- Establish a sense of place that will instill neighborhood pride and ownership in the corridor.

A number of issues and opportunities were identified during the study process and include the following:

- Severe traffic congestion – Due to commute patterns, the roadway’s intersection with the East-West Connector, the presence of several large retail centers, and the location of WellStar Cobb Hospital, the corridor experiences high levels of traffic congestion and delay during morning and evening rush hours.
- Traffic safety – The corridor is a challenging one for both autos and pedestrians. The intersection of Austell Road and East-West Connector has the highest accident rate in the State of Georgia.
- Economic decline – As the corridor’s importance as a transportation route has increased, the vibrancy of many of the older strip centers along it has decreased. Many stores have closed or relocated and some properties have a dilapidated look.
- Lack of community identity – This part of Cobb County once had an identity linked to the history of Milford community, but most of that historic image has been lost to commercial sprawl – large, unattractive signs; featureless parking lots; vacant storefronts; neglected maintenance of rights-of-way; a barren concrete median; overhead powerlines; and chain-link-fenced detention ponds in front yards.
- Stable residential neighborhoods – In contrast to the run-down appearance of many of the retail uses along Austell Road, the residential areas located just behind are, for the most part, strong, well-maintained neighborhoods. Most residential uses in the corridor are older, mature, low-density single family neighborhoods. Additionally, due to proximity to the hospital, a number of residential developments in the corridor cater to senior citizens, such as the Presbyterian Village Retirement Community.
- Community institutions – WellStar Hospital is in the center of the study area with 347 beds and 2,264 employees. The South Cobb Government Center is located in the southern portion of the corridor. In addition, there are three (3) public schools – Sanders Primary and Intermediate Schools, and South Cobb High School – and several churches.

Existing Transportation Systems and Conditions

- The Silver Comet Trail – This is a multi-use trail of regional proportions, stretching from Smyrna to Alabama’s Chief Ladiga Trail. It passes through the southern end of the study area; however, there is currently no access to this recreational amenity provided in the Austell Road Corridor.
- Development opportunities – There are several well-placed tracts of vacant land, a number of aging commercial centers, and other underutilized tracts (such as the two mobile home parks) that should provide ample opportunities for development and redevelopment in this corridor.

Austell Road and the East-West Connector are four-lane divided roadways that include left-turn lanes at intersections. All other roadways in the study area are two-lane, undivided roadways. Austell Road, the East-West Connector, Clay Road, and Floyd Road are all arterial roadways. All other roadways within the study area are collectors or local roads.

Austell Road has a large number of ingress and egress points along the roadway, most of which are right-in/right-out only due to the presence of a median. Roadway connectivity in the study area is generally poor due to a lack of parallel roadways. Additionally, there is a large amount of single family residential development adjacent to the corridor. These developments typically have a limited amount of access points and include a large number of cul-de-sacs which further limits connectivity.

The Georgia Department of Transportation (GDOT) has 8 permanent traffic count locations within the study area. These traffic count locations show that the 2005 Annual Average Daily Traffic (AADT) volumes were:

- AADT volumes along Austell Road was generally just under 40,000
- AADT on the south end of the Austell Road corridor was approximately 27,000 and on the north end of the corridor was approximately 42,000
- AADT volumes along the East-West Connector near Austell Road was just under 40,000
- AADT volumes along Austell Road and Milford Church Road were slightly under 11,000

Roadway traffic congestion is expressed in terms of Level of Service (LOS) as defined by the Highway Capacity Manual (HCM). LOS is a letter code ranging from A to F. LOS A represents free flow conditions while LOS F represents heavy traffic congestion where demand is greater than capacity. Both LOS E and LOS F are considered to be failing. The Austell Road Corridor LCI Study identified the PM peak hour LOS of major roadways using the Atlanta Regional Commission’s (ARC) regional travel demand model. This analysis showed the following results:

- Austell Road operates at LOS D during the PM peak hour along most segments with the exception of the segments north of Callaway Road and between Seayes Road and Clay Road, which operate at LOS E.

- The East-West Connector operates at LOS E west of Austell Road and at LOS D or better east of Austell Road.
- Callaway Road operates at LOS F west of Austell Road.
- Hurt Road operates at LOS D throughout much of its length, but the segment between Floyd Road and Hurt Road operates at LOS F and is the most congested roadway segment in the study area.
- Clay Road generally operates at LOS D.
- Milford Church Road operates at LOS E west of Austell Road and LOS D east of Austell Road.
- The segment of Floyd Road between Austell Road and Hurt Road operates at LOS D.

The Austell Road Corridor LCI Study used data from previous traffic studies in the study area as well as new traffic count data to determine the 2007 peak hour LOS at a number of intersections within the study area. The results of this analysis are shown in the Table 5-1. As the table shows, the intersections of Austell Road with Milford Church Road, Hurt Road, and the East-West Connector each operate with a failing LOS during both the AM peak hour and the PM peak hour. In addition, a number of other intersections operate at LOS D during at least one (1) peak hour. This analysis helps to target where future traffic improvements may be needed.

A number of high crash intersections exist along Austell Road. The intersection with the East-West Connector is the worst location. Between 2002 and 2005, a total of 517 crashes were reported at this location, which ranks it among one of the highest crash locations statewide. Other high crash intersections within the study area include:

- Milford Church Road
- Pair Road
- Amy Lane
- Floyd Road
- Blue Ridge Drive
- Hospital South Drive
- Anderson Mill Road
- Clay Road

The study area is served by Cobb Community Transit (CCT) Route 30. This route runs from the MARTA Holmes Station to the Marietta Transfer Center via Austell Road, the East-West Connector, and Floyd Road. Ridership on this transit route is one of the highest of all transit routes operated by CCT. In 2006, ridership averaged over 64,000 per month, reaching a total of 777,392 for the year. Average weekday boardings on Route 30 in 2006 were 2,567 persons, with an average of 1,661 boardings every Saturday (CCT Transit Planning Study, May 2006, pp. 3-4).

TABLE 5-1 Existing Intersection Level of Service (LOS)

Intersection	AM Peak Hour		PM Peak Hour	
	LOS	Delay (sec)	LOS	Delay (sec)
Austell Rd @ Callaway Rd.	C	33.7	D	42.8
Austell Rd @ Milford Church Rd.	F	83.2	E	67.6
Austell Rd @ Pair Rd.	C	23.0	B	18.5
Austell Rd @ Amy Ln.	B	19.8	B	11.4
Austell Rd @ Hurt Rd.	E	58.2	E	64.2
Austell Rd @ Mulkey Rd.	B	17.2	C	32.0
Austell Rd @ Hospital S. Dr.	A	7.8	C	30.5
Austell Rd @ East West Conn.	F	135.9	F	110.1
Austell Rd @ E W Commons	A	4.0	B	18.2
Austell Rd @ Anderson Mill Rd.	D	49.4	D	52.7
Austell Rd @ Seays Rd.	A	4.9	A	3.9
Austell Rd @ Clay Rd.	C	23.0	D	53.1
Austell Rd @ Austell Plaza	A	2.7	A	2.9
Austell Rd @ Perkerson Mill Rd.	C	29.2	B	12.2
East West Conn @ Tramore Pk.	A	2.3	A	7.9
East West Conn @ Champion Dr.	A	8.9	B	19.7
East West Conn @ IHOP	A	3.9	B	14.9
East West Conn @ Lowe's	B	11.2	B	11.5
East West Conn @ Brookwood Dr.	B	16.6	C	30.2
East West Conn @ Floyd Rd.	D	41.5	D	48.5
East West Conn @ Mulkey Rd.	A	4.6	A	6.0
East West Conn @ Hurt Rd.	B	15.7	B	14.5

From Final Summary Report: Austell Road
Corridor LCI Study, July 2007

Bicycle and Pedestrian Conditions

The Austell Road Corridor LCI Study identified no bicycle lanes within the study area. Sidewalks are located along much of Austell Road as well as many other roadways. However, gaps exist in the sidewalks on these roadways. The Silver Comet Trail is a multi-use trail that passes through the study area and connects the City of Smyrna in Cobb County to the Alabama state line. An inventory of existing infrastructure includes the following:

- Austell Road from East-West Connector to Callaway Road has sidewalks on both sides of the roadway.
- Some segments of the sidewalk on Austell Road between Pair Road and Callaway Road are in disrepair and are less than the required five-foot wide standard.

- Austell Road south of the East-West Connector has many segments that only have sidewalk on one side of the roadway.
- The East-West Connector generally has sidewalks near Austell Road, but gaps in the sidewalks exist.
- Callaway Road, Milford Church Road, Pair Road, Brookwood Drive, Hurt Road, Floyd Road, Anderson Mill Road and Clay Road each have sidewalks on at least one side of the roadway.
- The Silver Comet Trail crosses under Austell Road south of Drennon Avenue. No access to the trail from Austell Road currently exists, and the nearest access point is at Floyd Road. The Austell Road Corridor LCI Study recommends access adjacent to Austell Road.

The Austell Road Corridor LCI Study identified two (2) roadway improvements planned in the study area through the year 2030. These projects include:

- Widening Callaway Road to three (3) lanes from Austell Road to Powder Springs Road. This is a SPLOST project with construction planned for July 2011.
- Constructing the Mulkey Road Connector, a new two-lane roadway connecting Mulkey Road to the East-West Connector. This is a SPLOST project that had construction planned for summer 2007. (This project has been completed and is named Lipson Drive.)

The LCI Study identified a number of intersections along Austell Road that had improvements planned through 2012. These intersections include the following:

- East-West Connector
- Callaway Road
- Milford Church Road
- Floyd Road
- Hurt Road
- Hospital South Drive
- Clay Road

The ARC regional travel demand model was used to determine 2030 PM Peak Hour LOS on major roadways in the study area. Congestion levels throughout the study area are expected to increase by 2030. The 2030 PM Peak Hour LOS analysis showed the following:

- Most segments of Austell Road within the study area are projected to operate at LOS E in 2030. The exceptions include segments near Hurt Road which operate at LOS D and segments north of Clay Road and south of the East-West Connector which operate at LOS F.
- The East-West Connector is projected to operate at LOS F west of Austell Road and at LOS D and E east of Austell Road.

Future Transportation Issues and Service Levels

- Callaway Road is projected to operate at LOS E through the study area and LOS F near Powder Springs Road.
- The segments of Hurt Road between Austell Road and Floyd Road and near Powder Springs Road are projected to operate at LOS F. The segments east of Floyd Road are projected to operate at LOS D.
- Segments of Clay Road within the study area are projected to operate at LOS D, but segments east of the study area and near Flint Hill Road are projected to operate at LOS F.
- The portion of Milford Church Road within the study area is projected to operate at LOS D west of Austell Road and LOS E east of Austell Road. However, segments east of Hicks Road and near Powder Springs Road are projected to operate at LOS F.

Year 2030 AM and PM peak hour intersection analyses were conducted on the same intersections included in the 2007 peak hour analyses. This was done by applying a growth rate of 1.6% per year to the 2007 traffic volumes. The results of this analysis are shown in Table 5-2. As the table shows, nearly every intersection operates with a failing LOS in either the AM Peak Hour or the PM peak hour.

The LCI Study also recommended a grid system of streets be implemented in the area east of Austell Road, north of the East-West Connector, and along Hurt Road and Floyd Road. The Heritage Hills Shopping Center and the former Target location were both identified as catalyst sites for redevelopment. Both of these sites would be a part of the proposed street grid. Figure 5-1 shows the proposed street grid recommended in the LCI Study.

Transit Service

The Austell Road Corridor LCI Study provided data regarding transit service at the time the study was conducted. Additional research was conducted on transit within the study area to determine current transit service. Based on data available on the CCT website (<http://www.cobbdot.org/cct.htm>), Route 30 currently operates in the study area from the MARTA Holmes Station to the Marietta Transfer Center via Austell Road, the East-West Connector, and Floyd Road. Peak hour headways on this route are 15 minutes. Off-peak headways are variable, reaching up to an hour on some evening routes. These route locations are shown in Figure 5-2.

CCT Route 70 passes through the study area on the East-West Connector and connects the Cobb County Health Center to Cumberland Mall. This route operates with variable headways, typically around one (1) hour in length.

The Georgia Regional Transportation Agency (GRTA) operates Xpress Route 475 within the study area. This route connects the Highest Praise Church (Floyd Road at Hurt Road) Park & Ride, WellStar Cobb Hospital, Six Flags Park & Ride, and Downtown Atlanta. The WellStar Cobb Hospital stop is a reverse commute destination intended to serve employees of the hospital rather than residents of the area.

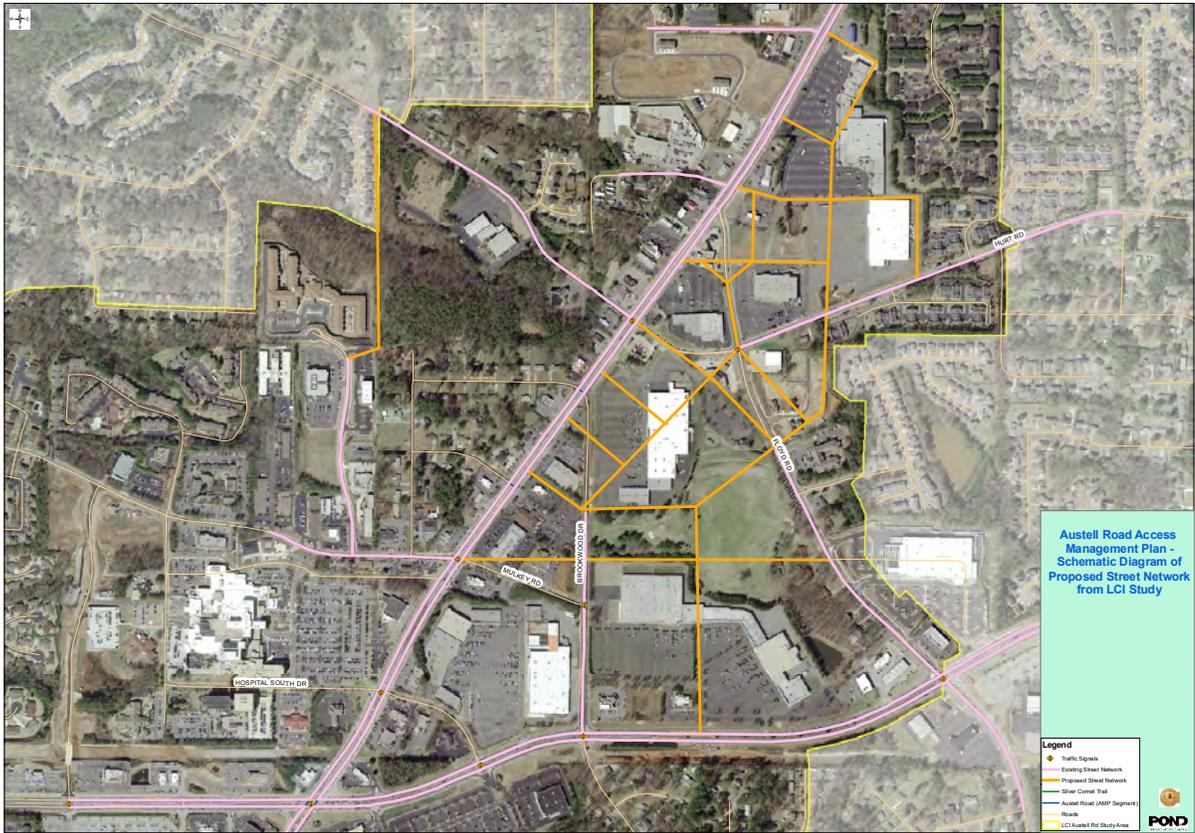
TABLE 5-2 Intersection Operations Analysis, 2030 Baseline Conditions

Intersection	AM Peak Hour		PM Peak Hour	
	LOS	Delay (sec)	LOS	Delay (sec)
Austell Rd @ Callaway Rd.	F	>80	F	>80
Austell Rd @ Milford Church Rd.	F	>80	F	>80
Austell Rd @ Pair Rd.	F	>80	E	71.4
Austell Rd @ Amy Ln.	D	53.7	D	50.0
Austell Rd @ Hurt Rd.	F	>80	F	>80
Austell Rd @ Mulkey Rd.	D	37.3	F	>80
Austell Rd @ Hospital S. Dr.	C	20.5	F	>80
Austell Rd @ East West Conn.	F	>80	F	>80
Austell Rd @ E W Commons	D	52.9	E	78.5
Austell Rd @ Anderson Mill Rd.	F	>80	F	>80
Austell Rd @ Seays Rd.	B	11.2	B	12.4
Austell Rd @ Clay Rd.	F	>80	F	>80
Austell Rd @ Austell Plaza	A	6.3	C	27.8
Austell Rd @ Perkerson Mill Rd.	F	>80	E	71.2
East West Conn @ Tramore Pk.	E	77.2	F	>80
East West Conn @ Champion Dr.	F	>80	F	>80
East West Conn @ IHOP	E	59.6	F	>80
East West Conn @ Lowe's	F	>80	D	50.4
East West Conn @ Brookwood Dr.	E	75.2	F	>80
East West Conn @ Floyd Rd.	F	>80	F	>80
Brookwood Dr. @ Mulkey Rd.	A	5.2	A	7.6
Floyd Rd. @ Hurt Rd.	C	26.7	C	32.2

From Final Summary Report: Austell Road
Corridor LCI Study, July 2007

The Cobb County Bicycle/Transportation Plan, completed in 1993, was intended to meet the requirement of the Intermodal Surface Transportation Act (ISTEA) passed by Congress in 1991. The Atlanta Regional Commission (ARC) requested that counties that make up the ARC complete bicycle transportation plans as part of a regional plan. Due to time constraints, only a skeletal plan was completed in 1993. The Plan did not identify any roadways within the Austell Road Access Management Plan study area for future bicycle facilities. The Silver Comet Trail is the only bicycle facility identified within the Austell Road Access Management Plan study area.

Cobb County Bicycle / Transportation Plan



From Final Summary Report: Austell Road Corridor LCI Study, July 2007

FIGURE 5-1 Proposed Street Network

Cobb County Bicycle and Pedestrian Improvement Plan

The Cobb County Department of Transportation (DOT) is currently conducting the Cobb County Bicycle and Pedestrian Improvement Plan. This plan will “identify where Cobb County can improve conditions for bicycling and walking and identify a strategy for investing in those improvements over time.”

Final recommendations and a project list have not yet been formulated as a part of this plan. However, level of service (LOS) for bicycle and pedestrian travel on existing roadways has been determined. Bicycle and pedestrian LOS was determined based on as roadway width, existence of sidewalks or bike lanes, traffic volumes, vehicle speeds, existence of on-street parking, and other factors. The results of this analysis show the following for bicycle LOS on major roadways within the study area:

- Austell Road operates at LOS F
- East-West Connector, Floyd Road, Hurt Road, and Clay Road operate at LOS E
- Anderson Mill Road, Milford Church Road, and Brookwood Drive operate at LOS D

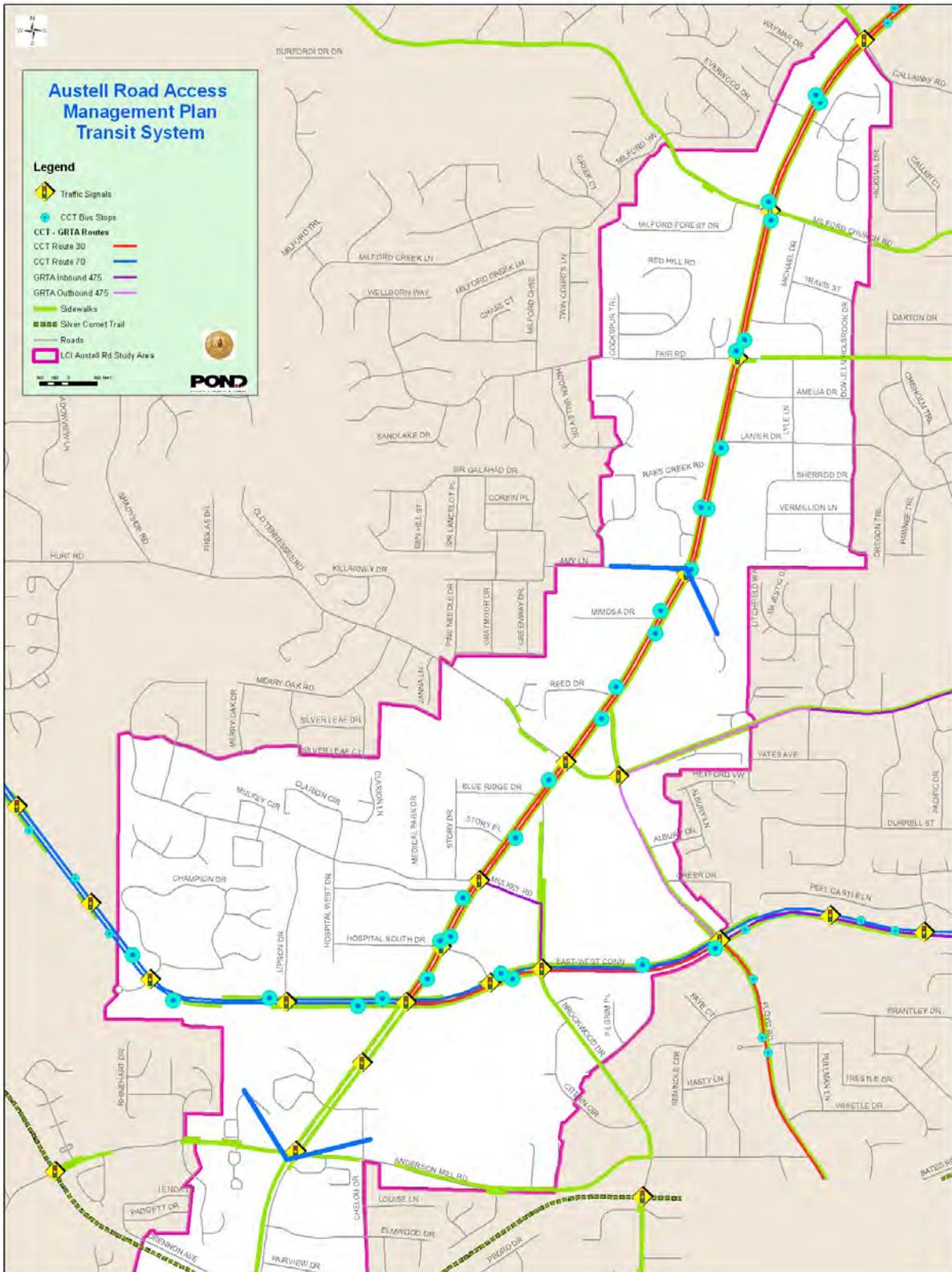


FIGURE 5-2 Transit System

The analysis shows the following for pedestrian LOS on major roadways within the study area:

- Austell Road operates at LOS E
- East-West Connector operates at LOS F west of Austell Road, LOS E east of Austell Road
- Floyd Road, Hurt Road, Clay Road, and Milford Church Road operate at LOS E
- Anderson Mill Road, Brookwood Drive operate at LOS D

The Cobb County Bicycle and Pedestrian Improvement Plan also conducted a travel demand analysis for major roadways within Cobb County. This was done by using four (4) methods of analysis. These methods include counting bicyclists and pedestrians, identifying key bicycle and pedestrian generators and attractors, using models, and assessing latent demand. This analysis then assigned roadways a score between 1 and 5, with 5 representing roadways with the highest demand and 1 representing roadways with the lowest demand. The results of this analysis show the following for bicycle demand on major roadways within the study area:

- Austell Road – Demand Level 4
- East-West Connector, Floyd Road, and Milford Church Road – Level 4
- Hurt Road west of Austell Road – Level 4, east of Austell Road – Level 3
- Clay Road, Anderson Mill Road, and Brookwood Drive– Level 3

The results of this analysis show the following for pedestrian demand on major roadways within the study area:

- Austell Road – Level 5
- East-West Connector, Floyd Road, Milford Church Road, Hurt Road, Anderson Mill Road, and Brookwood Drive – Level 4
- Clay Road west of Austell Road – Level 3, east of Austell Road – Level 4

Overall, on major roadways in the study area the LOS for bicycles and pedestrians is poor. However, on these same roadways, demand for bicycle and pedestrian travel is generally high. This means that bicyclists and pedestrians within the study area are not being served well. Additionally, if better infrastructure was in place, bicycle and pedestrian travel would likely increase. This is due to the fact that some bicycle and pedestrian are likely not taking place due to the poor bicycle and pedestrian infrastructure that exists in the study area.

ARC Regional Transportation Plan and the Cobb County SPLOST Project List

Table 5-3 is a list of previously planned projects located in or near the Austell Road Access Management Plan study area. This data is from the Atlanta Regional Commission's (ARC) Regional Transportation Plan (RTP) and the Cobb County SPLOST Project List. Figure 5-3 and Figure 5-4 show the locations of these projects as well as other existing transportation infrastructure in the study area.

TABLE 5-3 ARC RTP and Cobb County SPLOST Project List

Project Number	Project Name	Project Type	Project Description	Project Schedule
ARC CO-326	Austell Road Intersection Improvements from Clay Road to Sandtown Road	Roadway Operational Upgrades	This project will improve a series of intersections along Austell Road. The intersections to be improved are: Sandtown Road, Windy Hill Road, Callaway Road, Milford Church Road, Floyd Road, Hurt Road, and Clay Road.	Completion Date: 2008
ARC CO-356/ SPLOST D3030	Austell Road at East-West Connector	Roadway Operational Upgrades	Dual left-turn lanes will be constructed on the southbound, eastbound, and westbound approaches. On the eastbound and westbound approaches a 3rd thru lane will be added and the right-turn lane storage capacity will be extended.	Completion Date: 2009
ARC CO-342/ SPLOST D4240	Windy Hill Extension / Macland Road Connector	General Purpose Roadway Capacity	This project involves the construction of a new four-lane roadway between the intersection of SR 360 (Powder Springs Road) and Macland Road and the intersection of Austell Road and Windy Hill Road.	Completion Date: 2011
ARC CO-384A	Mulkey Road Extension - West from near Cliff Way to East-West Connector	General Purpose Roadway Capacity	This project involves constructing a new two-lane roadway from near the intersection of Mulkey Road and Cliff Place to the East-West Connector.	Completion Date: 2013
ARC CO-384B	Mulkey Road Extension - East from Brookwood Road to Floyd Road	General Purpose Roadway Capacity	This project involves constructing a new two-lane roadway from the intersection of Mulkey Road and Brookwood Road to Floyd Road.	Completion Date: 2012
ARC CO-385	Mulkey Road from just west of Cherokee Trails Drive to Austell Road	Roadway Operational Upgrades	This project involves making safety and geometric improvements to the existing alignment of Mulkey Road between Cherokee Trails Drive and Austell Road.	Completion Date: 2013
SPLOST D4140	Mulkey Road Connector	General Purpose Roadway Capacity	Mulkey Road to East-West Connector New 2 Lane Roadway	Construction Complete, Out to Bid February 2007
ARC CO-340	Callaway Road from Austell Road to SR 360 (Powder Springs Road)	Roadway Operational Upgrades	This project provides for roadway operational upgrades on Callaway Road to improve mobility and safety.	Completion Date: 2011
SPLOST D3040	Austell Road at Pat Mell Road	Roadway Operational Upgrades	Realign Pat Mell Rd to line up with apartment entrance	Completion Date: 2009
SPLOST D3050	Austell Rd at Roberta Dr/Cochran Rd	Roadway Operational Upgrades	Improve Alignment	Completion Date: 2009
SPLOST D3190	East-West Connector @ Hicks Road	Roadway Operational Upgrades	Add right-turn lanes northbound and southbound	Completed 2008
SPLOST D7150	Austell Road	Bike/Ped	Sidewalk batch #3	Final Design, Out to Bid September 2008
SPLOST D7210	Clay Road	Bike/Ped	Austell Road to Floyd Road	Engineering RFP, Engineering began November 2008
SPLOST D8210	South Cobb High School	Bike/Ped	Sidewalks on Clay Road	Construction Complete, Out to Bid January 2008

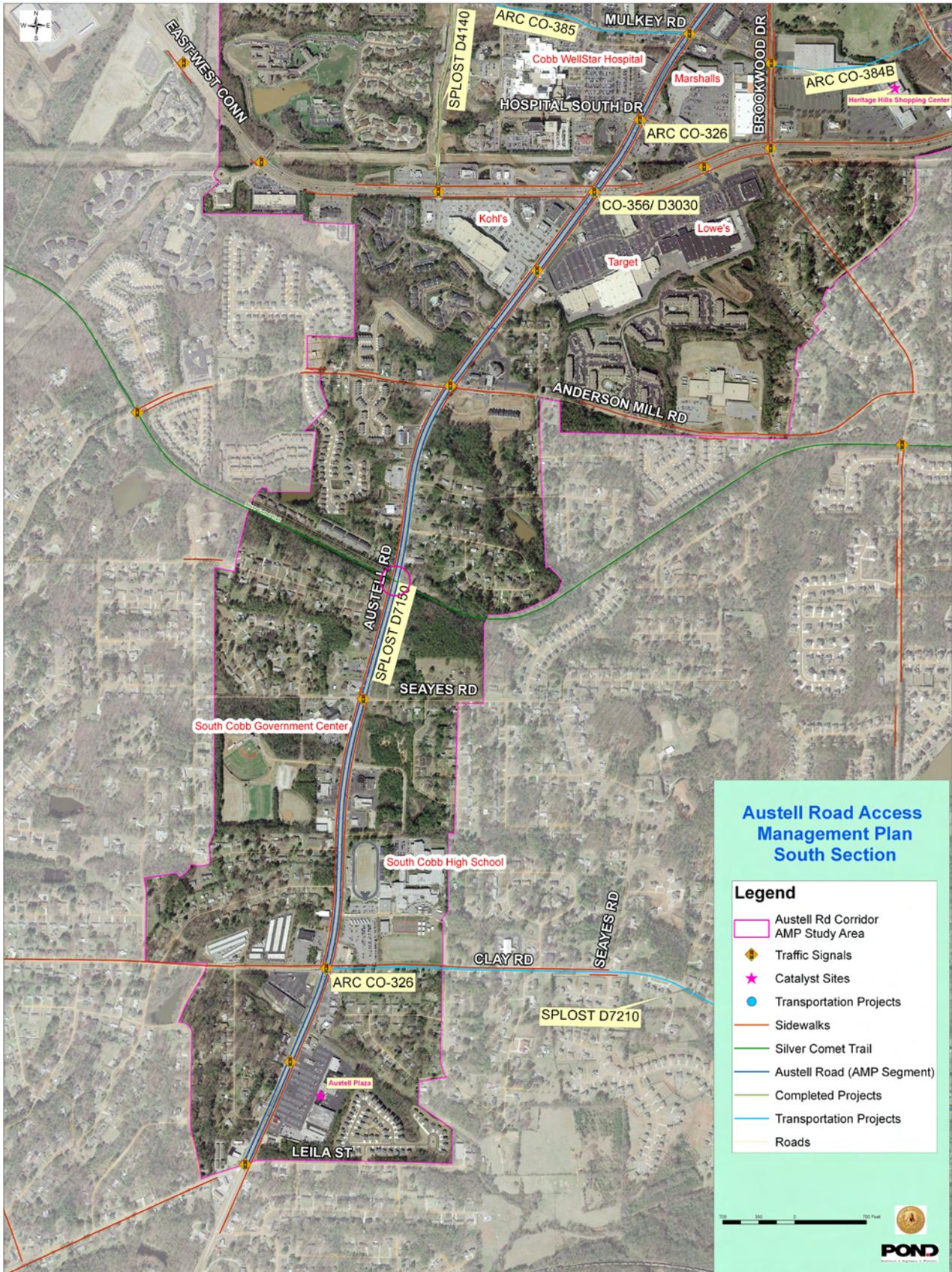


FIGURE 5-4 Transportation Infrastructure and Planned Projects, South Section

**Cobb
County 2030
Comprehensive
Transportation
Plan**

The Cobb County 2030 Comprehensive Transportation Plan (CTP) reviewed the transportation program in the context of local land use, economic development, and public expectations and priorities. The plan considered transportation modes individually as well as part of an interactive system. The results of the study were synthesized into a transportation project list that covered roadway, transit, pedestrian, and bicycle infrastructure projects.

The recommended roadway projects located in or near the Austell Road Access Management Plan Study Area are shown Table 5-4. Project number 1 has the potential to have the greatest impact on traffic operations in the area. This project would expand Austell Road from a 4-lane roadway to a 6-lane roadway from Windy Hill Road to Veterans Memorial Highway. Implementation of this project will provide additional traffic capacity on Austell Road and reduce traffic congestion throughout the corridor.

Map ID #	Project Location	Project Scope	Project Category
1	Austell Road from Windy Hill Road to Veterans Memorial Highway	Widen to 6 lanes	Capacity Projects
10	Brookwood Dr Extension to Veterans Memorial Hwy (US 278/US 78/SR 5)	Roadway Extension (2 lanes)	Capacity Projects
33	Floyd Road from Austell Rd to Hicks Rd	Widen to 4 lanes	Capacity Projects
37	Hurt Road at Floyd Road	Intersection Realignment	Capacity Projects
82	Clay Rd from Austell Powder Springs Rd to Austell Rd	Roadway operational upgrades	Off-Model Projects

As shown in Table 5-5, two (2) transit projects were recommended that would pass through the study area. Project T31 would implement local bus service connecting two major activity centers, the Town Center Mall area and the Cumberland Galleria area. This transit route would pass through the study area on the East-West Connector, providing additional travel options to residents in the area. Project T37 would implement limited bus service connecting the Marietta Transfer Center to the Bankhead MARTA station in Atlanta. This route would be particularly beneficial to commuters as limited bus service typically has faster travel times due to the fact that only a small number of stops are made by the bus. Additionally, the connection to the Bankhead MARTA provides access to the rest of the City of Atlanta via MARTA's heavy rail and bus systems.

TABLE 5-5 Cobb CTP Transit Projects

Map ID #	Project Description
T31	Local Bus Service on Barrett Pkwy and East-West Connector, Town Center Park and Ride to Cumberland Galleria
T37	Limited Stop Bus Service from Marietta Transfer Center to Bankhead MARTA Station via Atlanta St, Austell Rd, and Veterans Memorial Pkwy

A number of pedestrian projects, shown in Table 5-6, were recommended for the study area. The CTP recommended pedestrian countdown signals for eight intersections along Austell Road. These signals increase safety and improve the pedestrian experience. Project P51 recommends adding sidewalks to a segment of Austell Road on the southern end of the study area. This segment has existing sidewalk on the west side of the roadway, so this project would fill in the gap on the east side of the roadway. The CTP also recommends adding sidewalks to three (3) other roadways located within the study area.

TABLE 5-6 Cobb CTP Pedestrian Projects

Map ID #	Project Name	Project Description	Length (Linear Miles)
P2	Austell Road	At Anderson Mill Rd - Pedestrian Countdown Signals	0
P3	Austell Road	At Milford Church Rd - Pedestrian Countdown Signals	0
P4	Austell Road	At Pair Rd - Pedestrian Countdown Signals	0
P5	Austell Road	At Hurt Rd - Pedestrian Countdown Signals	0
P6	Austell Road	At Mulkey Rd - Pedestrian Countdown Signals	0
P8	Austell Road	At Amy Ln - Pedestrian Countdown Signals	0
P9	Austell Road	At Evergreen Dr - Pedestrian Countdown Signals	0
P10	Clay Road	At Seayes Rd - Pedestrian Countdown Signals	0
P39	Amy Lane	Velvet Creek Dr to Austell Rd	0.2
P48	Pair Rd	Hidden Valley Dr to Austell Rd	0.5
P51	Austell Rd	Anderson Mill Rd to Stallion Dr	0.8
P55	Callaway Road	Austell Rd to Greenridge Dr	0.6

Table 5-7 shows the two (2) multi-use trails recommended by the CTP that are located in or near the study area. Project M4 would provide connections to the Silver Comet Trail from multiple local roadways located near Austell Road. The nearest connection to the Silver Comet Trail is from Floyd Road, located to the east of the study area. Project M4 would make access to the Silver Comet Trail significantly more convenient. Project M43, the Olley Creek Trail, is located west

of Austell Road. This trail will parallel Austell Road, providing a continuous, north-south route for bicyclists separated from vehicular traffic.

TABLE 5-7 Cobb CTP Multi-Use Projects			
Map ID #	Corridor	Project Description	Length (Linear Miles)
M4	Austell Road Corridor Trails	Anderson Mill, Stonecrest Drive, Seayes Road, Hemlock Drive Extension to Silver Comet Trail	1
M43	Olley Creek Trail	Old Marietta Road north to County Services Parkway	8.5

Cobb County Comprehensive Plan

As required by the Department of Community Affairs (DCA), counties must assign character areas to land throughout their jurisdiction as part of the comprehensive planning process. The Austell Road corridor has multiple character areas assigned to it. These character areas include the following:

- Redevelopment Commercial
- Activity Center
- Corridors
- Suburban Residential
- Residential Revitalization

The Cobb County Comprehensive Plan references the Austell Road corridor LCI Study numerous times. The comprehensive plan generally recommends implementing the policy changes and redevelopment steps recommended in the LCI study. In the Action Items section, the comprehensive plan states that the County should “Pursue economic, land use, and transportation changes as defined in the Canton Road Corridor Study, Austell Road Livable Center Initiative, Six Flags Drive Corridor Study, and the Historic Mableton Master Plan as a means of expanding opportunities for areas that have traditionally been underserved.” This statement is made for the following action items:

- Economic Development – Jobs-housing balance
- Economic Development – Managing land for business and industrial growth
- Economic Development – Promote historic-based tourism
- Transportation – Context sensitive design
- Transportation – Transportation alternatives
- Quality-of-life – Urban design
- Intergovernmental Coordination – Future growth and development
- Intergovernmental Coordination – Comprehensive planning

The Transportation section of the document states that the County is in the process of creating a Comprehensive Transportation Plan (CTP). Transportation issues and opportunities identified in the Comprehensive Plan include the following:

- Traffic congestion
- Air quality
- Context sensitive design
- Transportation alternatives
- Land use-transportation connectivity
- Intelligent transportation systems
- Operational improvements
- Travel demand management

Within the list of issues and opportunities, the traffic congestion section specifically supports interconnectivity of streets, interparcel access, and the reduction of curb cuts. The transportation alternatives section supports expansion of CCT, supports new regional transit, and recommends investment in new bicycle and pedestrian facilities. The land use-transportation connectivity section recommends linking land use and transportation planning, promoting grid street systems, and promotes a development pattern that enhances mobility such as mixed-use developments. These concepts are key components of any access management plan.

The corridor does not have a consistent zoning pattern. Figure 5-5 shows the study area with the zoning districts aggregated to general land uses. This was done due to the fact that the study area includes a large number of zoning districts.

Existing Zoning

The corridor generally consists of Office/Institutional and Retail/Commercial. These two (2) zoning designations operate to keep the corridor at a fairly consistent low density with standard screening techniques. Most of the major intersections have Community Retail Commercial (CRC) and Planned Shopping Center (PSC) designations. Their intents state they want to reduce congestion, by “being a one-stop shopping destination.” However, they both allow a number of permitted uses that are not particularly pedestrian friendly or consistent in theme (i.e. carwashes, drive in fast food, golf courses) along with wide setbacks and large minimum lot size requirements (20,000 sq ft). Sidewalk and landscaping requirements are minimal.

Interspersed throughout the corridor are Neighborhood Retail Commercial and Neighborhood Shopping districts, which differ from PSC and CRC through allowable uses. They want to focus on “nodal growth” and “stepping down from more intense urban uses” but they have the same setbacks, minimum lot size, and frontage requirements as the PSC and CRC.

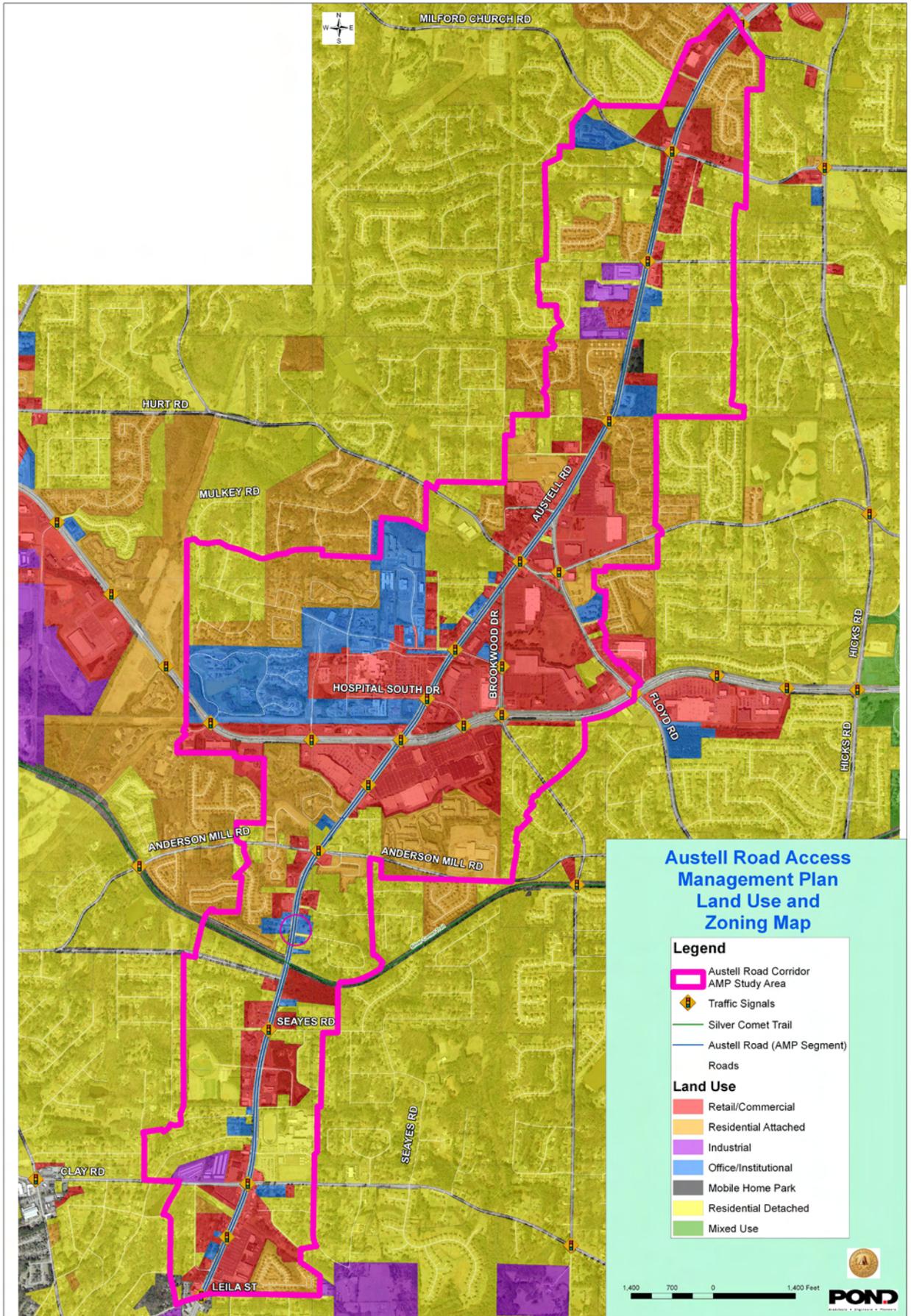


FIGURE 5-5 Land Use Map

Residential zoning districts range from compact single family detached to several attached designations (from 6 to 12 units per acre). Some pedestrian-friendly districts such as Planned Residential Districts exist along the corridor, but do not allow mixed use development.

At the north and southern end of the corridor there are some parcels zoned Heavy Industrial and Light Industrial, these could be problematic with trucks entering and leaving Austell Road and highlights the need for strong transition regulations for the corridor.

The data discussed in the preceding text was presented to the public in two (2) meetings. The first was a stakeholders meeting held on February 5, 2009, at the South Cobb Government Center. Stakeholder comments at the meeting include the following:

- Some attendees expressed concern about the continuity of signage.
- Traffic safety for pedestrian and vehicles was identified as one of the most important issues for this study.
- The need to create more corridors to get in and out of the WellStar Cobb Hospital area without using Austell Road.
- An attendee mentioned that some drivers cut through neighborhood roads at 45 mph because of the lack of different corridors (Hurt Road was mentioned specifically).
- Residents believe that the majority of the drivers that commit traffic violations are not residents of the area, but rather live in surrounding areas.
- An attendee identified the Party City and Lowe's shopping centers as needing improved connectivity to reduce the traffic entering and exiting the East-West Connector and accessing these two (2) sites.
- The stakeholders think that if the former Target store area is redeveloped, a back entrance could help alleviate traffic congestion on Austell Road caused by traffic from the site.
- Some attendees think that CCT bus stops need to be relocated. The bus stops are not always close to signalized intersections and some transit users cross roadways mid-block to reach the bus stops, creating a safety hazard.
- Some attendees would like to see improved streetscapes.
- A shuttle system was mentioned as an option to alleviate traffic on Austell Road.
- The section of Austell Road between Callaway Road and Milford Church Road is very slow and some analysis is needed, based on some participants' comments.
- Some attendees suggested prohibiting left turns from Hicks Road to Austell Road southbound. Additional analysis was proposed at this intersection. However, this intersection lies outside the project study area.
- Some attendees expressed safety concerns about the Austell Road and Floyd Road intersection. It is a full median opening that is not signalized and has significant turning movements.

Public Involvement

- A more in-depth study was suggested for the gaps on sidewalks along the corridor.
- There are concerns with the Silver Comet Trail because Austell Road is about 20 feet above the trail. This configuration creates a safety issue and robberies have taken place on the trail at this location.
- Some attendees mentioned that extended-stay facilities and medical offices were previously proposed around Wal-Mart but they were concerned about how to redevelop this area with the market downturn. There are many underutilized developments that could be used for medical ancillary services to revitalize the area.
- Commissioner Woody Thompson mentioned that new ordinances were being developed for the area to be applied.
- Some attendees mentioned that one objective of the study should be to create a sense of community (maybe get a YMCA in the area). They would like to get people out of their cars and have more activities for families and children.

A public meeting was held on February 17, 2009, at the South Cobb Government Center. This meeting consisted of an open house with boards presenting existing conditions. Meeting attendees had the opportunity to review the data, ask questions of staff members, and make written comments. A formal presentation then took place, followed by an additional open house time period.

Comments and questions from the public focused primarily on existing problems or potential improvements at specific locations. These included comments/questions about specific intersections, when resurfacing of specific segments would take place, the location of potholes, and comments that power lines were unsightly. Other comments/questions about individual developments were also made. Specific comments/questions related to transportation and traffic operations include the following:

- Please consider the residential areas that will be impacted by the traffic that is re-routed to reduce congestion on Austell Road.
- Signal timing along the corridor needs to be re-evaluated.
- Can left and right turns be coordinated based on volume in predominant flow directions?
- Will the daycare being built at Amy and Austell Roads have access onto Austell Road?
- What are the plans for the intersection of Clay and Austell Roads?
- A right-turn is needed from Seayes onto Austell Road.
- Austell Road is congested enough without adding another [intersection] for the Silver Comet Trail.
- Consider some type of solar cell system for Silver Comet Trail tunnel underneath Austell Road.
- Need a bike trail from Silver Comet to Traymore Park.
- Need a right-turn lane for east Anderson Mill onto Austell Road.

- At stop lights for Austell Road and Parkway Station (Ivy Commons Apts), add left-turn arrows on Austell Road sides of lights.
- Intersection of Austell at Floyd Road is dangerous. It needs to be fixed and improved in some way. Also, Cobb Market Fair has some problems going left on Austell Road.
- Left turn at Austell and Pair Road is confusing.
- Anderson Mill Road and Austell Road – only a few cars get to turn right or left at a time. Sit a long time.
- Hard to get out of Dolly’s Restaurant onto Austell Road – also to turn left at the light on Austell Road to go back to Dolly’s.
- Getting onto or across Austell Road at Domino’s Pizza and Burlington/Dollar General shopping area.

There are a total of 14 signalized intersections within the study area. In addition, there are 12 unsignalized intersections, or full median openings, within the study area. Peak hour turning movement traffic counts were conducted for this study at three (3) of the signalized intersections and four (4) of the unsignalized intersections. This traffic count data was used in the existing and future traffic analysis of a segment of the study area, which is discussed later in this report. These traffic count locations include the following intersections:

- Austell Road and Mulkey Road, signalized
- Austell Road and Story Place, unsignalized
- Austell Road and Blue Ridge Drive/Brookwood Drive, unsignalized
- Austell Road and Hurt Road, signalized
- Austell Road and Floyd Road, unsignalized
- Austell Road and Cobb Marketfair driveway/Park Trail townhomes, unsignalized
- Austell Road and Amy Lane, signalized

Additional details regarding the traffic analysis are included later in this report.

The Austell Road corridor involved in this project has a total of 165 driveways. There are 87 driveways on the northbound and 78 driveways on the southbound. The Austell Road section in this study has 27 median openings. From these openings, there are 22 full intersections and 5 median openings for U-turn movements.

For the Austell Road segment in this project, there are 34 intersections total. 22 intersections have full median openings. There are seven (7) intersections on the northbound and six (6) intersections on the southbound that do not have median openings. See Figures 5-6, 5-7 and 5-8.

Intersections and Access Points

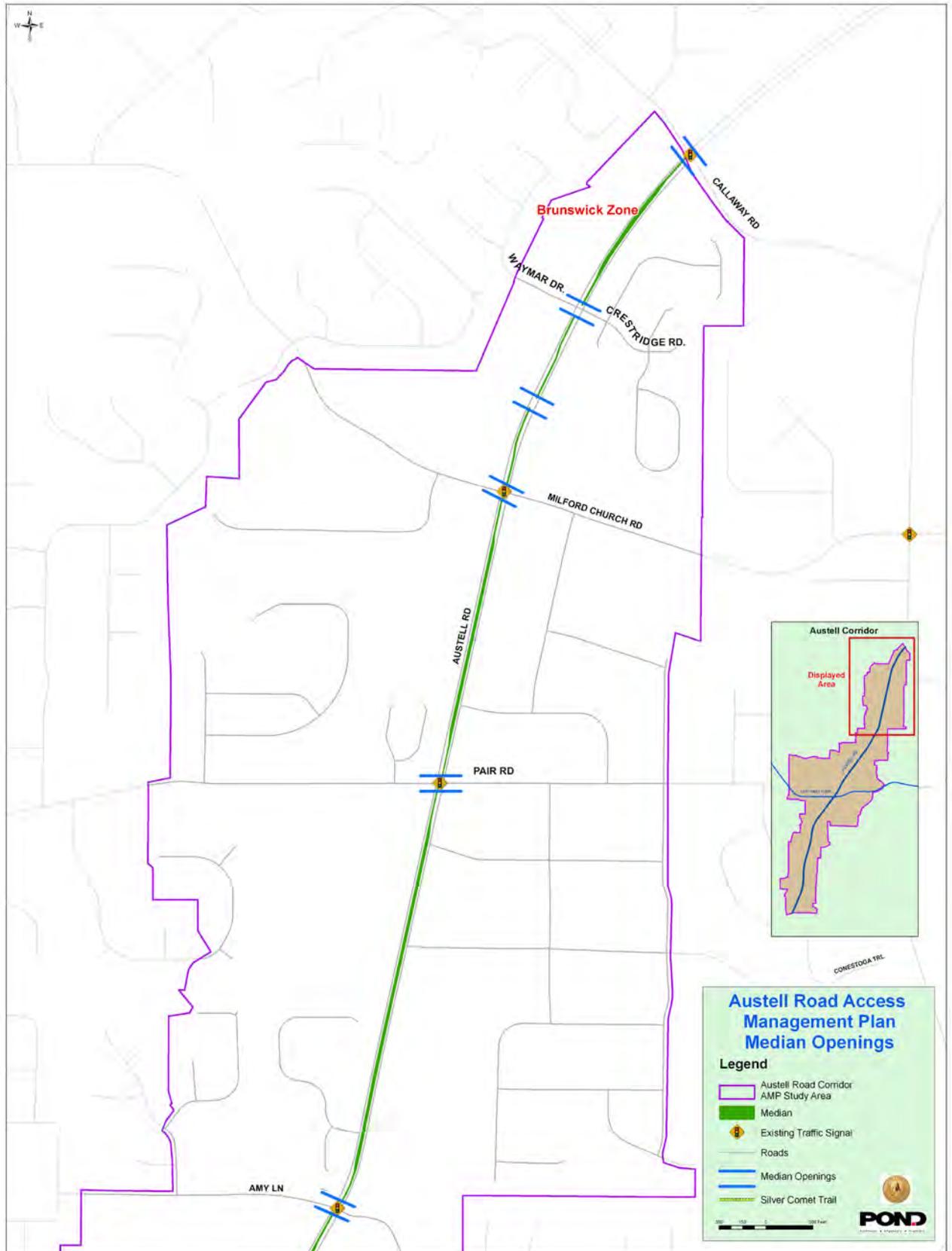


FIGURE 5-6 Median Openings, North Section

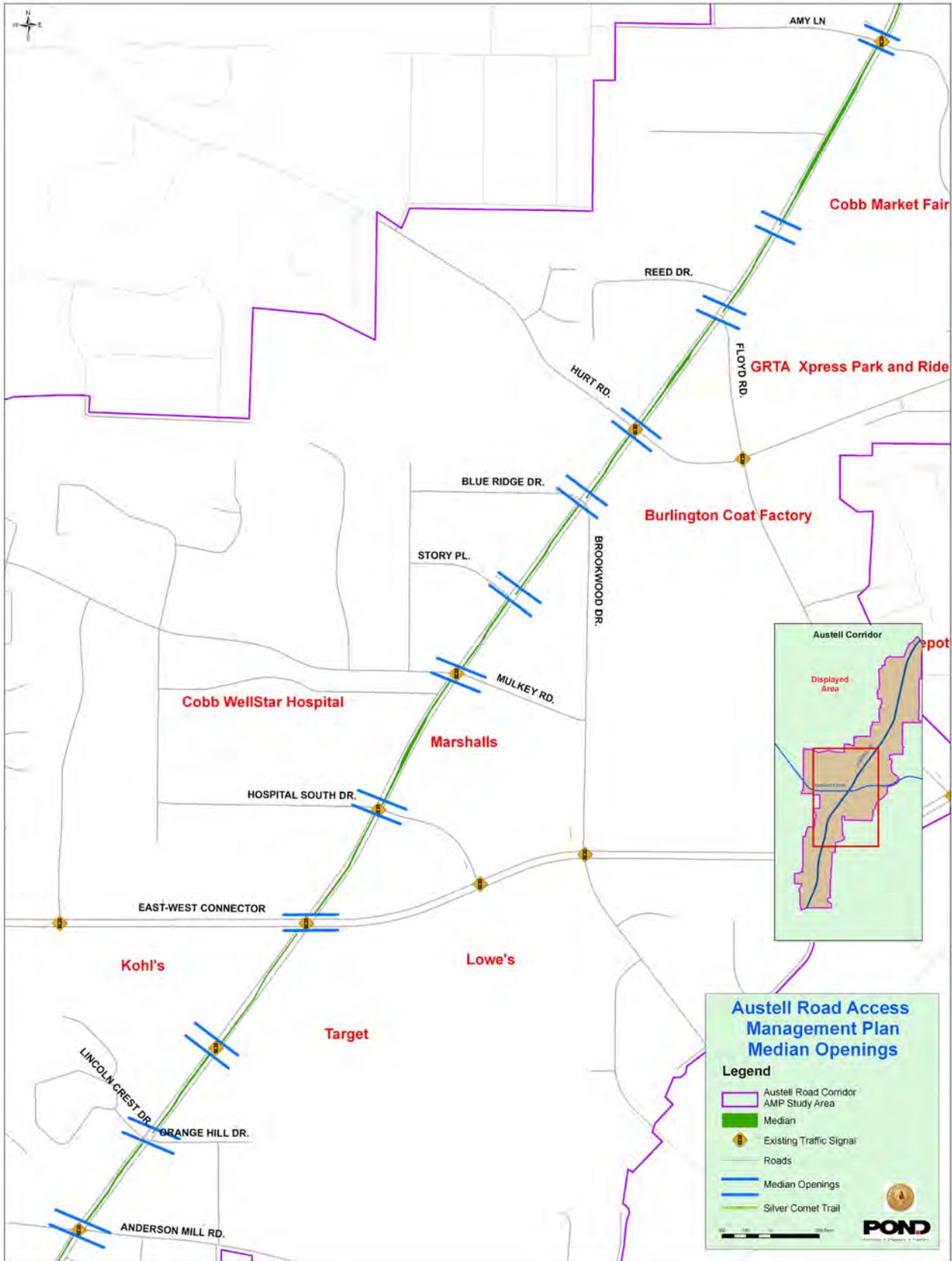


FIGURE 5-7 Median Openings, Central Section

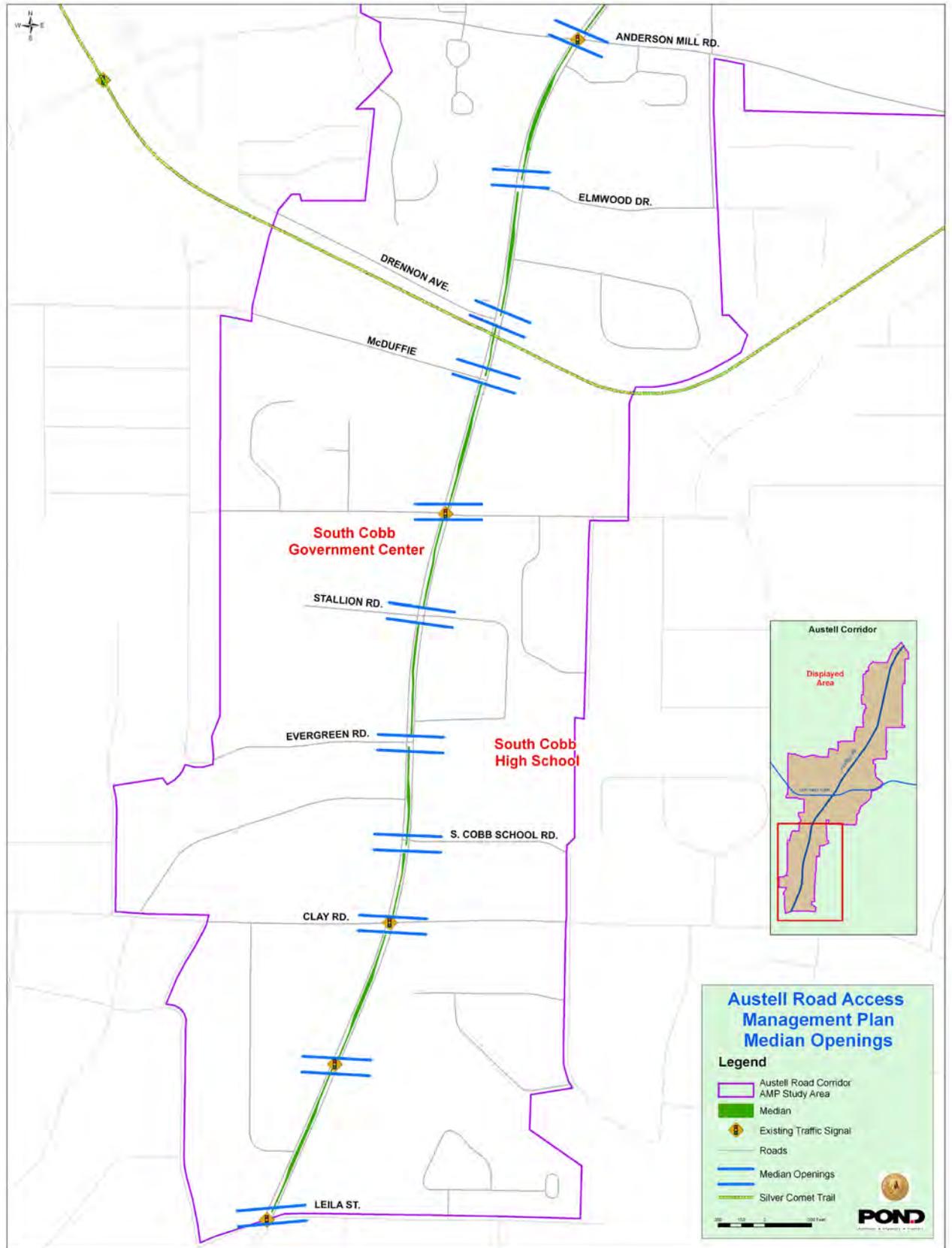


FIGURE 5-8 Median Openings, South Section

Sidewalk Inventory

A sidewalk inventory was conducted as a part of the field review of the study area. As previously described, the Austell Road Corridor LCI study provided basic information regarding sidewalks in the study area. Cobb County provided existing sidewalk data in a GIS shapefile that allowed the location of existing sidewalks to be mapped. The data on this map was field verified to determine if any revisions needed to be made. The sidewalk inventory focused on Austell Road as well as a number of other major roadways in the study area, including the following:

- Clay Road
- Seayes Road
- Anderson Mill Road
- East-West Connector
- Lipson Road
- Brookwood Road
- Floyd Road
- Mulkey Road
- Hurt Road
- Amy Lane
- Pair Road
- Milford Church Road
- Callaway Road

The GIS sidewalk data provided was generally accurate within the study area. Sidewalks exist on both sides of Austell Road north of the East-West Connector, although some sidewalks on the northern portion of this segment are narrow or in disrepair. Austell Road south of the East-West Connector has gaps in the sidewalk infrastructure where sidewalks are only located on one side of the roadway. The East-West Connector has sidewalks along a significant amount of the roadway, but much of the sidewalk infrastructure is where new development is located.

Some new sidewalks are present in the study area but were not included in the GIS sidewalk data. These were typically located at new developments. Figure 5-3 and Figure 5-4 show existing sidewalks in the study area. These maps include sidewalks that were already a part of the GIS data as well as those that were identified during the sidewalk inventory. Table 5-8 provides a detailed inventory of sidewalks by roadway segment in the study area.

TABLE 5-8 Study Area Sidewalk Inventory

Street Name	Segment		Side of Roadway	Existing Sidewalk?
	From	To		
Austell Road	South of Study Area Boundary	Clay Road	West	No
Austell Road	South of Study Area Boundary	Clay Road	East	Yes
Austell Road	Clay Road	Seayes Road	West	Yes
Austell Road	Clay Road	Seayes Road	East	Yes
Austell Road	Seayes Road	East-West Connector	West	Yes
Austell Road	Seayes Road	410 feet north of Seayes Road	East	No
Austell Road	410 feet north of Seayes Road	540 feet north of Seayes Road	East	Yes
Austell Road	540 feet north of Seayes Road	90 feet south of Anderson Mill Road	East	No
Austell Road	90 feet south of Anderson Mill Road	East-West Connector	East	Yes
Austell Road	East-West Connector	North of Study Area Boundary	West	Yes
Austell Road	East-West Connector	North of Study Area Boundary	East	Yes
Clay Road	West of Study Area Boundary	Austell Road	South	No
Clay Road	West of Study Area Boundary	Austell Road	North	Yes
Clay Road	Austell Road	160 feet west of Huntcrest Drive	South	No
Clay Road	160 feet west of Huntcrest Drive	70 feet east of Huntcrest Drive	South	Yes
Clay Road	70 feet east of Huntcrest Drive	East of Study Area Boundary	South	No
Clay Road	Austell Road	East of Study Area Boundary	North	Yes
Seayes Road	West of Study Area Boundary	Austell Road	South	No
Seayes Road	West of Study Area Boundary	185 feet west of Austell Road	North	No
Seayes Road	185 feet west of Austell Road	Austell Road	North	Yes
Seayes Road	Austell Road	East of Study Area Boundary	South	No
Seayes Road	Austell Road	East of Study Area Boundary	North	No
Anderson Mill Road	West of Study Area Boundary	230 feet west of Koussa Road	South	No
Anderson Mill Road	230 feet east of Koussa Road	210 feet west of Austell Road	South	No
Anderson Mill Road	West of Study Area Boundary	200 feet west of Koussa Road	North	No
Anderson Mill Road	200 feet west of Koussa Road	15 feet east of Koussa Road	North	Yes
Anderson Mill Road	15 feet east of Koussa Road	Austell Road	North	No
Anderson Mill Road	Austell Road	Chelou Drive	South	Yes
Anderson Mill Road	Chelou Drive	120 feet west of Silver Ridge Drive	South	No
Anderson Mill Road	120 feet west of Silver Ridge Drive	120 feet east of Silver Ridge Drive	South	Yes
Anderson Mill Road	120 feet east of Silver Ridge Drive	East of Study Area Boundary	South	No

Street Name	Segment		Side of Roadway	Existing Sidewalk?
	From	To		
Anderson Mill Road	Austell Road	385 feet east of White Way Drive	North	No
Anderson Mill Road	385 feet east of White Way Drive	East of Study Area Boundary	North	Yes
East-West Connector	West of Study Area Boundary	65 feet west of Mesa Valley Way	South	No
East-West Connector	65 feet west of Mesa Valley Way	Mesa Valley Way	South	Yes
East-West Connector	Mesa Valley Way	485 feet east of Mesa Valley Way	South	No
East-West Connector	485 feet east of Mesa Valley Way	30 feet east of Davis-Struempf Funeral Home Driveway	South	Yes
East-West Connector	30 feet east of Davis-Struempf Funeral Home Driveway	155 feet west of Kohl's Shopping Center Driveway	South	No
East-West Connector	155 feet west of Kohl's Shopping Center Driveway	Austell Road	South	Yes
East-West Connector	West of Study Area Boundary	750 feet west of Lipson Drive	North	No
East-West Connector	750 feet west of Lipson Drive	Austell Road	North	Yes
East-West Connector	Austell Road	Brookwood Drive	South	Yes
East-West Connector	Brookwood Drive	90 feet west of Floyd Road	South	No
East-West Connector	90 feet west of Floyd Road	East of Study Area Boundary	South	Yes
East-West Connector	Austell Road	Krystal Driveway	South	Yes
East-West Connector	Krystal Driveway	100 feet west of Marshalls/Staples Driveway	South	No
East-West Connector	100 feet west of Marshalls/Staples Driveway	East of Study Area Boundary	South	Yes
Lipson Drive	East-West Connector	Mulkey Road	West	No
Lipson Drive	East-West Connector	Mulkey Road	East	Yes
Brookwood Drive	South of Study Area Boundary	250 feet south of Austell Road	West	Yes
Brookwood Drive	250 feet south of Austell Road	Austell Road	West	No
Brookwood Drive	South of Study Area Boundary	East-West Connector	East	No
Brookwood Drive	East-West Connector	290 feet north of Heritage Hills Shopping Center driveway	East	Yes
Brookwood Drive	290 feet north of Heritage Hills Shopping Center driveway	Austell Road	East	No
Floyd Road	South of Study Area Boundary	350 feet north of East-West Connector	West	Yes
Floyd Road	350 feet north of East-West Connector	Austell Road	West	No
Floyd Road	South of Study Area Boundary	230 feet south of Hurt Road	East	Yes

Street Name	Segment		Side of Roadway	Existing Sidewalk?
	From	To		
Floyd Road	230 feet south of Hurt Road	Hurt Road	East	No
Floyd Road	Hurt Road	Austell Road	East	Yes
Mulkey Road	West of Study Area Boundary	Austell Road	South	No
Mulkey Road	West of Study Area Boundary	Mulkey Circle	North	No
Mulkey Road	Mulkey Circle	Austell Road	North	Yes
Mulkey Road	Austell Road	Brookwood Drive	South	Yes
Mulkey Road	Austell Road	315 feet east of Austell Road	North	No
Mulkey Road	315 feet east of Austell Road	Brookwood Drive	North	Yes
Hurt Road	West of Study Area Boundary	715 feet west of Austell Road	South	No
Hurt Road	715 feet west of Austell Road	190 feet west of Austell Road	South	Yes
Hurt Road	190 feet west of Austell Road	Austell Road	South	No
Hurt Road	West of Study Area Boundary	115 feet west of Heritage Ridge Lane	North	No
Hurt Road	115 feet west of Heritage Ridge Lane	165 feet east of Heritage Ridge Lane	North	Yes
Hurt Road	165 feet east of Heritage Ridge Lane	Austell Road	North	No
Hurt Road	Austell Road	500 feet east of Floyd Road	South	No
Hurt Road	500 feet east of Floyd Road	Winesap Drive	South	Yes
Hurt Road	Winesap Drive	East of Study Area Boundary	South	No
Hurt Road	Austell Road	East of Study Area Boundary	North	Yes
Amy Lane	West of Study Area Boundary	Austell Road	South	No
Amy Lane	West of Study Area Boundary	Austell Road	North	No
Pair Road	West of Study Area Boundary	Austell Road	South	No
Pair Road	West of Study Area Boundary	Austell Road	North	Yes
Pair Road	Austell Road	190 feet east of Austell Road	South	Yes
Pair Road	190 feet east of Austell Road	East of Study Area Boundary	South	No
Pair Road	Austell Road	230 feet east of Austell Road	North	No
Pair Road	230 feet east of Austell Road	East of Study Area Boundary	North	Yes
Milford Church Road	West of Study Area Boundary	250 feet west of Milford Forest Drive	South	Yes
Milford Church Road	250 feet west of Milford Forest Drive	Austell Road	South	No
Milford Church Road	West of Study Area Boundary	65 feet west of Austell Road	North	Yes
Milford Church Road	65 feet west of Austell Road	Austell Road	North	No
Milford Church Road	Austell Road	East of Study Area Boundary	South	No
Milford Church Road	Austell Road	1035 feet east of Austell Road	North	Yes
Milford Church Road	1035 feet east of Austell Road	East of Study Area Boundary	North	No
Callaway Road	West of Study Area Boundary	Austell Road	South	No
Callaway Road	West of Study Area Boundary	Austell Road	North	Yes
Callaway Road	Austell Road	East of Study Area Boundary	South	No
Callaway Road	Austell Road	East of Study Area Boundary	North	No

Slope Analysis

The slope in the study area was analyzed to see if there are any concerns related to the access management strategies. Slope is used to describe the steepness, incline, or gradient of a straight line. A higher slope value means the terrain is steeper while a lower slope value means the terrain is flatter. The slope in a road can be defined by the percentage of the slope. Usually a terrain will not have complications for entryways and interparcel access if the slope is less than 11% for commercial uses and 15% for residential uses. As you can see in Figure 5-9, the study area has in its majority a slope of 10% or less. There are some areas with higher values of slope. One of these areas is the Silver Comet Trail. However this slope makes sense since the trail crosses underneath Austell Road. The other areas are spread out along the corridor and do not have a large impact on the terrain of the corridor.

Good access management practice also involves providing access to land development, while preserving traffic flow along Austell Road and other, surrounding roadways. Poor spacing, design, and location of driveways lowers average travel speed, and improvements in access management can increase roadway capacity. Research has also shown that access management helps reduce the rate and severity of traffic accidents. Good definition and spacing of driveways also improves pedestrian and bicycle safety by reducing the potential for conflicts with turning vehicles.

From a land development perspective, appropriate land development access management requirements help discourage poor redevelopment and site design. The quality of site access along Austell Road is important to the success of any redevelopment effort. The Urban Land Institute Shopping Center Development Handbook warns that poorly designed entrances and exits not only present a traffic hazard, but also cause congestion that can create a poor image of a retail shopping center. Reducing the number and frequency of driveways also improves the appearance of major corridors. More land is freed for landscaping and the visual dominance of paved areas is reduced. Access management requires coordination of land use and transportation objectives.

Nationally recognized standards show that “an increase from 10 to 20 driveways per mile increases crash rates by roughly 30%. However, the specific relationship varies with differences in road geometry, operating speeds, and driveway and intersection traffic volumes”. The Austell Road corridor of about four (4) miles has several access points, as shown in Table 5-9.

Driveway Number and Spacing

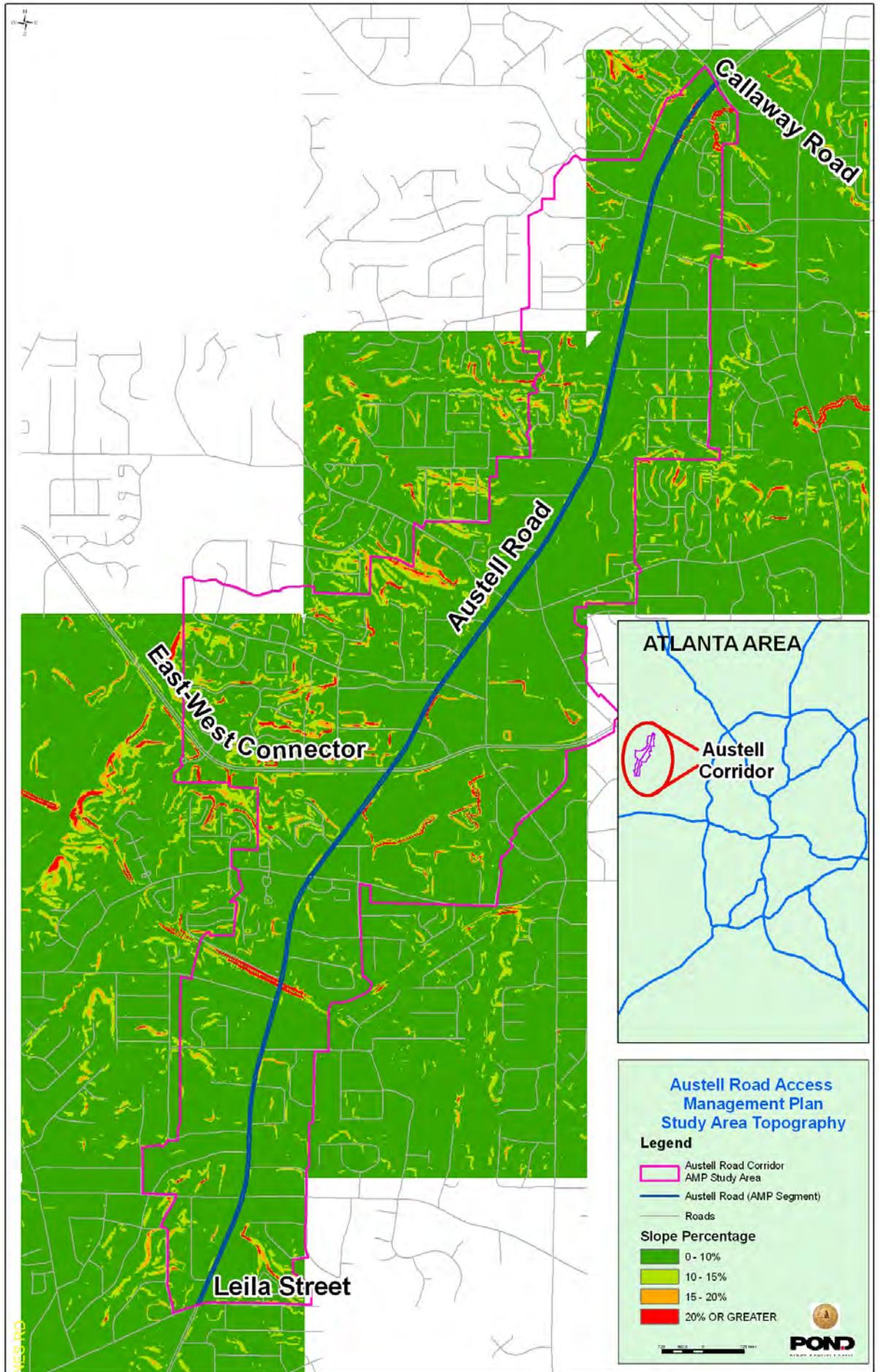


FIGURE 5-9 Topography of Study Area

TABLE 5-9 Corridor Access Points

Type of Access	Number of Access Points	Direction
Signalized intersection	14	Northbound and Southbound
Unsignalized intersection	4	Northbound and Southbound
T-intersection with Median break	2	Northbound
T-intersection with Median break	4	Southbound
T-intersection without Median break	7	Northbound
T-intersection without Median break	6	Southbound
U-Turn only	3	Northbound and Southbound
Driveways	78	Southbound
Driveways	87	Northbound

Additionally, the standard from the TRB manual states that the spacing on a minor arterial such as Austell road should be 330 ft. As shown in Table 5-10, the average spacing on some sections of the corridor do not comply with the standards. The sections are divided in north and south bounds. See Figures 5-10, 5-11 and 5-12 for locations of road sections with above-standards driveway spacing.

TABLE 5-10 Average Spacing Along Sections of the Corridor

Start Point	End Point	Approx. Length (ft.)	Number of Driveways Northbound	Average Driveway Distance (ft.) Northbound	Number of Driveways Southbound	Average Driveway Distance (ft.) Southbound
Milford Church Rd	Byers Dr	1,393	12	116.08	3	464.33
Byers Dr	Pair Rd	521	3	173.67	0	
Amelia Dr	Lanier Dr	674	2	337.00	5	134.80
Lanier Dr	Amy Ln	1,757	6	292.83	1	1757.00
Mimosa Dr	Reed Dr	1,125	4	281.25	2	562.50
Floyd Rd	Hurt Rd	882	6	147.00	7	126.00
Hurt Rd	Blue Ridge Dr	556	3	185.33	5	111.20
Blue Ridge Dr	Story Pl	738	4	184.50	7	105.43
Story Pl	Mulkey Rd	581	2	290.50	3	193.67
Anderson Mill Rd	Elmwood Dr	1,028	5	205.60	4	257.00
Elmwood Dr	Fairview Dr	478	5	95.60	3	159.33
Fairview Dr	Drennon Av	405	4	101.25	1	405.00
McDufie Rd	Seayes Rd	896	3	298.67	4	224.00
Stallion Pkwy	Evergreen Dr	825	3	275.00	4	206.25
South Cobb School Rd	Clay Rd	512	2	256.00	3	170.67
Clay Rd	Doby Ln	1,600	9	177.78	13	123.08
Doby Ln	Leila St	480	2	240.00	2	240.00

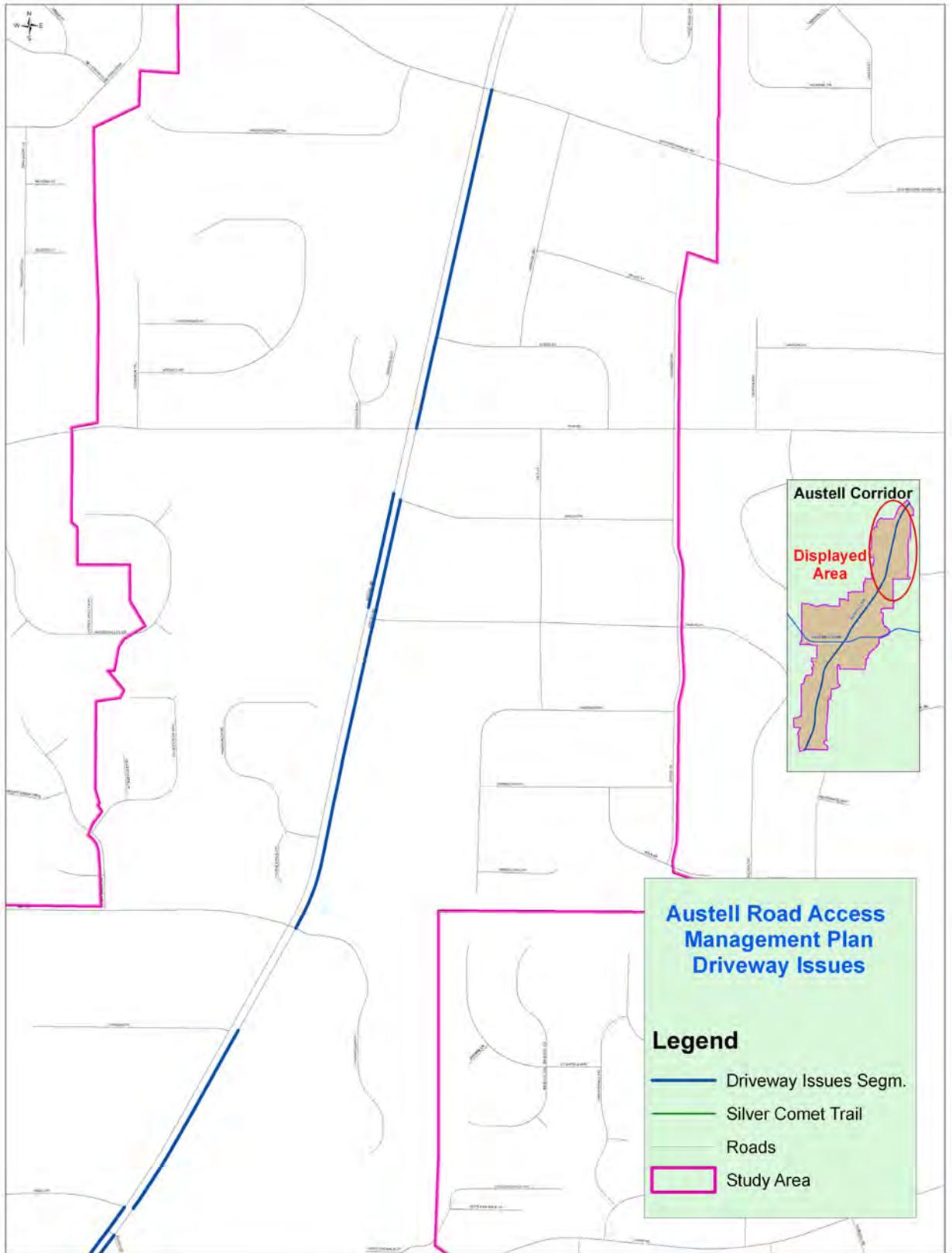


FIGURE 5-10 Driveway Spacing, North Section

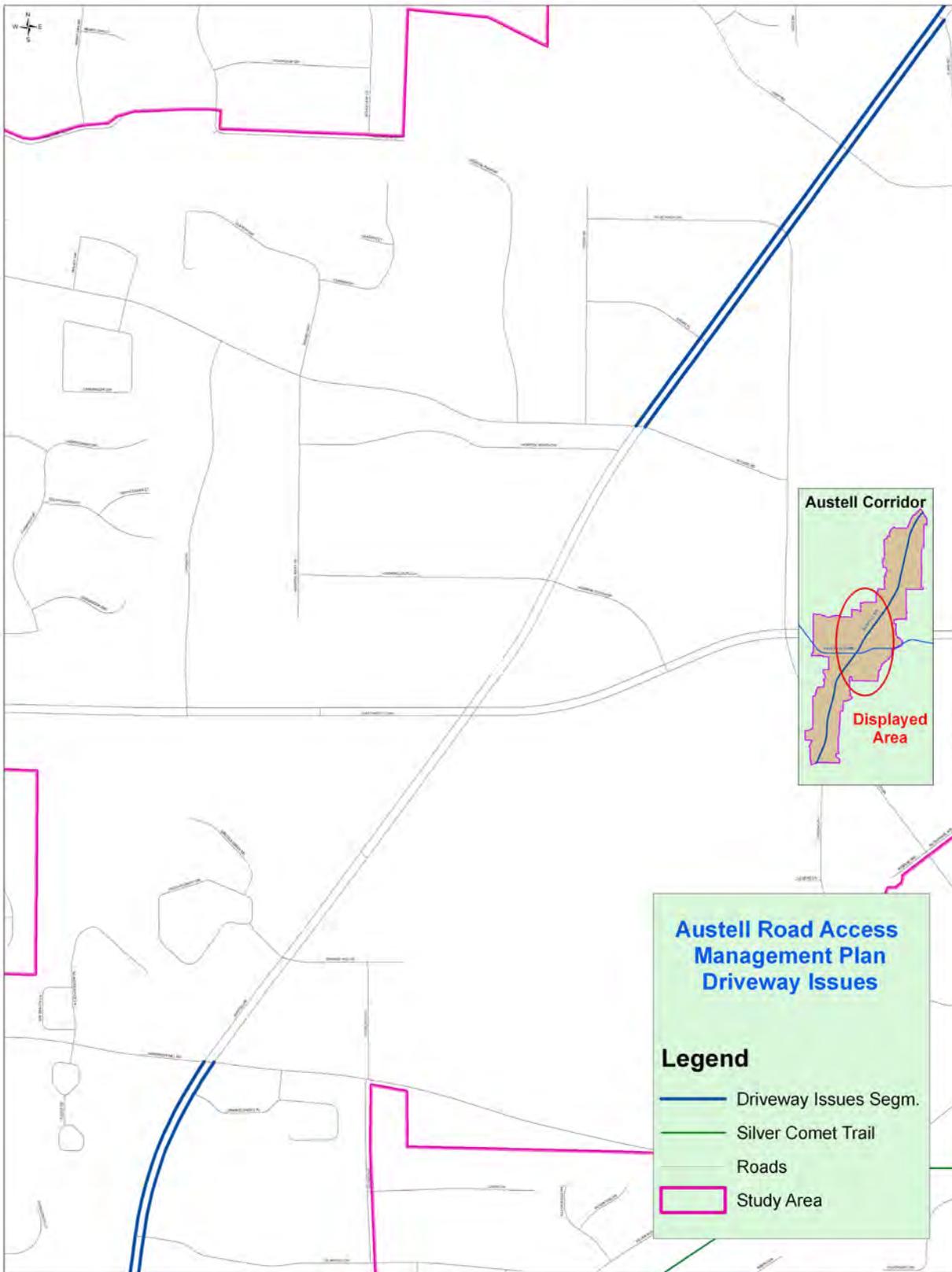


FIGURE 5-11 Driveway Spacing, Central Section

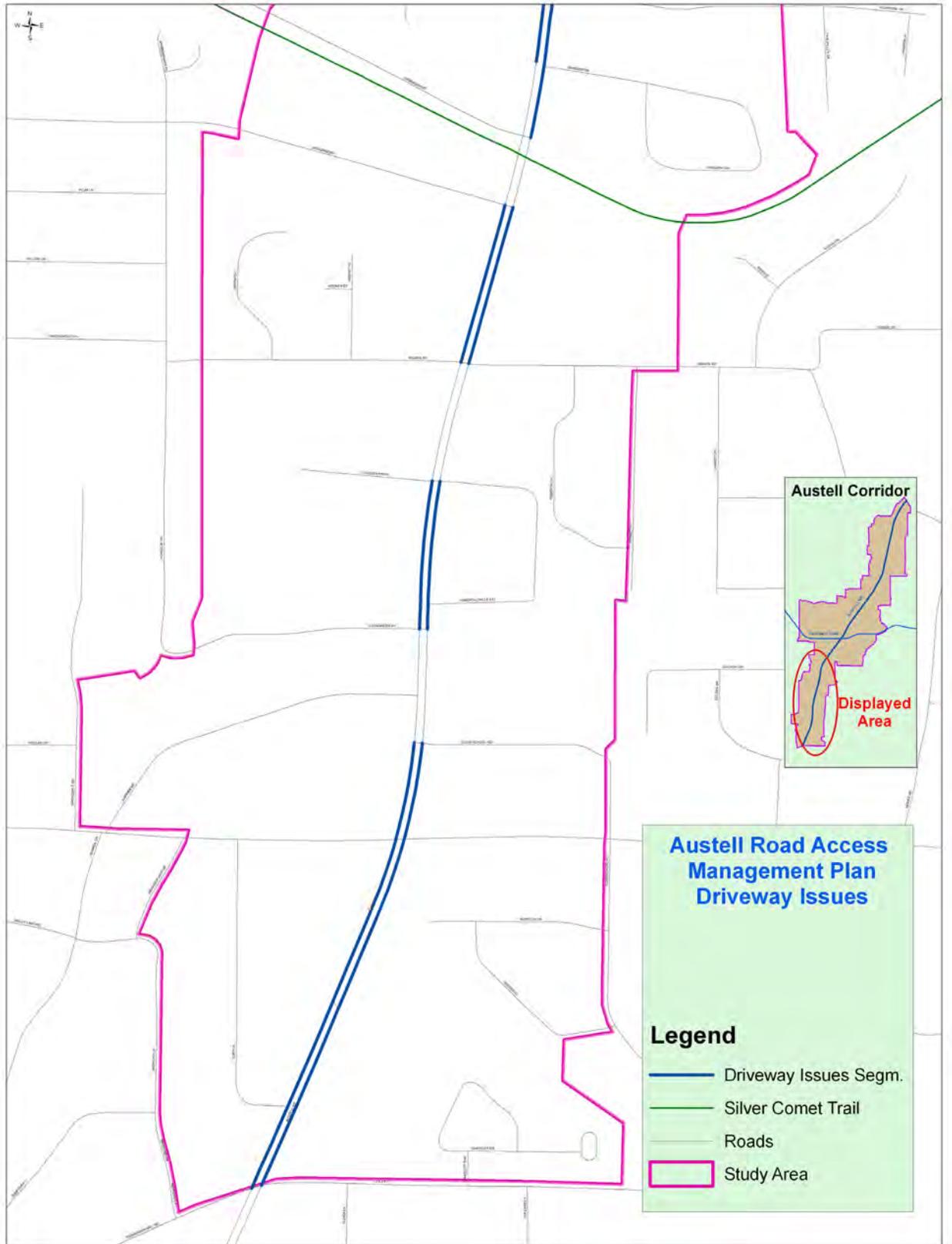


FIGURE 5-12 Driveway Spacing, South Section

Some photo examples of good and bad access management were taken along the corridor.



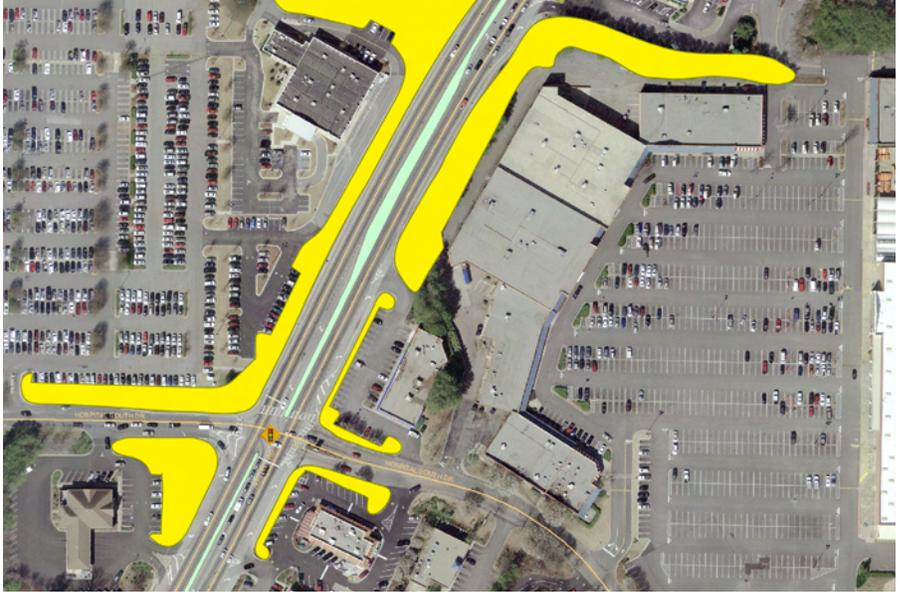
A segment of Austell Road where driveways are very close together



Example of bad access management

The following is an example of good access management along the Austell Road corridor. In this area, few access points on the road exist, which makes traffic smoother and safer, and there are less conflicts between vehicles and pedestrians.

Example of good access management



Land Use

The Cobb County Community Development Department maintains a set of review standards to assess development projects. Some of the elements include adherence to design guidelines, master plan and comprehensive plan. The Cobb County Department of Transportation traditionally reviews projects submitted and provides comments regarding certain access management regulations. Specifically, Section 402 of the Development Standards Amendments adopted December 9, 2008, contains several standards regarding interparcel access, driveway location driveway spacing driveway standards. All driveways are to be designed and constructed with sidewalk transitions as appropriate and must comply with minimum Cobb County intersection/corner sight distance requirements. Furthermore, when property frontage is less than 200 feet, one (1) driveway shall be allowed for approval. Additional entrances/exits for property having street frontage in excess of 200 feet may be considered by Cobb DOT upon a showing that interparcel access, as encouraged in section 402.03 of these standards is not feasible. Applicants must also demonstrate that such additional entrances/exits are needed and would not increase traffic congestion or otherwise reduce the safety and convenience of the traveling public.

Finally, interparcel access easements between adjacent, non residential properties that access county thoroughfares shall be encouraged. Controlling access and establishing interparcel access easements is desirable for providing safe and efficient movement of traffic, both vehicular and pedestrian, as well as encouraging efficient development plans that enable occupants and clients to fulfill their daily activities through minimal use of vehicles, and through increased use of alternative transportation modes such as public transit, walking and bicycling.

6 Access Management Process

Developing the Plan

The purpose of the planning study is to evaluate access characteristics and to propose access changes that improve the safety and operation of Austell Road. Such changes involve median design, auxiliary lanes, site access, land use refinements, additional sidewalks, improved pedestrian conditions, and enhancements to the supporting roadway network. Access management plans are typically implemented through a combination of regulations, interagency or public-private agreements, and roadway improvement projects.

The planning effort in this study includes the following steps:

- Corridor management analysis
- Developing the access management plan
- Evaluating alternatives
- Plan adoption and implementation.

Developing the access management plan included an assessment of the existing conditions of the road, public input through survey and public meetings, and information from different interviewees from ARC, Cobb DOT and stakeholders. The consultant team examined an array of access management alternatives based on an assessment of the corridor. The alternatives were evaluated subsequently to determine potential impacts. The alternatives identify existing and future access locations, type of access modification, and desirable changes to roadway design along the corridor. The process culminated in a set of preferred strategies with an emphasis on the central core of the study area. This is the subarea where the consultant team was able to gather detailed information to make highly specific recommendations.

An example list of questions explored to help the analysis is as follows:

- What problems need to be resolved?
- What methods of access management can be used to resolve those problems?
- Are auxiliary lanes needed in certain locations?
- Are there problems with traffic signal location and traffic progression?
- Does an existing median need to be improved or should a non-

traversable median be incorporated into the roadway design?

- Is there a supporting street network?
- Are there opportunities for joint access or interparcel circulation?
- How can the supporting street and circulation system be modified or developed to improve corridor safety and operations?

This section of the report will present the analysis, possible alternatives, and recommended solution per each of the following topics:

- Crash Analysis
- Median Plan

A field review was conducted to observe the types of safety issues that exist in the study area. Some of the most noticeable were problems related to left-turning traffic, particularly at unsignalized intersections. The following photo shows the intersection of Austell Road & Blue Ridge Drive/Brookwood Drive. The white SUV is making a left-turn from Blue Ridge Drive onto Austell Road northbound. However, the northbound through traffic forced the SUV to stop, blocking one of the southbound through lanes and the southbound left-turn lane. This creates a significant safety problem with the potential for a crash between a southbound vehicle traveling at full speed and the stopped SUV.

Corridor Management Analysis - Crash Analysis



Austell Road &
Blue Ridge Drive /
Brookwood Drive

The Cobb County DOT provided three (3) years of crash data from February 2006 to January 2009. A summary of this data by crash type is shown in Table 6-1.

Crash Type	Number of Crashes
Rear End	720
Right Angle	153
Sideswipe	149
Left Turn	117
Fixed Object	51
Other	37
Head On	2
Total Crashes	1229

As this table shows, more than half the crashes within the corridor during this 3-year time period were considered rear end crashes. These crashes may be related to traffic congestion and take place when a vehicle is stopped for a traffic signal or other delay and the vehicle behind it doesn't stop. However, turning traffic movements can also be a cause of rear end crashes as turning vehicles also slow or stop on Austell Road and create conflicts for moving traffic.

The existence of a median on Austell Road reduces the number of head on crashes and left-turn crashes that otherwise might take place along the corridor. However, median openings at both signalized and unsignalized intersections allow conflicts where left-turn crashes may take place.

To compare the number of crashes along Austell Road to other roadways, the crash rate per million vehicles miles (MVM) traveled was determined. This rate is based in part on the Average Annual Daily Traffic (AADT) volumes along a roadway. The AADT volumes along Austell Road were obtained from GDOT. These volumes were broken down into four (4) segments within the study area. Additional data, including the number of crashes within each segment and the length of each segment, were also used to determine the crash rate per MVM traveled. This data is summarized in Table 6-2.

TABLE 6-2 Crash Rate per MVM Traveled

Austell Road Segment Start Point	End Point	AADT	Number of Crashes	Approximate Length (FT)	Crash Rate by Million Vehicle Miles (MVM)
Leila St	South of Clay Rd	31,860	36	2076	2.62
Clay Rd	Anderson Mill Rd	34,820	319	5885	7.51
Orange Hill Dr	South of Floyd Rd	41,760	522	6224	9.68
Floyd Rd	Callaway Rd	36,700	352	9224	5.01

The GDOT classifies Austell Road as an urban minor arterial roadway. According to the Federal Highway Administration (FHWA), an urban minor arterial interconnects with and augments the urban principal arterial system and provide service to trips of moderate length at a somewhat lower level of travel mobility than principal arterials. The crash rate in the State of Georgia for all urban minor arterials is 5.13 Crashes/MVM. As Table 6-2 shows, compared to the State of Georgia crash rate, the segment from Floyd Road to Callaway Road has about the same crash rate, the segment from Clay Road to Anderson Mill Road has a higher crash rate, and the segment from Orange Hill Road to south of Floyd Road has a significantly higher crash rate. The crash rate for the segment from Leila Street to south of Clay Road may be skewed lower than it should be due to the fact that this is a relatively small segment without any large intersections. While crash rates are not particularly problematic on this segment, the reality is that they may be higher than the rate shown here.

The crash rate for all roadways in Cobb County is 4.12 Crashes/MVM. However, this crash rate involves a large number of collectors and local roadways which typically have lower crash rates than arterials. Therefore, the State of Georgia crash rate for urban minor arterials is a better standard for comparing to Austell Road.

The maps on the following pages, Figure 6-1, Figure 6-2, and Figure 6-3, show the locations of crashes and crash types throughout the study area. It should be noted that crash locations are identified by the nearest intersection to the crash. However, this does not mean the crash necessarily took place at the intersection itself. The crash could take place at the intersection or it could also take place before or after the intersection. The cause of the crash could be intersection related or could be related to driveways, median breaks, or simply driver error. However, the maps do provide a good general idea of the segments of Austell Road that have significant amounts of crashes.

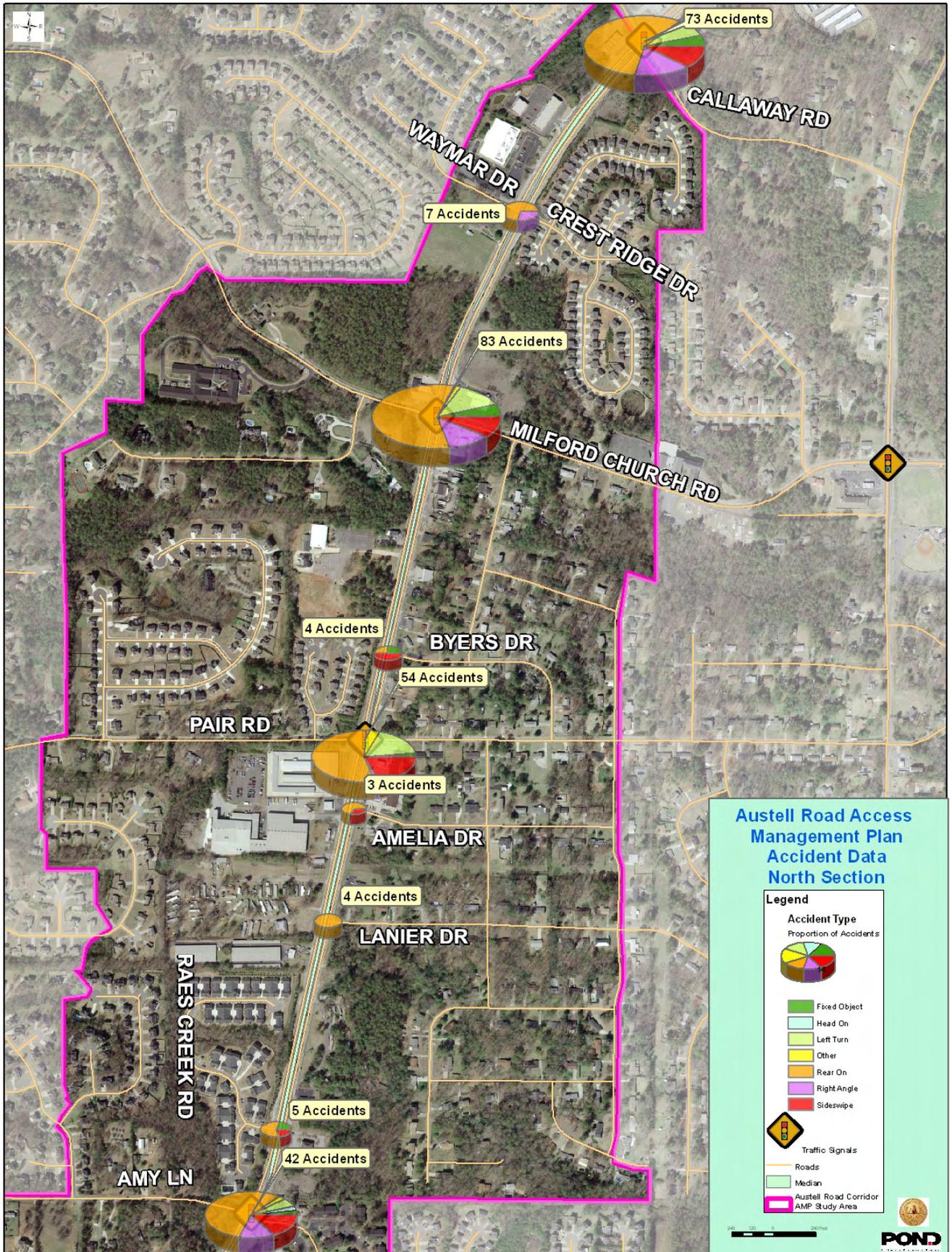


FIGURE 6-1 Accident Data, North Section

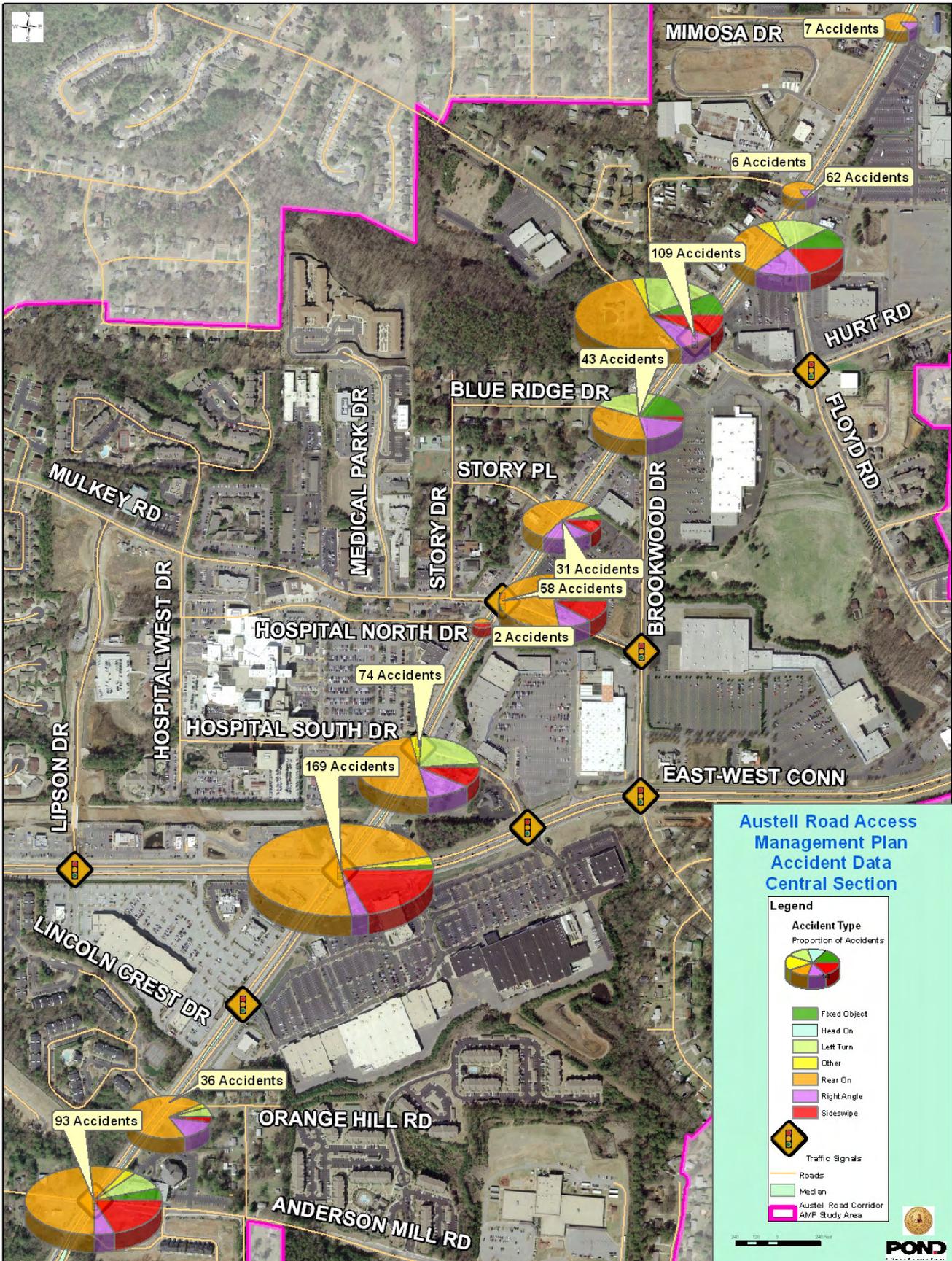


FIGURE 6-2 Accident Data, Central Section

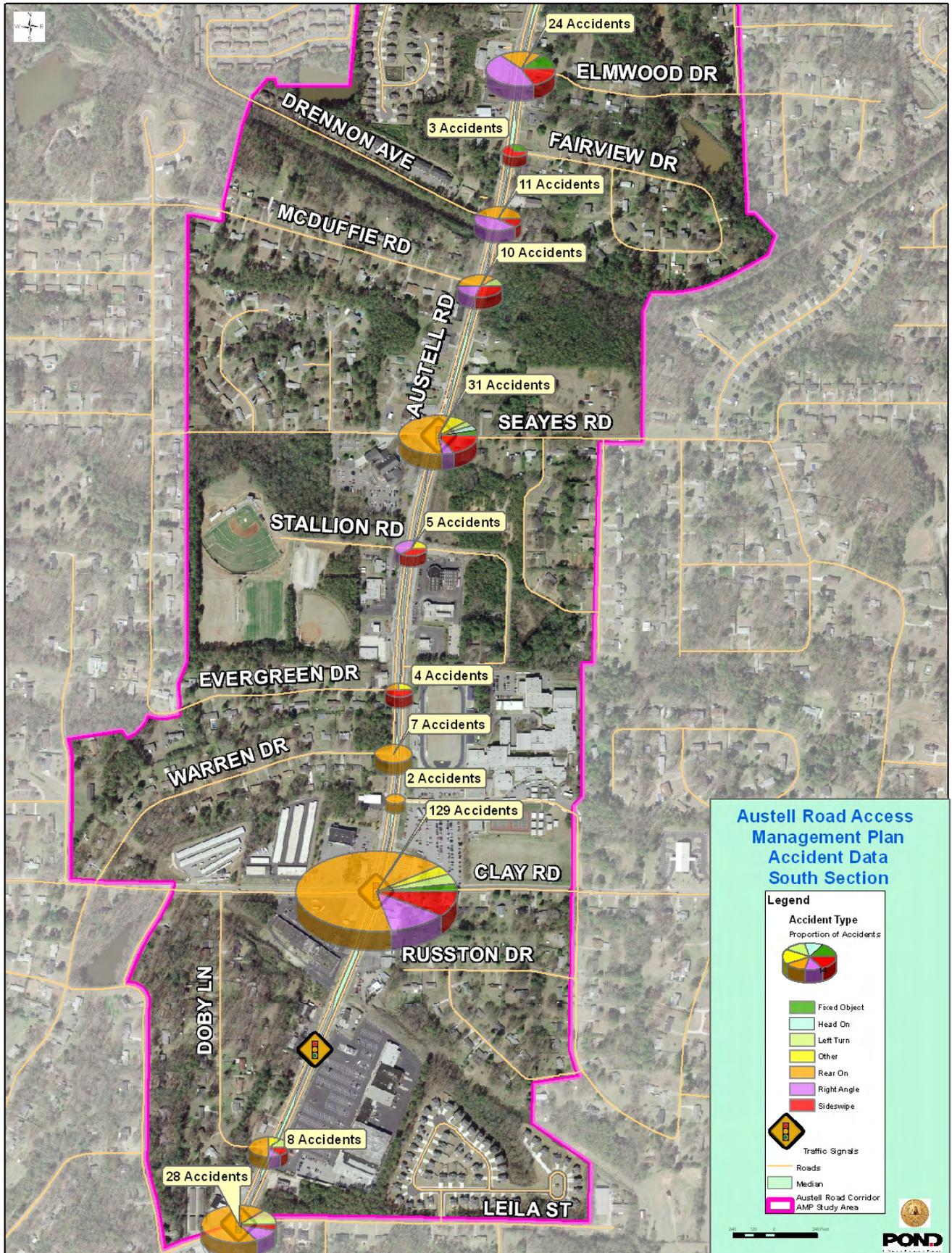


FIGURE 6-3 Accident Data, South Section

As the figures show, the largest numbers of crashes take place at or near the intersections with the most traffic congestion. The central section of the corridor, primarily from Anderson Mill Road to Amy Lane, experienced the highest number of crashes for the time period analyzed. Land use in this area consists primarily of commercial uses along Austell Road with residential uses further off the roadway. Land use in the north and south sections consists primarily of residential development with small amounts of commercial development. Some roadway segments within the central section have large amounts of driveways with short distances between them. All of these factors contribute to increasing the number of crashes in the central section of the corridor.

Median Break Plan

A total of twelve (12) unsignalized median openings exist along the corridor in the study area. These unsignalized median openings are located within the corridor as shown in Table 6-3.

Austell Road Segment		Segment Length (miles)	Number of Unsignalized Median Openings
From	To		
Leila Street	East-West Connector	1.95	7
East-West Connector	Amy Lane	1.23	4
Amy Lane	Callaway Road	1.37	2

Only two (2) unsignalized median openings are located in the northern section of the corridor from Amy Lane to Callaway Road. Due to the already low number of existing unsignalized median openings in this section of the corridor, no changes are recommended to the median openings. The central section of the corridor (East-West Connector to Amy Lane) and the southern section of the corridor (Leila Street to East-West Connector) have more median openings and have median openings located closer together than the northern section.

As discussed in the crash analysis earlier in this section, the central segment of the corridor has more crashes than the northern or southern sections of the corridor. The AADT volumes for this segment of the corridor are higher than the other segments, as shown in Table 6-2. Adjacent land uses in the central section of the corridor are primarily commercial, which tend to generate more traffic than residential land uses. Therefore, the unsignalized median openings in the central section of the corridor were identified as needing further analysis with a traffic study.

There are no unsignalized median openings in the central section of the corridor between Anderson Mill Road and Mulkey Road. Additionally, due in part to some recent development in this area, driveway spacing does not cause significant problems in this segment of the corridor. While traffic congestion along this segment of the roadway is problematic, it is caused largely by the high volumes of traffic using all four (4) legs of the intersection of Austell Road and East-West Connector. As identified in Section 5, the Existing Conditions section of this report, there is already an operational improvement project planned for this intersection.

Since there are no unsignalized median openings between Anderson Mill Road and Mulkey Road and the intersection of Austell Road and East West Connector already has improvements planned, the traffic study did not focus on this area. Instead, the traffic study focused on the segment of Austell Road from Mulkey Road to Amy Lane. This segment includes four (4) unsignalized median openings:

- Story Place
- Blue Ridge Drive/Brookwood Drive
- Floyd Road
- Cobb Market Fair Driveway

A hierarchy of options for addressing operations at each unsignalized median opening was created. The highest item in the hierarchy has the most positive impact on the flow of through traffic and safety. However, this item also has the most reduction in access. The next items have less of a positive impact on the flow of through traffic but provide greater access. The last item has no impact on the intersection. This hierarchy includes the following:

- Close the median opening
- Partially close/channelize the median opening
- Signalize the intersection (if signal warrant is met)
- Leave the intersection unchanged

Each of these hierarchy options has positive and negative consequences. Closing a median opening has a positive impact on through traffic on Austell Road as all left-turn and U-turn movements are eliminated from the intersection. However, this change significantly reduces access to adjacent land uses. Residents and business owners may be opposed to such changes as closing a median opening increases the distance they must travel to access their property. Additionally, all left-turn and U-turn traffic will be forced to take an alternative route. Closing a median opening therefore changes traffic patterns near the intersections and may have a negative impact on operations at nearby intersections.

For example, if left-turn traffic volumes are too high then fully closing a median opening may not be feasible. At these intersections, partially closing and channelizing the median opening was analyzed. Partially closing and channelizing a median opening prevents some left-turn movements at an intersection while allowing others to continue. Figure 6-4 is a segment of the design plans for the planned Cobb DOT project at the intersections of Floyd Road and Hurt Road. The Floyd Road intersection is currently a full, unsignalized intersection. This project will partially close the intersection so that the southbound left-turn movement from Austell Road to Floyd Road is the only left-turn movement allowed at the intersection. Additionally, the median will channelize this opening so that no U-turn movements can be made. This design prevents any left-turn movement and through movements from the cross street and all of the conflicts associated with these movements. The remaining left-turn movement from Austell Road onto the cross street has fewer conflict points than the left-turn movement from the cross street onto Austell Road.

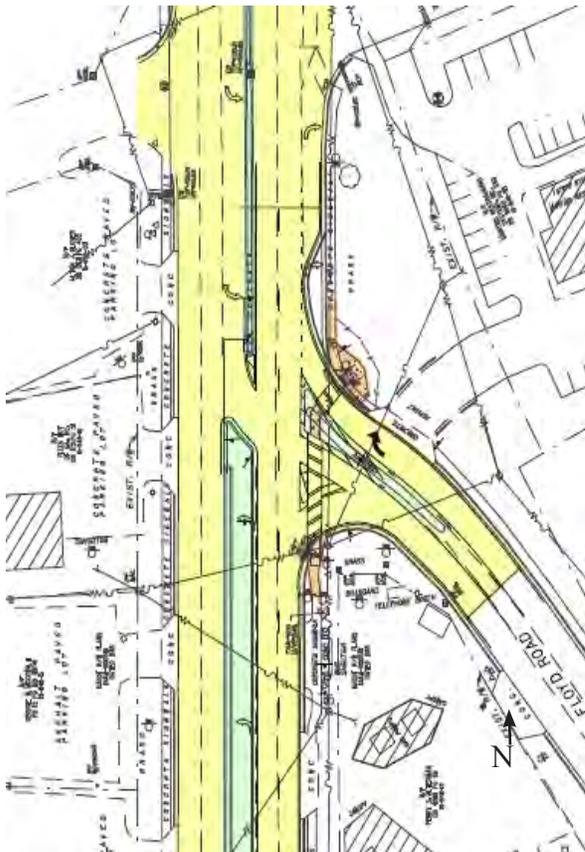


FIGURE 6-4 Design Plan, Intersection at Floyd Road

See Appendix C for a complete design of Austell Road at Floyd Road and Hurt Road.

The design plans for Floyd Road allow left-turns only from the mainline roadway (Austell Road) from one direction. However, the same basic design can be applied to allow left-turns from the mainline roadway in both directions while preventing any left-turn or through movements from the cross-street. An example of this design is shown below in Figure 6-5. A key element of this design is the raised median section located between the two left-turn lanes. This raised median section acts as a barrier to the left-turn and through-movement traffic from the cross street/driveways.

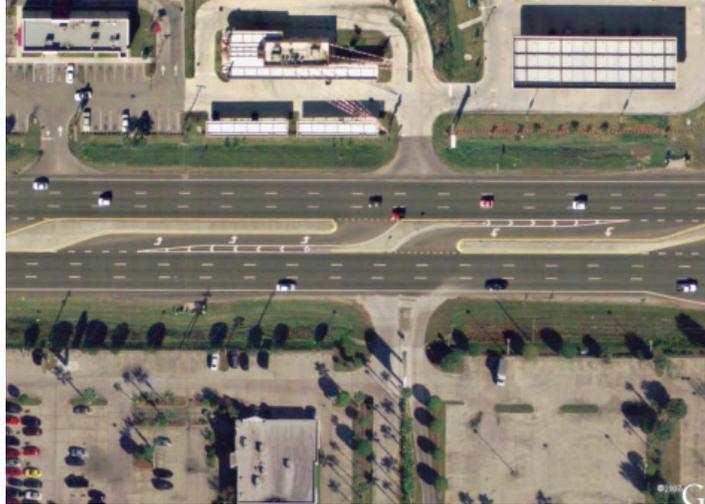


FIGURE 6-5 Channelized Median Example

Signalizing the intersection was the next option considered if turning movement traffic volumes were too high at an intersection for it to be closed or partially closed and channelized. Signal warrants must be met for any intersection to be signalized. When an intersection is signalized, access for all movements continues to be allowed. Access to adjacent land uses is actually improved as left-turn movements to and from the adjacent property becomes safer on high volume roadways with the introduction of a traffic signal. This improved access increases the viability of adjacent property. Introducing a new traffic signal on a roadway results in increased delay for traffic on the roadway. All traffic, including through traffic, may be delayed by the traffic signal.

No change was recommended for an intersection if closing a median opening was deemed infeasible due to high traffic volumes and if the intersection did not meet the warrants for a new intersection. At a location such as this, any other recommended changes would have a negative impact on traffic operations at the intersection and/or at adjacent intersections.

AM and PM peak hour turning movement counts were conducted at seven (7) intersections within the study area. These include the following intersections:

- Mulkey Road – Signalized
- Story Place – Unsignalized
- Blue Ridge Drive/Brookwood Drive – Unsignalized
- Hurt Road – Signalized
- Floyd Road – Unsignalized
- Cobb Market Fair Driveway – Unsignalized
- Amy Lane – Signalized

The existing traffic count volumes are shown in Figure 6-6. The traffic count data was used to conduct a peak hour traffic analysis using Trafficware Synchro software. Appendix D is a technical memo which provides detailed data on this traffic analysis. The raw count data, the results of the existing peak hour analysis, and an analysis of adjacent land uses and other nearby roadway connections were used to develop a preliminary set of recommendations at the four unsignalized intersections under analysis. These preliminary recommendations include the following:

- Story Place: Close existing full median opening
- Brookwood Drive/Blue Ridge Drive: Partially close/channelize the median opening
- Floyd Road: No changes recommended beyond previously planned Cobb DOT project
- Cobb Marketfair Shopping Center/Park Trail Townhome Development:
 - ♦ Short term – No changes
 - ♦ Long term – Signalize intersection (if warrants are met)

Closing the median opening at Story Place, as shown in Figure 6-7, is recommended to improve safety and traffic flow at this location along Austell Road. In the project list in Section 7, this intersection project is included as Project I1. This closure is possible due to the low left-turn and U-turn volumes that currently exist at this intersection, shown in Figure 6-6. These volumes are in the single digits for most of the left-turn and U-turn movements at this intersection.

As shown in Figure 6-8, impacted traffic can make a left-turn or U-turn at the Mulkey Road intersection, located approximately 500 feet to the south, and at the Blue Ridge Drive/Brookwood Drive intersection, located approximately 700 feet to the north. On the west side of Austell Road, traffic impacted by this median closure can access Story Drive followed by Mulkey Road. Mulkey Road then connects to Austell Road at a traffic signal. On the east side of Austell Road, rear and side access to parcels along the roadway allow impacted traffic to connect to Mulkey Road and Brookwood Drive, both of which provide access to Austell Road. Closing this median opening also makes right-of-way (ROW) available that can be used for a wide, landscaped median. The landscaped

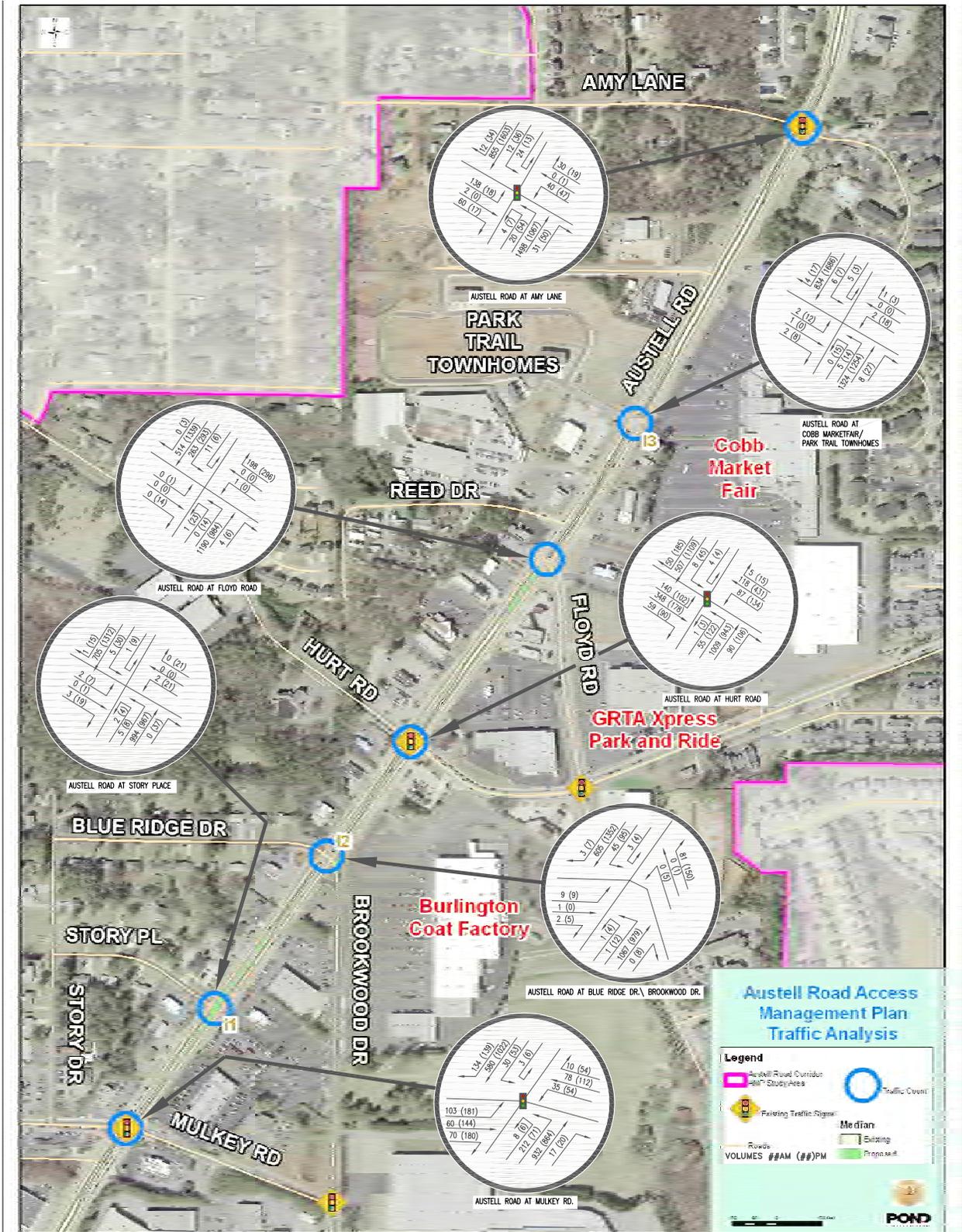


FIGURE 6-6 Existing Traffic Counts

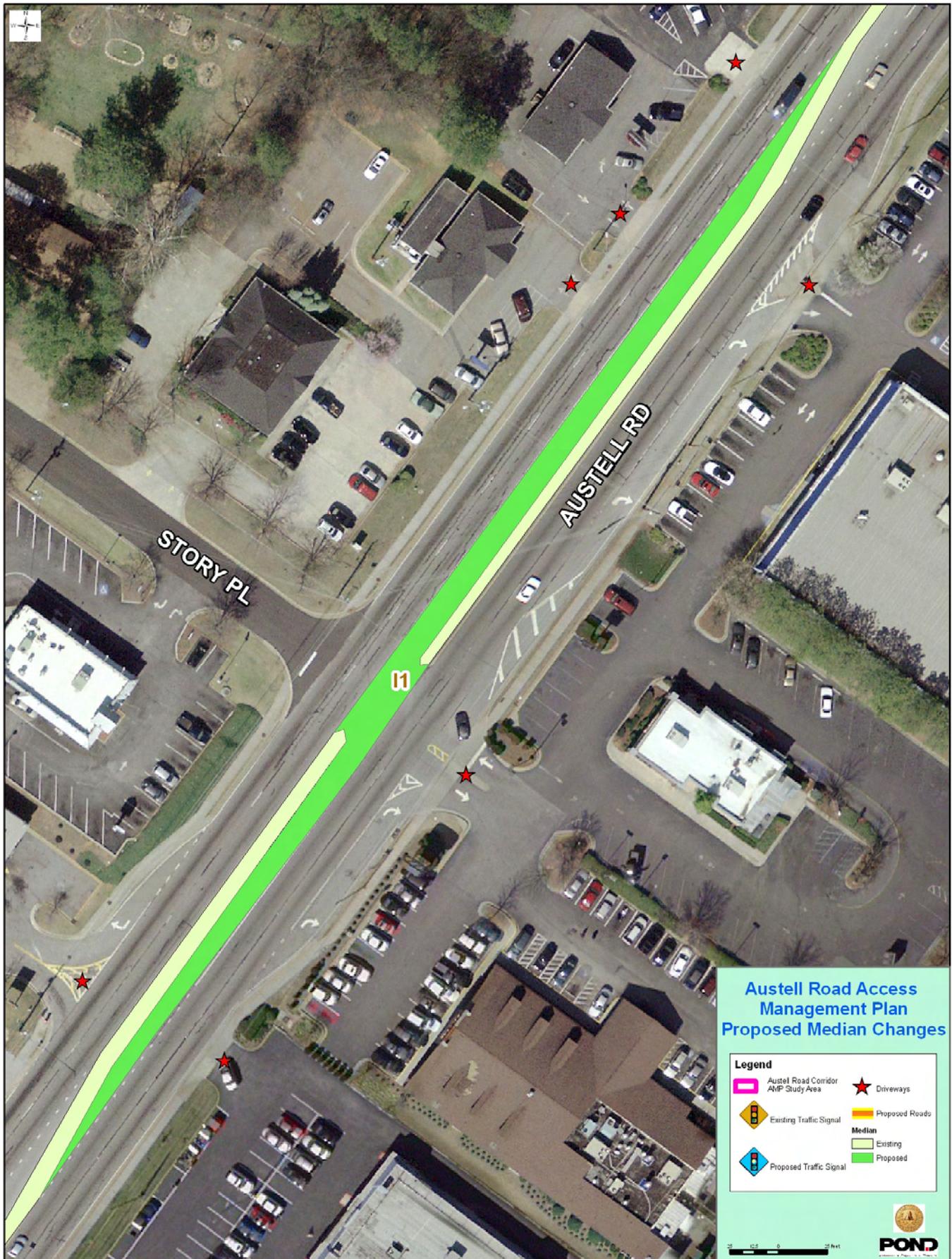


FIGURE 6-7 Proposed Median Changes - I1



FIGURE 6-8 Proposed Median Changes - I1 & I2 Connectivity

median will help to beautify the area, which in turn makes nearby land more viable for private investment.

A design similar to that shown in Figure 6-5 is proposed for the intersection with Blue Ridge Drive/Brookwood Drive. Figure 6-9 shows the proposed design of this partially closed/channelized median opening, which will prohibit all eastbound and westbound left-turn and through movements. Northbound and southbound left-turn movements will still be allowed.

As shown in Figure 6-6, left-turn and U-turn volumes at this intersection are low. The only left-turn or U-turn movement with significant traffic volumes is the southbound left-turn movement from Austell Road onto Brookwood Drive. Once on Brookwood Drive, traffic can access multiple retail parcels as well as the East-West Connector. Partially closing/channelizing this median opening will allow the southbound left-turn movement to continue and will make it safer due to the removal of other conflicts at this intersection.

As with the Story Place intersection, impacted traffic on the west side of Austell Road can access Story Drive and Mulkey Road to connect to Austell Road. On the east side of Austell Road, rear and side access to adjacent parcels allows impacted traffic to connect to Mulkey Road and Hurt Road, both of which accesses Austell Road. In addition, the signalized intersection at Hurt Road is approximately 500 feet to the north of the Blue Ridge Drive/Brookwood Drive intersection.

The Austell Road Access Management Plan has also identified the need for a backage road behind the existing commercial parcels on the west side of Austell Road between Blue Ridge Drive and Hurt Road. The backage road will improve access to this area, helping to alleviate any negative impacts to access that the partial median closure will cause. Additional details about this backage road are provided later in this report.

At the intersection of Austell Road & Floyd Road, no changes are recommended beyond the previously designed Cobb DOT SPLOST project. The layout of this project is shown in Figure 6-10. As previously described, this project will partially close the intersection so that the southbound left-turn movement from Austell Road to Floyd Road is the only left-turn movement allowed at the intersection. This movement has significantly higher traffic volumes than any other left-turn or U-turn movements at this intersection. Additionally, the median design will prevent any U-turns from being made and will prevent through movements on the eastbound and westbound approaches. Turning movement volumes are high enough that closing the median opening fully, rather than implementing a partial closing, would have a significant impact on traffic congestion at adjacent intersections. Closing the median opening fully would also impact nearby development.

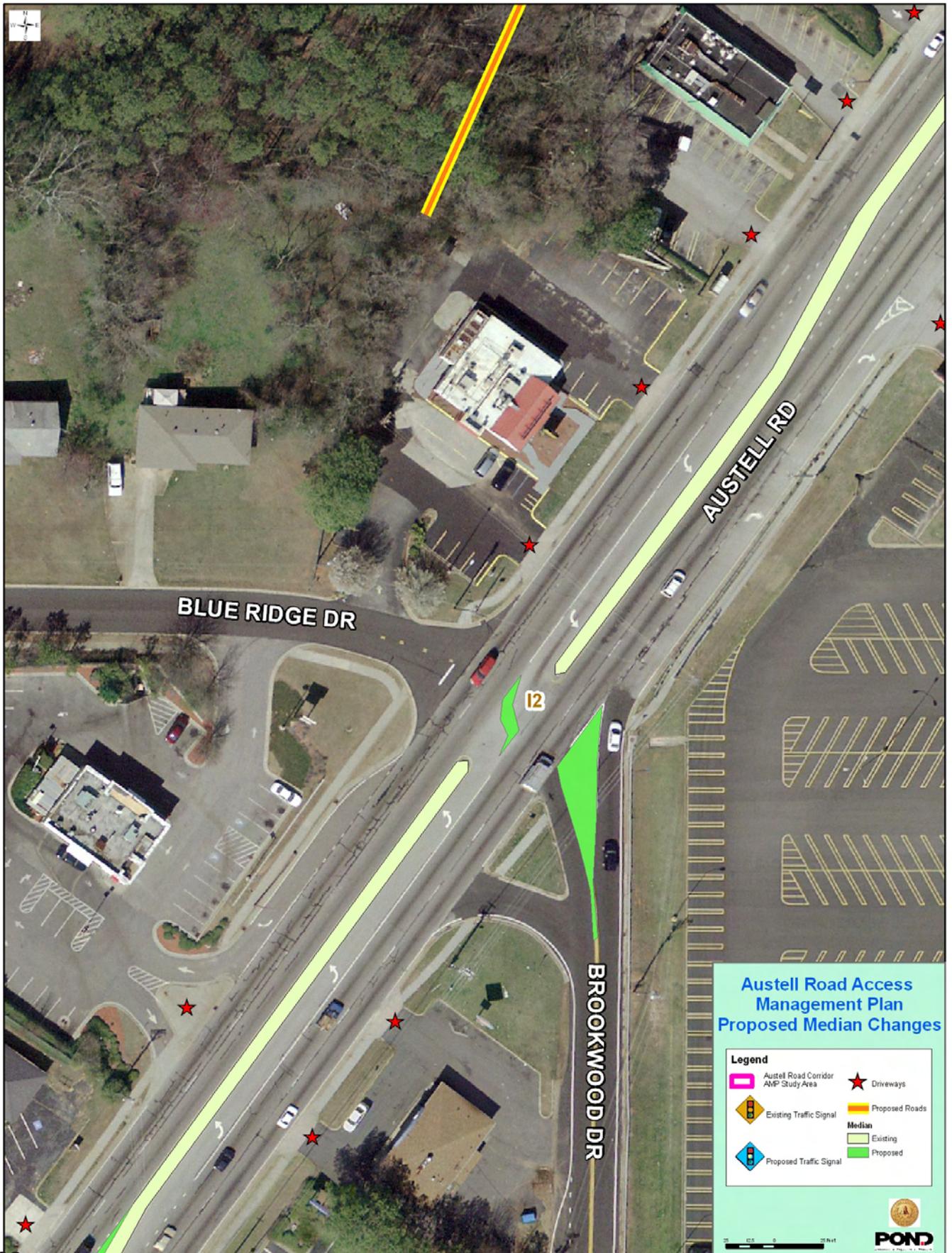


FIGURE 6-9 Proposed Median Changes - I2

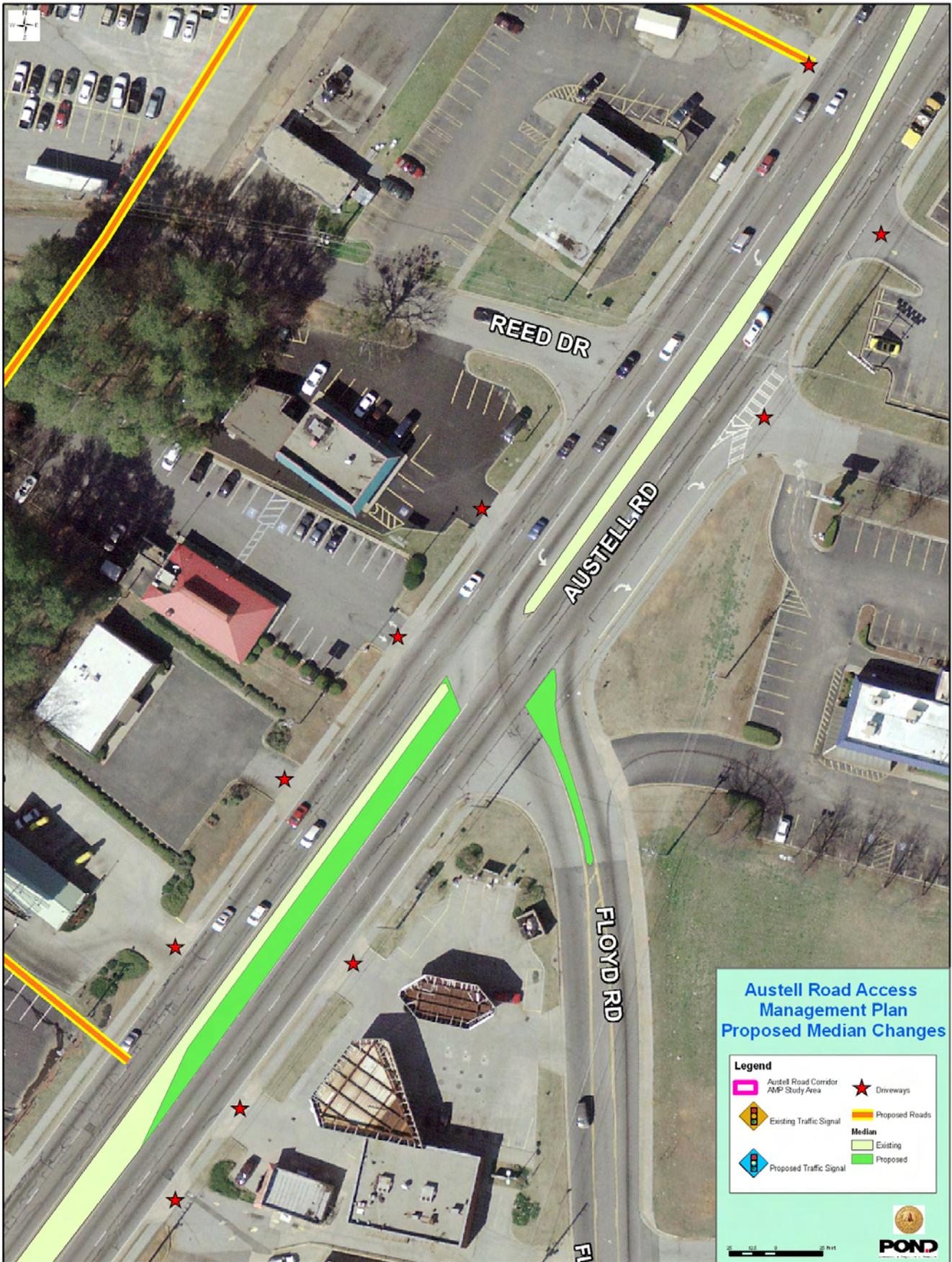


FIGURE 6-10 Proposed Median Changes - Floyd Road

Signalizing the intersection of Austell Road & Floyd Road is not feasible due to its proximity to adjacent intersections. The existing traffic signal at Hurt Road is approximately 775 feet south of Floyd Road. While this distance meets GDOT minimum signal distance requirements of 660 feet, it does not meet Cobb DOT's preference of 1000 feet between signalized intersections. Additionally, the proposed traffic signal at the intersection of Austell Road & the Cobb Marketfair Shopping Center/Park Trail Townhome development is approximately 600 feet to the north. This distance would not allow both of these intersections to be signalized. Therefore, no additional changes are recommended at the intersection of Austell Road & Floyd Road.

Figure 6-11 shows that on the east side of Austell Road, rear and side access to adjacent parcels allows impacted traffic to connect to Hurt Road, which accesses Austell Road at a traffic signal. Additionally, the Austell Road Access Management Plan has identified a backage Road connecting Hurt Road to Reed Drive and to the Park Trail townhome development. This roadway would provide additional access to the development on the west side of Austell Road. No changes are recommended at the Cobb Marketfair Shopping Center/Park Trail Townhome development. As Figure 6-6 shows, left-turn and U-turn volumes are low at this intersection. These low volumes would appear to make this location a candidate for closure or partial closure of the median opening. However, the nearest median opening to the north is the signalized intersection at Amy Lane, which is approximately 1,250 feet away. While Floyd Road is the nearest median opening to the south, this intersection will soon only allow southbound left-turns and no other left-turn or U-turn movements. The nearest full median opening to the south is at the signalized intersection at Hurt Road, which is approximately 1,450 feet away. The distance of these intersections from the Cobb Marketfair Shopping Center/Park Trail Townhome Development intersection may have a significant impact on traffic patterns if this median opening was closed.

While the left-turn and U-turn movements at the Cobb Marketfair Shopping Center/Park Trail Townhome development intersection are low, these volumes are expected to increase in the future. A significant portion of the Cobb Marketfair Shopping Center is currently empty. In addition, the site of a former Target store, now empty, is located immediately adjacent to the shopping center. The former Target store parking lot connects directly to the Cobb Marketfair Shopping Center parking lot. This empty retail space is not generating any traffic, which reduces the traffic volumes at the Cobb Marketfair Shopping Center/Park Trail Townhome development intersection. However, these two shopping centers were both identified in the Austell Road LCI study as catalyst sites for redevelopment. If these sites redevelop, or if they simply become leased out, then traffic at the Cobb Marketfair Shopping Center/Park Trail Townhome development intersection will increase.



FIGURE 6-11 Proposed Median Changes - Floyd Road & I-3 Connectivity

On the west side of Austell Road at this intersection is the Park Trail townhome development. Only a portion of this development has been completed and few, if any, of the units are currently occupied. This undeveloped land and uninhabited townhome units are not generating traffic. However, this development is planned to have a total of 86 residential units. Once this development is completed and the units are purchased, then traffic generation at this site will likely increase significantly. Due to the fact that traffic generation from both the Cobb Marketfair Shopping Center and the Park Trail townhome development is expected to increase in the future, a median closure or partial closure/channelization would not be appropriate at this intersection. However, the existing traffic volumes at this intersection are not high enough to justify a traffic signal. Therefore, no changes are recommended at this intersection in the short term.

When the Cobb Marketfair Shopping Center redevelops or gets leased out and when the Park Trail townhome development is completed and all of the units are sold, new traffic generation may be enough to warrant a traffic signal. Keeping the full median opening in place preserves access to these developments. The addition of a traffic signal, shown in Figure 6-12, improves access to these developments by making turns into and out of the developments easier and safer. As the retail sites have been identified as catalyst sites for redevelopment, improved site access will help make these sites more viable for potential redevelopment.

The nearest signalized intersections are Amy Lane, which is approximately 1,250 feet away, and Hurt Road, which is approximately 1,450 feet away. These distances meet GDOT and Cobb DOT requirements for traffic signal spacing. Since these requirements are met, a traffic signal is recommended when the adjacent land uses begin generating enough traffic to warrant a signal.

As previously mentioned, implementing changes to existing unsignalized intersections will impact adjacent intersections. Therefore, in addition to the existing conditions traffic analysis, three other traffic alternatives were analyzed for the AM and PM peak hours to determine how much impact implementing the recommendations above would have. These alternatives include the following:

- 2009 With Access Management Recommendations Implemented
- 2019 Without Access Management
- 2019 With Access Management Recommendations Implemented

All three (3) alternatives assume the completion of the Cobb DOT SPLOST project that has already been designed for the intersections of Austell Road & Hurt Road and Austell Road & Floyd Road. A portion of the design for this intersection is shown in Figure 6-4. The complete design plans are included in Appendix C of this report.

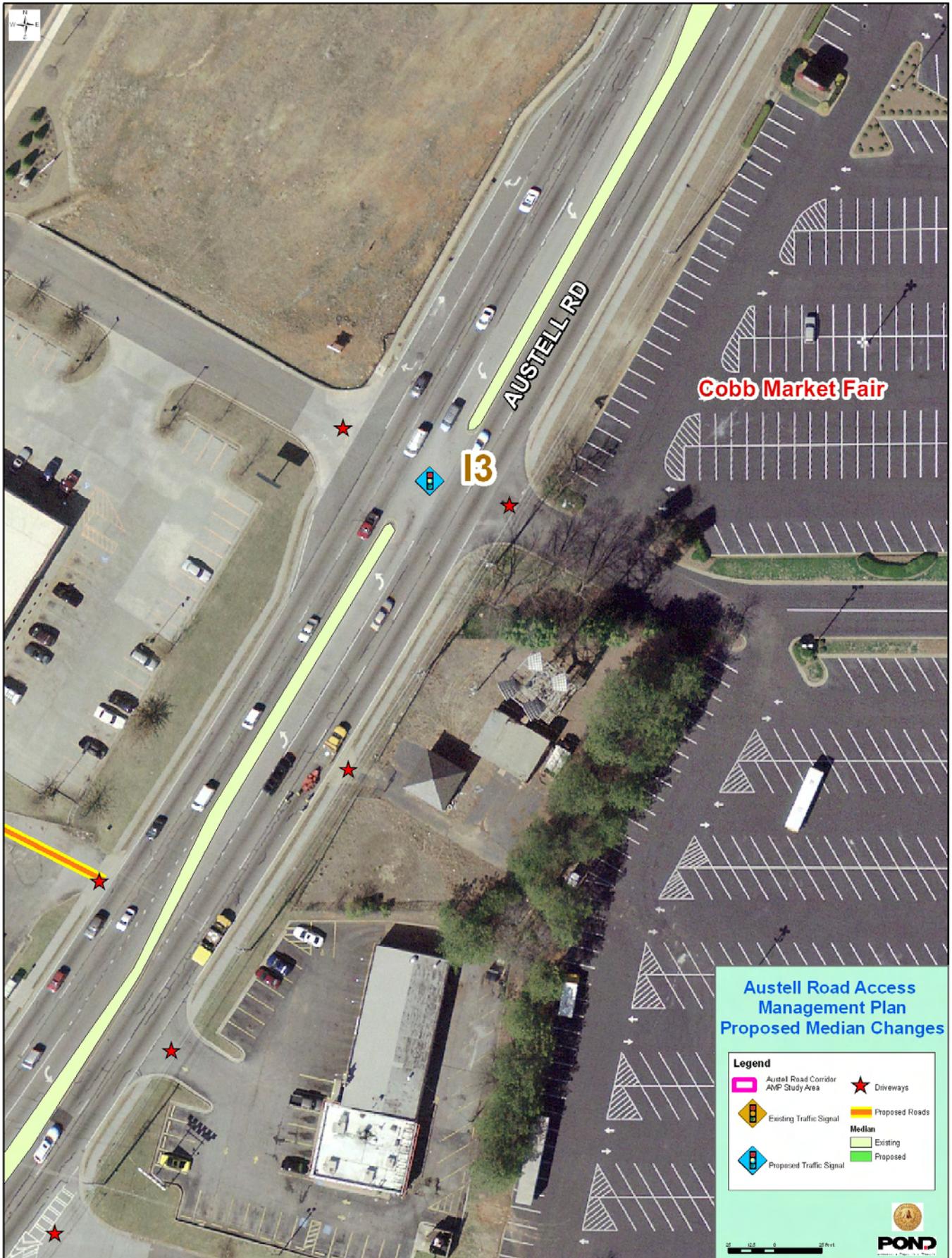


FIGURE 6-12 Proposed Median Changes - I3

The “2009 With Access Management Recommendations Implemented” alternative assumes that the preliminary access management recommendations listed above will be implemented, with the exception of the new traffic signal at the intersection of Austell Road & the Cobb Marketfair Shopping Center/Park Trail Townhome development. Traffic patterns were adjusted based on the impact that implementation of these recommendations are expected to have.

The 2019 alternatives assumed additional background traffic growth between 2009 and 2019. The assumption was made that the Cobb Marketfair shopping center would be fully leased by 2019 and the Park Trail townhome development would be complete. Therefore, separate trip generation was conducted to account for new traffic generated by the Cobb Marketfair shopping center and the Park Trail townhome development. The “2019 Without Access Management” alternative is an analysis using 2019 traffic volumes and existing traffic patterns without implementation of any of the preliminary recommendations. The “2019 With Access Management Recommendations Implemented” alternative uses 2019 traffic volumes and implements the preliminary recommendations listed above. The intersection of Austell Road & the Cobb Marketfair Shopping Center/Park Trail Townhome development was also signalized in this analysis.

The purpose of analyzing these alternatives was to identify any significant traffic congestion problems the preliminary recommendations may create. A summary of the results of this alternatives analysis is shown in Table 6-4. (A technical memo is included in the appendix of this report to provide additional detailed data regarding the methodology of the traffic analysis.) As Table 6-4 shows, the only intersection experiencing a failing LOS in the “2019 With Access Management Recommendations Implemented” alternative is Austell Road & Hurt Road. This intersection operates at LOS E during the PM peak hour with and without the implementation of the preliminary recommendations. The impact of these recommendations on this intersection is minor.

At the intersection of Austell Road & Floyd Road, the southbound left-turn movement operates at LOS F during the AM and PM peak hours in the 2019 analyses. No changes were recommended for this intersection beyond the previously planned Cobb DOT project. As discussed previously, turning movement volumes are high enough at this intersection that closing the median opening fully would have a significant impact on traffic congestion at adjacent intersections. However, signalizing the intersection is not feasible due to its proximity to adjacent intersections. Therefore, no additional changes are recommended at the intersection of Austell Road & Floyd Road.

TABLE 6-4 Traffic Analysis Results

INTERSECTION	2009 Without Access Management				2009 With Access Management				2019 Without Access Management				2019 With Access Management					
	AM PEAK	PM PEAK	AM PEAK	PM PEAK	AM PEAK	PM PEAK	AM PEAK	PM PEAK	AM PEAK	PM PEAK	AM PEAK	PM PEAK	AM PEAK	PM PEAK	AM PEAK	PM PEAK		
	LOS	v/c*	LOS	v/c*	LOS	v/c*	LOS	v/c*	LOS	v/c*	LOS	v/c*	LOS	v/c*	LOS	v/c*		
Austell Road & Amy Lane	C	0.67	A	0.58	B	0.67	A	0.58	C	1.18	B		C	1.18	B	0.85	C	0.83
Austell Road & Cobb Marketfair / Park Trail Townhomes																		1.03
Eastbound Approach	F	--	F	--	F	--	F	--	F	--	F	--	F	--	F	--	F	--
Westbound Approach	F	--	F	--	F	--	F	--	F	--	F	--	F	--	F	--	F	--
Northbound Left	A	--	C	--	A	--	C	--	B	--	D	--	B	--	D	--	B	--
Southbound Left	B	--	B	--	B	--	B	--	C	--	C	--	C	--	C	--	C	--
Austell Road & Floyd Road																		
Eastbound Approach	A	--	F	--		--		--		--		--		--		--		--
Westbound Approach	B	--	C	--	C	--	C	--	C	--	C	--	C	--	C	--	C	--
Northbound Left	B	--	B	--		--		--		--		--		--		--		--
Southbound Left	C	--	C	--	C	--	C	--	F	--	F	--	F	--	F	--	F	--
Austell Road & Hurt Road	D	0.66	D	0.75	C	0.62	D	0.78	D	0.84	E	1.03	D	0.84	E	0.84	D	1.31
Austell Road & Blue Ridge Drive / Brookwood Drive																		
Eastbound Approach	D	--	F	--	A	--	B	--	F	--	F	--	F	--	F	--	B	--
Westbound Left	B	--	F	--		--		--		--		--		--		--		--
Westbound Right	B	--	B	--	B	--	B	--	C	--	C	--	C	--	C	--	C	--
Northbound Left	A	--	B	--	A	--	B	--	A	--	D	--	A	--	D	--	A	--
Southbound Left	B	--	B	--	B	--	B	--	C	--	C	--	C	--	C	--	C	--
Austell Road & Story Place																		
Eastbound Approach	C	--	D	--	B	--	B	--	D	--	F	--	D	--	F	--	B	--
Westbound Approach	D	--	D	--	A	--	B	--	F	--	F	--	F	--	F	--	A	--
Northbound Left	A	--	B	--		--		--		--		--		--		--		--
Southbound Left	B	--	B	--		--		--		--		--		--		--		--
Austell Road & Mulkey Road	B	0.43	C	0.59	B	0.44	C	0.66	C	0.62	E	0.95	C	0.64	D	0.89	D	0.89

*At unsignalized intersections a v/c ratio is not applicable.

One additional change is recommended at the intersection of Austell Road and Mulkey Road. At this intersection, the southbound U-turn volumes will increase due to the closure of the Story Place median opening. Traffic making this movement is likely traveling to the retail developments along the east side of Austell Road such as the Golden Corral restaurant and Pep Boys Auto Parts store. It is recommended that a wider shoulder be added on the northeast side of the intersection so that U-turns can be made more easily. This wider shoulder is particularly beneficial to large trucks and sport utility vehicles (SUVs) due to the wide turning radius that is common for vehicles of this type. A wider shoulder with this type of design is being added at the Austell Road and Hurt Road intersection, as shown in the design plans in Figure 6-13. This change to the shoulder width should be added when Project I1 is constructed.

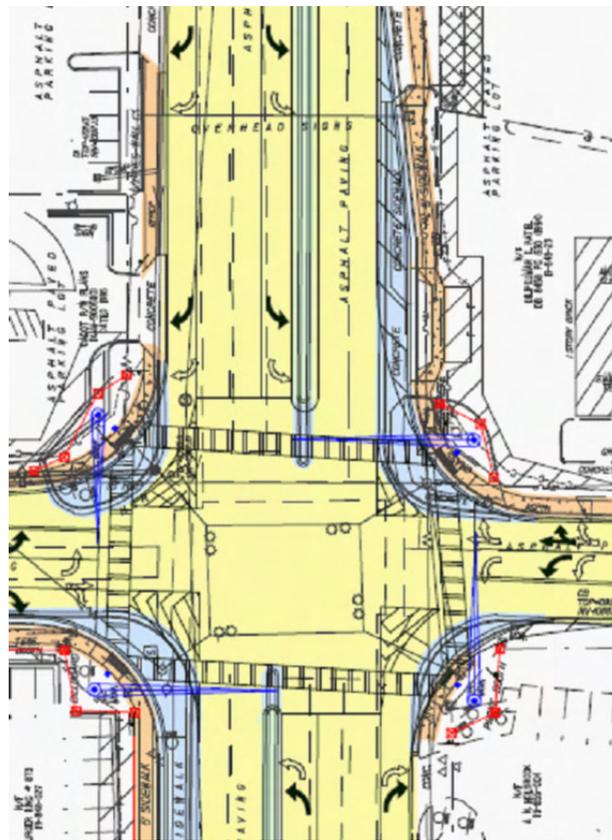


FIGURE 6-13 Design Plan, Intersection at Hurt Road

Based on the results of the traffic analysis, it appears that the preliminary recommendations will not have a negative impact on traffic operations throughout the corridor if they are implemented. Therefore, the recommendations for the four (4) unsignalized intersections that were analyzed include the following:

- I1, Story Place:
 - ♦ Close existing full median opening
- I2, Brookwood Drive/Blue Ridge Drive: Partially close/channelize the median opening
- Floyd Road: No changes recommended beyond previously planned Cobb DOT project
- I3, Cobb Marketfair Shopping Center/Park Trail Townhome development:
 - ♦ Short term – No changes
 - ♦ Long term – Signalize intersection (if warrants are met).

7 Recommendations

Recommendations for the Austell Road Access Management Plan consist of a number of different types of projects. These include the intersection projects that were identified and tested using traffic analysis discussed in Section 6. The recommendations also include potential new roadways, changes to the median, driveway closures, and pedestrian projects. These projects are listed in Table 7-1, while major projects are shown in Figure 7-1.

Alternative Access Roads

The prior Austell Road LCI study identified potential new roadway locations within the study area. The Access Management Plan further analyzed potential locations for new roadways that were identified in the Austell Road LCI Study. These roadways were generally left unchanged, although the alignment of one roadway was revised. Additionally, new roadway locations were identified based on existing traffic congestion in the area and proposed changes to existing access along the corridor.

Figure 7-2 shows new roadway projects R1 and R2. As the figure shows, Project R1 is a new roadway passing behind the Kohl's shopping center. This roadway connects Austell Road to the East-West Connector on the west side of Austell Road and is approximately 1,400 ft in length. A roadway with a similar alignment was proposed in the Austell Road LCI study. However, that roadway would have connected to Austell Road at Lincoln Crest Drive. That proposed alignment would have impacted a significant number of apartment units in the Madison at Forest Glen apartment complex. The impact to the apartment complex would make this alignment very expensive and likely infeasible.

The new alignment will use an existing access point for the Kohl's shopping center to connect to Austell Road. This access point currently allows only right-in/right-out movements. It is recommended that when this roadway is constructed a partial median break is created to allow for northbound traffic on Austell Road to make a left turn onto the new R1 roadway. This access point is approximately 350 feet from the signalized intersection that serves the Kohl's and Target shopping centers. Northbound traffic turning left onto the R1 roadway will benefit from the nearby traffic signal due to the platoons of traffic, and gaps between these platoons, that the signal will create. Therefore, this new partial median opening should not create traffic congestion problems.

TABLE 7-1 Recommended Projects

Project ID	Description	Type of Improvement	Engineering Year	Engineering Costs	ROW Year	ROW Costs	Construction Year	Construction Costs	Total Project Costs	Responsible Party	Funding Source	Local Source	Match Amount
I1	Austell Road at Story Place - Close existing median opening, replace left turn lane storage bays with raised, landscaped median; add wide shoulder for southbound U-turn movement at Austell Road at Mulkey Road	Roadway Operations	2012	\$30,000	2013	\$20,000	2014	\$294,000	\$344,000	Cobb County DOT	SPLOST	N/A	N/A
I2	Austell Road at Blue Ridge Drive/Brookwood Drive - Partially close/channelize the median opening to allow northbound and southbound left turn movements but no other left turn or U-turn movements; convert concrete median to raised, landscaped median	Roadway Operations	2012	\$8,000	N/A	\$0	2013	\$80,000	\$88,000	Cobb County DOT	SPLOST	N/A	N/A
I3	Austell Road at Cobb Marketfair/Park Trail Townhomes - Signalize Intersection	Safety	2014	\$75,000	N/A	\$0	2015	\$750,000	\$825,000	Cobb County DOT	SPLOST	N/A	N/A
M1	Raised, Landscaped Median on Austell Road from Mulkey Road to Hurt Road	Safety	2012	\$28,800	2013	\$669,600	2014	\$288,000	\$986,400	Cobb County DOT	TE/SPLOST	SPLOST	\$197,280
M2	Raised, Landscaped Median on Austell Road from Hurt Road to Amy Lane	Safety	2014	\$44,800	2015	\$1,041,600	2016	\$448,000	\$1,534,400	Cobb County DOT	TE/SPLOST	SPLOST	\$306,880
M3	Raised, Landscaped Median on Austell Road from East-West Connector to Mulkey Road	Safety	2015	\$27,200	2016	\$632,400	2017	\$272,000	\$931,600	Cobb County DOT	TE/SPLOST	SPLOST	\$186,320
M4	Raised, Landscaped Median on Austell Road from Anderson Mill Road to East-West Connector	Safety	2016	\$36,800	2017	\$855,600	2018	\$368,000	\$1,260,400	Cobb County DOT	TE/SPLOST	SPLOST	\$252,080
M5	Raised, Landscaped Median on the East-West Connector from Lipson Drive/Kohl's Shopping Center to Brookwood Drive	Safety	2017	\$51,200	2018	\$1,190,400	2019	\$512,000	\$1,753,600	Cobb County DOT	TE/SPLOST	SPLOST	\$350,720
R1	Backage Road, Kohl's Shopping Center - Connects Austell Road and the East-West Connector with a 2-lane urban roadway that has 11-ft travel lanes and a 5-ft sidewalk on one side of the roadway; Project Length: 1,400 ft	Roadway Capacity	2013	\$74,000	2014	\$520,800	2015	\$740,000	\$1,334,800	Cobb County DOT	LCI/SPLOST	SPLOST	\$266,960
R2	Backage Road, Target/Lowe's Shopping Center - Connects Austell Road and the East-West Connector with a 2-lane urban roadway that has 11-ft travel lanes and a 5-ft sidewalk on one side of the roadway; Project Length: 3,800 ft	Roadway Capacity	2015	\$193,800	2016	\$1,413,600	2017	\$1,938,000	\$3,545,400	Cobb County DOT	LCI/SPLOST	SPLOST	\$709,080
R4	Stallion Road Gate - Unlock gate between the South Cobb Government Center and the South Cobb High School fields at all times when the fields are in use	Internal Access	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Cobb County DOT	Local	N/A	N/A
R3	Parallel Roadway at Hurt Road - Connects Hurt Road, Reed Drive, and the Park Trail townhomes on the west side of Austell Road with a 2-lane urban roadway that has 11-ft travel lanes and a 5-ft sidewalk on one side of the roadway. Two new roads will connect this roadway to Austell Road. Total Project Length: 2,450 ft	Roadway Capacity	2014	\$118,825	2015	\$911,400	2016	\$1,188,250	\$2,218,475	Cobb County DOT	LCI/SPLOST	SPLOST	\$443,695

Project ID	Description	Type of Improvement	Engineering Year	Engineering Costs	ROW Year	ROW Costs	Construction Year	Construction Costs	Total Project Costs	Responsible Party	Funding Source	Local Source	Match Amount
P1	5-ft sidewalk on the south side of the East-West Connector from Brookwood Drive to 100 feet west of Floyd Road	Pedestrian	2012	22,000	2013	44,000	2014	143,000	\$209,000	Cobb County DOT	LCI/SPLOST	SPLOST	\$41,800
P2	5-ft sidewalk on the west side of Austell Road from Leila Street to Clay Road	Pedestrian	2012	\$20,000	2013	\$40,000	2014	\$130,000	\$190,000	Cobb County DOT	LCI/SPLOST	SPLOST	\$38,000
P3	5-ft sidewalk on the east side of Austell Road from 550 feet north of Seayes Road to 100 feet south of Anderson Mill Road	Pedestrian	2013	\$24,000	2014	\$48,000	2015	\$156,000	\$228,000	Cobb County DOT	LCI/SPLOST	SPLOST	\$45,600
P4	5-ft sidewalk on the east side of Austell Road from Seayes Road to 400 feet north of Seayes Road	Pedestrian	2013	\$4,100	2014	\$8,200	2015	\$26,700	\$39,000	Cobb County DOT	LCI/SPLOST	SPLOST	\$7,800
P7	5-ft sidewalk on the south side of the East-West Connector from Davis-Struempf Funeral Home to 150 feet west of Kohl's Shopping Center driveway	Pedestrian	2014	\$6,000	2015	\$12,000	2016	\$39,000	\$57,000	Cobb County DOT	LCI/SPLOST	SPLOST	\$11,400
P8	5-ft sidewalk on the north side of the East-West Connector from the Krystal driveway to 100 feet west of the Marshalls/Staples driveway	Pedestrian	2014	\$4,700	2015	\$9,400	2016	\$30,550	\$44,650	Cobb County DOT	LCI/SPLOST	SPLOST	\$8,930
P9	5-ft sidewalk on the south side of the East-West Connector from Mesa Valley Way to 500 feet east of Mesa Valley Way	Pedestrian	2015	\$4,900	2016	\$9,700	2017	\$31,500	\$46,100	Cobb County DOT	LCI/SPLOST	SPLOST	\$9,220
P10	5-ft sidewalk on the south side of the East-West Connector from west of study area boundary to 50 feet west of Mesa Valley Way	Pedestrian	2015	\$9,300	2016	\$18,600	2017	\$60,500	\$88,400	Cobb County DOT	LCI/SPLOST	SPLOST	\$17,680
P11	5-ft sidewalk on the north side of the East-West Connector from west of study area boundary to 750 feet west of Lipson Drive	Pedestrian	2015	\$20,000	2016	\$40,000	2017	\$130,000	\$190,000	Cobb County DOT	LCI/SPLOST	SPLOST	\$38,000
P5	5-ft sidewalk on the east side of Brookwood Drive from Anderson Mill Road to the East-West Connector	Pedestrian	2016	\$25,000	2017	\$50,000	2018	\$162,500	\$237,500	Cobb County DOT	LCI/SPLOST	SPLOST	\$47,500
P6	5-ft sidewalk on the south side of Callaway Road from Austell Road to Hicks Road	Pedestrian	2016	\$17,000	2017	\$34,000	2018	\$110,500	\$161,500	Cobb County DOT	LCI/SPLOST	SPLOST	\$32,300
A1	Review existing development codes to determine if interparcel access and driveway spacing requirements are sufficient	Land Use	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Cobb County Department of Community Development	Local	N/A	N/A
A2	Revise county zoning review forms to include category for access management	Land Use	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Cobb County Department of Community Development	Local	N/A	N/A
		Totals		\$845,425		\$7,569,300		\$7,898,500	\$16,313,225				

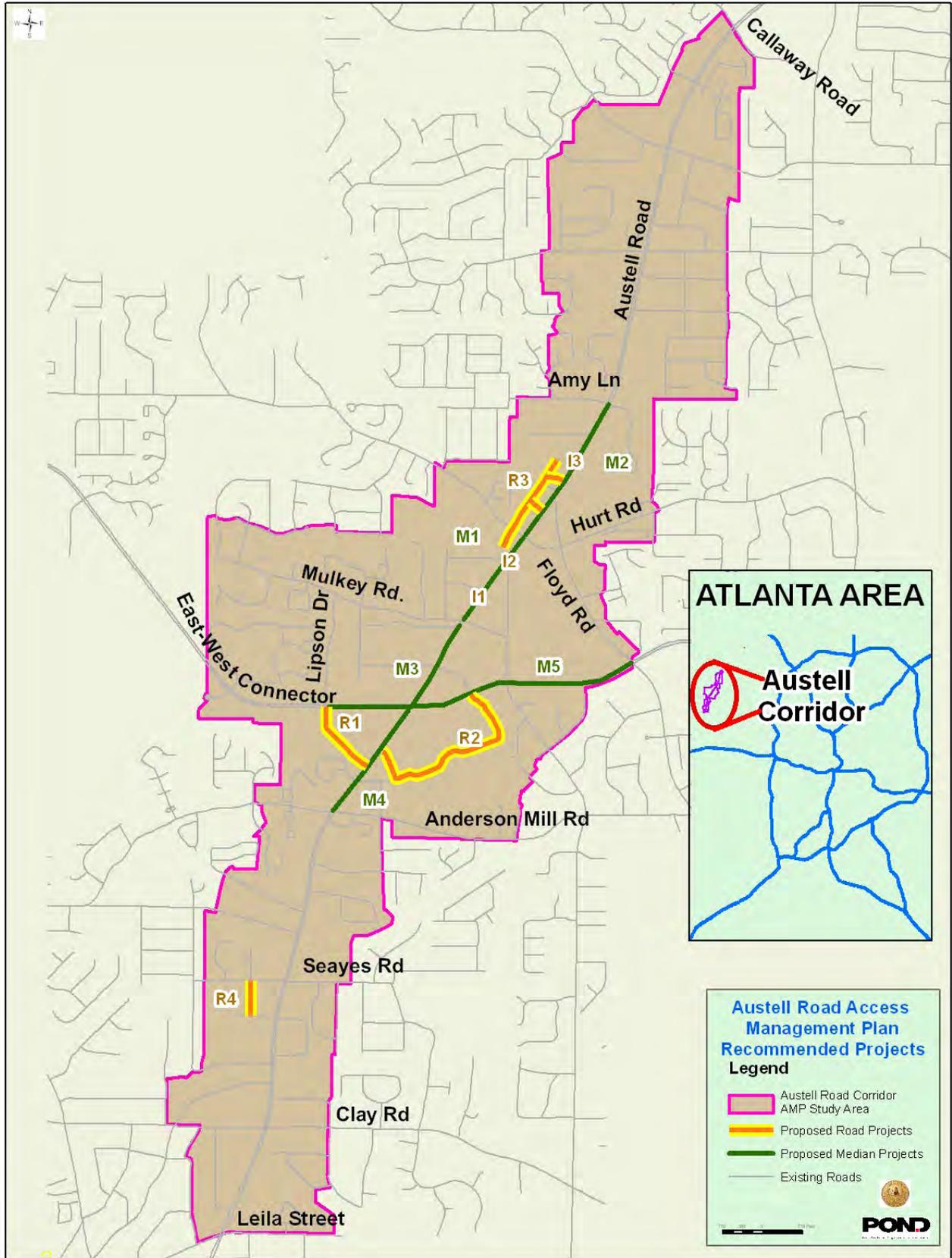


FIGURE 7-1 Recommended Projects

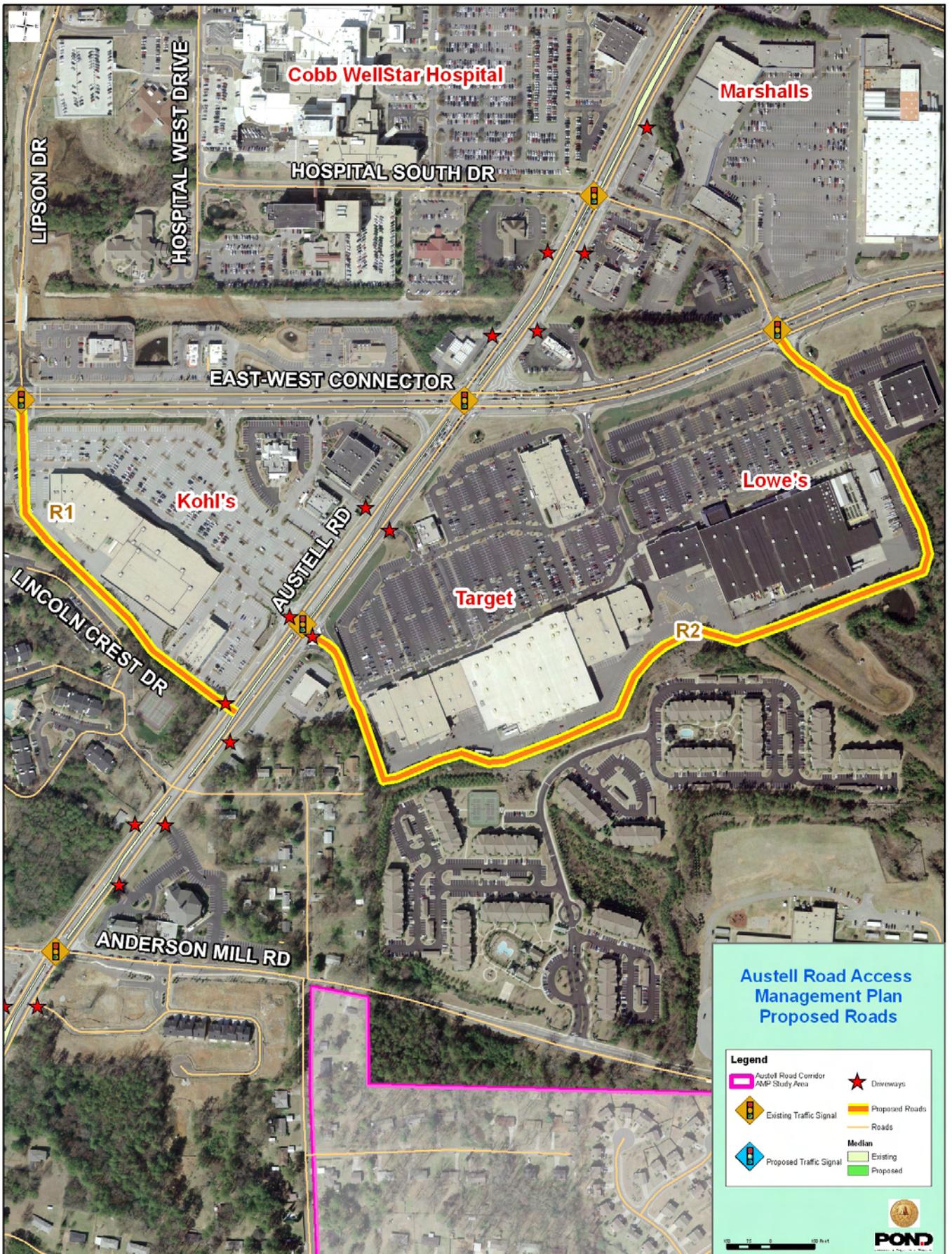


FIGURE 7-2 New Roadway Projects R1 and R2

Left-turn traffic demand from the Project R1 roadway onto Austell Road would likely be very low. Traffic turning onto the Project R1 roadway from the East-West Connector would likely have a destination located to the south on Austell Road. Any traffic that needs to turn left onto Austell Road can do so at the signalized access point to the shopping center located approximately 350 feet further to the north.

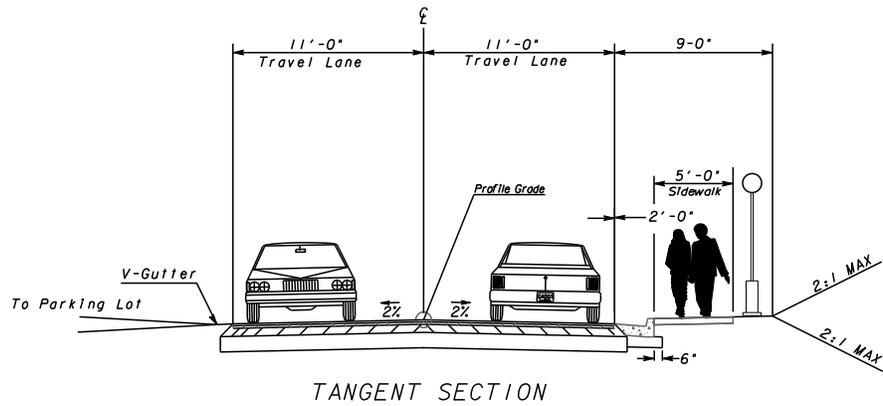
The roadway will use partial right-of-way (ROW) from the existing landscape buffer located between the Kohl's shopping center and the apartment complex. Using this ROW will allow the roadway to be constructed without impacting the apartment complex or the loading area for the shopping center. Additionally, this proposed alignment will not impact any existing structures. This alignment makes the roadway significantly less expensive to construct, which in turn makes it a more feasible project.

Project R1 will help reduce traffic passing through the intersection of Austell Road and East-West Connector. This new roadway will primarily relieve the eastbound right turn movement and the northbound left turn movement at this intersection. Due to the design of this intersection, these movements take place at an acute angle. This angle, rather than a standard 90 degree angle, slows traffic as it moves through the intersection. Therefore, reducing traffic making these movements will reduce some of the slowest moving traffic passing through the intersection. Reducing the total amount of traffic passing through the intersection will allow the signal timing and phasing to be re-optimized, helping to improve traffic congestion on all approaches.

Some cut-through traffic already exists at this site. However, this traffic is traveling on private property within the shopping center and must contend with parking movements within the parking lot as well as trucks in the loading area for the shopping center. Making this alignment a separate, public roadway will make it a more viable route for traffic in the area. The new roadway will move traffic safely and with fewer conflicts. The proposed typical section for this new roadway is shown in Figure 7-3. As shown, the roadway will consist of two (2) 11-ft travel lanes and a 5-foot sidewalk on one side of the roadway. The sidewalk will help improve pedestrian connectivity in the area in the same way that the roadway will improve automobile connectivity.

Project R2 is a new roadway passing behind the Target/Lowe's shopping center. This roadway connects Austell Road to the East-West Connector on the east side of Austell Road. It is approximately 3,800 ft in length and has the same proposed typical section as shown in Figure 7-3. The alignment for this roadway will primarily use land that acts as a buffer between the shopping center and the Alta Mill apartments. Again, the loading area for the shopping center and the apartment buildings must be avoided to prevent significant impacts to these existing developments.

FIGURE 7-3 Tangent Section



Another location that must be avoided is Buttermilk Creek Pond, which is located on the southeast edge of the roadway. This pond may create wetland problems that make this roadway infeasible. Additional study is needed to determine whether these wetlands will impact the roadway's alignment.

A field review of the Target/Lowe's shopping center during the weekday PM peak hour showed that a significant amount of cut-through traffic is passing through the shopping center. The westbound left turn from the East-West Connector onto Austell Road experiences significant traffic congestion during the PM peak hour. The delay for this movement causes traffic to wait through more than one traffic signal cycle.

Due to this delay, some traffic makes a left turn into the shopping center from East-West Connector and continues to the shopping center's signalized intersection with Austell Road. This traffic travels through the outer section of the shopping center's parking lot perpendicular to the route that most vehicular and pedestrian traffic is traveling within the shopping center. Therefore, the cut-through traffic presents a potential safety problem within the shopping center parking lot. Creating a public roadway located on the back side of the shopping center would mitigate this safety problem. Traffic calming devices could be installed within the shopping center to slow traffic and encourage cut-through traffic to use the public roadway. Additionally, a public roadway might increase the amount of traffic making this movement, which in turn reduces the amount of traffic passing through the intersection of Austell Road & the East-West Connector.

Mulkey Road, Hospital S. Drive, Brookwood Drive, the recently completed Lipson Drive, and projects R1 and R2 help to create a grid of streets around the intersection of Austell Road and the East-West Connector. Since this intersection is the most congested, and least safe, intersection in the study area, this grid of streets should help to reduce traffic congestion around the intersection. The reduction in traffic congestion should result in increased safety in the area. These roadways also provide alternatives to the major commuter routes for local traffic, allowing this traffic to avoid Austell Road and the East-West Connector where possible.

Figure 7-4 shows Project R3, a new roadway located on the west side of Austell Road. The alignment for Project R3 runs parallel to Austell Road and connects Hurt Road, Reed Drive, and the Park Trail townhome development. This roadway is approximately 1,850 ft in length and has the same proposed typical section that is shown in Figure 7-3. Two additional segments connect this roadway to Austell Road. Each of these segments are approximately 275 feet in length.

Project R3 will also provide rear access to a number of small commercial parcels along Austell Road. The purpose of the project is to provide this access so that the number of existing access points along Austell Road can be reduced. If several existing driveways along Austell Road are removed or consolidated, then the new roadway will ensure that these parcels continue to have good access. Providing this additional access may also contribute to parcel consolidation and redevelopment. When that happens, the number of access points along this segment of Austell Road can potentially be reduced significantly.

The existing parcels along Austell Road are about 170 ft to 240 ft deep. The roadway proposed in Project R3 would need a minimum of 31 feet of ROW and would leave existing structures unharmed. The smallest lots have an irregular shape and therefore the construction of the roadway would only have a minor impact on the size of the parcels. The larger parcels would be impacted more by the construction of the new roadway. However, these parcels would still extend approximately 200 feet from Austell Road, which is adequate space for retail development. The proposed layout of a segment of Project R3 is shown in Figure 7-5. As the figure shows, the roadway's impact on the existing parcels is minimal.



GRTA Xpress
Park and Ride

FIGURE 7-4 Project R3

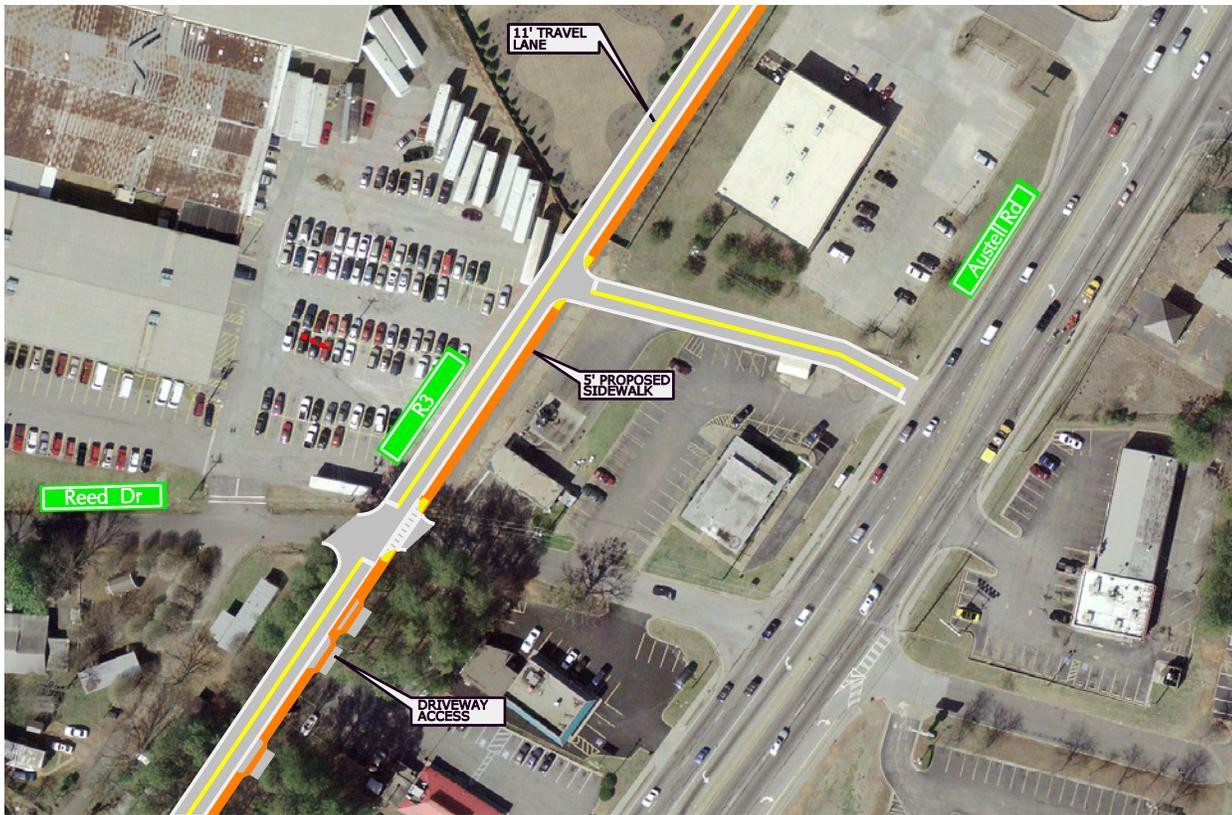


FIGURE 7-5 Proposed Layout, Segment of Project R3

Figure 7-6 shows Project R4, a connection located on the west side of Austell Road. Project R4 connects the parking lot of the South Cobb Government Center to Stallion Parkway and the South Cobb High School fields located along this roadway. This connection already exists. However, there is a locked gate that prevents vehicular travel between these locations. Cobb County school staff has expressed concern regarding safety, security, and the potential for vandalism/graffiti if this gate was opened to allow this connection.

There is a separate gate on Stallion Parkway between the high school athletic fields and Austell Road. In field visits to this site, the gate on Stallion Parkway has typically been open while the gate connecting to the South Cobb Government Center has never been open. It is recommended that at any time one gate is open then the other gate should also be opened. Both gates then could be closed for safety and security reasons whenever there were no activities taking place at the fields.

The purpose of opening this gate is to better connect the fields to the surrounding neighborhood. This connection would be interparcel access between two government owned parcels. Opening the gate would create a new route for vehicular and pedestrian traffic that would allow access without using Austell Road. At times when the athletic facilities are not in use, both gates could be closed to prevent unnecessary access. However, it should be noted that



FIGURE 7-6 Project R4

while the gates keep out vehicular traffic, pedestrian access is still possible even with the gates closed if pedestrians choose to walk through the undeveloped wooded land adjacent to the fields.

During the existing conditions analysis, mid-block pedestrian crossings at unmarked locations, or jaywalking, was identified as a problem along the Austell Road corridor as well as on the East-West Connector. Along Austell Road it was identified as most prevalent in the central section of the corridor, generally between Anderson Mill Road and Amy Lane. The East-West Connector, within the study area, was also identified as a problem area. The central section of the corridor and the East-West Connector have primarily commercial development, making these areas frequent destinations for transit users. This problem was identified by members of the public and was also observed during field visits to the study area.

Transit Assessment

Mid-block pedestrian crossings take place primarily near Cobb Community Transit (CCT) bus stops. Some transit riders cross roadways at a point most convenient to accessing a bus stop. These locations are not necessarily at signalized intersections. While these locations are convenient from a pedestrian's perspective, they are also dangerous for pedestrians as well as drivers. The mid-block crossings increase the number of conflict points between pedestrians and vehicles. Mid-block crashes between vehicles and pedestrians are a legitimate possibility due to the high traffic volumes and relatively high travel speeds (primarily during off-peak hours) along Austell Road and the East West Connector.

While crashes between vehicles and pedestrians are rare, mid-block crossings at unmarked locations cause traffic to slow or stop unexpectedly. This unexpected slowing or stopping may lead to crashes between vehicles, making the roadway less safe. Even when no vehicular crashes take place, unexpected slowing or stopping of this type will slow through traffic speeds, reducing traffic capacity along the roadway.

Remedies for this problem are limited. Relocating bus stops closer to traffic signals was considered as a possible solution to make crossing at signalized intersections a more favorable option for pedestrians. However, relocating bus stops can have a negative impact on bus operations and also requires funding.

In the central section of the corridor, as well as along the East West Connector near Austell Road, traffic signals are spaced relatively close together. There are seven (7) traffic signals from Anderson Mill Road to Amy Lane. This is a total distance of 8,785 feet, meaning there is an average distance of 1,464 feet between traffic signals. The furthest average distance a pedestrian would have to walk to a traffic signal, regardless of the location of a transit stop, is half that distance, or 732 feet. When the recommended traffic signal at the intersection

with Cobb Marketplace and the Park Trail townhomes is implemented, the average distance between traffic signals is reduced to 1,255 feet. The furthest average distance a pedestrian would have to walk to a traffic signal would then be 628 feet. A typical pedestrian is willing to walk approximately one-quarter (0.25) mile, or 1,320 feet, to reach their destination. This traffic signal spacing means that walking to a traffic signal to cross the road is less than one-quarter (0.25) mile and does not put an excessive burden on pedestrians.

Figure 7-7 shows the existing bus stops within the study area as well as the distance from each bus stop to the closest signalized intersection. Between Anderson Mill Road and Amy Lane, the longest distance from a bus stop to a signalized intersection is 1,155 feet. This bus stop is located just north of Reed Drive. This distance is less than the one-quarter (0.25) mile typical walking distance described above. Additionally, if a new traffic signal is added at the intersection of Austell Road and the Cobb Marketfair/Park Trail townhomes intersection, the distance between this bus stop and a signalized intersection will be approximately 350 feet. The furthest distance between a transit stop and a traffic signal on the East West Connector within the study area is 1,000 feet. Again, this distance is less than the one-quarter (0.25) mile typical walking distance described above. Still, many pedestrians will choose to walk the shortest path available, regardless of the distance to the nearest intersection. Therefore, relocating bus stops would likely not have a significant impact on this problem in the central section of the corridor or along the East West Connector near Austell Road.

In addition, bus pull-out bays were also considered for implementation within the study area. These would help improve the overall traffic flow along Austell Road and the East West Connector by allowing through traffic to continue to move when a bus stops on the roadway. The pull-out bays can have a negative impact to transit operations as heavy traffic volumes can make re-entering the roadway difficult and time consuming for buses. Traffic conflicts between buses and through traffic can create safety problems as well. “Yield to Bus Laws” have been enacted in some states to help reduce the conflicts that bus pull-out bays create. However, as discussed in the Transportation Research Board Transit Cooperative Research Program Synthesis 49, Yield to Bus – State of the Practice, the yield to bus laws require a number of steps. In addition to legal authority to require traffic to yield to buses, implementation typically requires improved signage and lighting, public outreach and education, and additional training for bus drivers. Further refinement of the access management plan or of Cobb Community Transit policies would be necessary to determine if implementation of bus pull-out bays and a yield to bus program would be beneficial.

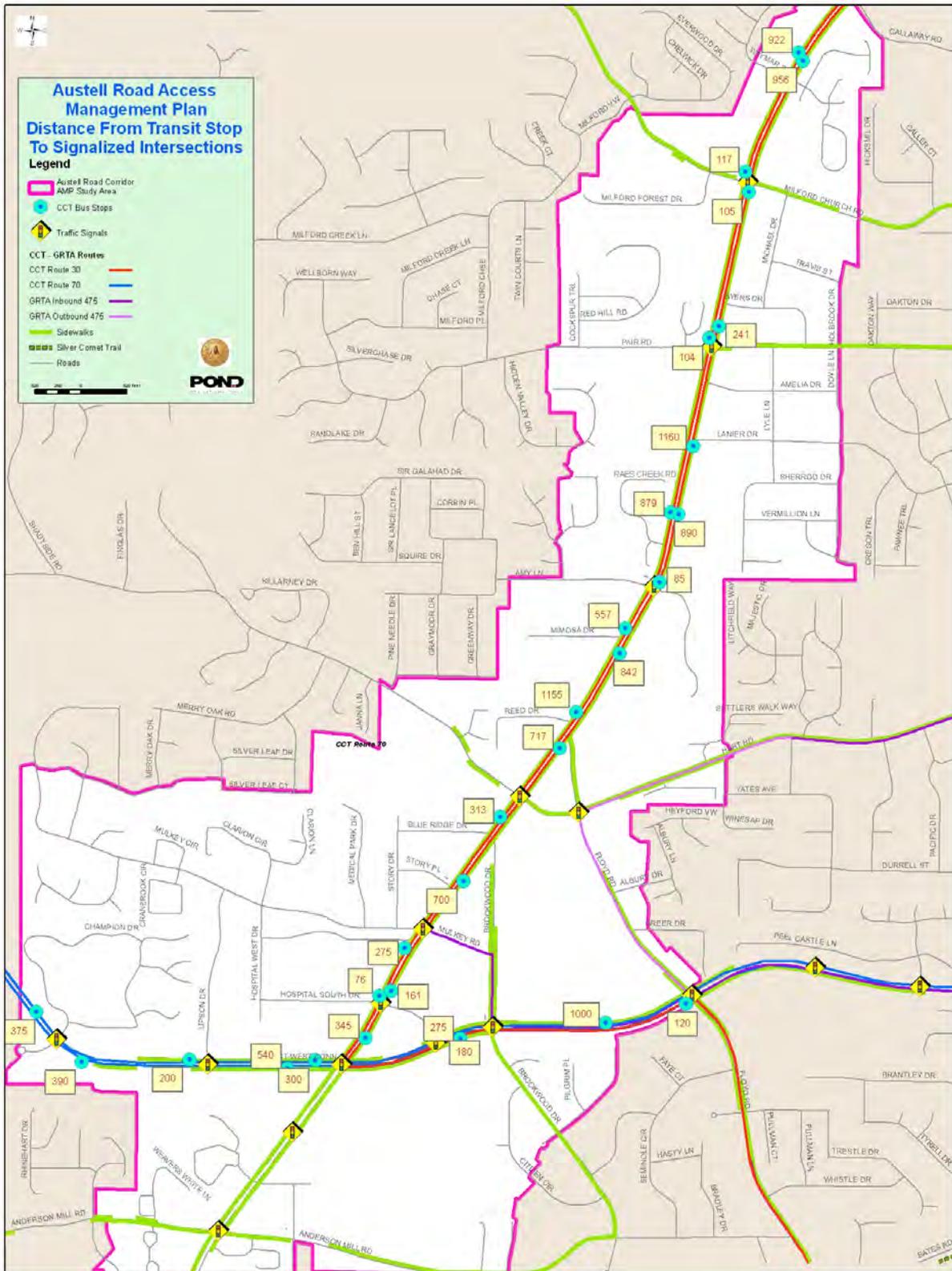


FIGURE 7-7 Distance from Transit Stops to Signalized Intersections

Requiring transit riders to cross roadways at signalized intersections appears to be the preferred way to prevent conflicts between pedestrians and vehicular traffic. Further analysis was conducted on how to require pedestrians to walk to signalized intersections. This analysis focused primarily on the median design within the study area.

Median Treatment

The next possible solution considered for the problem of mid-block crossings was to place barriers in the median of the roadway to prevent pedestrians from crossing. Concrete barriers, commonly referred to as Jersey barriers, are commonly used in the medians of interstate roadways and other highways and would effectively prevent pedestrians from crossing the roadway. However, these barriers are not aesthetically pleasing. Since private development is vital for this corridor, adding a barrier that has a negative aesthetic impact is not recommended. Additionally, since Jersey barriers are commonly used on high speed roadways, Jersey barriers might change driver perception of the roadway and result in increased travel speeds. Other barrier designs, such as an iron fence, were also suggested during a meeting. Again, while this design would be effective in preventing pedestrian mid-block crossing, it would not be aesthetically pleasing.

The recommended median treatment is the installation of a curb in the median that is higher than a regular curb and has landscaping in the median. Figure 7-8 and Figure 7-9 show the proposed design of the median, while the adjacent photos show how an existing median of this type looks. This existing median is located along Peachtree Road in Atlanta, near Piedmont Road and SR 400. This design is more difficult for pedestrians to cross than the existing concrete median due to the higher curb and the landscape elements.

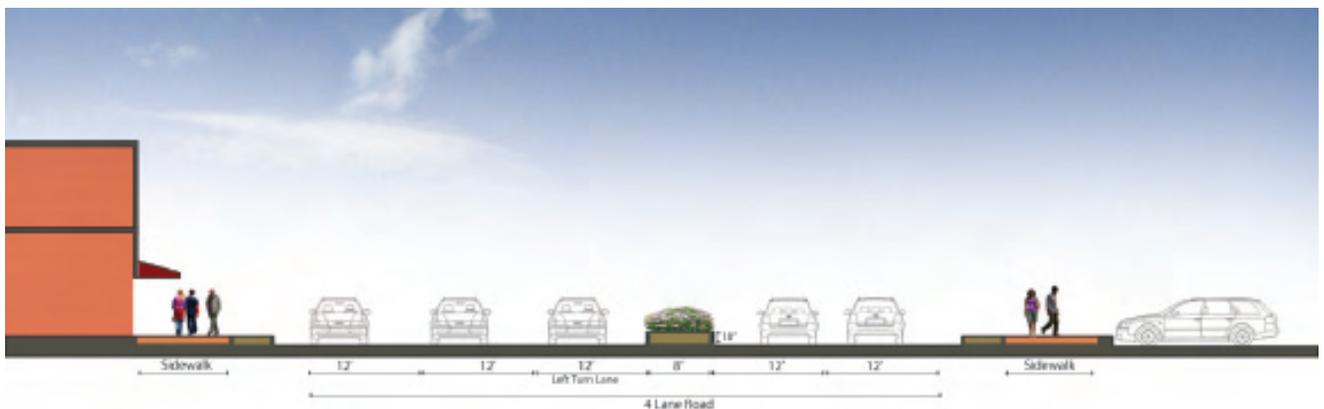


FIGURE 7-8 Proposed Design of Median

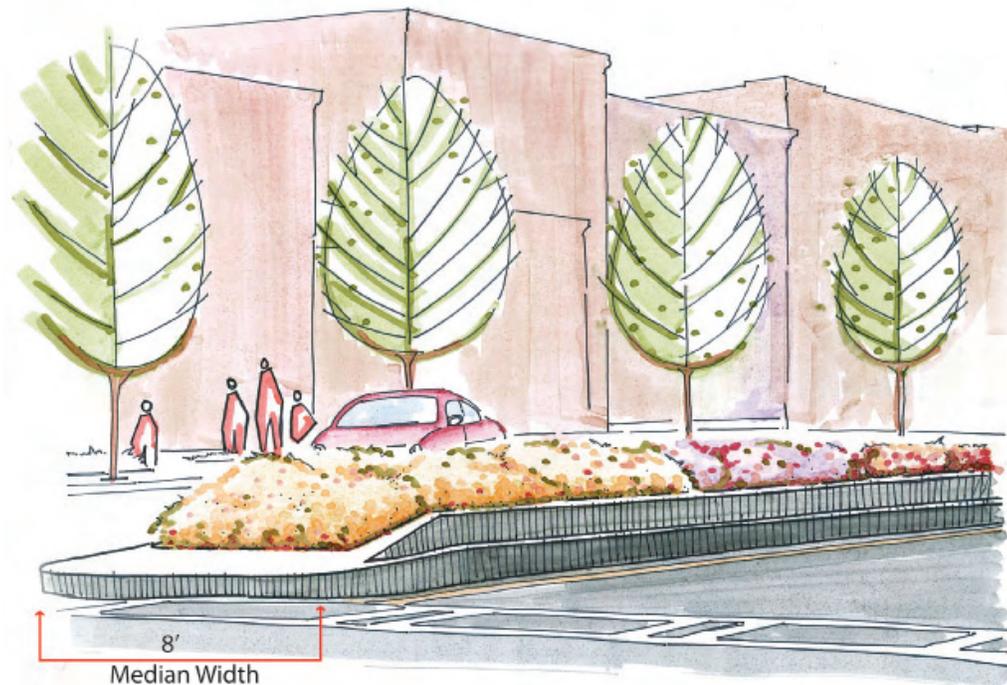


FIGURE 7-9 Proposed Median Width

The flowers shown in the adjacent photo are primarily located at median breaks in the existing median. Flowers in a median are typically more costly to maintain than other types of landscaping. The other photo shows examples of the types of trees and shrubs which can potentially be installed in a median of this type. This type of landscaping is less expensive to maintain. It also acts as more of a barrier than the flowers. Therefore, the trees and shrubs are recommended as the primary landscaping type for the recommended median. Flowers should be used in small areas, mainly at intersections.



Example photos of existing medians



Austell Road is a state route, meaning the installation of a median of this type requires approval by GDOT. Like Austell Road, Peachtree Road is a state route. This precedent makes implementation of this design more likely. The speed limit on Peachtree Road is 35 mph, while on Austell Road it is 45 mph. The higher speed limit on Austell Road makes a barrier of this type less safe for vehicular traffic. However, it should be noted that the implementation of this median on Peachtree Road require reducing travel lane widths to only eleven (11) feet. On Austell Road, the travel lanes can remain at the existing twelve (12) feet width. This additional lane width increases the safety for vehicular traffic, helping to negate for the additional speed that traffic may be traveling.

In the central section of the corridor, close signal spacing typically prevents high vehicular speeds from being reached. During peak hours, traffic speed decreases significantly due to existing traffic congestion. While the Austell Road Access Management Plan makes a number of recommendations to improve traffic operations along the corridor, some level of traffic congestion is expected to continue in the future, keeping traffic speeds lower than they would be on an uncongested roadway.

This median design is recommended to initially be installed between Mulkey Road and Hurt Road, identified as Project M1 in Figure 7-1. This is the segment of Austell Road where changes to existing median openings are recommended. The recommended median design can be implemented at the same time the median opening recommendations are implemented. Simultaneous design and construction will reduce cost and help implement these projects faster. This segment of Austell Road, as well as the other prioritized segments recommended for this median design, includes the following:

- M1 – Austell Road from Mulkey Road to Hurt Road
- M2 – Austell Road from Hurt Road to Amy Lane
- M3 – Austell Road from East West Connector to Mulkey Road
- M4 – Austell Road from Anderson Mill Road to East-West Connector
- M5 – East-West Connector from Lipson Drive/Kohl's Shopping Center to Brookwood Drive

The East-West Connector east of Brookwood Drive has an existing landscaped median. While this part of the East-West Connector may still benefit from the recommended median design, funding priorities should likely be focused on other projects throughout the study area rather than modifying an exiting landscaped median.

A landscaped median exists along Austell Road north of Amy Lane. Again, due to the existing landscaped median, no modifications to the median are recommended for this segment of the corridor. In addition, this segment of the corridor consists primarily of residential development, which typically results in less transit ridership and less pedestrian activity. This area was not identified as having a significant amount of mid-block pedestrian crossings, nor were mid-block pedestrian crossings observed during field reviews of the study area.

The southern segment of the study area, from Leila Street to Anderson Mill Road, has a landscaped median for some small portions of the corridor. A concrete median exists along most of this segment of the corridor. Land use along this segment of the corridor consists primarily of residential development, meaning there are few destinations for pedestrians. Currently, travel speeds are higher and traffic congestion is less along this segment of the corridor. This makes implementing the recommended median design less safe, meaning it is less likely to get GDOT approval. Implementation along this segment of the corridor is recommended as a long-term project when conditions become more amenable.

An existing sidewalk inventory for the study area was created during the existing conditions analysis of this study. The segments of roadway within the study area that do not have sidewalks were prioritized using Cobb County's Sidewalk Project Selection Criteria. These criteria, developed for the Cobb County 2005 SPLOST, assign points to each potential sidewalk segment based on whether they meet the criteria. These criteria include the following:

- School Connectivity
- Transit Connectivity
- High Pedestrian Area
- DOT Goal Fulfillment
- Activity Center Connectivity
- Gap Closure

Additional criteria related to engineering, ROW, and cost/funding are a part of the Cobb County Sidewalk Project Selection Criteria. Analysis of these criteria is outside of the scope of this project. Therefore, the total number of points assigned to each sidewalk project within the study area can't be directly compared to sidewalk projects outside of the study area. All criteria should be analyzed and points awarded to each sidewalk project for this comparison to be made. However, applying some elements of the Cobb County Sidewalk Project Selection Criteria allows prioritization of sidewalk projects within the study area.

Pedestrian Safety

The prioritized list of sidewalk projects within the study area is shown in Table 7-2. As this table shows, the highest priority projects are located on Austell Road and East-West Connector. This is expected due to the fact that these roadways have a large number of destinations for pedestrians, have transit stops, and some segments are located near schools. Brookwood Drive and Callaway Road each have a roadway segment with a prioritization score as high as the Austell Road and East-West Connector scores. These roadway segments essentially have high scores for the same reasons as Austell Road and East-West Connector. Prioritization of other cross streets follows after these two (2) roadways. Cost estimates for each sidewalk project are included in this table as well. These estimates assume a cost of \$95/linear foot for a 5-foot sidewalk.

Driveway Closure

As stated earlier in this section, there is a project that will provide rear access to a number of small commercial parcels along Austell Road. The purpose of the project is to provide this access so that the number of existing access points along Austell Road can be reduced. If several existing driveways along Austell Road are removed or consolidated, then the new roadway will ensure that these parcels continue to have good access.

A key element of access management is the closure or relocation of driveways that are inappropriately dispersed.

Redundant driveways add points of conflict that make traffic patterns unpredictable, increase the risk of accidents, and contribute to traffic delays. If driveways are too narrow or have a small turning radius, vehicles will be unable to maneuver quickly and easily off of the road. If the turning radius and width are very wide, fast maneuvers on and off the site pose safety hazards for pedestrians, bicycles, and vehicles.

As indicated in the existing conditions section of the report, there are far too many access points within 330 feet upstream and downstream of each other. As an urban minor urban arterial roadway, this is generally undesirable, causing increased conflict points and decreased roadway capacity. Strategies for mitigating the safety aspects of this situation include closing the driveway (if other access to the adjacent property already exists) or relocating the driveway (if no other appropriate access is available). As a general policy, it is desirable to relocate access points from Austell Road (a major road) to a minor road, frontage road or backage road. In the case of the commercial core of the study area, the consultant team has suggested a backage road from south of Hurt Road to the Park Trail townhomes. This area contains one of the highest proportions of close driveways on the corridor.

Access restrictions could cause some owners of retail businesses to lose (or to think they will lose) customers. This is highly dependent on the type of business and the nature of the access restriction. Such impacts need to be carefully

TABLE 7-2 Sidewalk Project Prioritization List

Street Name	Side of Roadway	Existing Sidewalk?	Approx. length of sidewalk (ft)	School Connectivity	Transit Connectivity	High Pedestrian Area	DOT Goal Fulfillment	Activity Center Connectivity	Gap Closure	Total Points	Total Cost of Sidewalk
East-West Connector	South	No	2,200	2	2	1	1	1	1	8	\$209,000
Austell Road	West	No	2,000	2	2	1	1	1	0	7	\$190,000
Austell Road	East	No	2,400	2	0	1	1	1	1	6	\$228,000
Austell Road	East	No	410	2	0	1	1	1	1	6	\$38,950
Brookwood Drive	East	No	2,500	2	2	0	0	1	1	6	\$237,500
Callaway Road	South	No	1,700	2	2	0	0	1	1	6	\$161,500
East-West Connector	South	No	600	0	2	1	1	1	1	6	\$57,000
East-West Connector	North	No	470	0	2	1	1	1	1	6	\$44,650
East-West Connector	South	No	485	0	2	1	1	1	1	6	\$46,075
East-West Connector	South	No	930	0	2	1	1	1	1	6	\$88,350
East-West Connector	North	No	2,000	0	2	1	1	1	1	6	\$190,000
Callaway Road	North	No	1,700	2	2	0	0	1	0	5	\$161,500
Callaway Road	South	No	800	2	2	0	0	1	0	5	\$76,000
Floyd Road	East	No	230	0	2	0	1	1	1	5	\$21,850
Floyd Road	West	No	2,500	0	2	0	1	1	1	5	\$237,500
Hurt Road	North	No	650	0	2	0	1	1	1	5	\$61,750
Hurt Road	South	No	190	0	2	0	1	1	1	5	\$18,050
Hurt Road	South	No	1,100	0	2	0	1	1	1	5	\$104,500
Milford Church Road	South	No	1,200	2	2	0	0	1	0	5	\$114,000
Pair Road	South	No	1,200	2	2	0	0	1	0	5	\$114,000
Anderson Mill Road	North	No	660	2	0	0	0	1	1	4	\$62,700
Anderson Mill Road	South	No	210	2	0	0	0	1	1	4	\$19,950
Anderson Mill Road	North	No	950	2	0	0	0	1	1	4	\$90,250
Anderson Mill Road	South	No	1,600	2	0	0	0	1	1	4	\$152,000
Anderson Mill Road	South	No	300	2	0	0	0	1	1	4	\$28,500
Brookwood Drive	West	No	250	0	2	0	0	1	1	4	\$23,750
Brookwood Drive	East	No	1,300	0	2	0	0	1	1	4	\$123,500
Hurt Road	North	No	1,000	0	2	0	1	1	0	4	\$95,000
Hurt Road	South	No	1,300	0	2	0	1	1	0	4	\$123,500
Hurt Road	South	No	800	0	2	0	1	1	0	4	\$76,000
Milford Church Road	North	No	435	2	0	0	0	1	1	4	\$41,325

Street Name	Side of Roadway	Existing Sidewalk?	Approx. length of sidewalk (ft)	School Connectivity	Transit Connectivity	High Pedestrian Area	DOT Goal Fulfillment	Activity Center Connectivity	Gap Closure	Total Points	Total Cost of Sidewalk
Milford Church Road	South	No	550	2	0	0	0	1	1	4	\$52,250
Milford Church Road	North	No	65	2	0	0	0	1	1	4	\$6,175
Mulkey Road	North	No	315	0	2	0	0	1	1	4	\$29,925
Pair Road	North	No	230	0	2	0	0	1	1	4	\$21,850
Amy Lane	South	No	900	0	2	0	0	1	0	3	\$85,500
Amy Lane	North	No	900	0	2	0	0	1	0	3	\$85,500
Anderson Mill Road	South	No	560	2	0	0	0	1	0	3	\$53,200
Anderson Mill Road	North	No	440	2	0	0	0	1	0	3	\$41,800
Clay Road	South	No	1,000	2	0	0	0	1	0	3	\$95,000
Clay Road	South	No	2,400	2	0	0	0	1	0	3	\$228,000
Clay Road	South	No	1,200	2	0	0	0	1	0	3	\$114,000
Lipson Drive	West	No	2,000	0	2	0	0	1	0	3	\$190,000
Mulkey Road	North	No	1,500	0	2	0	0	1	0	3	\$142,500
Mulkey Road	South	No	4,000	0	2	0	0	1	0	3	\$380,000
Seayes Road	South	No	1,300	2	0	0	0	1	0	3	\$123,500
Seayes Road	North	No	1,300	2	0	0	0	1	0	3	\$123,500
Seayes Road	South	No	1,400	2	0	0	0	1	0	3	\$133,000
Seayes Road	North	No	1,200	2	0	0	0	1	0	3	\$114,000
Pair Road	South	No	1,400	0	0	0	0	1	0	1	\$133,000

considered by highway agencies before implementing this strategy. It is advisable to involve stakeholders at the early stages of planning for these improvements.

Cobb County DOT should work with owners of adjacent properties to assure them that some restriction of access to their properties will improve safety and will not affect their ability (or, in the case of a retail business, their customers' ability) to reach their properties. Where practical, the closure of driveways should be implemented as part of redevelopment efforts.

Implementation of driveway closures and relocations can require three (3) months to three (3) years. While an extensive project development process usually is not required, discussions with affected property owners should be must be carried by the County to reach agreement on access provisions. Essential aspects of such an agreement may include driveway permits, easements, and, perhaps, driveway-sharing agreements.

The strategy of closing or relocating driveways adjacent to intersections is considered effective and has been addressed in published literature, but there is no consensus on quantitative estimates of its effectiveness. The safety effectiveness of this strategy is highly site dependent and will vary with the driveway location relative to the intersection before and after the project, the traffic volume using the driveway, the traffic volume and speed on the relevant intersection approaches, and the type of development served by the driveway. Some of the states that have implemented access management policies include Iowa, Minnesota, and Florida. Costs are highly variable. These costs mostly involve acquiring access or constructing replacement access.

Finally, interparcel access easements between adjacent, non residential properties are encouraged by the county, but are not mandatory. As stated earlier, controlling access and establishing interparcel access easements is desirable for providing safe and efficient movement of traffic, both vehicular and pedestrian, as well as encouraging efficient development plans that enable occupants and clients to fulfill their daily activities through minimal use of vehicles, and through increased use of alternative transportation modes such as public transit, walking and bicycling.

Interparcel Access

As stated in the Existing Conditions section of the report, the slope of the Austell Road is less than eleven percent (11%) and does not hinder access topographically. Cobb County addresses access management related issues under their zoning review and permitting functions. In this way, the County exercises its police powers to protect the safety, health, and welfare of the roadways in the County. In order to facilitate movement of customers from business to business without generating additional turning movements, Figure 7-10 will be used as a method of providing zoning recommendations for interparcel connectivity via use of an access easement, which would become

effective upon granting of a reciprocal easement by the adjoining property owner. Shared parking would not have to be a requisite aspect of the access easement. The County's Chief Building Official may waive the requirement of the access easement as part of the site plan review process where use and usability of properties would be adversely impacted by the required easement.

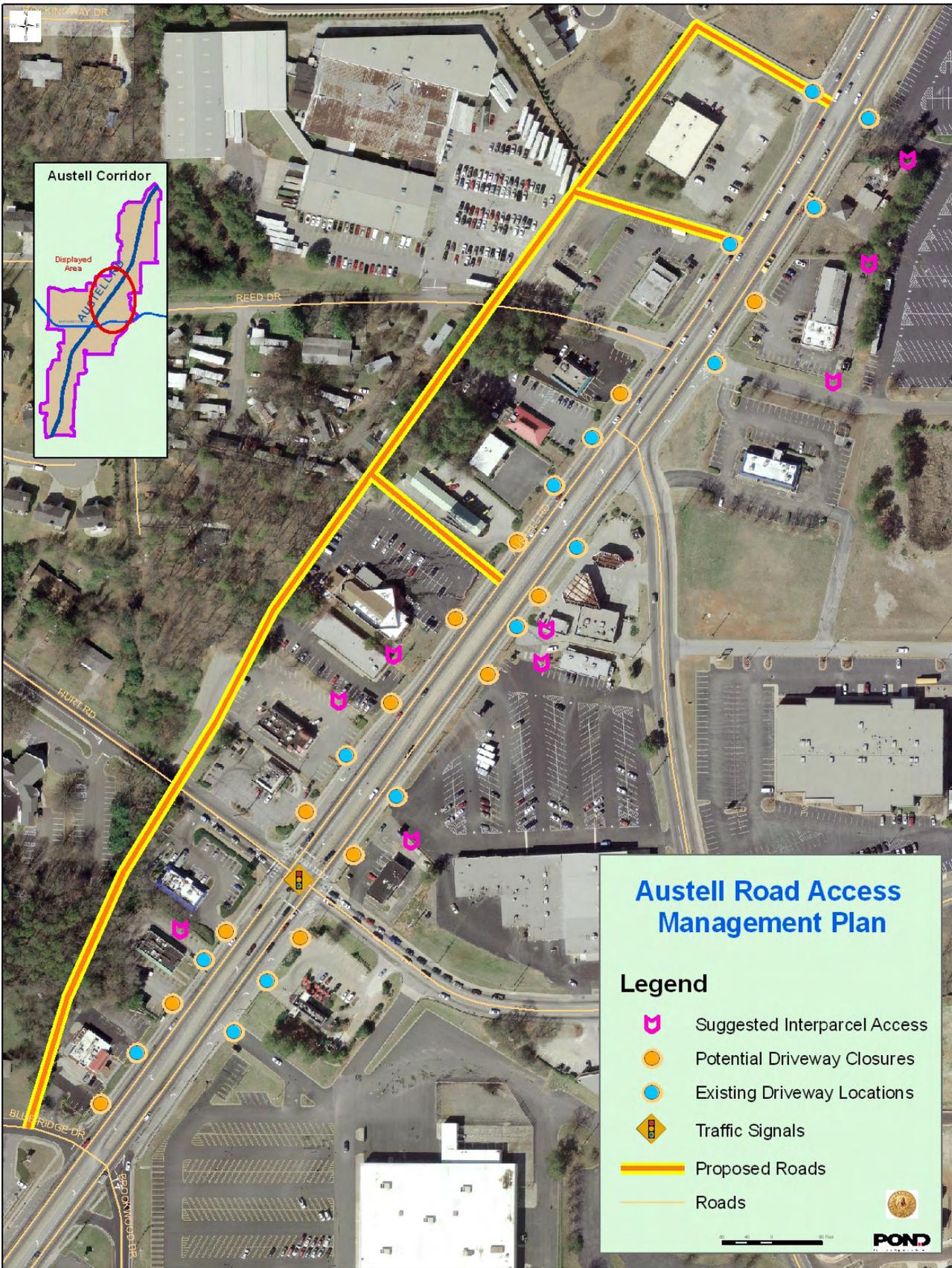


FIGURE 7-10 Map for Providing Zoning Recommendations for Interparcel Connectivity

Appendix A

Meetings & Interviews

List of Meetings and Interviews
Austell Road Access Management Plan

Type of Meeting	Attendees	Date	Reason for Meeting
Kick-off meeting	Project Team	12/11/2008	To startup the project
Interview	Commissioner Woody Thompson	1/22/2009	To interview the Commissioner about goals and expectations
Transportation meeting	Cobb County DOT: Joe Fletcher, Brook Martin, Chris Pruitt	2/2/2009	To meet with the DOT staff to discuss the goals of the project
Stakeholder meeting	Stakeholders	2/5/2009	To present and discuss the goals for the project with the stakeholders
Interview	Rob Hosack, Director of Community Development	2/9/2009	To interview the Planning Director at Cobb to discuss the goals of the project
Public meeting	General Public	2/17/2009	To present the project to the public
Project Management	Project Team	3/5/2009	To discuss the direction of the project
ARC meeting	ARC staff, Cobb DOT staff	3/19/2009	To discuss the direction of the project and solicit ARC
Stakeholder meeting	Stakeholders	4/1/2009	To present and discuss the evolution of the project with the stakeholders
Public meeting	General Public	4/16/2009	To present the evolution of the project to the public
Project Management	Project Team	4/28/2009	To discuss the direction of the project
ARC meeting	ARC staff, Cobb DOT staff	5/1/2009	To present study recommendations
Stakeholder meeting	Stakeholders	5/7/2009	To present and discuss the evolution of the project with the stakeholders
DOT meeting	Cobb DOT	5/22/2009	To present the evolution of the project to the public
Commissioner meeting	Commissioners	6/2/2009	To present the potential recommendations to the Commissioner
Public meeting	General Public	6/30/2009	To present the study to the public
Board of Commissioners Work Session and Meeting	Board of Commissioners	7/28/2009	To present the study to the Board of Commissioners
Board of Planning Commissioners	Planning Commission	8/4/2009	To present the study to the Planning Commission



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MEETING MINUTES

Project : Austell Road Access Management Plan

Pond Project No. : 1090144

Meeting : Project Kickoff Meeting

Meeting Location : Cobb County - Department of Transportation

Meeting Date : Dec 11, 2008

Minutes prepared by : Daniel Studdard

Prepared on : December 12, 2008

Copies: File
Attendees

ATTENDEES:

Name	Company / Dept / Branch	Title	Phone	Fax or Email
Laraine Vance	Cobb DOT – Planning		770-528-1650	lvance@cobbcounty.org
Jason Gaines	Cobb DOT – Planning		770-528-1664	jason.gaines@cobbcounty.org
Brook Martin	Cobb DOT – Traffic Signals (Ops)		770-528-4065	brook.martin@cobbcounty.org
Jane Stricklin	Cobb DOT – Development Review		770-420-6664	jane.stricklin@cobbcounty.org
Nar Chaudhry	Cobb DOT – Engineering		770-528-1656	nar.chaudhry@cobbcounty.org
Terrilyn Hannah	Cobb Economic Development		770-528-1009	terrielyn.hannah@cobbcounty.org
Keehren Richards	Cobb Planning and Zoning		770-528-2199	keehren.richards@cobbcounty.org
Dan Cohen	Pond & Company – Planning		678-336-7740	cohend@pondco.com
Daniel Studdard	Pond & Company – Planning		678-336-7740	studdardd@pondco.com

PURPOSE OF MEETING:

A project kickoff meeting for the Austell Road Access Management Plan was held at the Cobb DOT office on December 11, 2008. The meeting began at 2:00 pm and was attended by the above listed. The following items were discussed.

Dan Cohen began by asking about a revision to the project schedule, as the original end date for the project from ARC was March 27, 2009. Laraine Vance stated that ARC had already extended the completion date until the end of May, 2009.

Dan Cohen gave an overview of the project and possible recommendations:

- This plan is one step in implementing the Austell Road LCI Study
- Potential recommendations – reduced curb cuts (i.e. Peachtree Boulevard in Chamblee, where each parcel only receives 1 curb cut unless it meets minimum frontage requirements), changes to median openings, intersection recommendations, additional local roadways, etc.

Dan Cohen asked if there are any other issues or roadblocks that Pond should be aware of. Laraine Vance stated that the county commissioner that represented the district which includes the study area was not re-elected and a new commissioner will be representing this district. Later it was added that this commissioner had previously been the

commissioner for the district for 8 years, had lost re-election and been out of office for 4 years, and had won the office again in the 2008 election. The commissioner also has a background in real estate and should be contacted regarding this plan.

Dan Cohen asked what type of public involvement was preferred for this plan. Laraine Vance said that the staff members who were a part of the kickoff meeting would be the stakeholder group and should be a part of any regular project meetings that take place. Separate meetings should be held for the public. County staff will provide a list of people who should be interviewed for the project, including the new commissioner and a representative from the local business association. She also said that Cobb County has a staff member that can create and manage a web page for the project.

Dan Cohen asked the meeting attendees what they wanted to see to make this a successful project.

- Jason Gaines – Would like to see GDOT be amenable to reducing curb cuts along the corridor
- Laraine Vance – Improvements in safety and circulation to spur redevelopment
- Brook Martin – Increase interparcel connectivity
- Jane Stricklin – Stated that there is a code amendment about interparcel access that will be coming up with the Cobb County commission soon
- Keehren Richards – Safety improvements, reduction in stop and go traffic and overall traffic congestion levels
- Terrilyn Hannah – Would like to be sure that developers are informed about any code amendments or changes in requirements so they aren't surprised

Dan Cohen asked if traffic impact studies are required for development that is not large enough to be a DRI. Jane Stricklin stated that there are no requirements for developments smaller than a DRI. She reviews proposed developments for Cobb DOT, and Dana Johnson reviews proposed developments for the land use and zoning department.

Dan Cohen asked about the level of public and business involvement in the study area.

- The Austell Business Association is active and meets regularly
- Residents were well engaged during the LCI Study process
 - Residents liked workshops/breakout groups
 - Some residents were afraid they would lose their homes due to the LCI Study or changes in the area the study caused
 - Residents want quality development and are scared of getting poorly designed development
 - Residents liked development in Smyrna such as Ivy Walk at Atlanta Road/Cumberland Parkway and West Village at Atlanta Road/I-285
 - Residents are open to pulling development to the street but generally don't want any development greater than 2 stories

Brook Martin stated that he was working with Iteris on a project focusing on traffic operations at 11 to 13 intersections in the Austell Road corridor. Nar Chaudhry added that he was working on a project that focused on 6 intersections in the corridor.

Dan Cohen asked if there was a preference for days/times to schedule public meetings. Staff consensus was to schedule public meetings on weeknights, not on Wednesdays. Tuesday or Thursday nights were generally the preferred nights for meetings. The Cobb County Commission meets the 1st Tuesday of each month and so that day should be avoided to prevent a conflict between the meetings.



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Keehren Richards stated that the County's comprehensive plan is updated annually. She is the project manager for the update and should be contacted for any information regarding the comprehensive plan.

**Austell Road Access Management Study
Kickoff Meeting Agenda – December 11, 2008**

1. Schedule
 - a. Revisions based on new start date
 - b. Extension from ARC
2. Expectations of outcomes
 - a. Review deliverables of scope
 - b. Any additional goals/issues?
3. Public Participation
 - a. Stakeholders Group (property owners/business community?)
 - b. Three public forums: Objectives for these meetings
 - c. Interviews
 - d. Website
4. Data needs from County – Pond will provide a list by Monday, December 15
 - a. Existing traffic studies and/or DRIs along the corridor (Task 1.2.4)
 - b. Land values (Task 2.1.1)
 - c. GIS data including zoning, parcel lines, ROW, etc. (Task 1.2.5)
 - d. Recent development activity (Task 1.2.5)
 - e. Final LCI Study (Document posted on ARC's website does not have the transportation project list)

Cobb County Austell Road Corridor Study
Commissioner Thompson Interview Questions/Answers
January 22, 2009

1. What can you tell me about Austell Road; what do you think the issues are in the corridor?

The E/W connector has absorbed upscale retailers from the area.

2. What positive or negative changes have you seen along the corridor?

Mulkey Road has gotten busier like the Connector; Lipson Drive and Hospital Drive, too.

3. What would you like to get out of this study?

A nice landscaped median would be great.

4. What is your vision for what the corridor could be?

A good overlay district.

5. What top 3 – 5 changes are needed to achieve this?

More homeownership is needed; condo's not apartments. Mixed use development with all types of uses is okay; tax incentives for older buildings.

6. What impedes that vision from occurring?

Not sure.

7. Who are the key community players?; business leaders, etc.

David Hudson and Terry Johnson

8. Are there specific nodes along the corridor that you consider appropriate for redevelopment?

The old Target site needs to be redeveloped.

9. Are there specific locations where you think traffic congestion or safety is particularly problematic?

Crossing the street by the hospital.

10. What role do you see yourself playing to implement improvements in the corridor?

Being a good listener; trying to bring something like the YMCA as we did where the Cub Foods used to be or West Park where the old Kroger stood. .

11. What different/additional role would your office or the Board of Commissioners be willing to play?

I need to think about that.

12. Do you have any other comments about the corridor?

No



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MEETING MINUTES

Project : Austell Road Access Management Plan

Pond Project No. : 1090144

Meeting : Transportation Meeting

Meeting Location : Cobb County - Department of Transportation

Meeting Date : Feb 2, 2009

Minutes prepared by : Daniel Studdard

Prepared on : February 3, 2009

Copies: File
Attendees

ATTENDEES:

Name	Company / Dept / Branch	Title	Phone	Fax or Email
Joe Fletcher	Cobb DOT – Traffic Signals (Ops)	Systems Manager	770-528-2496	Joe.fletcher@cobbcounty.org
Brook Martin	Cobb DOT – Traffic Signals (Ops)		770-528-4065	brook.martin@cobbcounty.org
Chris Pruitt	Cobb DOT – Traffic Operations		770-528-1670	chris.pruitt@cobbcounty.org
Dan Cohen	Pond & Company – Planning		678-336-7740	cohend@pondco.com
Daniel Studdard	Pond & Company – Planning		678-336-7740	studdardd@pondco.com

PURPOSE OF MEETING:

A transportation meeting for the Austell Road Access Management Plan was held at the Cobb DOT office on February 2, 2009. The meeting began at 11:00 am and was attended by the above listed. The following items were discussed.

Dan Cohen began by giving some background about the project. He stated that the Austell Road LCI Corridor Study was completed in July 2007. One of the recommendations from the LCI study was to conduct an Access Management Study to look at non-capacity improvements to the corridor in greater detail.

Dan Cohen then asked the meeting attendees what the corridor's most important issues are. Responses include the following:

- Joe Fletcher stated that peak hour traffic congestion is the biggest problem in the corridor. Off-peak traffic congestion can be problematic at times but is not as consistently problematic as peak hour traffic.
- Traffic signals are typically timed well throughout the County, including along Austell Road. Therefore, no significant improvements can be made by adjusting the traffic signal timing along the corridor. Traffic congestion is primarily caused by too much traffic volume without enough capacity to handle it.
- The location with the most significant traffic congestion problem is the intersection of Austell Road and the East/West Connector.
 - The timing of the traffic signal at this intersection has been adjusted recently and no additional improvements can be made here based on the signal timing.
 - There is a planned project to add more turn lanes at this intersection.

- Expanding the East/West Connector to a 6-lane roadway would help to address congestion problems at this intersection.
- The intersection may need to be grade separated to handle long-term traffic volume growth.
- A continuous flow intersection is another possible solution for this intersection
- There is a project at the intersection with Pat Mell Road, (north of the study area), that is under construction and will improve safety at the intersection.

Daniel Studdard presented a copy of the grid network for the area near Hurt Road, Floyd Road, and the WellStar Cobb Hospital that was recommended in the Austell Road Corridor LCI Study. The meeting attendees generally were supportive of creating a grid network of some type in this area.

- Brook Martin stated that reliever roads have been successful in other parts of the county and are a good idea at this location as well.
- Daniel Studdard pointed out that under the proposed street grid network, Hurt Road would no longer pass directly through the area. The street grid would shift eastbound traffic on Hurt Road onto Floyd Road after crossing Austell Road, where the traffic would travel southeast to the East/West Connector and beyond the study area. A new left turn movement would be created for eastbound traffic on Hurt Road to continue traveling east on Hurt Road. Westbound traffic on Hurt Road would face the opposite problem as a new right turn movement would be needed for this traffic to continue west on Hurt Road. Westbound through traffic would be shifted south onto Brookwood Drive.
- Joe Fletcher and Brook Martin agreed that Hurt Road carries a significant amount of traffic and acts as a reliever to the East-West Connector. Implementing the recommended street grid therefore might create new problems along Hurt Road.
- The meeting attendees agreed that this was an area that needed further study from a traffic perspective due to the street grid recommendations.

Daniel Studdard suggested upgrades at the crosswalk on Austell Road at the unsignalized intersection with Evergreen Drive, near South Cobb High School. The crosswalk upgrades proposed would be similar to the crosswalks on Buford Highway that are at unsignalized intersections. These include a pedestrian refuge island in the middle of the roadway, improved lighting and signage, and flashing caution lights that are activated by the pedestrian.

- Joe Fletcher was not in favor of these types of changes at the unsignalized crosswalk. He stated that they are ineffective at stopping traffic and can increase crashes due to the implementation of an unnecessary traffic control device.
- A crossing guard also works at this location at the start and end of each school day to insure the safety of the students using the crosswalk.

Dan Cohen asked if there were any other issues that had come up along the corridor. Responses included the following.

- A visually impaired resident lives near the intersection of Austell Road and Mulkey Road. Audible pedestrian signals have been added at this intersection to better accommodate this resident.
- Construction of a new roadway connecting Mulkey Road to the East/West Connector, located west of WellStar Cobb Hospital, has been completed.
- One fatal accident with a pedestrian has taken place along the corridor at the intersection with Anderson Mill Road.
- Gaps in the sidewalk along the corridor need to be identified and addressed.

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- The north side of the corridor is having landscaping installed. It is not clear if similar plans exist for the south side of the corridor. However, the Austell Road Corridor LCI Study does recommend a landscaped median and streetscapes.
- Bus stops along the roadway can be problematic as some stops do not have sidewalks adjacent to them to serve the transit users. Additionally, some pedestrians create safety problems by crossing mid-block to access the bus stops.
- The location of the GRTA Xpress Bus Park and Ride lot is problematic because the lot was not designed to accommodate vehicles the size of these buses.



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MEETING MINUTES

Project : Austell Road Access Management Plan

Pond Project No. : 1090144

Meeting : Stakeholders Meeting

Meeting Location : South Cobb Government Service Center at Austell Rd.

Meeting Date : Feb 5, 2009

Minutes prepared by : Diana Estrada

Copies: File

Prepared on : February 6, 2009

ATTENDEES:

Name	Company / Dept / Branch	Title	Phone	Fax or Email
Woody Thompson	Board of Commissioners			
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PURPOSE OF MEETING:

A Stakeholders meeting for the Austell Road Access Management Plan was held at the South Cobb Government Service Center office on February 5, 2009. The meeting began at 2:30pm and was attended by the above listed. The following items were discussed.

Laraine Vance made a short introduction and thanked the participants for coming. Then, she asked everyone to introduce themselves with name and company/agency. Next, she turned the presentation to Dan Cohen. Dan Cohen began by giving some background about the project. He stated that the Austell Road LCI Corridor Study was completed in July 2007. One of the recommendations from the LCI study was to conduct an Access Management Study to look at non-capacity improvements to the corridor in greater detail. (See Attachment A for the Meeting Agenda (document "Austell Road Stakeholders Meeting Agenda 2-5-09.doc").

The presentation of the meeting was focused on the hand out given to the participants. Please refer to the document called "Austell Road Stakeholders Meeting Handouts 2-5-09.doc" (Attachment B). He asked the participants to take the goals mentioned in this document and see if they wanted to enhance them and let him know.

Dan Cohen presented the Introduction, Study Purpose, Public Participation Plan, and Land Use and Zoning section of the agenda. Daniel Studdard presented the Transportation and Transportation Project list sections of the agenda.

After the presentation, Dan Cohen opened the meeting for discussion about Issues and Opportunities from Stakeholders. Comments and issues include the following:

- Some people expressed concern about the continuity of signage.
- Traffic safety for pedestrian and vehicles is one of the most important issues for this study. The participants would like to let residents walk more. However, they think that outside temperature is a factor to prevent pedestrian flow in the corridor.
- Mark Haney mentioned the need to create more corridors to get in and out of the hospital area without going through Austell Rd. The rush hour for the hospital impacts a bigger area around the Hospital.
- It was mentioned that some drivers cut through neighborhoods at 45 mph because of the lack of different corridors (Hurt Rd was mentioned).
- Residents believe that the majority of the drivers that commit traffic violations are not residents of the area. They live in other counties.
- One issue mentioned is the fact that the Party City's and the Lowe's shopping centers are not connected and the traffic of vehicles entering in and out of Austell Rd and East West Connector is very high.
- The stakeholders think that if the former Target store area is going to be redeveloped, a back entrance could alleviate the traffic on Austell Road because it would allow residents to access the new redeveloped area without getting to Austell Rd.
- Some people think that CCT needs to be involved with pedestrian crossing because some bus stops do not have a signal and people jaywalk to get in the bus.
- Some people mentioned that they would like to see better streetscapes.
- A mini-shuttle was mentioned as an option to alleviate the traffic on Austell Rd.
- The section of Austell Rd between Callaway Road and Milford Church Road is very slow and some analysis is needed based on some participants' comments.
- Some people suggested prohibiting the left turns from Hicks Road to Austell Road southbound. Additional analysis was proposed at this intersection. (This intersection lies outside the project study area.)
- Some people expressed concern about the Austell Road and Floyd Road intersection because people cross in all directions and there is not a traffic signal there.
- A more in-depth study was suggested for the gaps on sidewalks along the corridor.

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- Nar Chaudhry mentioned a long list of projects that were either under construction or soon would be. Daniel will get back to him and get this list of projects.
- There is a concern on the Silver Comet Trail because the elevation of the trail in relationship with Austell Rd is 20 feet below. This configuration creates a safety issue because robberies have taken place on the trail.
- Some people mentioned that long-stay facilities, medical offices were proposed around Wal-Mart but they were concerned about how to redevelop this area with the market downturn. There are many empty places that could be used for medical ancillary services to revitalize the area.
- The Commissioner mentioned that new ordinances were being developed for the area to be applied.
- Some people suggested using the same list of organizations and people involved with the previous LCI study. Laraine Vance has this list.
- Some people mentioned that one objective of the study is to create a sense of community (maybe get YMCA in the area). They would like to get people out of their cars and have more activities for families and children.

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**Stakeholders Meeting Agenda
February 5, 2009 at 2:00PM**

- 1. Introductions – 10 minutes**
- 2. Study Purpose – 15 minutes**
- 3. Public Participation Plan – 10 minutes**
 - a. Interviews
 - b. Stakeholder Group Meetings
 - c. Three Public Meetings
 - d. Presentation to the Cobb County Board of Commissioners near project completion
 - e. Website - <http://dot.cobbcountyga.gov/AustellRoadLCI/index.htm>
- 4. Review of Existing Conditions – 20 minutes**
 - a. Land Use and Zoning
 - b. Transportation
 - c. Transportation Project List
- 5. Issues and Opportunities from Stakeholders – 15 minutes**
- 6. Next Steps/Meeting Dates – 10 minutes**
 - a. First public meeting is Tuesday, February 17, 2009 from 6:00-8:00 PM at South Cobb Government Center, 4700 Austell Road, Austell, GA 30106
 - b. Analyze existing conditions and public input to develop preliminary recommendations for the corridor
- 7. Additional Comments/Questions – 10 minutes**



APPENDIX B

Study Goals

- Engage all stakeholders in the planning process and encourage partnerships between the public and private sectors in both planning and implementation.
- Link land use and transportation to improve mobility and economic efficiency in the corridor.
- Identify multi-modal transportation enhancements to balance the transportation system.
- Arrest economic decline and encourage redevelopment of vacant and underutilized commercial centers.
- Encourage appropriate infill opportunities.
- Increase the diversity of housing and support housing choices for current and future residents.
- Improve land use balance and transportation system efficiency in the corridor by creating vibrant, mixed-use development.
- Establish a sense of place that will instill neighborhood pride and ownership in the corridor.

Issues and Opportunities

- Severe traffic congestion – Due to commuting patterns, the roadway’s intersection with the East-West Connector, the presence of several large retail centers, and the location of WellStar Cobb Hospital, the corridor experiences high levels of traffic congestion and delay during morning and evening rush hours.
- Traffic safety – The corridor is a challenging one for both autos and pedestrians. The intersection of Austell Road and East-West Connector has the highest accident rate in the state of Georgia.
- Economic decline – As the corridor’s importance as a transportation route has increased, the vibrancy of many of the older strip centers along it has decreased. Many stores have closed or relocated and some properties have a dilapidated look.
- Lack of community identity – This part of Cobb County once had an identity linked to the history of Milford community, but most of that historic image has been lost to commercial sprawl – large, unattractive signs; featureless parking lots; vacant storefronts; neglected maintenance of rights-of-way; a barren concrete median; overhead powerlines; and chain-link-fenced detention ponds in front yards.
- Stable residential neighborhoods – In contrast to the run-down appearance of many of the retail uses along Austell Road, the residential areas located just behind are, for the most part, strong, well-maintained neighborhoods. Most residential uses in the corridor are older, mature, low-density single family neighborhoods. Additionally, due to proximity to the hospital, a number of residential developments in the corridor cater to senior citizens, such as the Presbyterian Village Retirement Community.
- Community institutions – WellStar Hospital is in the center of the study area with 347 beds and 2,264 employees. The South Cobb Government Center is located in the southern portion of the corridor. In addition, there are three public schools – Sanders Primary and Intermediate Schools, and South Cobb High School – and several churches.
- The Silver Comet Trail – This is a multi-use trail of regional proportions, stretching from Smyrna to Alabama’s Chief Ladiga Trail. It passes through the southern end of the study area; however, there is currently no access to this recreational amenity provided in the Austell Road Corridor.
- Development opportunities – There are several well-placed tracts of vacant land, a number of aging commercial centers, and other underutilized tracts (such as the two mobile home parks) that should provide ample opportunities for development and redevelopment in this corridor.



Land Use and Zoning

The corridor does not have a consistent zoning pattern. It generally consists of Office + Institutional and General Commercial. These two zoning designations operate to keep the corridor at a fairly consistent low density with standard screening techniques.

Most of the major intersections have CRC and PSC designations--Community Retail Commercial district and the Planned Shopping Center are two designations that are repeated throughout the corridor. Their intents state they want to reduce congestion, by "being a one-stop shopping destination." However, they both allow a number of permitted uses that are not particularly pedestrian friendly or consistent in theme (i.e. carwashes, drive in fast food, golf courses) along with wide setbacks and large minimum lot size requirements (20,000 sq ft). Sidewalk and landscaping requirements are minimal. These districts appear mainly geared for building convention centers and malls.

Interspersed throughout the corridor are Neighborhood Retail Commercial and Neighborhood Shopping districts, which seem only to differ from PSC and CRC through allowable uses. These districts seem focused on chain restaurants and grocery stores. They want to focus on "nodal growth" and "stepping down from more intense urban uses" but they have the same setbacks, minimum lot size, and frontage requirements as the PSC and CRC.

Residential zoning districts range from compact single family detached to several attached designations (from 6 to 12). Some pedestrian friendly districts such as Planned Residential Districts exist along the corridor, but do not allow mixed use development.

At the north and southern end of the corridor there are some parcels zoned Heavy Industrial and Light Industrial, these could be problematic with trucks entering and leaving Austell Road and highlights the need for strong transition regulations for the corridor.



Transportation Existing Conditions

Existing Intersection Level of Service
From the Austell Road Corridor LCI Study

Intersection	AM Peak Hour		PM Peak Hour	
	LOS	Delay (sec)	LOS	Delay (sec)
Austell Rd @ Callaway Rd	C	33.7	D	42.8
Austell Rd @ Milford Church Rd.	F	83.2	E	67.6
Austell Rd @ Pair Rd.	C	23.0	B	18.5
Austell Rd @ Amy Lane.	B	19.8	B	11.4
Austell Rd @ Hurt Rd.	E	58.2	E	64.2
Austell Rd @ Mulkey Rd.	B	17.2	C	32.0
Austell Rd @ Hospital So.Dr.	A	7.8	C	30.5
Austell Rd @ East West Conn.	F	135.9	F	110.1
Austell Rd @ E W Commons	A	4.0	B	18.2
Austell Rd @ Anderson Mill Rd.	D	49.4	D	52.7
Austell Rd @ Seays Rd.	A	4.9	A	3.9
Austell Rd @ Clay Rd.	C	23.0	D	53.1
Austell Rd @ Austell Plaza	A	2.7	A	2.9
Austell Rd @ Perkerson Mill Rd.	C	29.2	B	12.2
East West Conn. @ Tramore Pk	A	2.3	A	7.9
East West Conn. @ Champion Dr.	A	8.9	B	19.7
East West Conn. @ IHOP	A	3.9	B	14.9
East West Conn. @ Lowes	B	11.2	B	11.5
East West Conn. @ Brookwood Dr.	B	16.6	C	30.2
East West Conn. @ Floyd Rd.	D	41.5	D	48.5
East West Conn. @ Mulkey Rd.	A	4.6	A	6.0
East West Conn. @ Hurt Rd.	B	15.7	B	14.5



Transportation Existing Conditions

Roadways – PM Peak Hour Roadway Level of Service (LOS) based on Atlanta Regional Commission's (ARC) Regional Travel Demand Model

- Austell Road operates at LOS D along most segments, however, segments north of Callaway Road and between Seayes Road and Clay Road operate at LOS E
- East-West Connector operates at LOS E west of Austell Road and at LOS D or better east of Austell Road
- Hurt Road operates at LOS D throughout much of its length; the segment between Floyd Road and Brookwood Drive operates at LOS F and is the most congested roadway segment in the study area.

Roadways – High crash locations along Austell Road

- East-West Connector – Between 2002 and 2005, a total of 517 crashes were reported at this location, which ranks it among one of the highest crash locations statewide.)
- Milford Church Road
- Pair Road
- Amy Lane
- Floyd Road
- Blue Ridge Drive
- Hospital South Drive
- Anderson Mill Road
- Clay Road



Transit Service

- Cobb Community Transit (CCT) Route 30 runs from the MARTA Holmes Station to the Marietta Transfer Center via Austell Road, the East-West Connector, and Floyd Road.
 - Ridership along this transit route is one of the highest of all operated by CCT. In 2006, ridership averaged over 64,000 per month for a total of 777,392.
 - Peak hour headways of 15 minutes; Off-peak headways up to 1 hour
- CCT Route 70 passes through study area on East West Connector and connects Cobb County Health Center to Cumberland Mall
- Georgia Regional Transportation Agency (GRTA) Xpress Route 475 serves the study area, connecting the Highest Praise Church (Floyd at Hurt Rd.) Park & Ride, Wellstar Cobb Hospital, Six Flags Park & Ride, and Downtown Atlanta.

Bicycle/Pedestrian Infrastructure

- Austell Road from East West Connector to Callaway Road has sidewalks on both sides of the roadway
- Some segments of the sidewalk on Austell Road between Pair Road and Callaway Road are in disrepair and are less than the required five-foot wide standard.
- Austell Road south of the East West Connector has many segments that only have sidewalk on one side of the roadway.
- The East West Connector generally has sidewalks near Austell Road, but gaps in the sidewalks exist
- The Silver Comet Trail crosses under Austell Road south of Drennon Avenue. No access to the trail currently exists, and the nearest access point is at Floyd Road. Austell Road Corridor LCI Study recommends access adjacent to Austell Road.



The following is a list of previously planned projects shown on the Austell Road Access Management Plan Transportation Map. This data is from the Atlanta Regional Commission's (ARC) Regional Transportation Plan (RTP) and the Cobb County SPLOST Project List.

- **ARC CO-326** Austell Road Intersection Improvements from Clay Road to Sandtown Road
 - This project will improve a series of intersections along Austell Road. The intersections to be improved are: Sandtown Road, Windy Hill Road, Hicks Road, Callaway Road, Milford Church Road, Floyd Road, Hurt Road, Hospital South Road, and Clay Road.
 - Project Type: Roadway Operational Upgrades
 - Completion Date: 2009
- **ARC CO-356** Austell Road at East-West Connector
 - The intersection improvement project at Austell Road and East-West Connector consists of improving operations through the intersection, helping to ease the congestion. As a result, dual left turn lanes will be constructed on both approaching streets. Also, the eastbound and westbound right turn lane storage capacity will be extended at the intersection; this will allow more lane space availability for the through vehicles.
 - Project Type: Roadway Operational Upgrades
 - Completion Date: 2010
- **SPLOST D3030** Austell Rd at East West Connector
 - Add 3rd Thru Lane and Dual Lefts on East West Connector
 - Project Type: Roadway Operational Upgrades
 - Project Phase: Construction Contract, Out to Bid in October 2008
- **ARC CO-342/SPLOST D4240** Windy Hill Extension / Macland Road Connector
 - This project involves the construction of a new four-lane roadway between the intersection of SR 360 (Powder Springs Road) and Macland Road and the intersection of Austell Road and Windy Hill Road.
 - Project Type: General Purpose Roadway Capacity
 - Completion Date: 2011
- **ARC CO-384A** Mulkey Road Extension - West from near Cliff Way to East-West Connector
 - This project involves constructing a new two-lane roadway from near the intersection of Mulkey Road and Cliff Place to the East-West Connector.
 - Project Type: General Purpose Roadway Capacity
 - Completion Date: 2013
- **ARC CO-384B** Mulkey Road Extension - East from Brookwood Road to Floyd Road
 - This project involves constructing a new two-lane roadway from the intersection of Mulkey Road and Brookwood Road to Floyd Road.
 - Project Type: General Purpose Roadway Capacity
 - Completion Date: 2012
- **ARC CO-385** Mulkey Road from just west of Cherokee Trails Drive to Austell Road
 - This project involves making safety and geometric improvements to the existing alignment of Mulkey Road between Cherokee Trails Drive and Austell Road.
 - Project Type: Roadway Operational Upgrades
 - Completion Date: 2013
- **SPLOST D4140** Mulkey Road Connector (Recently Completed SPLOST Project)
 - Mulkey Road to East West Connector New 2 Lane Roadway
 - Project Type: General Purpose Roadway Capacity
 - Project Phase: Construction Complete, Out to Bid February 2007
- **ARC CO-340** Callaway Road from Austell Road to SR 360 (Powder Springs Road)
 - This project provides for roadway operational upgrades on SR 5 to improve mobility and safety.
 - Project Type: Roadway Operational Upgrades
 - Completion Date: 2011



- **SPLOST D3040** Austell Road @ Pat Mell Road
 - Realign Pat Mell Rd to line up with apartment entrance
 - Project Type: Roadway Operational Upgrades
 - Project Phase: Construction, Out to Bid in July 2008
- **SPLOST D3050** Austell Rd@Roberta Dr/Cochran Rd
 - Improve Alignment
 - Project Type: Roadway Operational Upgrades
 - Project Phase: Construction, Out to Bid October 2007
- **SPLOST D3190** East West Connector @ Hicks Road
 - Add Right-Turn Lanes Northbound and Southbound
 - Project Type: Roadway Operational Upgrades
 - Project Phase: Construction, Out to Bid December 2007
- **SPLOST D7150** Austell Road
 - Seayes Road to Anderson Mill Road, E. Side
 - Sidewalk Batch #3
 - Project Type: Bike/Ped
 - Project Phase: Final Design, Out to Bid September 2008
- **SPLOST D7210** Clay Road
 - Austell Road to Floyd Road
 - Project Type: Bike/Ped
 - Project Phase: Engineering RFP, Engineering began November 2008
- **SPLOST D8210** South Cobb High School
 - Sidewalks on Clay Road
 - Project Type: Bike/Ped
 - Project Phase: Construction Complete, Out to Bid January 2008

Austell Road Access Management Plan



Sign In Sheet

	Name	Business	E-mail Address
1	Woody Thompson	BOC	
2	Jason Gaines	Cobb DOT	
3	Laraine Vance	Cobb DOT	
4	Chysses Mitchell	GDOT	cmitchell@dot.ga.gov
5	Brook Martin	COBB DOT	brook.martin@cobbcounty.org
6	David Stewart	GA Power	dmstewart@southernco.com
7	Bruce Brown	Resident	brucebrown@comcast.net
8	Rebecca Jenkins	Sanders Primary	rebecca.l.jenkins@cobbk12.org
9	Pamela Dingle	Sanders Intermediate	pamela.dingle@cobbk12.org
10	Mark Haney	Wellstar	mark.haney@wellstar.org
11	Roger Henze	GRTA/Cobb TAB	rhenze@grta.org
12	NKeschue Brundidge	Boys & Girls Club	nbrundidge@bjcma.org
13	NAR CHAUDHRY	Cobb DOT	nar.chaudhry@cobbcounty.org
14	Ju Chouweh	Resident	jc-hiddencreek@yahoo.com
15	KEATHEN RICHARDS	COBB PLANNING	keethen.richards@cobb-co.com
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Cobb County Austell Road Corridor Study
Rob Hosack Interview Questions/Answers
February 9, 2009

1. What positive or negative changes have you seen along the corridor in the past 3 years?

Much of the development has moved off the corridor as the E/W connector has become more of a thoroughfare. A lot of retail is in decline. The hospital is the major employer. More and more SFR's are going commercial.

2. What would you like to get out of this study? Were you satisfied with the recommendations from the initial study?

I was very satisfied with the results of the first effort; the overlay ordinance was a good effort and it had more teeth in it at one point in time. The Development Standards Committee (DSC) worked through this with us and the Council for Quality Growth exerted influence in removing any requirements for inter-parcel access. The arguments made included changes in elevation would make this difficult to mandate, as well as the need to locate, perhaps, retention ponds in areas where the connections might be made. I would appreciate if this can be re-examined and maybe the corridor can be a model for other parts of the county.

3. What is your vision for what the corridor could be?

More mixed use development, especially at the nodes/major intersections. Better access can hopefully lead to redevelopment in the area.

4. Have any changes been made to the county's Redevelopment Overlay ordinance that encourages mixed use, i.e, extending the boundaries of the overlay?

Not really, I think extending the boundaries in the corridor might be an idea worth looking into.

5. Are the urban design standards being applied? Why/why not?

Loosely.

6. What are the catalytic sites along the corridor?

The old Target site; Fred's market area I think the expanding the area's focus on ancillary medical facilities is a good idea. See what we have done around Kennestone Hospital and look at canton Road.

7. Are there specific nodes along the corridor that you consider appropriate for redevelopment?—aside from the old Target site and Fred’s shopping plaza.

You have it covered.

8. What do you think about inter-parcel access regulations?

See #2 above.

9. How is the coordination between CCDOT and your department?

We work closely with CCDOT—they review all re-zonings in a timely fashion.

10. What different/additional role(s) would your offices be willing to play?

We can assist with follow-up with several members of the DSC.

11. What form could public/private partnerships take?

Maybe a CID

12. Do you have any other comments about the corridor?

Its time is coming.



Meeting Objectives

The main objectives of this first public information meeting were to:

- Inform the public about the study
- Provide an opportunity for the public to react and provide input

Attendance & Participation

Meeting attendees were asked to sign in upon entering the meeting room. A total of 33 people signed in.

Meeting Format

The meeting began with a 30 minute open house period. Three stations were available which provided information about the project study area with staff positioned at each station to answer questions. Attendees were encouraged to review the display boards, ask questions of staff, and to provide input by writing their comment on an index card or by writing their comment on the flip charts positioned at each station. A brief presentation was made at 6:30 followed by a question and answer period. The open house format resumed after all questions and comments were addressed.

Summary of Input

Attendees were given the opportunity to provide input during the question and answer session; by writing comments on index cards; or by writing comments on flipcharts at the display stations.

The following questions/comments were raised during the question and answer session:

- Regarding Hwy 5 in Powder Springs, will this highway be moved or elevated?
- Bus shelters should not include ads; they make them appear junky and unsafe because the view through them is obstructed. More people may use the bus if shelters were more attractive.
- The stretch on Austell Road between Amy Lane and Milford Church Road has power lines that are unsightly and appear to be falling.
- Why does this project end before the Douglas County line?
- Is there any coordination between the County and the City of Austell on this project?
- Will meeting displays be available on line?
- Is Austell Road north slated to be re-paved or beautified? There are potholes in this area between Hurt and Milford Church Roads.
- Will the redevelopment include commercial properties/businesses and/or the trailer park along the road?
- Are there any plans for school buses to stop picking up children on Austell Road?
- Please consider the residential areas that will be impacted by the traffic that is re-routed to reduce congestion on Austell Road.
- Signal timing along the corridor needs to be re-evaluated
- Can left and right turns be coordinated based on volume in predominant flow directions?
- Will the daycare being built at Amy and Austell Roads have access onto Austell Road?
- What are the plans for the intersection of Clay and Austell Roads?
- At the last meeting, houses on Doby Lane were zoned differently. Why was the whole street not re-zoned to the same classification?
- A right turn is needed from Seayes onto Austell Road.
- Will the PowerPoint presentation be posted to the website?

The following questions/comments were written by the public on index cards and submitted at the conclusion of the meeting:

- Austell Road is congested enough without adding another for Silver Comet Trail.
- Consider some type of solar cell system for Silver Comet Trail tunnel underneath Austell Road
- Area south of Clay Road and Brookwood – dissatisfied with this area becoming commercial.



- You need to do something about:
 - Pedestrians at Pat Mell Road.
 - Bike trail from Silver Comet to Traymore park
 - Right turn lane for east Anderson Mill onto Austell Road
- Will both sides of Doby Lane be rezoned commercial? My address is 5086 Doby Lane. Whatever is built on east side of Doby will affect west side especially water run-off [John Greene 770-941-9117]
- Repave Austell Road north and beautify
- At stop lights for Austell and Parkway Station (Ivy Commons Apts) add left turn arrows on Austell Road sides of lights.
- Intersection of Austell at Floyd Rd is dangerous. It needs to be fixed and improved in some way. Also, Cobb Market Fair has some problems going left on Austell Road.
- Left turn at Austell at Pair is confusing
- On the land use and zoning map it shows 1947 Russton Drive as retail/commercial along with the west side of Poston Lane. Does this mean it is going commercial? bfb@yahoo.com or bfwnwga2121@yahoo.com
- Powder Springs Road was the old Highway 5. Should we move Hwy 5 again to relieve Austell Road?
- Anderson Mill and Austell Road – only a few cars get to turn right or left at a time. Sit a long time
- Hard to get out of Dolly's Restaurant onto Austell Road – also to turn left at the light on Austell Road to go back to Dolly's
- Getting on to or across Austell Road at Domino's Pizza and Burlington/Dollar General shopping area.
- From Amy Drive to Milford Church Road – tall, wood utility poles which appear ready to fall. Very ugly and degrade the longest straight stretch of Austell Road.
- For security and attractiveness, advertisements should not be allowed on bus stop enclosures. Makes them junky looking.
- Thank you for your presentation. Please continue to provide updates on your website.
- Home Depot – turn into emergency room and hospital.

Austell Road Access Management Plan



Sign In Sheet

	Name	Affiliation	E-mail Address
1	Jean Burgess	(neighbor)	jeanburgers3@gmail.com
2	B. Famb & Barbara J. Williams		bfwnwga2121@yahoo.com
3	Elliott Tully	Neighbor	
4	Marie McClowan		
5	Steve Campbell		
6	Marvin Sanders		
7	John J. Greene		
8	Ernie Keown		
9	Cheryl Rice		riceart2122@yahoo.com
10			
11	Ford Thigpen		
12	Norma Winberley		
13	M. F. Winberley		
14	Larry J. Poles		
15	Jane Conyers		
16	Jane Conyers		
17	Mary Bogal		
18	Jim B. Bogal		
19	Whel Reesmith		reesmith@bellsouth.net
20	Don	"	"
21	Andrew Heath		aheath@dot.ga.gov
22	Jill Chauvelon		
23	Deid Wilkerson		wilke2000@aol.com
24	Prisilla Wright		wrightrealty@bellsouth.net
25	KEITHREN RICHARDS		Keithren.Richards@co.cobb.org
26	Leim Powell		
27	Woody Thompson	BOC	
28	Bob Hovey		
29			
30			

Austell Road Access Management Plan



Sign In Sheet

	Name	Affiliation	E-mail Address
1	HANES JAMESON		chjameson@comcast.net
2	Ulysses Mitchell		umitchell@obt.ga.gov
3	Mary M. Dickens		
4	Eugene F. Dickens		
5	Clarice Barber-Page	SWAN	claricebp@bellsouth.net
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Austell Road Access Management Plan

Public Meeting February 17, 2009

Laraine Vance: Cobb DOT Project Manager
Dan Cohen: Pond & Company Planning Director

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Access Management

What is Access Management?

- The systematic control of the location, spacing, design, and operation of driveways, median openings, interchanges, and street connections to a roadway
 - From the Transportation Research Board's Access Management Manual

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Access Management

Why Manage Access?

- Improve safety
- Improve traffic flow and reduce motorist delay without adding traffic lanes
 - Reduce curb cuts
 - Improve interparcel access
 - Create alternate roadways
- Benefit non-vehicular travel modes
 - Bicyclists
 - Pedestrians
 - Transit Users

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Access Management: The Perception

- Customers will not be able to find or reach my business
- My customers will complain
- My business sales will suffer
- Development will stagnate after access is managed
- Land values will decline
- Land will become un-developable

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Access Management: The Reality



- Reality is a lot more positive than perception in the case of access management impacts
- Customers like to drive on access managed roads
- Business sales are usually not impacted (except during construction)
- Land can still be developed (and is)
- Land values do not decline when access is managed right



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Study Goals



- Improve traffic safety and vehicular crash rates
- Shorten travel times and reduced travel costs
- Increase capacity of roadways
- Enhance value of private land development and improve access to property
- Improve overall aesthetics of the community
- Connect sidewalks and examine bicycle path feasibility



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Issues and Opportunities



- Examine Party City and Lowe's shopping center Connectivity
- Examine Ingress/Egress at Target and at other shopping centers
- Create more corridors to get in and out of Hospital area without using Austell Road
- Close Sidewalk gaps along corridor
- Create Better Streetscapes
- The Silver Comet Trail – There is currently no access provided from Austell Road
- Improve continuity of signage



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Redevelopment Overlay District



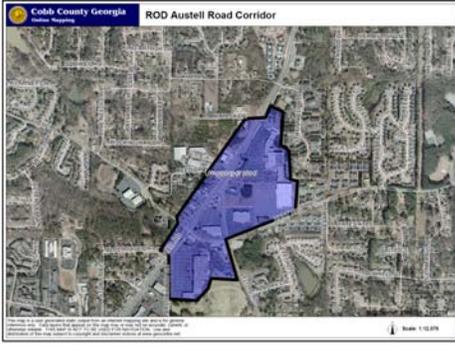
- Has potential to require all site plans to include a Multi-modal Access Plan
- Can enhance catalyst site that serves either as the focal point or the gateway for the ROD
- The site can be developed with interconnecting streets and sidewalks designed on a grid not larger than 600 feet on a side
- The development can be required to prepare a traffic study



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Redevelopment Overlay District



Traffic Congestion

- Austell Road generally has enough traffic capacity to handle current traffic volumes
- Traffic congestion is primarily caused by delays at intersections
- Based on Austell Road Corridor LCI Study, three intersections had a failing Level of Service (LOS) in 2007
 - East-West Connector
 - Hurt Road
 - Milford Church Road
- Projects are planned to improve traffic congestion at all three intersections

Proposed Grid System



Interparcel Access

- Identify existing access points
- Locate opportunities for new roadways and new access points
 - Barriers include existing structures and elevation changes
- Examine zoning code to determine feasibility of interparcel access



Cobb Wellstar Hospital



- Largest Employer in Study Area
- Mulkey Road Connector provides new access point
- Are other access improvements needed?
 - Roadway
 - Bicycle/pedestrian



Bike and Pedestrian Conditions



- Austell Road from East West Connector to Callaway Road has sidewalks on both sides of the roadway
- Some sidewalk segments between Pair Road and Callaway Road are in disrepair and are less than the required five-foot wide standard.
- Austell Road south of the East West Connector has segments that only have sidewalk on one side of the roadway.



Bike and Pedestrian Conditions



- The East West Connector generally has sidewalks near Austell Road, but gaps in the sidewalks exist
- Other major roadways typically have sidewalks on at least one side of the road but some gaps without sidewalks do exist



Silver Comet Trail



- Austell Road Corridor LCI Study recommends connection to trail from Austell Road
- Cobb County Comprehensive Transportation Plan includes project M4 to build connection to trail
- No further analysis necessary
 - Need for improved lighting at Austell Road bridge over Silver Comet Trail

Transit Service



- Transit Serving the Study Area
 - Cobb Community Transit (CCT) Route 30 and Route 70
 - Georgia Regional Transportation Agency (GRTA) Xpress Route 475
- CCT provides local bus service, GRTA operates express route to Downtown Atlanta
 - GRTA Park and Ride lot at Highest Praise Church (Floyd Road at Hurt Road)
- Concern regarding local bus stop locations






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Signage





Existing Sign on
Austell Road



From the MUTCD
(Manual on Uniform
Traffic Control Devices)



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Austell Road Access Management Plan



Questions?

Updates will be available on the project website at
<http://www.cobbdot.org/AustellRoadLCI/index.htm>



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MEETING MINUTES

Project : Austell Road Access Management Plan

Pond Project No. : 1090144

Meeting : Project Management Meeting

Meeting Location : Cobb County - Department of Transportation

Meeting Date : March 5, 2009

Minutes prepared by : Dan Cohen

Prepared on : March 9, 2009

Copies: File
Attendees

ATTENDEES:

Name	Company / Dept / Branch	Title	Phone	Fax or Email
Laraine Vance	Cobb DOT – Planning		770-528-1650	lvance@cobbcounty.org
Jason Gaines	Cobb DOT – Planning		770-528-1664	jason.gaines@cobbcounty.org
Brook Martin	Cobb DOT – Traffic Signals (Ops)		770-528-4065	brook.martin@cobbcounty.org
Jane Stricklin	Cobb DOT – Development Review		770-420-6664	jane.stricklin@cobbcounty.org
Nar Chaudhry	Cobb DOT – Engineering		770-528-1656	nar.chaudhry@cobbcounty.org
Terrilyn Hannah	Cobb Economic Development		770-528-1009	terrielyn.hannah@cobbcounty.org
Keehren Richards	Cobb Planning and Zoning		770-528-2199	keehren.richards@cobbcounty.org
Larry Stokes	Cobb DOT			larry.stokes@cobbcounty.org
Dan Cohen	Pond & Company – Planning		678-336-7740	cohend@pondco.com

PURPOSE OF MEETING:

A project management meeting for the Austell Road Access Management Plan was held at the Cobb DOT office on March 5, 2009. The meeting began at 3:00 pm and was attended by the above listed. The following items were discussed.

Dan Cohen spoke about Technical Memorandum on existing conditions and asked for comments from the project team by March 12, 2009. He reviewed tasks covered in the project schedule, and spent some time discussing the Public Meeting Feb. 17th as the South Cobb Government Center. Mr. Chaudry mentioned an updated project list which Mr. Gaines will retrieve.

Dan also spoke about several critical decisions that needed to be made regarding the study. The first one concerns a potential scope revision that would require a change in the number of intersection counts from a maximum of 4 to 7. This would allow Pond to count three unsignalized intersections so the traffic analysis would be enhanced, allowing for a better assessment of any median closures/redistributed traffic from the simulation model and their effect on the signalized intersections. The additional cost for this change in scope is between \$5,000 and \$6,000. Mr. Martin mentioned the DOT had counts for the signalized intersections which might be helpful. A subsequent conversation yielded the fact that these counts were dated, but could be of use for historical purposes



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Dan mentioned the need for accident data (3 years) to help with the assessment and Ms. Stricklin said it would be forthcoming.

Dan mentioned the sidewalk assessment that is part of the Technical Memorandum. He presented several ideas on ranking criteria. Ms. Vance mentioned the BOC had approved criteria from the SPLOST program Pond should use.

Dan mentioned the on-line survey and asked for comments. Ms. Vance mentioned a preamble to the survey was needed and that the format would need to be reviewed by the county web master. Sycamore Consulting will speak to this person. Additionally, the county would like the survey distributed at several public meetings. Mr. Stokes and Ms. Hannah had some ideas for meetings and Ms. Hannah will get Pond the information.

Dan asked if there are any other issues or roadblocks that Pond should be aware of. Ms. Hannah mentioned the county has a property tax abatement program she would forward to Pond. Ms. Richards said Pond needed to be mindful of requiring mandatory inter-parcel access. Laraine Vance asked if the next public meeting could be held at 5:30 on the 16th of April instead of 6:00 p.m. Ms. Vance offered a screen for the next meeting.

TO DO LIST:

- L. Vance to arrange meeting with ARC to discuss change in work scope
- Mr. Martin to get accident data and traffic counts
- Ms. Hannah to get public meeting information
- Mr. Cohen to revise survey and have Sycamore contact the webmaster
- Mr. Gaines to update corridor project list



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MEETING MINUTES

Project : Austell Road Access Management Plan

Pond Project No. : 1090144

Meeting : ARC Meeting

Meeting Location : ARC Offices

Meeting Date : March 19, 2009

Minutes prepared by : Dan Cohen

Copies:

Prepared on : March 20, 2009

ATTENDEES:

Name	Company / Dept / Branch	Title	Phone	Fax or Email
Laraine Vance	Cobb DOT			
Rob LeBeau	ARC			
Michael Kray	ARC			
Dan Cohen	Pond & Company – Planning			

PURPOSE OF MEETING:

A meeting for the Austell Road Access Management Plan was held at the ARC office on March 19, 2009. The following items were discussed:

- Dan discussed that peak hour traffic congestion is the biggest problem in the corridor. Off-peak traffic congestion can be problematic at times but is not as consistently problematic as peak hour traffic.
- Dan also mentioned that traffic signals are typically timed well throughout the County, including along Austell Road. Therefore, no significant improvements can be made by adjusting the traffic signal timing along the corridor. Traffic congestion seems to be caused primarily by too much traffic volume without enough capacity to handle it.
- The location with the most significant traffic congestion problem is the intersection of Austell Road and the East/West Connector.
- Dan solicited ARC's opinion as to breaking the corridor into study sections with the major focus being the commercial core.



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MEETING MINUTES

Project : Austell Road Access Management Plan
Pond Project No. : 1090144
Meeting : Stakeholders Meeting
Meeting Location : South Cobb Government Service Center at Austell Rd.

Meeting Date : April 1, 2009

Minutes prepared by : Diana Estrada
Prepared on : April 2, 2009

Copies: File

ATTENDEES:

Name	Company / Dept / Branch	Title	Phone	Fax or Email
Laraine Vance	Cobb DOT			
Joel Cape	Mableton Improvement			copej@hotmail.com
Bruce Brown	Resident			brucesbrown@comcast.net
Rebecca Jenkins	Sanders Primary			Rebecca1.jenkins@cobbk12.org
Roger Henze	GRTA/Cobb TAB			rhenze@grta.org
Nar Chaudhry	Cobb DOT			Nar.chaudhry@cobbcounty.org
Dan Cohen	Pond & Company – Planning		678-336-7740	cohend@pondco.com
Diana Estrada	Pond & Company – GIS		678-336-7740	estrada@pondco.com
Daniel Studdard	Pond & Company – Planning		678-336-7740	studdard@pondco.com

PURPOSE OF MEETING:

The second Stakeholders meeting for the Austell Road Access Management Plan was held at the South Cobb Government Service Center office on April 1, 2009. The meeting began at 2:30pm and was attended by the above listed. The following items were discussed.

Dan Cohen made a short introduction and thanked the participants for coming. He began by asking the participants to comment on the presentation to be shown because this presentation will be given to the public on April 16th. Then he gave the Power Point presentation. Please refer to the document called "Austell Road Stakeholders Meeting 4-1-09 Final.ppt" (see attachment A) for this presentation.

Dan Cohen presented the first part of the Power Point document and Daniel Studdard presented the second part starting at the "Crash Data" section. After the presentation, Dan Cohen opened the meeting for comments on the document to be presented to the public. Some of the comments are as follows:

- Nar Chaudhry explained some issues with the proposed design displayed as an example at the intersection of Floyd Rd and Austell Rd.
- It was mentioned by several people that one of the main challenges of the project is the trade-offs of giving/taking access in the corridor.



- Nar Chaudhry also mentioned that at the Paces Ferry Road and Atlanta Rd intersection, Cobb DOT closed one driveway out of three that the gas station had at that location.
- Laraine Vance mentioned that she was in a meeting recently and that the transit service in the area may increase. This will be considered by the Cobb County BOC on April 14th.
- Laraine Vance mentioned that she was recently contacted by someone who was considering buying the former BP gas station located on the northwest corner of the intersection of Austell Road and the East West Connector. This individual was interested in what impact the Austell Road Access Management Plan will have on that property.
- Bruce Brown asked if we were considering giving solutions to the cut through problem in some neighborhoods.
- Roger Henze asked if we were considering creating islands for pedestrians to cross at the middle of segments where some bus stops are located. Dan Cohen said that he has some examples of how this is handled in London.
- Dan Cohen also asked if someone knew about any specific locations of bus stops that was causing any issues. No locations were identified at this time.
- Everyone agreed that the presentation was very well prepared. Even though it had a lot of content, it did not seem like a complicated or long presentation.
- Some suggestions to the presentation were given and they are as follows:
 - Make the hard copy maps easier to read by creating more than three sections for the corridor.
 - Include the proposed roads in the hard copy maps.
 - Add in the presentation what and which projects are going on in the area by the Cobb DOT.
 - Add in the presentation that transit service will be increased in the area.
 - Create a hard copy map that shows the transit information.
 - Show more photos about good and bad examples in the corridor.
 - It was suggested to have a longer public meeting and to give two presentations – one presentation at the beginning of the meeting and one presentation at the end of the meeting.

Austell Road Access Management Plan



Sign In Sheet

	Name	Business	E-mail Address
1			
2	Joel Cope	Madison Improvement Co/Hos (MIC)	copej@hotmail.com
3	Rebecca Jenkins	Sanders Primary	rebecca2jenkins@cobb
4	Bruce Brown	Kingsland HOA	brucebrown@comcast.net
5	Roger Henze	GRTA	rhenze@grta.org
6	Laurie Vance	Cobb DOT	lvance@cobbcounty.org
7	NAR CHAUDHRY	Cobb DOT	nar.chaudhry@cobbcounty.org
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Austell Road Access Management Plan

Stakeholders Meeting April 1, 2009

Laraine Vance: Cobb DOT Project Manager
Dan Cohen: Pond & Company Planning Director

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Access Management

What is Access Management?

- The systematic control of the location, spacing, design, and operation of driveways, median openings, interchanges, and street connections to a roadway

Source: Access Management Manual – Transportation Research Board

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What is Access Management?

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What is Access Management?

- More access = less mobility
- Less access = more mobility

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Capacity is Higher in Better Managed Roads

Maximum Daily Traffic at Level of Service "D" on 4-Lane Road

* Source: FDOT and 1985 Highway Capacity Manual

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With Good Access Management

- Market reach
- Business sales
- Land value and use
- Aesthetics

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With Good Access Management



Increase in Average Speed	Increase in Market Area
0	NA
+10%	+23%
+20%	+56%
+30%	+122%

How is Access Management Accomplished?



- State and local policies, directives and guidelines
- Enforceable regulations, codes and guidelines
- Acquisition of access rights
- Land development regulations
- Development review and impact assessments
- Good geometric design criteria
- Understanding of access implications by business and property owners.

Public Involvement



Comments from first public meeting:

- Comments have been forwarded to Cobb DOT
- Many comments focused on specific problem areas, including the following intersections:
 - Brookwood Drive
 - Floyd Road
 - Marketfair Shopping Center
 - Amy Lane
- Silver Comet Trail
 - Concern that connection from Austell Road will disrupt traffic
 - Interest in new trail connecting to Traymore Park

Austell Road Corridor

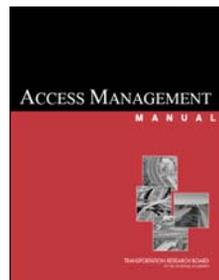


- For the entire corridor, we will create an access management plan based on nationally recognized planning principles.
- For the commercial part of the corridor, we are going to apply these principles and conduct traffic analyses to arrive at specific engineering level solutions.

Access Management Standards



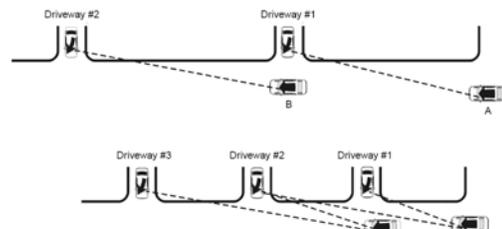
- Standards for minimum spacing on a minor arterial such as Austell Road:
 - 660 ft undivided roadway
 - 1320 ft full median opening
 - 350 ft right in/right out only
 - 660 ft directional median opening



Driveway Spacing



- Right-turn conflict overlap
- Minimum recommended spacing: 350 ft



Source: Access Management Manual – Transportation Research Board

Austell Road Corridor Findings

Start Point	End Point	Approx. Length (ft)	Average Driveway Distance (ft)	
			Northbound	Southbound
Millford Church Rd	Byers Dr	1,393	12	116.08
Byers Dr	Pair Rd	521	3	173.67
Amelia Dr	Lanier Dr	674	2	337.00
Lanier Dr	Amy Ln	1,757	6	292.83
Mimosa Dr	Reed Dr	1,125	4	281.25
Floyd Rd	Hurt Rd	882	6	147.00
Hurt Rd	Blue Ridge Dr	556	3	185.33
Blue Ridge Dr	Story Pl	738	4	184.50
Story Pl	Mulkey Rd	581	2	290.50
Anderson Mill Rd	Elmwood Dr	1,028	5	205.60
Elmwood Dr	Fairview Dr	478	5	95.60
Fairview Dr	Drennon Av	405	4	101.25
McDuffie Rd	Seayes Rd	896	3	298.67
Stallion Pkwy	Evergreen Dr	825	3	275.00
South Cobb				
School Rd	Clay Rd	512	2	256.00
Clay Rd	Doby Ln	1,600	9	177.78
Doby Ln	Leila St	480	2	240.00



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Austell Road: Bad Example



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Austell Road: Good Example



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Crash Analysis

- 3 Years of Crash Data, February 2006 – January 2009
- Field review of corridor



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Crash Analysis

Crash Type	Number of Crashes
Rear On	720
Right Angle	153
Sideswipe	149
Left Turn	117
Fixed Object	51
Other	37
Head On	2
Total Crashes	1229



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Crash Data Standard

Austell Road Segment		Crash Rate by Million Vehicle Miles (MVM) Travelled
Start Point	End Point	
Leila St	South of Clay Rd	2.62
Clay Rd	Anderson Mill Rd	7.51
Orange Hill Dr	South of Floyd Rd	9.68
Floyd Rd	Callaway Rd	5.01



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Crash Data Standard

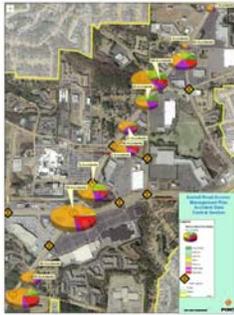
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- State of Georgia crash rate for all urban minor arterials: 5.12 Crashes/MVM
- Cobb County crash rate for all roadways: 4.12 Crashes/MVM

Crash Analysis – Southern Section



Crash Analysis – Central Section



Crash Analysis – Northern Section



Crash Analysis

Total Crashes By Intersection, 3-Year Time Period			
Cross Street	Number of Crashes	Traffic Signal	Median Opening
East-West Connector	169	Yes	Yes
Clay Road	129	Yes	Yes
Hurt Road	109	Yes	Yes
Anderson Mill Road	93	Yes	Yes
Milford Church Road	83	Yes	Yes
Hospital South Drive	74	Yes	Yes
Callaway Road/E Callaway Road	73	Yes	Yes
Floyd Road	62	No	Yes
Mulkey Road	58	Yes	Yes
Pair Road	54	Yes	Yes
Brookwood Drive/Blue Ridge Drive	43	No	Yes
Amy Lane/Station Club Drive	42	Yes	Yes
Orange Hill Drive/Lincoln Crest Drive	36	No	No
Story Place	31	No	Yes
Seayes Road	31	Yes	Yes

Access Management Techniques

- Zoning changes to reduce curb cuts in future development
- Close some existing driveways
- Close or partially close some median openings
- Add new roadways to provide alternate routes



Traffic Analysis

AM and PM peak hour analysis at 7 intersections along Austell Road

- Mulkey Road (Signalized)
- Story Place
- Blue Ridge Drive/Brookwood Drive
- Hurt Road (Signalized)
- Floyd Road
- Cobb Market Fair Driveway
- Amy Lane (Signalized)



Traffic Analysis

Purpose

- Determine feasibility of closing or partially closing median openings
 - Improves traffic flow
 - Improves safety
- Identify impact to adjacent intersections
 - Increase in left turn volumes
 - Increase in U-turn volumes

Traffic Analysis



Austell Road at Floyd Road

Supporting Street Network

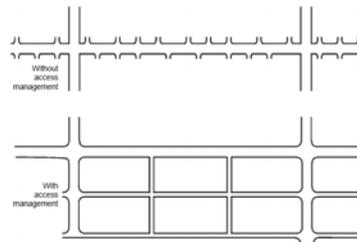


FIGURE 1-7 Supporting street systems provide alternative access and support multimodal needs.

Source: Access Management Manual – Transportation Research Board

Proposed Roadways – Stallion Rd Area



Proposed Roadways – EW Connector Area



Proposed Roadways



Target/Party City Shopping Center



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Proposed Roadways – Hurt Road Area



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Proposed Roadways



Reed Drive, west of Austell Road



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Questions/Comments?



**Next Public Meeting is
Thursday, April 16th at 5:30 at the
South Cobb Government Center**

Updates will be available on the project website at
<http://www.cobbdot.org/AustellRoadLCI/index.htm>



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MEETING MINUTES

Project : Austell Road Access Management Plan

Pond Project No. : 1090144

Meeting : Public Meeting

Meeting Location : South Cobb Government Service Center at Austell Rd.

Meeting Date : April 16, 2009

Minutes prepared by : Sycamore Consulting

Copies: File

Prepared on : April 17, 2009

ATTENDEES:

Name	Company / Dept / Branch	Title	Phone	Fax or Email
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[See attached Sign in sheet](#)

PURPOSE OF MEETING:

Meeting Objectives

The main objectives of this first public information meeting were to:

- Educate the public about Access Management
- Inform the public about project progress
- Provide an opportunity for the public to react and provide input

The meeting began at 5:30. A series of maps were on display. Attendees were invited to come in and review the maps in advance of a power point presentation that was scheduled to begin at 5:45.

At 5:45 Jason Gaines welcomed everyone to the meeting and thanked them for their participation. Mr. Gaines acknowledged a few special guests, including County Commissioner Woody Thompson, and Bob Hovey.

Mr. Gaines then turned the meeting over to Mr. Brian Bolick of Pond & Company. Mr. Bolick indicated that this is the 2nd public meeting of the Austell Road Access Management Plan, and further explained that this project resulted from a need identified in the Austell Road LCI project completed earlier.



Mr. Bolick, along with Daniel Studdard of Pond & Company presented a PowerPoint document that defined Access Management and the benefits associated with good access management based on nationally recognized planning principles. The presentation further detailed the consultant team's approach to Austell Road study, the findings of existing driveway and traffic signal spacing as opposed to the nationally recognized standards, crash statistics, and traffic analysis for the corridor. Finally, the presentation included several examples of ways to improve network connections.

A copy of the presentation is attached.

Summary of Input

Attendees were given the opportunity to provide input during the question and answer session; by writing comments on index cards; or by writing comments on flipcharts at the display stations.

The following questions/comments were raised during the question and answer session:

Comment: The intersection at the East/West Connector and Austell Road includes angles that are not perpendicular. The acute angles result in very slow turning movements. Please try to make intersections with 90 degree angles.

Response: You are absolutely correct. The angles can affect safety and capacity. The challenge is to weave or widen roads in highly urbanized areas. There are tremendous impacts to adjacent properties.

Austell Road and E/W Connector improvements are planned that will include adding a thru lane in each direction and dual turn left lanes. The angle will still be acute due to costs and impacts to existing businesses, but the improvements should help with safety and capacity.

Comment: There are numerous accidents in front of the bowling alley near Callaway Rd. A turning lane and traffic signal would help with speeding when it is not congested as well as access to the businesses. There is no turn lane at Milford Church road. Put a traffic light at the bowling alley.

Response: Principles of effective access management call for openings every ¼ mile. We don't want them any closer, and we don't want them much further.

Traffic signals have to be warranted by volumes, safety, etc. Also, Austell Road is a state route and we are governed by GDOT and their requirements. Cobb DOT operations personnel have looked at this, but they will look at it again. Cobb DOT is also improving other intersections that will make u-turns easier with an eyebrow.

Comment: Would like to see an intersection near this location at the South Cobb Govt. Center. Add a left turn lane southbound on to Seayes Road from Austell.

Response: This is not warranted based on volumes.

Comment: It doesn't seem that there is anything that can be done in a situation where cars pull out into oncoming traffic and block the lanes. We can't control drivers.

Response: People often compare traffic to water flow, but water flow does not have free will, like people do. This is an older corridor, which is largely built out. We have to look towards the long term, make changes we can now, but plan for future redevelopment.

Comment: Traveling toward Paulding County on Clay Road, there is no good route to avoid congestion in Powder Springs. Are any new roads or improvements planned?

Response: This is beyond our scope, but the intersection of Clay Road and Powder Springs Road is being improved.



Question: What is the appropriate proximity or distance between traffic signals?

Comment: The Floyd Road intersection needs signalization. You take a chance with your life every time you go that way.

Response: The left turn off of Floyd Road is not a heavy movement. This intersection does limit access to businesses on the other side. This is what Access Management is all about. We want to provide good access to businesses and neighborhoods, but signals are not meant to control speed. We are trying to set the bar toward the best planning practices. The area you are talking about is our example number 3.

Comment: While I am not in favor of any more signals on Austell Road, I have to agree with the guy who wants a light at the bowling alley. It would really help.

Comment: When you add an access road to the back of these businesses, I think you will create more congestion, traffic back up on the side streets.

Response: the LCI has a whole new grid system for this area that will address those concerns in future redevelopment.

Comment: It seems like a lot of this was covered by the LCI. Are we duplicating efforts and spending taxpayer money?

Response: LCI looked at quality of life issues, long term redevelopment, at action items to reach those plans. The Austell Road Corridor Management Plan results from the LCI action items. The concepts and other recommendations we are looking at here consider hard data, concrete guidelines and policies for the corridor as a whole.

Comment: Bringing in better businesses along Austell Road would be great.

Response: This is a free market economy, but we are attempting to provide the infrastructure and access that will attract new business.

Comment: What is the funding status and possibility of implementing these plans?

Response: We are constantly applying for grants, looking for sources of income from the local, state and federal sources. This is a process we have to go through to before we can identify funding.

Comment: If you were to do the access road on the back of those businesses, it is going to cause additional traffic in the neighborhood in the Floyd/Hurt area.

Comment: Don't add more lights. If you add a light at the bowling alley, it will affect the existing signals all the way to Windy Hill.

Comment: Why don't you tunnel under Austell with the East/West connector?

Response: Grade separation at that intersection is actually included in the long range plan. Cost is a huge issue.

Comment: Will Millford Church Road be widened on the east side? And if so, how far down will it go? There are access issues getting in and out of the neighborhood.



Response: We are adding a right turn and left turn lane and increasing capacity of the storage lanes all the way past the church entrance.

Comment: What are you recommending as far a bus stops and potential pull offs along Austell Road?

Response: We included the slide about bus service based on comments from the last meeting where issues were raised about pedestrians crossing Austell Road to reach stops mid-block. So we are looking at problem locations, safety, etc. so that we can pass it along to CCT.

Generally speaking transit providers do not like pull offs because they can not easily pull back on. Unless CCT buys in to pull offs, we will not be looking at them. We will ask CCT about it.

Comment: Add turn lanes on Seayes Road so that people can turn right when the traffic signals are red.

Comment: Optimal point will be hard to find. Good luck.

Comment: The LCI went into great detail about empty buildings. Will more studies be required before anything is done with that?

Response: The LCI plan is being referred for all land use/zoning considerations so that future development will reflect the ideas presented in the LCI.

Being no other questions or comments, Mr. Bolick thanked everyone for their participation, noting that a corridor like this is a challenge and that the project team will continue to strive to reach the right balance. The meeting adjourned at 7:50 pm.

Austell Road Access Management Plan



Sign In Sheet

	Name	Business	E-mail Address
1	Dolores Hartline	—	—
2	Shirley Peak	—	—
3	David Collins	—	—
4	Elliott Fuller		
5	Landon Crider		
6	PATRICIA WILLIAMS		
7	WARREN BOLDS JR		
8	Bob Hovey		
9	Russ Fitzgerald	Presbyterian Village	rfitzgerald@PVAustell.org
10	David Hoag	ECOA	davidhoag@earthlink.net
11	Kent + Mae Harmon		
12	Brook Martin	Cobb DOT	
13	Tammie Kincaid		KntKincaid@hotmail.com
14	MARK G. Koch		MKoch 37 GAD Comcast.net
15	Jason Gaines	Cobb Co	
16	Lusille Galloway		
17	Wendy Morrow		
18	Willie B Brown		deerslayer073@aol.com
19	Sharrell Flowers		Phlawlesscleaning@comcast.net
20	Nar Chaudhry		nar.chaudhry@cobbcounty.org
21	Janella Dingle		janella.dingle@cobbk12.org
22	Charber-Page	SN, A, N,	swan 30168@bellsouth.net
23	Barbara Evans		
24	NATHAN BLAIR		brighterfuture@bellsouth.net
25			
26			
27			
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Austell Road Access Management Plan



Sign In Sheet

	Name	Business	E-mail Address
1	Woody Thompson	Cobb Commissioner	
2	Connie Taylor		
3	Will Patton		
4	KEATHEN RICHARDS	COBB COUNTY PLANNING /	
5	MARJERIE McCLELLAN		
6	Gay Mclellan		
7	Elizabeth Mclellan		leyle1@gmail.com
8	Sharon Vickery		hendricksharon@yahoo.com
9	Ramatu Tunusa		
10	Murphy Sweetland		
11	CITRES McLEAN		SALESNOW@AOL.COM
12	DALE McLEAN		
13	Laraine Vance	Cobb DOT	
14	Brian Bolick	Pond & Company	
15	Diana Estrada	Pond & Company	
16	Daniel Stoddard	Pond & Company	
17	Leah Vaughan	Sycamore.	
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Austell Road Access Management Plan

Public Meeting April 16, 2009

Laraine Vance: Cobb DOT Project Manager
Brian Bolick: Pond & Company, Vice President

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Access Management

What is Access Management?

- *“The systematic control of the location, spacing, design, and operation of driveways, median openings, interchanges, and street connections to a roadway...”*

Source: Access Management Manual – Transportation Research Board

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What is Access Management?

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What is Access Management?

- More access = less mobility
- Less access = more mobility

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Capacity is Higher in Better Managed Roads

Maximum Daily Traffic at Level of Service "D" on 4-Lane Road

* Source: FDOT and 1985 Highway Capacity Manual

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With Good Access Management

- ↔ Market reach
- ▬ Business sales
- ↑ Land value and use
- ↑ Aesthetics

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With Good Access Management



Increase in Average Speed	Increase in Market Area
0	NA
+10%	+23%
+20%	+56%
+30%	+122%

How is Access Management Accomplished?



- State and local policies, directives and guidelines
- Enforceable regulations, codes and guidelines
- Acquisition of access rights
- Land development regulations
- Development review and impact assessments
- Good geometric design criteria
- Understanding of access implications by business and property owners

Public Involvement



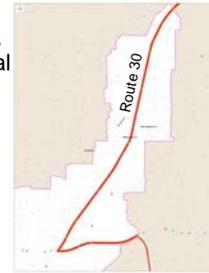
Comments from first public meeting:

- Comments have been forwarded to Cobb DOT
- Many comments focused on specific problem areas, including the following intersections:
 - Brookwood Drive
 - Floyd Road
 - Marketfair Shopping Center
 - Amy Lane
- Silver Comet Trail
 - Concern that connection from Austell Road will disrupt traffic
 - Interest in new trail connecting to Traymore Park
- Concerns related to the transit system

Enhanced Service – Route 30



Service enhancements will consist of additional weekday morning and evening trips and reduced headways on weekday trips for CCT Route 30.



Our Approach to the Study

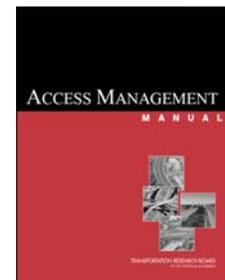


- For the entire corridor, we will create an access management plan based on nationally recognized planning principles
- For the central part of the corridor, we are going to apply these principles and conduct traffic analyses to arrive at specific engineering level solutions

Access Management Standards

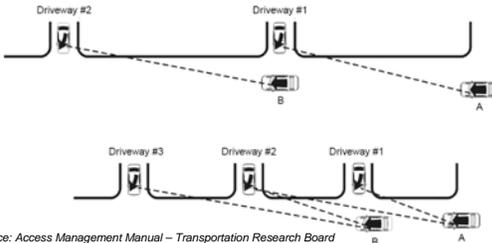


- Standards for minimum access spacing on a minor arterial such as Austell Road:
 - 1320 ft full median opening
 - 350 ft right in/right out only
 - 660 ft directional median opening



Driveway Spacing

- Right-turn conflict overlap
- Minimum recommended spacing: 350 ft



Source: Access Management Manual – Transportation Research Board



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Austell Road Corridor Findings

Start Point	End Point	Approx. Length (ft.)	Average Driveway Distance (ft)			
			Northbound	Southbound		
Miford Church Rd	Byers Dr	1,393	12	116.08	3	464.33
Byers Dr	Pair Rd	521	3	173.67	0	
Amelia Dr	Lanier Dr	674	2	337.00	5	134.80
Lanier Dr	Amy Ln	1,757	6	292.83	1	1757.00
Mimosa Dr	Reed Dr	1,125	4	281.25	2	562.50
Floyd Rd	Hurt Rd	882	6	147.00	7	126.00
Hurt Rd	Blue Ridge Dr	556	3	185.33	5	111.20
Blue Ridge Dr	Story Pl	738	4	184.50	7	105.43
Story Pl	Mulkey Rd	581	2	290.50	3	193.67
Anderson Mill Rd	Elmwood Dr	1,028	5	205.60	4	257.00
Elmwood Dr	Fairview Dr	478	5	95.60	3	159.33
Fairview Dr	Drennon Av	405	4	101.25	1	405.00
McDuffie Rd	Seayes Rd	896	3	298.67	4	224.00
Stallion Pkwy	Evergreen Dr	825	3	275.00	4	206.25
South Cobb						
School Rd	Clay Rd	512	2	256.00	3	170.67
Clay Rd	Doby Ln	1,600	9	177.78	13	123.08
Doby Ln	Lella St	480	2	240.00	2	240.00



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Example of Poor Driveway Spacing



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Example of Poor Driveway Spacing



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Example of Good Driveway Spacing



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Crash Analysis

- 3 Years of Crash Data, February 2006 – January 2009
- Field review of corridor



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Crash Analysis



Crash Type	Number of Crashes
Rear On	720
Right Angle	153
Sideswipe	149
Left Turn	117
Fixed Object	51
Other	37
Head On	2
Total Crashes	1229

Crash Data Standard



Austell Road Segment		Crash Rate by Million Vehicle Miles (MVM) Travelled
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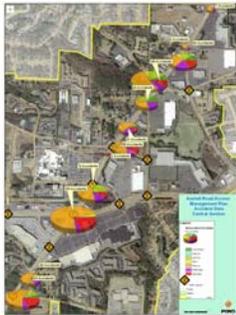
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Crash Analysis – Southern Section



Crash Analysis – Central Section



Crash Analysis – Northern Section



Crash Analysis

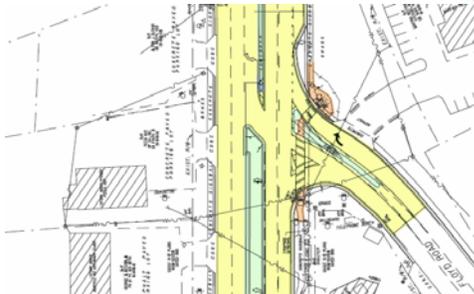
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Mulkey Road	58	Yes	Yes
Pair Road	54	Yes	Yes
Brookwood Drive/Blue Ridge Drive	43	No	Yes
Amy Lane/Station Club Drive	42	Yes	Yes
Orange Hill Drive/Lincoln Crest Drive	36	No	No
Story Place	31	No	Yes
Seaves Road	31	Yes	Yes

Traffic Analysis

Previously Planned Projects

- East-West Connector Intersection
 - Projected Completion Date: End of 2009
- Multiple Intersections
 - Clay Road
 - Hurt Road
 - Floyd Road
 - Milford Church Road
 - Projected Completion Date: March 2010
- Callaway Road Intersection
 - Projected Completion Date: May 2011

Traffic Analysis



Austell Road at Floyd Road

Traffic Analysis

AM and PM peak hour analysis at 7 intersections along Austell Road

- Mulkey Road (Signalized)
- Story Place
- Blue Ridge Drive/Brookwood Drive
- Hurt Road (Signalized)
- Floyd Road
- Cobb Market Fair Driveway
- Amy Lane (Signalized)



Traffic Analysis

Purpose

- Determine feasibility of closing or partially closing median openings
 - Improves traffic flow
 - Improves safety
- Identify impact to adjacent intersections
 - Increase in left turn volumes
 - Increase in U-turn volumes

Access Management Techniques

- Zoning changes to reduce curb cuts in **future** development
- Close some existing driveways
- Close or partially close some median openings
- Add new roadways to provide alternate routes



Supporting Street Network

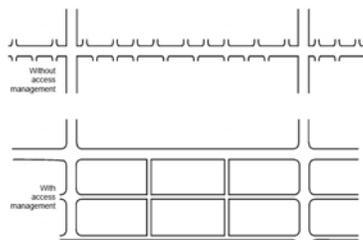


FIGURE 1-7 Supporting street systems provide alternative access and support multimodal needs.

Source: Access Management Manual – Transportation Research Board



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Example 1: Potential Network Connection



Stallion Rd
Area



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Example 2: Potential Network Connection



EW Conn.
Area



In Association with:
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Example 2: Potential Network Connection



Target/Party City Shopping Center



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Example 3: Potential Network Connection



Hurt Rd
Area



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Example 3: Potential Network Connection



Reed Drive, west of Austell Road



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Questions/Comments?

**Next Public Meeting is
Tuesday, May 12th at 5:30 at the
South Cobb Government Center**

Updates will be available on the project website at
<http://www.cobbdot.org/AustellRoadLCI/index.htm>



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MEETING MINUTES

Project : Austell Road Access Management Plan

Pond Project No. : 1090144

Meeting : Second Project Management Meeting

Meeting Location : Cobb County - Department of Transportation

Meeting Date : April 28, 2009

Minutes prepared by : Diana Estrada

Prepared on : April 30, 2009

Copies: File
Attendees

ATTENDEES:

Name	Company / Dept / Branch	Title	Phone	Fax or Email
Laraine Vance	Cobb DOT – Planning		770-528-1650	lvance@cobbcounty.org
Jason Gaines	Cobb DOT – Planning		770-528-1664	jason.gaines@cobbcounty.org
Brook Martin	Cobb DOT – Traffic Signals (Ops)		770-528-4065	brook.martin@cobbcounty.org
Nar Chaudhry	Cobb DOT – Engineering		770-528-1656	nar.chaudhry@cobbcounty.org
Terrilyn Hannah	Cobb Economic Development		770-528-1009	terrielyn.hannah@cobbcounty.org
Larry Stokes, Jr	Cobb DOT			
Keehren Richards	Cobb Planning and Zoning		770-528-2199	keehren.richards@cobbcounty.org
Dan Cohen	Pond & Company – Planning		678-336-7740	cohend@pondco.com
Daniel Studdard	Pond & Company – Planning		678.336.7740	studdardd@pondco.com
Diana Estrada	Pond & Company – GIS		678.336.7740	estrada@pondco.com

PURPOSE OF MEETING:

The second and last project management meeting for the Austell Road Access Management Plan was held at the Cobb DOT office on April 28, 2009. The meeting began at 3:00 pm and was attended by the above listed. The following items were discussed.

Dan Cohen said that Pond was going to present the potential solutions to the Austell Road corridor related to Access Management. Then, the group needed to approve the proposed solutions for Pond to create the definitive list of suggestions to be presented to David Montanye.

There was an agenda that is attached in Appendix A. The meeting followed the agenda. Dan mentioned the surveys and Pond will present the results to Laraine in an organized manner in few days. Laraine mentioned that the survey will remain posted until May 1, 2009. Pond will process new surveys send by May 4, 2009.

Daniel Studdard talked about the crash data and the traffic analysis on-going for the high commercial area of the corridor, between Amy lane and Mulkey Road (see Appendix B for the "Traffic Analysis Preliminary Summary").



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Engineers
Planners

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Nar Chaudhry mentioned that they could change some of the concrete medians to landscaped medians.

The group approved closing fully the median at Story Place and Austell Rd. The group had a consensus that this solution would improve traffic flow and could help beautify the corridor if median landscaping was added. Pond can recommend improving the left-turn and U-turn movements adjacent to this median opening.

Brook mentioned that a signal was removed from the intersection of Mulkey Rd and Brookwood Dr.

The group approved to partially close/channelize the median at Blue Ridge/Brookwood Dr at Austell Rd to allow northbound and southbound left turn movements but not eastbound or westbound left turn or through movements. Pond will need to put a cost together for this change once David Montanye has approved it.

The group approved the preliminary recommendations at Floyd Rd @ Austell Rd, and at Cobb Marketfair @ Austell Rd.

Diana Estrada talked about some driveway closings that should happen simultaneously when the new road connecting Reed Rd and Blue Ridge Drive is completed. The group approved the new proposed road; however, there are some concerns about closing the driveways if the parcels remain individual parcels instead of one big redevelopment area.

Jason Gaines will check on the purpose of the gate on the road behind the South Cobb Government Center.

The group approved the proposed road adjacent to the Target/Lowes and Kohls shopping centers south of the East West Connector.

The stakeholders meeting will be on May 7th, 2009 at 2:30pm. Laraine will coordinate a meeting with David Montanye and other members of management and staff to approve the initial suggestions before they become recommendations to be presented to the public.

Laraine will also schedule the last public meeting.

Keehren mentioned that if the project recommends any zoning changes, the plan has to go in front of the Planning commission. However, she will verify the process and send it to Laraine Vance and Diana Estrada.

TO DO LIST:

Laraine Vance will send to Pond any new surveys submitted after April 27, 2009.

Jason Gaines will check the purpose of the gate on the road behind the South Government Center.

Keehren Richards will verify the process to approve the AMP plan if zoning changes are proposed.



**Project Management Meeting Agenda
April 28, 2009 at 3:00PM**

1. Recap
2. Survey results review
3. Crash analysis overview
4. Preliminary traffic analysis summary
5. Preliminary recommendations
 - a. Proposed median closures/partial closures
 - b. Proposed new roadways
 - c. Proposed shared driveways
 - d. Proposed zoning changes related to curb cuts
6. Next steps / critical paths for the project
7. Review of meeting schedule:
 - a. Third Stakeholder meeting on May 7th (2:30 – 4:00)
 - b. Third Public meeting (5:30 – 7:30pm)
8. Concerns/ Questions



Traffic Analysis Preliminary Summary

Intersection Analysis Locations:

- Austell Road and Mulkey Road (Signalized)
- Austell Road and Story Place (Unsignalized)
- Austell Road and Blue Ridge Drive/Brookwood Drive (Unsignalized)
- Austell Road and Hurt Road (Signalized)
- Austell Road and Floyd Road (Unsignalized)
- Austell Road and Cobb Marketfair driveway/Park Trail Townhomes (Unsignalized)
- Austell Road and Amy Lane (Signalized)

The following four alternatives are being analyzed for the AM and PM peak hours:

- 2009 Existing Conditions
- 2009 Build
- 2019 No Build
- 2019 Build

A hierarchy of options for potential changes at each intersection was identified:

- Close median opening
- Partially close/channelize median opening
- Signalize the intersection (if signal warrant is met)
- Leave intersection unchanged

Based on this hierarchy, the following preliminary recommendations were developed for the unsignalized intersections being analyzed:

- Story Place – Close median fully
 - Affected left turn traffic will be redistributed to Mulkey Road
 - Use current left turn lane ROW for extension of Mulkey Road southbound left turn lane storage bay (as needed); landscape remainder of median
- Blue Ridge Drive/Brookwood Drive – Channelize the median to allow northbound and southbound left turn movements but no eastbound or westbound left turn or through movements
 - Affected left turn/through traffic will be reassigned to the appropriate movements at Mulkey Road.
- Floyd Road – Channelize median opening based on Cobb County DOT's design which allows southbound left turns but no other left turn movements and no eastbound or westbound through movements
 - Affected traffic will be reassigned to the appropriate movements at Hurt Road.
- Cobb Marketfair – This intersection will remain unchanged in the short term. When the Cobb Marketfair shopping center redevelops and when the Park Trail Townhomes residential development on the west side of Austell Road is completed then traffic volumes at this intersection will likely increase significantly. This intersection may warrant a traffic signal at that time.
 - The 2009 analysis will remain unchanged
 - The 2019 Build analysis will assume the addition of a traffic signal due to an increase in traffic based on the adjacent land uses.

Austell Road Access Management Plan

April 28, 2009 - PM meeting

Name	Organization
• BROOK MARTIN	CCDOT - TRAFFIC SIGNALS
• KEEHREN RICHARDS	CCPLANNING -
Daniel Studdard	Pond
• Jason Gaines	Cobb DOT
Laraine Vance	DOT
• Terilyn Hannah	Cobb Economic Development
• NAR CHAUDHRY	Cobb DOT
Dan Cohen	Pond
Diana Estrada	Pond
LARRY STOKES, JR.	Cobb DOT



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MEETING MINUTES

Project : Austell Road Access Management Plan

Pond Project No. : 1090144

Meeting : ARC Meeting

Meeting Location : ARC Offices

Meeting Date : May 1, 2009

Minutes prepared by : Dan Cohen

Prepared on : May 2, 2009

Copies:

ATTENDEES:

Name	Company / Dept / Branch	Title	Phone	Fax or Email
Laraine Vance	Cobb DOT			
Rob LeBeau	ARC			
Dan Cohen	Pond & Company – Planning			

PURPOSE OF MEETING:

The main objective of this meeting was to present plan recommendations to ARC.

Dan Cohen began with a recap of the project schedule and milestones, and then discussed preliminary suggestions for full and partial median closures, new roads, and driveway closures. Survey results were presented. These results identified and confirmed what the public viewed as issues – congestion, pedestrian safety, intersection design, and aesthetics. The meeting concluded with Dan presenting the study's recommendations.



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MEETING MINUTES

Project : Austell Road Access Management Plan
Pond Project No. : 1090144
Meeting : Stakeholders Meeting
Meeting Location : South Cobb Government Service Center at Austell Rd.

Meeting Date : May 7, 2009

Minutes prepared by : Diana Estrada
Prepared on : May 11, 2009

Copies: File

ATTENDEES:

Name	Company / Dept / Branch	Title	Phone	Fax or Email
Laraine Vance	Cobb DOT			
Tommy Abbott	Wellstar Cobb Hospital			Thomas.abbott@wellstar.org
Brooke Martin	Cobb DOT			
Rebecca Jenkins	Sanders Primary			Rebecca1.jenkins@cobbk12.org
Jason Gaines	Cobb DOT			
Nar Chaudhry	Cobb DOT			Nar.chaudhry@cobbcounty.org
Dan Cohen	Pond & Company – Planning		678-336-7740	cohend@pondco.com
Diana Estrada	Pond & Company – GIS		678-336-7740	estrada@pondco.com
Daniel Studdard	Pond & Company – Planning		678-336-7740	studdard@pondco.com

PURPOSE OF MEETING:

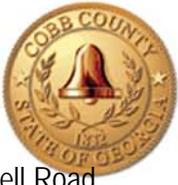
The third Stakeholders meeting for the Austell Road Access Management Plan was held at the South Cobb Government Service Center office on May 7, 2009. The meeting began at 2:30pm and was attended by the above listed (see attachment A for the Sign in sheet). The following items were discussed.

Dan Cohen made a short introduction and thanked the participants for coming. He began by asking the participants to comment on the presentation to be shown because this presentation will be given to the public on June 30th. Then he began the Power Point presentation. Please refer to the document called "Austell Road Stakeholders Meeting 5-7-09 Final.pdf" (see attachment B) for this presentation.

Dan Cohen presented the first part of the Power Point. Daniel Studdard presented the second part starting at the "Traffic Analysis" section. Diana Estrada presented the last part of the presentation starting at the "Access Management Standards". After the presentation, Dan Cohen opened the meeting for comments on the document to be presented to the public. The comments are as follows:

- Nar Chaudhry mentioned that there is an example of median treatment at Cumberland using a fence on the median. Nar also mentioned that the fence caused accidents when it fell.

Austell Road Access Management Plan



- Laraine Vance mentioned that the Cobb County Board of Commissioners work session to present the Austell Road Access Management Plan will be held on June 23th (4th Tuesday of the month). We will have 10 - 15 minutes to present the project to the Board of Commissioners.
- Tommy Abbott mentioned a concern he has related to the proposed road near the hospital. He expressed a safety concern because they will have another access point to the hospital to control. Other people suggested that this new road could connect people at the hospital to commercial areas without using Austell Rd and adding to the traffic congestion on Austell Road.
- Diana Estrada mentioned that for vegetation we could use native plants to reduce the need for irrigation. Laraine Vance mentioned that the county has new standards for Sustainability Planting. These standards were approved about two months ago by the Cobb County Board of Commissioners.

Austell Road Access Management Plan



Stakeholders Meeting on May 7th, 2009 - Sign In Sheet

	Name	Business	E-mail Address
1	Tommy Abbott	Wellstar Cobb Hospital	Thomas.Abbott@wellstar.org
2	Rebecca Jenkins	Sanders Primary Sch.	rebecca.f.jenkins@cobbk12.org
3	Brook Martin	Cobb DOT	brook.martin@cobbcounty.org
4	NAR CHAUDHRY	Cobb DOT	nar.chaudhry@cobbcounty.org
5	Brook Martin	Cobb DOT	
6	Laraine Vance	Cobb DOT	
7	Jason Gaines	Cobb DOT	
8	Dan Cohen	Pond & Company	
9	Daniel Stoddard	Pond & Company	
10	Diana Estrada	Pond & Company	
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Austell Road Access Management Plan

Stakeholders Meeting May 7, 2009

Laraine Vance: Cobb DOT Project Manager
Dan Cohen: Pond & Company, Planning Director



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Agenda

- Project Recap
- Preliminary Suggestions
- Survey Results Review
- Preliminary Traffic Analysis Summary
- Question/Comments



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Project Recap

- Present suggestions
- Prepare for final public meeting
- Comments will be included as part of study effort submitted to Cobb DOT for approval.



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Preliminary Suggestions

- Pond is suggesting changes in the following areas:
- Suggested median closures/partial closures
 - Suggested new roads
 - Suggested driveway closures



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Survey Results Review



- The issues mentioned most were:
 - Congestion
 - Pedestrian friendly
 - Intersection design
 - Aesthetics

Survey Results Review



- 64% **agree** with **mixed use development**
- 91% are **concerned** about **congestion**
- 63% would **encourage** new **access** among large **commercial** properties
- 93% are **concerned** about **commercial development**
- 96% **support** Cobb County **building sidewalks**

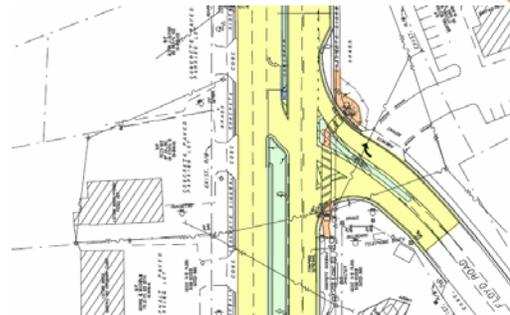
Traffic Analysis



Previously Planned Projects

- East-West Connector Intersection
 - Projected Completion Date: End of 2009
- Multiple Intersections
 - Clay Road
 - Hurt Road
 - Floyd Road
 - Milford Church Road
 - Projected Completion Date: March 2010
- Callaway Road Intersection
 - Projected Completion Date: May 2011

Traffic Analysis



Austell Road at Floyd Road

Preliminary Traffic Analysis Summary



AM and PM peak hour analysis at 7 intersections along Austell Road

- Mulkey Road (Signalized)
- Story Place
- Blue Ridge Drive/Brookwood Drive
- Hurt Road (Signalized)
- Floyd Road
- Cobb Market Fair Driveway
- Amy Lane (Signalized)



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Preliminary Traffic Analysis Summary



Four Alternatives Analyzed

- 2009 Existing Conditions
- 2009 With Access Management
- 2019 Without Access Management
- 2019 With Access Management



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Preliminary Traffic Analysis Summary



A hierarchy of options for potential changes at each unsignalized intersection was identified:

- Close median opening
- Partially close/channelize median opening
- Signalize the intersection (if signal warrant is met)
- Leave intersection unchanged



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Preliminary Traffic Analysis Summary



Story Place Suggested Recommendation: Close Median Opening

- Left turn traffic volumes are very low
- Alternate routes connect existing development to Mulkey Road



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Preliminary Traffic Analysis Summary



Blue Ridge Drive/
Brookwood Drive Suggested
Recommendation: Partially
Close/Channelize Median
Opening

- Most left turn traffic volumes are low
- Southbound left turn onto Brookwood Drive has significant traffic
- Alternate routes connect existing development to Hurt Road and Mulkey Road



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Preliminary Traffic Analysis Summary



Austell Road at Blue Ridge Drive/Brookwood Drive

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Preliminary Traffic Analysis Summary



Floyd Road Suggested
Recommendation: Cobb
DOT Project

- Partially Close/Channelize Median Opening
- Southbound left turn onto Floyd Road has significant traffic
- Alternate routes connect existing development to Hurt Road
- Potential Backage Road



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Preliminary Traffic Analysis Summary



Cobb Marketfair Suggested
Recommendation:

- Short term – No Change
- Long Term - Signalize
 - Traffic signal improves access to shopping center redevelopment
 - Meets distance requirements to adjacent signals



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Suggested New Roads

Stallion Road Area

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Suggested New Roads

East West Connector Area

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DRAFT 18

Suggested New Roads

Hurt Road Area

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Transit

Between Anderson Mill Road and Amy Lane:

- Transit users should cross at signalized intersections
- Average distance between traffic signals:
 - 0.28 miles
 - With additional signal at Cobb Marketfair: 0.24 miles
- Raised landscaped median will reduce mid-block crossings

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Proposed Median Treatment



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Proposed Median Treatment



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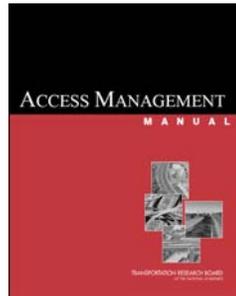
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Access Management Standards



- Standards for minimum access spacing on a minor arterial such as Austell Road:
 - 1320 ft full median opening
 - 350 ft right in/right out only
 - 660 ft directional median opening



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Example of Poor Driveway Spacing



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Driveway Distance Standards



Start Point	End Point	Approx. Length (ft.)	Number of Driveways		Average Driveway Distance (ft)	
			Northbound	Southbound	Northbound	Southbound
Milford Church Rd	Byers Dr	1,393	12	3	116.08	464.33
Byers Dr	Pair Rd	521	3	0	173.67	
Amelia Dr	Lanier Dr	674	2	5	337.00	134.80
Lanier Dr	Amy Ln	1,757	6	1	292.83	1757.00
Mimosa Dr	Reed Dr	1,125	4	2	281.25	562.50
Floyd Rd	Hurt Rd	882	6	7	147.00	126.00
Hurt Rd	Blue Ridge Dr	556	3	5	185.33	111.20
Blue Ridge Dr	Story Pl	738	4	7	184.50	105.43
Story Pl	Mulkey Rd	581	2	3	290.50	193.67
Anderson Mill Rd	Elmwood Dr	1,028	5	4	205.60	257.00
Elmwood Dr	Fairview Dr	478	5	3	95.60	159.33
Fairview Dr	Diennon Av	405	4	1	101.25	405.00
McDuffie Rd	Scoyee Rd	896	3	4	298.67	224.00
Stallion Pkwy	Evergreen Dr	825	3	4	275.00	206.25
South Cobb						
School Rd	Clay Rd	512	2	3	256.00	170.67
Clay Rd	Doby Ln	1,600	9	13	177.78	123.08
Doby Ln	Lella St	480	2	2	240.00	240.00



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Segments with Driveway Distance Below Standard



Southern Area of the Corridor

Austell Rd segments where average distance between driveways is less than 350ft



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Segments with Driveway Distance Below Standard



Central Area of the Corridor

Austell Rd segments where average distance between driveways is less than 350ft



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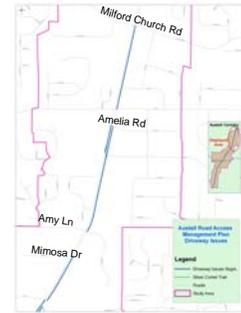
27

Segments with Driveway Distance Below Standard



Northern Area of the Corridor

Austell Rd segments where average distance between driveways is less than 350ft



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Driveway Closures



Next Steps



- Meeting with Cobb County officials on May 22th
- Prepare Draft Report by June 15th
- Prepare Final Report by June 29th
- Public Meeting on June 30th

Questions/Comments?



**Next Public Meeting is
Tuesday, June 30th at 5:30 at the
South Cobb Government Center**

Updates will be available on the project website at
<http://www.cobbdot.org/AustellRoadLCI/index.htm>



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MEETING MINUTES

Project : Austell Road Access Management Plan

Pond Project No. : 1090144

Meeting : Cobb DOT Staff Meeting

Meeting Location : Cobb DOT Offices

Meeting Date : May 22, 2009

Minutes prepared by : Daniel Studdard

Copies: File

Prepared on : May 28, 2009

ATTENDEES:

Name	Company / Dept / Branch	Title	Phone	Fax or Email
David Montanye	Cobb DOT – Director		770-528-1600	david.montanye@cobbcounty.org
Bob Galante	Cobb DOT – Engineering		770-528-1600	bob.galante@cobbcounty.org
Laraine Vance	Cobb DOT – Planning		770-528-1600	lvance@cobbcounty.org
Brook Martin	Cobb DOT – Traffic Signals (Ops)		770-528-1600	brook.martin@cobbcounty.org
Rob Hosack	Cobb Community Dev. – Director		770-528-2125	rhosack@cobbcounty.org
Dana Johnson	Planning Division – Manager		770-528-2120	dana.johnson@cobbcounty.org
Brian Bolick	Pond & Company – TCD		678-336-7740	bolickb@pondco.com
Dan Cohen	Pond & Company – Planning		678-336-7740	cohend@pondco.com
Daniel Studdard	Pond & Company – Planning		678-336-7740	studdardd@pondco.com

PURPOSE OF MEETING:

The purpose of this meeting was to review the findings and recommendations of the Austell Road Access Management Plan with Cobb DOT staff and Cobb Community Development/Planning staff. The meeting was held at the Cobb DOT's offices on May 22, 2009. The meeting began at 1:30pm and was attended by the above listed. The following items were discussed.

Dan Cohen began the meeting by reviewing the results of the survey that was administered to the public as a part of this project. Dan Cohen also provided some information regarding driveway spacing along the corridor and asked for opinions on the feasibility of changing certain land use related requirements as they affect redevelopment. . Rob Hosack had the following comments regarding driveway spacing:

- Driveway spacing requirements were recommended as a part of the Austell Road LCI Study. The Cobb County Commission adopted some recommendations from the study but they were not as stringent as the recommendations suggested in the study.
- The zoning review process should be revised. The driveway spacing requirements should be reflected in site plans of developments under review.
- These changes (driveway spacing requirements, revised zoning review process) should be adopted for the Austell Road Corridor rather than for the entire county.



Daniel Studdard discussed the traffic analysis that was conducted as a part of the study. The traffic analysis was necessary to support or refute recommendations at specific unsignalized intersections within the study area. The recommendations that came out of this analysis include the following:

- Austell Road & Story Place: Close the existing median opening
- Austell Road & Blue Ridge Drive/Brookwood Drive: Partially close/channelize the existing median opening
- Austell Road & Floyd Road: No changes beyond previously planned project at this location
- Austell Road & Cobb Marketfair Shopping Center/Park Trail Townhomes: Short term – No change; Long term (after completion of townhome development and shopping center is redeveloped or fully leased) signalize intersection when warrants are met

A proposed design for the roadway median was also discussed by all Pond staff members. This design is based on the design of Peachtree Road/SR 141 between Piedmont Road/SR 237 and SR 400 in Atlanta. The design includes a narrow landscaped median (6-ft wide) and a curb height raised to 18". This design is intended to reduce pedestrian mid-block crossings due to the raised curb level and landscaping. Pedestrian mid-block crossings were identified as a safety problem multiple times during the course of the study.

Both Peachtree Road/SR 141 and Austell Road/SR 5 are state routes which suggests that GDOT is open to this type of improvement. Pond stated it is more feasible on Austell Road because the lanes are wider, there was no prior median along Peachtree Road, and the number of accidents is quite high compared to the state average for similar facilities. Bob Galante suggested using a jersey barrier in the median of Austell Road rather than the proposed design. He is not certain that GDOT will approve of this design on Austell Road since it has different characteristics than Peachtree Road. The speed limit along Austell Road is 45 mph, but it is 35 mph along Peachtree Road. Additionally, there may not be enough ROW in the existing median to accommodate the proposed median design and meet GDOT curb and gutter requirements.

A discussion regarding transit stop location and design followed. Bob Galante stated that he thinks Cobb Community Transit (CCT) prefers bus stops near intersections, after the intersection where possible. David Montanye stated that he thinks CCT is amenable to bus bay pulloffs. David Montanye asked that Pond meet with Rebecca Gutowsky of CCT to discuss bus stop locations. The public has also stated that they dislike advertising on bus shelters. David Montanye asked that his be included in the final report for this study.

David Montanye requested that a priority list of projects be developed for the ARC RTP and for the Cobb County 2012 SPLOST. Bob Galante suggested that the group should be selective on which projects go for LCI or GDOT funding or the funding may not be awarded.

Dana Johnson stated that with the implementation of project R4 then block sizes in this area will be small and there should be a focus on making the area more walkable. He also stated that there should be a requirement that some driveways are removed when Project R4 is completed. Rob Hosack suggested that for giving up an existing driveway a property owner could potentially get a bonus of some type, such as allowing monument signage for their business.

Dan Cohen added one additional recommendation – opening the gate on the roadway connecting the South Cobb Government Center at Seayes Road with Stallion Road and the South Cobb High School sports fields. David Montanye and Rob Hosack both stated that this seems to be an inexpensive, minor improvement that should be done. However, David Montanye stated that if any repairs or maintenance was needed on the roadway and it was on property owned by the



Cobb County Board of Education (BOE) then only the BOE could fund these improvements. At this time it is unclear what the exact purpose of this gate is, although the working assumption is that is security related.

The consensus is that the study needs to be presented to the Cobb County Board of Commissioners (BOC) at one of their work sessions. The presentation should be approximately 15 minutes in length and include: study process, number of public meetings, stakeholder meetings, and project management team meetings, survey results, and recommendations.

A Cobb County BOC meeting will take place on June 23rd. A draft of the report should be provided by Monday, June 15th.

Survey Results Review



- The issues mentioned most were:
 - Congestion
 - Pedestrian friendly
 - Intersection design
 - Aesthetics

Survey Results Review



- 64% **agree** with **mixed use development**
- 91% are **concerned** about **congestion**
- 63% would **encourage** new **access among** large **commercial** properties
- 93% are **concerned** about **commercial development**
- 96% **support** Cobb County **building sidewalks**

Suggested New Roads



Stallion Road Area



Transit



Between Anderson Mill Road and Amy Lane:

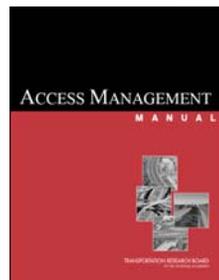
- Transit users should cross at signalized intersections
- Average distance between traffic signals:
 - 0.28 miles
 - With additional signal at Cobb Marketfair: 0.24 miles
- Raised landscaped median will reduce mid-block crossings



Access Management Standards



- Standards for minimum access spacing on a minor arterial such as Austell Road:
 - 1320 ft full median opening
 - 350 ft right in/right out only
 - 660 ft directional median opening



Example of Poor Driveway Spacing



Driveway Distance Standards

Start Point	End Point	Approx. Length (ft.)	Number of Driveways	Average Driveway Distance (ft)	
				Northbound	Southbound
Milford Church Rd	Byers Dr	1,393	12	116.08	3
Byers Dr	Paik Rd	521	3	173.67	0
Amelia Dr	Lanier Dr	674	2	337.00	5
Lanier Dr	Amy Ln	1,757	6	292.83	1
Mimosa Dr	Reed Dr	1,125	4	281.25	2
Floyd Rd	Hurt Rd	882	6	147.00	7
Hurt Rd	Blue Ridge Dr	556	3	185.33	5
Blue Ridge Dr	Story Pl	738	4	184.50	7
Story Pl	Mulkey Rd	581	2	290.50	3
Anderson Mill Rd	Elmwood Dr	1,028	5	205.60	4
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Fairview Dr	Drennon Av	405	4	101.25	1
McDuffie Rd	Seayes Rd	896	3	298.67	4
Stallion Pkwy	Evergreen Dr	825	3	275.00	4
South Cobb					
School Rd	Clay Rd	512	2	256.00	3
Clay Rd	Doby Ln	1,600	9	177.78	13
Doby Ln	Leila St	480	2	240.00	2

Driveway Closures



Proposed Project List

- Intersection Projects
 - I1 – **Story Place**, Close existing full median opening
 - I2 – **Brookwood Drive/Blue Ridge Drive**, Partially close/channelize the median opening
 - I3 – **Floyd Road**, No changes recommended beyond previously planned Cobb DOT project
 - I4 – **Cobb Marketfair Shopping Center/Park Trail Townhome Development**
 - Short term – No change
 - Long term – Signalize intersection (if warrants are met)
- Median Project
 - M1 – Raised, landscaped median, 8-ft to 20-ft in width
- New Roadways
 - R1 – Backage Road – **Kohl's Shopping Center**
 - R2 – Backage Road – **Target/Lowe's Shopping Center**
 - R3 – Backage Road – **Hurt Road/Reed Drive** area
 - R4 – **South Cobb Government Center** Connection
- Sidewalks
 - See sidewalk inventory/priority list

Channelized Median Design Example

I2 – Brookwood Drive/Blue Ridge Drive



I2-Austell Road at Blue Ridge Drive/Brookwood Drive



Proposed Median Treatment



Proposed Median Treatment





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MEETING MINUTES

Project : Austell Road Access Management Plan

Pond Project No. : 1090144

Meeting : Public Meeting

Meeting Location : South Cobb Government Service Center at Austell Rd.

Meeting Date : June 30, 2009

Minutes prepared by : Sycamore Consulting

Copies: File

Prepared on : July 1, 2009

ATTENDEES:

Name	Company / Dept / Branch	Title	Phone	Fax or Email
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[See attached Sign in sheet](#)

PURPOSE OF MEETING:

Meeting Objectives

The main objectives of this first public information meeting were to:

- Present plan recommendations
- Provide an opportunity for the public to react and provide input

The meeting began at 5:30. A series of maps were on display. Attendees were invited to come in and review the maps in advance of a power point presentation that was scheduled to begin at 5:45.

At 5:45 Dan Cohen welcomed everyone to the meeting and thanked them for their participation. Mr. Cohen introduced the project team and discussed the background of the study, and its purpose and need for the study area.

Mr. Cohen along with Daniel Studdard of Pond and Company then presented a PowerPoint presentation. They began with a recap of the project schedule and milestones and discussed preliminary suggestions for full and partial median closures, new roads and driveway closures. Survey results were presented which identified and confirmed what the public viewed as issues – congestion, pedestrian safety, intersection design, and aesthetics.



The final slides presented the study's recommendations for median openings and closings, new roads, driveway closures, and safer crossing options for transit users. A copy of the presentation is attached.

Summary of Input

Attendees were given the opportunity to provide input during the question and answer session; by writing comments on index cards; or by writing comments on flipcharts at the display stations.

The following questions/comments were raised during the question and answer session:

Comment: At Cumberland Mall, there is a fence in the median which may cut down on mid-block crossings. This could be another option for Austell Road.

Response: This option was raised in a previous meeting. Fence medians can present an issue if they fall into the roadway or are hit during an accident. They are not as aesthetically pleasing but are a valid option.

Question: Who maintains the medians?

Response: Businesses can be involved in median maintenance by "adopting" a section of the median.

Question: Could there be a hazard with sight if trees are planted in the median?

Response: Trees included on the County approved list will be used.

Comment: Do not plant Bradford Pear trees.

Question: How do business owners on the corridor feel about driveway closures?

Response: We will not close driveways without giving businesses another driveway in the rear of the business. Businesses will still be accessible by a single driveway; monument signage is recommended to direct drivers and patrons to businesses.

Comment: Regarding short driveway distances and changes in land use: because previously single family residential properties have become commercial businesses, there is an increase of traffic flow in and out of driveways on the corridor and congestion.

Comment: No more tire shops on Austell Road!

Question: Regarding the surveys, 92% of respondents were concerned with what?

Response: respondents were concerned with the lack of good development and a decline in commercial properties (big boxes closing and moving, etc).

Question: In the presentation you discussed future traffic in 2019. What assumptions were made for these projections?

Response: The team looked at the historic growth rate and applied it to existing traffic counts to project future background traffic; additional trip generation was conducted for certain locations (e.g., the new townhome development, shopping center); and impacts due to median closures.

Question: How is feeder traffic from Douglas County onto Austell Road factored in? Is there a way to divert traffic? There is an issue with Paulding County traffic, too.



Response: traffic counts do not identify where cars are coming from. The best we can do is give local residents more options for getting around traffic and avoiding congestion. Also, redevelopment will hopefully compel people to stop and spend in the area.

Comment: The East-West Connector was designed for cut through traffic. Growth is the problem.

Question: What is the distance between transit stops? Bus stops should be in the right places or at activity centers. Is the team working with CCT?

Response: determining the exact location of potential stops is beyond the scope of this study but the team has been in contact with CCT. Stops are placed based on ease of maneuver for busses. Our goal is to provide safe crossings for transit users.

Comment: Please consider pedestrian refuge islands within the medians.

Comment: CCT stops are too close in some areas.

Comment: Bus stop analysis should be a part of future access management studies.

Comment: The law needs to be enforced. Pedestrians who cross the streets illegally should be fined.

Being no other questions or comments, Mr. Cohen thanked everyone for their participation. He notified attendees that the plan will go before the Cobb County Board of Commissioners at their work session on July 28, 2009 and invited them out to voice support of the project.

Written Comments

The following written comments were submitted at the conclusion of the meeting:

- When you try to exit the apartment complex the vehicle making a left hand turn. There isn't any turning signal. There has been 3 accidents there already. There aren't any turning lanes. Please address these issues. There isn't any cross walks for the people who live in the complex to cross the road.
- At what point and time will you be working on the intersection at Austell rd and pat Mell Rd? We really need a turning signal coming out of Crescent Square apartments. It would also be good to have a right turning lane off Pat Mell Rd onto Austell Rd. We have already had accidents in the area since the light has been operating.
- What needs to be addressed is the safety of the children at Milford Elementary School. Not enough signs for school crossing on Austell Road. What also needs to be addressed is the landscaping. Move the bus stop to the opposite side of the traffic light.
- What are the plans for beautification/landscaping project for the small islands due to intersection renovation at Austell and Pat Mell Roads?
- I like the current plan. But my concern is further north; Calloway to South Cobb Drive on Austell Rd. Please provide a study of this area as soon as possible. I am looking forward to hearing from you when this study will take place.
- What are the plans for the intersection of Austell and Windy Hill Rd (stop light)? Crosswalks, turning lane, and beautification? What are the plans for Austell and Callaway Rd? Shopping center access and landscaping, traffic light and turning signals? What about speed limits and control if applicable?

Austell Road Access Management Plan



Public Meeting on June 30th, 2009 - Sign In Sheet

	Name	Business	E-mail Address
1	LARRY KING	COBB-TAB	LawrenceKing@bellsouth.net
2	Judy Brooks		
3	Charles Harris		
4	Sharon Harris		
5	Cheryl Tillison		
6	Mary M. Dickens		
7	Jamila Lasker		laskerjamila@yahoo.com
8	Gene Dickens		
9	Tereyha Burns	Milford PTA Pres.	Tereere@ yahoo.com
10	Terrilyn Hannah	COBB-Econ Dev	Terrilyn.Hannah@Cobbcounty.org
11	NORVELL MOORE		
12	MURRAY FROMAN.		
13	INAR CHAUDHRY		
14	David & Helga Hay	RFB	davidhay@earthlink.net
15	John Williams		williams2061@charter.net
16	Willie Brown		deersjason070@com.com
17	Sandra Hembree		Sandra@HomesOnMyMind.com
18	Kris Cartwright	KW Commercial	Kristinecartwright@gmail.com
19			
20	Jeff Cope	MIC	copej@hofmail.com
21	CHRISTINE ABLE	Osborne Community Coalition	Christineable@ccc-GA.org
22			
23			
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Austell Road Access Management Plan



Public Meeting on June 30th, 2009 - Sign In Sheet

	Name	Business	E-mail Address
1	Edith Lyons	Osborne Coalition	
2	Sharon Brown	Osborne Community Coalition	S-L-B@comcast.net
3	Russ Fitzgerald	Presbyterian Village	rfitzgerald@pvaustell.org
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Austell Road Access Management Plan

Public Meeting June 30, 2009

Laraine Vance: Cobb DOT Project Manager
Dan Cohen: Pond & Company, Planning Director



In Association with:
Herli | Sycamore Consulting



Agenda

- Project Recap
- Preliminary Suggestions
- Survey Results Review
- Traffic Analysis Summary
- Suggested Recommendations
- Question/Comments



In Association with:
Herli | Sycamore Consulting



Project Recap

Task Name	Dec '08	Jan '09	Feb '09	Mar '09	Apr '09	May '09	June '09	July '09
1. Data Collection and Analysis								
- Analyze existing land use patterns								
- Assess impact of current curb and driveway cuts								
- Assess needs of bicyclists and pedestrians								
- Identify current visibility concerns								
- Document existing conditions								
2. Needs Assessment and Projections								
- Assess current Levels of Service								
- Identify possible impacts of proposed changes								
3. Design Analysis and Strategies								
- Establish specifications for driveway design								
- Identify correct design for right-of-ways								
- Develop connectivity recommendations								
- Interviews								
- Public Forum (1 of 3)								
- Public Forum (2 of 3)								
- Public Forum (3 of 3)								
- Commission Meeting (1 of 1)								
4. Final Report with Recommendations								
- Prepare Deliverables								
- Final Delivery								



In Association with:
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Preliminary Suggestions

- Pond is suggesting changes in the following areas:
- Suggested median closures/partial closures
 - Suggested new roads
 - Suggested driveway closures



In Association with:
Herli | Sycamore Consulting

Survey Results Review



- The issues mentioned most were:
 - Congestion
 - Pedestrian friendly
 - Intersection design
 - Aesthetics

Survey Results Review



- 66% **agree** with **mixed use development**
- 96% are **concerned** about **congestion**
- 63% would **encourage** new **access** among large **commercial** properties
- 92% are **concerned** about **commercial development**
- 96% **support** Cobb County **building sidewalks**

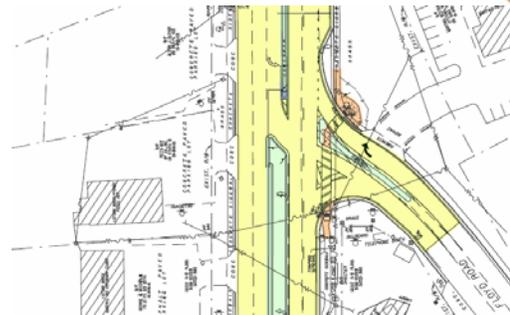
Traffic Analysis



Previously Planned Projects

- East-West Connector Intersection
 - Projected Completion Date: End of 2009
- Multiple Intersections
 - Clay Road
 - Hurt Road
 - Floyd Road
 - Milford Church Road
 - Projected Completion Date: March 2010
- Callaway Road Intersection
 - Projected Completion Date: May 2011

Traffic Analysis



Austell Road at Floyd Road

Preliminary Traffic Analysis Summary



AM and PM peak hour analysis at 7 intersections along Austell Road

- Mulkey Road (Signalized)
- Story Place
- Blue Ridge Drive/Brookwood Drive
- Hurt Road (Signalized)
- Floyd Road
- Cobb Market Fair Driveway
- Amy Lane (Signalized)



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Preliminary Traffic Analysis Summary



Four Alternatives Analyzed

- 2009 Existing Conditions
- 2009 With Access Management
- 2019 Without Access Management
- 2019 With Access Management



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Preliminary Traffic Analysis Summary



A hierarchy of options for potential changes at each unsignalized intersection was identified:

- Close median opening
- Partially close/channelize median opening
- Signalize the intersection (if signal warrant is met)
- Leave intersection unchanged



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Preliminary Traffic Analysis Summary



Story Place Suggested Recommendation: Close Median Opening

- Left turn traffic volumes are very low
- Alternate routes connect existing development to Mulkey Road



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Preliminary Traffic Analysis Summary



Blue Ridge Drive/
Brookwood Drive Suggested
Recommendation: Partially
Close/Channelize Median
Opening

- Most left turn traffic volumes are low
- Southbound left turn onto Brookwood Drive has significant traffic
- Alternate routes connect existing development to Hurt Road and Mulkey Road



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Preliminary Traffic Analysis Summary



Blue Ridge Drive/Brookwood Drive Suggested
Recommendation: Partially Close/Channelize Median Opening



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Preliminary Traffic Analysis Summary



Austell Road at Blue Ridge Drive/Brookwood Drive

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Preliminary Traffic Analysis Summary



Floyd Road Suggested
Recommendation: Cobb
DOT Project

- Partially Close/Channelize Median Opening
- Southbound left turn onto Floyd Road has significant traffic
- Alternate routes connect existing development to Hurt Road
- Potential Backage Road



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Preliminary Traffic Analysis Summary

Cobb Marketfair Suggested Recommendation:

- Short term – No Change
- Long Term - Signalize
 - Traffic signal improves access to shopping center redevelopment
 - Meets distance requirements to adjacent signals



Suggested New Roads

East West Connector Area



Suggested New Roads

Hurt Road Area



Suggested New Roads

Stallion Road Area



Transit



Between Anderson Mill Road and Amy Lane:

- Transit users should cross at signalized intersections
- Average distance between traffic signals:
 - 0.28 miles
 - With additional signal at Cobb Marketfair: 0.24 miles
- Raised landscaped median will reduce mid-block crossings



Proposed Median Treatment



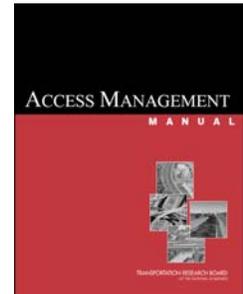
Proposed Median Treatment



Access Management Standards



- Standards for minimum access spacing on a minor arterial such as Austell Road:
 - 1320 ft full median opening
 - 330 ft right in/right out only
 - 660 ft directional median opening



Example of Poor Driveway Spacing



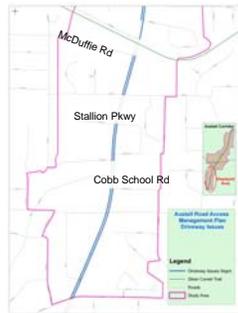
Driveway Distance Standards

Start Point	End Point	Approx. Length (ft.)	Number of Driveways Northbound	Average Driveway Distance (ft) Northbound	Number of Driveways Southbound	Average Driveway Distance (ft) Southbound
Milford Church Rd	Byers Dr	1,393	12	116.08	3	464.33
Byers Dr	Pair Rd	521	3	173.67	0	-
Amelia Dr	Lanier Dr	674	2	337.00	5	134.80
Lanier Dr	Amy Ln	1,757	6	292.83	1	1757.00
Mimosa Dr	Reed Dr	1,125	4	281.25	2	562.50
Floyd Rd	Hurt Rd	882	6	147.00	7	126.00
Hurt Rd	Blue Ridge Dr	556	3	185.33	5	111.20
Blue Ridge Dr	Story Pl	738	4	184.50	7	106.43
Story Pl	Mulkey Rd	581	2	290.50	3	193.67
Anderson Mill Rd	Elmwood Dr	1,028	5	205.60	4	257.00
Elmwood Dr	Fairview Dr	478	5	95.60	3	159.33
Fairview Dr	Drennon Av	405	4	101.25	1	405.00
McDuffie Rd	Seages Rd	896	3	298.67	4	224.00
Stallion Pkwy	Evergreen Dr	825	3	275.00	4	206.25
South Cobb School Rd	Clay Rd	512	2	256.00	3	170.67
Clay Rd	Doby Ln	1,600	9	177.78	13	123.08
Doby Ln	Lella St	480	2	240.00	2	240.00

Segments with Driveway Distance Below Standard

Southern Area of the Corridor

Austell Rd segments where average distance between driveways is less than 350ft



Segments with Driveway Distance Below Standard

Central Area of the Corridor

Austell Rd segments where average distance between driveways is less than 350ft



Segments with Driveway Distance Below Standard



Northern Area of the Corridor

Austell Rd segments where average distance between driveways is less than 350ft



Driveway Closures



Plan Adoption



- Cobb County Board of Commissioners Meeting – July 28, 2009

Questions/Comments?



Updates will be available on the project website at <http://www.cobbdot.org/AustellRoadLCI/index.htm>

Austell Road Access Management Plan

**Board of Commissioners
Work Session,
July 28, 2009**

Laraine Vance: Cobb DOT Project Manager
Dan Cohen: Pond & Company, Planning Director



Access Management



It is the systematic control of the location, spacing, design, and operation of driveways, median openings, interchanges, and street connections to a roadway

- From the Transportation Research Board's Access Management Manual



Why Manage Access?

Access



Mobility

- Improve safety
- Improve traffic flow and reduce motorist delay without adding traffic lanes
 - Reduce curb cuts
 - Improve interparcel access
 - Create alternate roadways
- Benefit non-vehicular travel modes
 - Bicyclists
 - Pedestrians
 - Transit Users



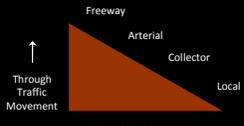
Study Goals



- Improve traffic safety and vehicular crash rates
- Shorten travel times and reduce travel costs
- Increase capacity of roadways
- Enhance value of private land development and improve access to property
- Improve overall aesthetics of the community
- Connect sidewalks and examine bicycle path feasibility



Approach to the Study



- For the entire corridor, create an access management plan based on nationally recognized planning principles
- For the central part of the corridor, to apply these principles and conduct traffic analyses to arrive at specific engineering level solutions



Issues and Opportunities



- Examine Party City and Lowe's shopping center Connectivity
- Examine Ingress/Egress at Target and at other shopping centers
- Create more corridors to get in and out of Hospital area without using Austell Road
- Close Sidewalk gaps along corridor
- Create Better Streetscapes
- The Silver Comet Trail – There is currently no access provided from Austell Road



Access Management & Market

Increase in Average Speed	Increase in Market Area
0	NA
+10%	+23%
+20%	+56%
+30%	+122%



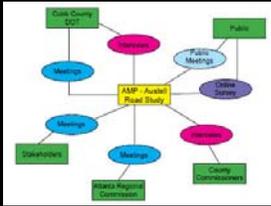
Recommendations



- Median closures/partial closures
- New roads
- Driveway closures
- Land use review changes



Survey Results



- 66% agree with mixed use development
- 96% are concerned about congestion
- 63% would encourage new access among large commercial properties
- 92% are concerned about the need for commercial redevelopment
- 96% support Cobb County building sidewalks



Crash Analysis



3 Years of Crash Data, February 2006 – January 2009
Field review of corridor



Crash Data Standard

Austell Road Segment		Crash Rate by Million Vehicle Miles (MVM) Travelled
Start Point	End Point	
Leila St	South of Clay Rd	2.62
Clay Rd	Anderson Mill Rd	7.51
Orange Hill Dr	South of Floyd Rd	9.68
Floyd Rd	Callaway Rd	5.01

- State of Georgia crash rate for all urban minor arterials: 5.13 Crashes/MVM
- 71% are access management related accidents (rear on / right angle)



Traffic Analysis



Austell Road at Floyd Road

- Previously Planned Projects
 - East-West Connector Intersection
 - Projected Completion Date: End of 2009
 - Multiple Intersections
 - Clay Road
 - Hurt Road
 - Floyd Road
 - Milford Church Road
 - Projected Completion Date: March 2010
 - Callaway Road Intersection
 - Projected Completion Date: May 2011



Traffic Analysis



- Mulkey Road (Signalized)
- Story Place
- Blue Ridge Drive/Brookwood Drive
- Hurt Road (Signalized)
- Floyd Road
- Cobb Market Fair Driveway
- Amy Lane (Signalized)



Traffic Analysis



Purpose

- Determine feasibility of closing or partially closing median openings
 - Improves traffic flow
 - Improves safety
- Identify impact to adjacent intersections
 - Increase in left turn volumes
 - Increase in U-turn volumes



Traffic Analysis Summary



A hierarchy of options for potential changes at each unsignalized intersection was identified:

- Close median opening
- Partially close/channelize median opening
- Signalize the intersection (if signal warrant is met)
- Leave intersection unchanged



Traffic Analysis Summary



Story Place

Story Place Suggested Recommendation: Close Median Opening

- Left turn traffic volumes are very low
- Alternate routes connect existing development to Mulkey Road



Traffic Analysis Summary



Blue Ridge Drive

Brookwood Drive

Blue Ridge Drive/ Brookwood Drive Suggested Recommendation: Partially Close/Channelize Median Opening

- Most left turn traffic volumes are low
- Southbound left turn onto Brookwood Drive has significant traffic
- Alternate routes connect existing development to Hurt Road and Mulkey Road



Traffic Analysis Summary



Blue Ridge Drive/Brookwood Drive Suggested Recommendation: Partially Close/Channelize Median Opening



Traffic Analysis Summary



Floyd Road Suggested Recommendation: Cobb DOT Project

- Partially Close/Channelize Median Opening
- Southbound left turn onto Floyd Road has significant traffic
- Alternate routes connect existing development to Hurt Road
- Potential Backage Road



Traffic Analysis Summary



Cobb Marketfair Suggested Recommendation:

- Short term – No Change
- Long Term - Signalize
 - Traffic signal improves access to shopping center redevelopment
 - Meets distance requirements to adjacent signals



Suggested New Roads

East West Connector Area




Suggested New Roads

Hurt Road Area




Suggested New Roads

Stallion Road Area




Transit

Between Anderson Mill Road and Amy Lane:

- Transit users should cross at signalized intersections
- Average distance between traffic signals:
 - 0.28 miles
 - With additional signal at Cobb Marketfair: 0.24 miles
- Raised landscaped median will reduce mid-block crossings




Proposed Median Treatment

Driveway Spacing

- Right-turn conflict overlap
- Minimum recommended spacing: 350 ft

Source: Access Management Manual – Transportation Research Board

Driveway Distance Standards

The minimum recommended spacing for driveways is 330 ft.

- 59% of the Austell Road corridor in the Northbound direction is not in compliance.
- 39% of the Austell Road corridor in the Southbound direction is not in compliance.
- 82% of the traffic study area in the Northbound direction is not in compliance.
- 62% of the traffic study area in the Southbound direction is not in compliance.

Land Use

- Interparcel Access is encouraged in County Development Regulations.
- Require connectivity analysis as part of county planning staff review process

Sidewalks

- Conducted sidewalk inventory to determine needs
- Projects were ranked using 6 of Cobb County's criteria including:
 - Transit Connectivity – DOT Goal Fulfillment
 - School Connectivity – Activity Center Connectivity
 - High Pedestrian Area – Gap Closure
- Highest ranked projects include
 - Austell Road: 4,810 total linear ft
 - East West Connector: 6,685 total linear ft

Project List and Cost Estimates

Project ID	Description	Type of Improvement	Total Project Cost
E1	Austell Road at Shery Place - Close existing median opening, replace left turn lane storage box with raised, landscaped median, add sidewalk for southbound to Austell Road at Malley Road	Rightway Operations	\$344,000
E2	Austell Road at Elm Ridge Drive/Workwood Drive - Partially close/hammock the median opening to allow northbound and southbound left turn movements but no other left turn or cross street movements, correct concrete median to road, landscaped median	Rightway Operations	\$85,000
E3	Austell Road at Cobb Marketplace Park Trail Treatment - Squarish Intersection	Rightway	\$85,000
M1	Raised, Landscaped Median on Austell Road from Malley Road to Hart Road	Rightway	\$986,400
M2	Raised, Landscaped Median on Austell Road from Hart Road to Arroy Lane	Rightway	\$1,534,400
M3	Raised, Landscaped Median on Austell Road from East West Connector to Malley Road	Rightway	\$611,200
M4	Raised, Landscaped Median on Austell Road from Anderson Mill Road to East West Connector	Rightway	\$1,260,400
M5	Raised, Landscaped Median on the East West Connector from Legans Drive/K&H's Shopping Center to Brookwood Drive	Rightway	\$1,751,400
R1	Backlog Road, K&H's Shopping Center - Connects Austell Road and the East West Connector with a 2 lane urban roadway that has 11-ft travel lanes and a 5-ft sidewalk on one side of the roadway. Project Length: 1,480 ft	Rightway Capacity	\$1,534,400
R2	Backlog Road, Target Lane's Shopping Center - Connects Austell Road and the East West Connector with a 2 lane urban roadway that has 11-ft travel lanes and a 5-ft sidewalk on one side of the roadway. Project Length: 2,000 ft	Rightway Capacity	\$1,545,400
R3	Partially Roadway at Hart Road - Connects Hart Road, Road Drive and the Park Trail Treatment on the west side of Austell Road with a 2 lane urban roadway that has 11-ft travel lanes and a 5-ft sidewalk on one side of the roadway. Two new roads will connect the roadway to Austell Road. Total Project Length: 2,450 ft	Rightway Capacity	\$2,238,475
R4	Median Roadway Lane - 14-mile gap between the South Cobb Government Center and the South Cobb High School Middle at all times when the Middle is in use	Rightway	N/A
P1	5-ft sidewalk on the south side of the East West Connector from Brookwood Drive to 100 feet west of Phylax Road	Pedestrian	\$200,000
P2	5-ft sidewalk on the west side of Austell Road from Lady Street to Clay Road	Pedestrian	\$300,000
P3	5-ft sidewalk on the east side of Austell Road from 100 feet north of Scopus Road to 100 feet east of Anderson Mill Road	Pedestrian	\$228,000
P4	5-ft sidewalk on the east side of Austell Road from Scopus Road to 400 feet north of Scopus Road	Pedestrian	\$70,000
P5	5-ft sidewalk on the west side of the East West Connector from North Shopping Center/Phylax Road to 100 feet west of K&H's Shopping Center driveway	Pedestrian	\$67,000
P6	5-ft sidewalk on the north side of the East West Connector from the Regional Observatory to 300 feet west of the Marketplace/Target driveway	Pedestrian	\$61,450
P9	5-ft sidewalk on the north side of the East West Connector from Meigs Valley Way to 500 feet east of Meigs Valley Way	Pedestrian	\$61,000
P10	5-ft sidewalk on the north side of the East West Connector from west of study area boundary to 50 feet west of Meigs Valley Way	Pedestrian	\$80,400
P11	5-ft sidewalk on the north side of the East West Connector from west of study area boundary to 750 feet west of Legans Drive	Pedestrian	\$100,000
P7	5-ft sidewalk on the west side of Brookwood Drive from Anderson Mill Road to the East West Connector	Pedestrian	\$225,000
P8	5-ft sidewalk on the west side of Coleridge Road from Austell Road to Block Road	Pedestrian	\$161,500
A1	Review existing development codes to determine if integrated access and driveway spacing requirements are sufficient	Land Use	N/A
A2	Review county zoning review forms to include category for access management	Land Use	N/A
Total			\$14,313,228

Questions / Comments?



Updates will be available on the project website at
<http://www.cobbdot.org/AustellRoadLCI/index.htm>



Austell Road Access Management Plan

**Planning Commission
August 4, 2009**

Laraine Vance: Cobb DOT Project Manager
Dan Cohen: Pond & Company, Planning Director



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 - Pedestrians
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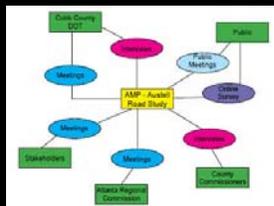
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Orange Hill Dr	South of Floyd Rd	9.68
Floyd Rd	Callaway Rd	5.01

- State of Georgia crash rate for all urban minor arterials: 5.13 Crashes/MVM
- 71% are access management related accidents (rear on / right angle)



Traffic Analysis



Austell Road at Floyd Road

- Previously Planned Projects
 - East-West Connector Intersection
 - Projected Completion Date: End of 2009
 - Multiple Intersections
 - Clay Road
 - Hurt Road
 - Floyd Road
 - Milford Church Road
 - Projected Completion Date: March 2010
 - Callaway Road Intersection
 - Projected Completion Date: May 2011



Traffic Analysis



- Mulkey Road (Signalized)
- Story Place
- Blue Ridge Drive/Brookwood Drive
- Hurt Road (Signalized)
- Floyd Road
- Cobb Market Fair Driveway
- Amy Lane (Signalized)



Traffic Analysis



Purpose

- Determine feasibility of closing or partially closing median openings
 - Improves traffic flow
 - Improves safety
- Identify impact to adjacent intersections
 - Increase in left turn volumes
 - Increase in U-turn volumes



Traffic Analysis Summary



A hierarchy of options for potential changes at each unsignalized intersection was identified:

- Close median opening
- Partially close/channelize median opening
- Signalize the intersection (if signal warrant is met)
- Leave intersection unchanged



Traffic Analysis Summary



Story Place Suggested Recommendation: Close Median Opening

- Left turn traffic volumes are very low
- Alternate routes connect existing development to Mulkey Road



Traffic Analysis Summary



Blue Ridge Drive/ Brookwood Drive Suggested Recommendation: Partially Close/Channelize Median Opening

- Most left turn traffic volumes are low
- Southbound left turn onto Brookwood Drive has significant traffic
- Alternate routes connect existing development to Hurt Road and Mulkey Road



Traffic Analysis Summary



Blue Ridge Drive/Brookwood Drive Suggested Recommendation: Partially Close/Channelize Median Opening



Traffic Analysis Summary



Floyd Road Suggested Recommendation: Cobb DOT Project

- Partially Close/Channelize Median Opening
- Southbound left turn onto Floyd Road has significant traffic
- Alternate routes connect existing development to Hurt Road
- Potential Backage Road



Traffic Analysis Summary



Cobb Marketfair Suggested Recommendation:

- Short term – No Change
- Long Term - Signalize
 - Traffic signal improves access to shopping center redevelopment
 - Meets distance requirements to adjacent signals



Suggested New Roads

East West Connector Area




Suggested New Roads

Hurt Road Area




Suggested New Roads

Stallion Road Area




Transit

Between Anderson Mill Road and Amy Lane:

- Transit users should cross at signalized intersections
- Average distance between traffic signals:
 - 0.28 miles
 - With additional signal at Cobb Marketfair: 0.24 miles
- Raised landscaped median will reduce mid-block crossings




Proposed Median Treatment

Driveway Spacing

- Right-turn conflict overlap
- Minimum recommended spacing: 350 ft

Source: Access Management Manual – Transportation Research Board

Driveway Distance Standards

The minimum recommended spacing for driveways is 330 ft.

- 59% of the Austell Road corridor in the Northbound direction is not in compliance.
- 39% of the Austell Road corridor in the Southbound direction is not in compliance.
- 82% of the traffic study area in the Northbound direction is not in compliance.
- 62% of the traffic study area in the Southbound direction is not in compliance.

Land Use

- Interparcel Access is encouraged in County Development Regulations.
- Require connectivity analysis as part of county planning staff review process

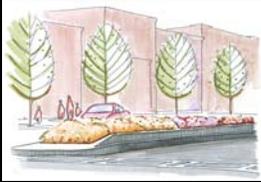
Sidewalks

- Conducted sidewalk inventory to determine needs
- Projects were ranked using 6 of Cobb County's criteria including:
 - Transit Connectivity – DOT Goal Fulfillment
 - School Connectivity – Activity Center Connectivity
 - High Pedestrian Area – Gap Closure
- Highest ranked projects include
 - Austell Road: 4,810 total linear ft
 - East West Connector: 6,685 total linear ft

Project List and Cost Estimates

Project ID	Description	Type of Improvement	Total Project Cost
E1	Austell Road at Shery Place - Close existing median opening, replace left turn lane storage box with raised, landscaped median, add sidewalk for southbound to Austell Road at Malley Road	Rightway Operations	\$344,000
E2	Austell Road at Elm Ridge Drive/Workwood Drive - Partially close/hammock the median opening to allow northbound and southbound left turn movements but no other left turn or cross street movements, correct concrete median to road, landscaped median	Rightway Operations	\$83,000
E3	Austell Road at Cobb Marketplace Park Trail Treatment - Squarish Intersection	Rightway	\$85,000
M1	Revised Landscaped Median on Austell Road from Malley Road to Hart Road	Rightway	\$986,400
M2	Revised Landscaped Median on Austell Road from Hart Road to Arny Lane	Rightway	\$1,534,400
M3	Revised Landscaped Median on Austell Road from Arny Lane to West Connector - Malley Road	Rightway	\$611,200
M4	Revised Landscaped Median on Austell Road from Anderson Mill Road to East West Connector	Rightway	\$1,260,400
M5	Revised Landscaped Median on the East West Connector from Legans Drive/K&H Shopping Center to Brookwood Drive	Rightway	\$1,751,400
R1	Backlog Road, K&H's Shopping Center - Connects Austell Road and the East West Connector with a 2 lane urban roadway that has 11-ft travel lanes and a 5-ft sidewalk on one side of the roadway. Project Length: 1,480 ft	Rightway Capacity	\$1,534,400
R2	Backlog Road, Target/Lowe's Shopping Center - Connects Austell Road and the East West Connector with a 2 lane urban roadway that has 11-ft travel lanes and a 5-ft sidewalk on one side of the roadway. Project Length: 2,000 ft	Rightway Capacity	\$3,545,400
R3	Partially Redesign at Hart Road - Connects Hart Road, Road Drive and the Park Trail Intersection on the west side of Austell Road with a 2 lane urban roadway that has 11-ft travel lanes and a 5-ft sidewalk on one side of the roadway. Two new roads will connect the roadway to Austell Road. Total Project Length: 2,450 ft	Rightway Capacity	\$2,238,475
R4	Redesign Road End - 14.5 mile gap between the South Cobb Government Center and the South Cobb High School Middle at all times when the Middle is in use	Rightway	N/A
P1	5-ft sidewalk on the south side of the East West Connector from Brookwood Drive to 100 feet west of Phylod Drive	Pedestrian	\$309,000
P2	5-ft sidewalk on the west side of Austell Road from Lady Street to Clay Road	Pedestrian	\$390,000
P3	5-ft sidewalk on the east side of Austell Road from 100 feet north of Scapes Road to 100 feet east of Anderson Mill Road	Pedestrian	\$228,000
P4	5-ft sidewalk on the east side of Austell Road from Scapes Road to 400 feet north of Scapes Road	Pedestrian	\$70,000
P5	5-ft sidewalk on the west side of the East West Connector from Brien Shropshire Parcel Block to 100 feet west of K&H Shopping Center driveway	Pedestrian	\$67,000
P6	5-ft sidewalk on the north side of the East West Connector from the Regional Observatory to 300 feet west of the Matthews/Duglas driveway	Pedestrian	\$61,450
P9	5-ft sidewalk on the north side of the East West Connector from Meigs Valley Way to 500 feet east of Meigs Valley Way	Pedestrian	\$61,000
P10	5-ft sidewalk on the north side of the East West Connector from west of study area boundary to 50 feet west of Meigs Valley Way	Pedestrian	\$80,400
P11	5-ft sidewalk on the north side of the East West Connector from west of study area boundary to 750 feet west of Legans Drive	Pedestrian	\$190,000
P7	5-ft sidewalk on the west side of Brookwood Drive from Anderson Mill Road to the East West Connector	Pedestrian	\$225,900
P8	5-ft sidewalk on the west side of Colterway Road from Austell Road to Block Drive	Pedestrian	\$161,500
A1	Review existing development codes to determine if integrated access and driveway spacing requirements are sufficient	Land Use	N/A
A2	Review county zoning review forms to include category for access management	Land Use	N/A
Total			\$14,313,228

Questions / Comments?



Updates will be available on the project website at
<http://www.cobbdot.org/AustellRoadLCI/index.htm>



Appendix B

Online Survey

Cobb County Department of Transportation

Austell Road Community Survey

Cobb County continues to seek your opinions and comments concerning the Austell Road Corridor from Leila Street to Callaway Road. As you know, the County has been active in promoting potential redevelopment opportunities in the area and is looking for ways to make this area more vibrant and safe. The County is undertaking a study right now to determine what improvements are needed and **we want to know what you think.**

Please take a few moments to fill this survey out **before the end of April 2009.** We will use the information from this survey to assist us in selecting priorities for enhancements in the corridor. We hope you can attend this meeting so you can hear the results. If you cannot attend, we will post the results on this site shortly thereafter.

1) Do you own/represent a:

Private Residence

Business

Non-Profit Group

Other:

2) What are the top three most important issues that should be solved in the corridor?

Issue 1

Issue 2

Issue 3



3) What is the most important transportation problem facing you and your family in the Austell Road area today?



4) Businesses and homes should be built closer together, often in the same community to shorten commutes and limit traffic congestion.

- Totally Agree
- Strongly Agree
- Somewhat Agree
- Somewhat Disagree
- Strongly Disagree
- Totally Disagree
- Don't Know

5) Businesses and homes should be built closer together, so that stores and shops are within walking distance and don't require the use of an automobile.

- Totally Agree
- Strongly Agree
- Somewhat Agree
- Somewhat Disagree
- Strongly Disagree
- Totally Disagree
- Don't Know

6) How concerned are you about the increase in traffic congestion and length of commute?

- Totally Concerned
- Strongly Concerned
- Somewhat Concerned
- Only A Little Concerned
- Not At All Concerned
- Don't Know

7) How concerned are you about increased reliance on needing cars because everything is spread out?

- Totally Concerned
- Strongly Concerned
- Somewhat Concerned
- Only A Little Concerned
- Not At All Concerned
- Don't Know

8) How concerned are you about the increase in highway commercial development, such as strip malls?

- Totally Concerned
- Strongly Concerned
- Somewhat Concerned
- Only A Little Concerned
- Not At All Concerned
- Don't Know

9) Do you think Cobb County should encourage new access among large commercial properties?

- Totally Support
- Somewhat Support
- Somewhat Oppose
- Totally Oppose
- Don't Know

10) Would you support Cobb County building sidewalks in the area?

Yes

No

11) Which of the following proposals is the best long-term solution to reducing traffic in your area?

Build new roads

Improve public transportation

Develop communities where people do not have to drive as much

12) Do you think bus stops are located in the right places in the area?

Yes

No

Where should they be located?

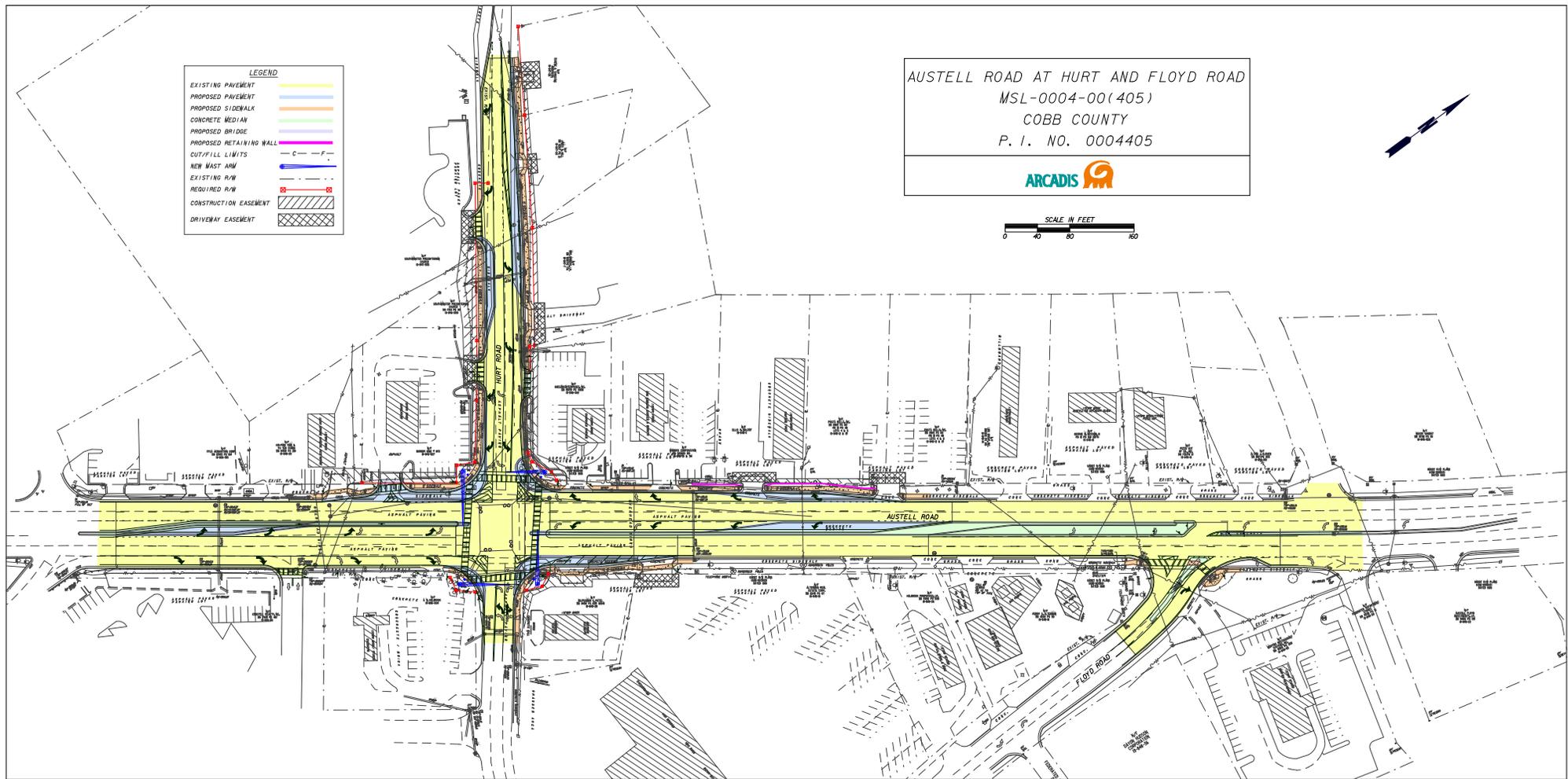
Please provide any additional input about this project in the space provided below.

Appendix C

Complete Design of Austell Road at Hurt Road and Floyd Road

LEGEND	
EXISTING PAVEMENT	
PROPOSED PAVEMENT	
PROPOSED SIDEWALK	
CONCRETE MEDIUM	
PROPOSED BRIDGE	
PROPOSED RETAINING WALL	
CUT/FILL LIMITS	
NEW MAST ARM	
EXISTING R/W	
REQUIRED R/W	
CONSTRUCTION EASEMENT	
DRIVEWAY EASEMENT	

AUSTELL ROAD AT HURT AND FLOYD ROAD
 MSL-0004-00(405)
 COBB COUNTY
 P. I. NO. 0004405



Appendix D

Technical Memo - Traffic Analysis

the ruler tool then verified in the field. The grades were measured in the field 150' from the stop-line on Austell Road and 75' from the stop-line on the side streets. Cobb County Traffic Engineering provided the existing traffic signal timing data and the Georgia Department of Transportation provided the Annual Average Daily Traffic (AADT) report.

Cobb County Traffic Engineering provided drawings of the three signalized intersections. The drawings included signal phasing, presence loop size and set-back loop distances. The lane configurations and facility names have changed since the drawings were made, and the model was updated with accurate dimensions from field measurements. The Google Earth photos were field verified for accurate lane configuration.



The intersection of Austell Road at Amy Lane is controlled by a 2070LCN in a dual-ring configuration. The northbound Austell Road left-turn bay is 190' in length and the southbound left-turn bay is 149' in length. None of the approaches have left-turn phases. The northbound Austell Road approach has a striped right-turn bay of 16'. The Amy Lane/Ivy Creek Apartments approaches have 40' quad-pole presence loops. The Austell Road northbound setback loop is 400' and the southbound setback loop is 360'.



The intersection of Austell Road at Hurt Road is controlled by a 2070LCN in a dual-ring configuration. The northbound Austell Road left-turn bay is 153' in length and the southbound left-turn bay is 153' in length. The eastbound Hurt Road left-turn bay is 130' in length and the westbound left-turn bay is 130' in length. All of the approaches have left-turn phases. The northbound Austell Road approach has a striped right-turn bay of 115' and the southbound approach has a striped right-turn bay of 158'. The Hurt Road approaches have 40' quad-pole presence loops. The Austell Road northbound setback loop is 315' and the southbound setback loop is 335'.



The intersection of Austell Road at Mulkey Road is controlled by a 2070LCN in a dual-ring configuration. The northbound Austell Road left-turn bay is 228' in length and the southbound left-turn bay is 121' in length. The eastbound Mulkey Road left-turn bay is 120' in length and the westbound left-turn bay is 140' in length. All of the approaches have left-turn phases. The northbound Austell Road approach has a striped right-turn bay of 83' and the southbound approach has a striped right-turn bay of 160'. The Mulkey Road approaches have 40' quad-pole presence loops. The Austell Road northbound setback loop is 270' and the southbound setback loop is 300'.

The four non-signalized intersections included in the model are Cobb Mayfair Center, Floyd Road, Brookwood Road, and Story Place. The lane configurations were obtained from Google Earth and field verified. Austell Road at Cobb Mayfair Center and Austell Road at Story Place have standard cross-street configurations. Austell Road at Floyd Road and Austell Road at Brookwood Drive are severely skewed intersections.



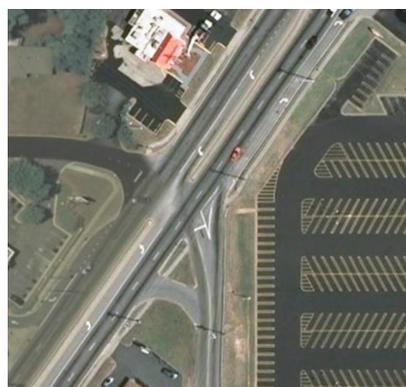
Austell Road at Cobb Marketfair



Austell Road at Story Place



Austell Road at Floyd Road



Austell Road at Brookwood Drive

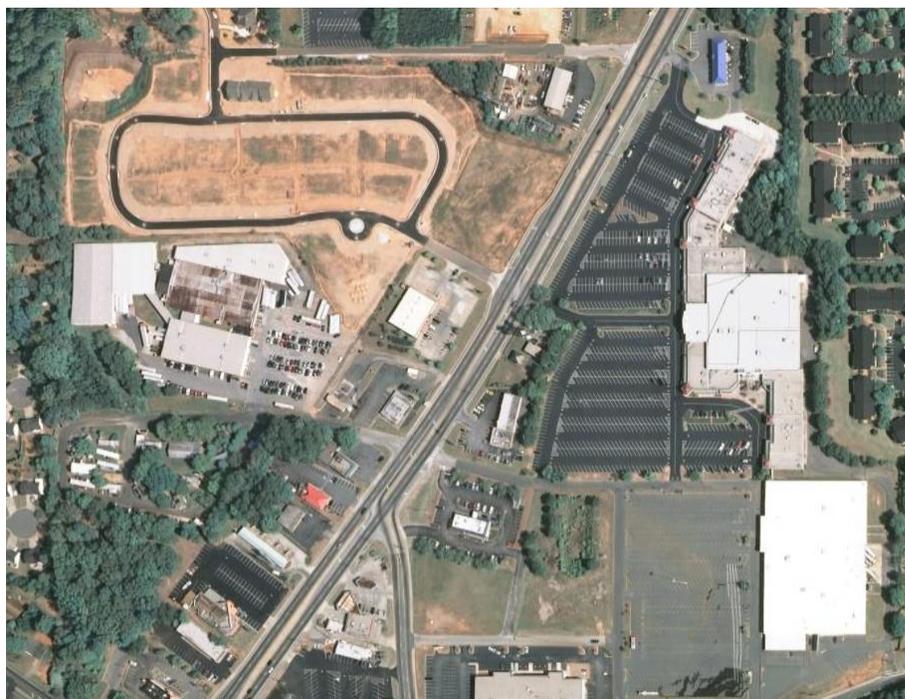
The project has the following requirements:

1. Use Synchro to model showing the existing conditions in April 2009.
2. Change the geometrics of the existing conditions model to reflect Cobb County's Floyd Road/Hurt Road project scheduled for construction in 2009. Include the proposed geometric changes of closing the median opening at Story Place and channelizing the median at Brookwood Drive/Blue Ridge Drive to allow northbound and southbound left-turns only. Reassign the affected traffic to Hurt Road or Mulkey Road.
3. Do trip generations for the Cobb Marketfair shopping center and the Park Trail Townhomes and predict the traffic volumes ten years to 2019 using the new trip generations and historical traffic count data.
4. Apply the projected ten year growth rate with trip generations using only the Floyd Road/Hurt Road project changes to the existing transportation network.

5. Apply the projected ten year growth rate with new trip generations using all the proposed changes to the transportation network.
6. Conduct AM and PM analyses on the network scenarios described and identify any impacts that might be detrimental to traffic conditions along the corridor.
7. Analyze the intersection of Austell Road at Amy Lane for left-turn phasing needs on all approaches.

Synchro has constraints on how the transportation network is defined for it to generate a model and capacity reports. The following assumptions regarding the transportation network and trip distributions were made.

- A. Assumptions regarding the Trip Generation for Cobb Marketfair and Park Trail Townhomes.
 1. The trips are distributed at the main entrance based on the existing turning movement volume percentages.
 2. Half the AM and PM right turns in are assigned to Mimosa Drive; the other half use the main entrance at the Park Trail Townhomes median break.
 3. Half the total right turns into Cobb Marketfair are assigned to the southern entrance across from Reed Dr; 80% of the remaining turn at the main entrance at the median break; the remainder turn in at the northern entrance across from Mimosa Drive.
 4. Half the total right turns out Cobb Marketfair are assigned to the northern entrance across from Mimosa Dr; 70% of the remaining turn at the main entrance at the median break; the remainder turn in at the southern entrance across from Reed Drive.
 5. 25% of the vehicles wishing to go south on Austell Rd from Cobb Marketfair use the Hurt Road route.
 6. A traffic signal at the Cobb Marketfair/Park Trail Townhomes median opening was included in the 2019 Build scenario to improve capacity and coordination.





- B. The Floyd Road/Hurt Road project will change the intersection geometrics as listed below.
1. The Hurt Road Project lengthened the left-turn and right-turn lanes both northbound and southbound on Austell Road.
 2. The project also added a right-turn lane eastbound on Hurt Road.
 3. The project removed the northbound left-turn lane at Floyd Road and made the median opening for southbound left-turns only. This eliminated southbound U-turns and any cross-street thru or left-turn movements.
- C. The other suggested intersection geometric changes include:
1. Closing the median opening at Story Place.
 2. Eliminating the cross-street left-turns and thru movements at Brookwood Drive/Blue Ridge Drive.
 3. Install a new traffic signal at Cobb Marketfair/Park Trail Townhomes and left-turn phasing for all movements at Amy Lane.
- D. The other issues that place constraints on the different scenarios are the following:
1. The East-West Connector at Austell Road is 1,786 feet south of Mulkey Road and determines the corridor cycle-length. The section of Austell Road being modeled is only a portion of the traffic signal system so the background cycle was held at the existing 170 seconds throughout all the scenarios.
 2. The Georgia Department of Transportation and Cobb County policies and procedures.

The proposed Austell Road improvements would close the median opening at Story Place and prevent cross-street through traffic at Blue Ridge Drive/Brookwood Drive. The vehicles that currently make through or left-turns from Blue Ridge Drive or Story Place will use Story Drive to access Austell Road via the Mulkey Road eastbound approach. The vehicles that currently make through or left-turns from Brookwood Drive or Story Place/Wendy's driveway will make these movements via the Mulkey Road westbound approach. The redistribution of traffic is reflected in all the "With Access Management" scenarios.

The Floyd Road/Hurt Road improvement project will add a 127' right-turn lane on the eastbound Hurt Road approach. It will increase the northbound left-turn lane to 335' and the right-turn lane to 432'. The southbound left-turn lane will be increased to 412' and the right-turn lane to 358'. The westbound approach is a striped three-lane road from Floyd Road to Austell Road. Motorists use the center dual left-turn lane as an extension of the dedicated left-turn at Austell Road and this was taken into account when determining the length of the westbound left-turn lane. The project closes the Floyd Road median opening to all movements except the southbound left-turn. It does not increase the length of the left-turn lane.

The modeling project generated the following results.

Traffic Signal Analysis

The left-turn movements at Amy Lane were analyzed abiding by the Georgia Department of Transportation' TOPPS "Left Turn Phasing" #6785-2 revised 07/22/05 and reviewed 01/25/08. The analysis showed the eastbound left-turn movement currently meets the greater-than 125

vehicles per hour (138) requirement. The northbound and southbound left-turn movements will meet the cross-product requirement in the 2019 scenario because of the overall 3% growth rate. The westbound Ivy Creek Apartments movement does not meet the requirements during any of the scenarios. The crash data for 2008 does not indicate any modification of the cross-product policy is necessary.

The median opening at Cobb Marketfair/Park Trail Townhomes will meet the traffic signal volume warrants in the 2019 scenario because of the trip generations and the 3% growth rate. A traffic signal at the Cobb Marketfair/Park Trail Townhomes median opening and the left-turn phasing at Amy Lane were included in the 2019 Build scenario to show the effect on capacity and signal coordination.

Left Turn Storage Analysis

Amy Lane:

The eastbound Amy Lane approach is currently close to a failing level-of-service because of the large number of left-turning vehicles, and it does fail in the future scenarios for both AM and PM peaks. Adding a thru-right lane 300 feet in length to the eastbound Amy Lane approach and re-striping the existing lane as a left-turn lane will help improve both the capacity and safety of this movement. The westbound Ivy Creek Apartments approach does not show a failing level-of-service until 2019. It has enough width for a left-turn lane and a thru-right lane 50 feet in length so re-striping could be considered to ease future congestion without additional pavement. The Austell Road northbound left-turn lane will handle the projected left-turn volume at its current length. But the southbound left-turn projected growth to 2019 will push it to a failing level-of-service. Lengthening the left-turn bay to approximately 200 feet should be considered.

Cobb Market Fair/Park Trail Townhomes:

The northbound and southbound left-turn lanes will handle the projected left-turn volumes at their current length. The eastbound (Park Trail Townhomes) approach currently has very few vehicles. Most of these vehicles want to make a left-turn onto Austell Road but are getting very few gaps in the traffic flow. This creates the delay that causes the approach to have a failing level-of-service in both the 2009 and the 2019 Without Access Management scenarios. The growth in traffic in 2019 With Access Management scenarios include the trip generations for Cobb Marketfair retail space being fully leased. The projected volumes show that 250 feet of additional left-turn capacity is needed on the Cobb Marketfair approach with re-striping the Park Trail Townhomes approach for a 50 foot left-turn lane and thru-right lane.

Floyd Road:

The Austell Road northbound left-turn lane will be closed by the Hurt Road project and the southbound left-turn lane will be lengthened to 240 feet but this movement onto Floyd Road will deteriorate to a failing level-of-service by 2019 because of the projected growth rate. Lengthening this lane to 400 feet should be considered. The eastbound and westbound approaches will be prohibited by the Hurt Road project.

Hurt Road:

The Austell Road northbound left-turn movement currently operates at a good level-of-service both with and without the proposed intersection improvements and the proposed Access Management. It may experience a failing level-of-service by 2019 because of the projected growth rate and adding an additional left-turn lane equal to the 335 feet being install by the Hurt Road project should be considered. The southbound left-turn movement has the same issues as the northbound and an additional left-turn lane equal to the 412 feet by the Hurt Road project should also be considered. Currently the westbound thru movement on Hurt Road has a failing level-of-service. The existing intersection improvement project alleviates this even with the proposed Access Management. The projected growth in traffic for 2019 will cause it to fail again so additional thru and left-turn storage to at least 230 feet should be considered. The projected growth in traffic for 2019 will cause the eastbound left-turn lane to also fail again so additional left-turn storage to at least 275 feet should be considered

Brookwood Drive/Blue Ridge Drive:

The closing of the median break to the cross-street traffic for Brookwood Drive and Blue Ridge Drive will help the flow of traffic along Austell Road with little impact on the side-street traffic. The vehicles wanting to make a thru or left-turn from Brookwood Drive may use the westbound Mulkey Road approach. And the vehicles wanting to do the same from the Blue Ridge Drive approach can use Story Drive to the Mulkey Road eastbound approach. The northbound and southbound left-turn lanes have adequate length to handle the projected left-turn volume.

Story Place/Wendy's Driveway:

The closing of the median break to the cross-street traffic for Story Place and Wendy's Driveway will help the flow of traffic along Austell Road with little impact on the side-street traffic. The vehicles wanting to make a thru or left-turn from Wendy's Driveway may use the westbound Mulkey Road approach. And the vehicles wanting to do the same from the Story Place approach can use Story Drive to the Mulkey Road eastbound approach.

Mulkey Road:

Mulkey Road existing eastbound left-turn has a failing level-of-service during the AM peak. The additional volume generated by the proposed closings at Brookwood Drive and at Story Place only increases the AM peak delay slightly. The growth in traffic volume to the 2019 levels also increases the delay on this approach for the AM peak and increases the delay during the PM peak as well to a failing level-of-service. Additional vehicle storage for the eastbound left-turn movement to approximately 400 feet should be considered. The westbound left-turn currently has an acceptable level-of-service but fails during the PM peak in both the 2009 and 2019 With Access Management scenarios. Additional left-turn storage to approximately 250 feet should be considered for this movement. The northbound and southbound left-turn lanes have adequate length to handle the projected left-turn volume.

U-Turn Radius Analysis

In general, all Austell Road approaches have adequate pavement widths for passenger car U-turns. Pavement width may become an issue with SU-type trucks or even long-bed or 4-door pickup trucks. Turning movement counts collected for this project did not distinguish between passenger cars and longer vehicles, so Iteris assumed that a threshold of 10 U-turns during either Year 2019 peak hour would serve as the criteria to add pavement for long-vehicle U-turns. Since the Access Management project will involve minor roadway design, we recommend detailed design of U-turn aprons where noted below.

1. Amy Lane
 - a. Neither peak hour exceeded 10 northbound U-turn vehicles.
 - b. The curb return for the westbound approach provides adequate space for southbound vehicles making U-turns.
2. Cobb Marketfair
 - a. The projected PM peak shows 20 northbound U-turn vehicles. Additional paving should be considered to accommodate U-turns.
 - b. Neither peak hour exceeded 10 southbound U-turn vehicles.
3. Floyd Road
 - a. Northbound left turns and U-turns will be prohibited by the Hurt Road project.
 - b. The Hurt Road project will prohibit southbound U-turns.
4. Hurt Road
 - a. The Hurt Road project will add additional paving for northbound U-turns.
 - b. The Hurt Road project will add additional paving for southbound U-turns.
5. Brookwood Drive
 - a. The projected PM peak shows 16 northbound U-turn vehicles. Additional paving should be considered to accommodate U-turns.
 - b. Neither peak hour exceeded 10 southbound U-turn vehicles.
6. Story Place
 - a. This project will close the median opening at this location, precluding U-turns in either direction.
7. Mulkey Road
 - a. The projected PM peak shows 13 northbound U-turn vehicles. Additional paving should be considered to accommodate U-turns.
 - b. The projected PM peak shows 20 southbound U-turn vehicles. Additional paving should be considered to accommodate U-turns.



Synchro 6 produced the following capacity results for the existing roadway conditions and with the Access Management improvements.

INTERSECTION	2009 Without Access Management				2009 With Access Management				2019 Without Access Management				2019 With Access Management			
	AM PEAK		PM PEAK		AM PEAK		PM PEAK		AM PEAK		PM PEAK		AM PEAK		PM PEAK	
	LOS	v/c	LOS	v/c	LOS	v/c	LOS	v/c	LOS	v/c	LOS	v/c	LOS	v/c	LOS	v/c
Austell Road & Amy Lane (signalized)	C	0.67	A	0.58	B	0.67	A	0.58	C	1.18	B	1.18	C	0.85	C	0.83
Austell Road & Cobb Marketfair/Park Trail Townhomes (no signal)																
Eastbound Approach	F	Note 1	F	Note 1	F	Note 1	F	Note 1	F	Note 1	F	Note 1	Note 2	--	Note 2	--
Westbound Approach	F	Note 1	F	Note 1	F	Note 1	F	Note 1	F	Note 1	F	Note 1	Note 2	--	Note 2	--
Northbound Left	A	Note 1	C	Note 1	A	Note 1	C	Note 1	B	Note 1	D	Note 1	Note 2	--	Note 2	--
Southbound Left	B	Note 1	B	Note 1	B	Note 1	B	Note 1	C	Note 1	C	Note 1	Note 2	--	Note 2	--
Austell Road & Cobb Marketfair/Park Trail Townhomes (with signal)													A	0.70	D	1.03
Austell Road & Floyd Road (no signal)																
Eastbound Approach	A	Note 1	F	Note 1	Note 4	--	Note 4	--	Note 4	--	Note 4	--	Note 4	--	Note 4	--
Westbound Approach	B	Note 1	C	Note 1	C	Note 1	C	Note 1	C	Note 1	C	Note 1	C	Note 1	C	Note 1
Northbound Left	B	Note 1	B	Note 1	Note 4	--	Note 4	--	Note 4	--	Note 4	--	Note 4	--	Note 4	--
Southbound Left	C	Note 1	C	Note 1	C	Note 1	C	Note 1	F	Note 1	F	Note 1	F	Note 1	F	Note 1
Austell Road & Hurt Road (signalized)	D	0.66	D	0.75	C	0.62	D	0.78	D	0.84	E	1.03	D	0.84	E	1.31
Austell Road & Blue Ridge Drive/Brookwood Drive (no signal)																
Eastbound Approach	A	Note 1	F	Note 1	A	Note 1	B	Note 1	F	Note 1	F	Note 1	B	Note 1	B	Note 1
Westbound Left	B	Note 1	F	Note 1	Note 3	--	Note 3	--	F	Note 1	F	Note 1	Note 3	--	Note 3	--
Westbound Right	B	Note 1	B	Note 1	B	Note 1	B	Note 1	C	Note 1	C	Note 1	C	Note 1	C	Note 1
Northbound Left	A	Note 1	B	Note 1	A	Note 1	B	Note 1	A	Note 1	D	Note 1	A	Note 1	D	Note 1
Southbound Left	C	Note 1	B	Note 1	B	Note 1	B	Note 1	C	Note 1	C	Note 1	C	Note 1	C	Note 1
Austell Road & Story Drive (no signal)																
Eastbound Approach	C	Note 1	D	Note 1	A	Note 1	B	Note 1	D	Note 1	F	Note 1	B	Note 1	B	Note 1
Westbound Approach	D	Note 1	D	Note 1	B	Note 1	B	Note 1	F	Note 1	F	Note 1	A	Note 1	B	Note 1
Northbound Left	A	Note 1	B	Note 1	Note 3	--	Note 3	--	B	Note 1	D	Note 1	Note 3	--	Note 3	--
Southbound Left	B	Note 1	B	Note 1	Note 3	--	Note 3	--	B	Note 1	B	Note 1	Note 3	--	Note 3	--
Austell Road & Mulkey Road (signalized)	B	0.43	C	0.59	B	0.44	C	0.66	C	0.62	E	0.95	C	0.64	D	0.89

Notes:

1. Unsignalized movements have no v/c ratio.
2. This movement will be signalized through Access Management.
3. This movement will be eliminated through Access Management.
4. The Hurt Road project will eliminate northbound left turns, northbound U-turns, southbound U-turns, eastbound left turns, and the eastbound through movement at Floyd Road.

HCM Signalized Intersection Capacity Analysis

1: Hurt Rd & Austell Rd

5/19/2009

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations	↖	→	↗	↖	↗			↖	↗	↖		↖	↗	↖
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		4%			1%				1%				-2%	
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00	0.95	1.00		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.99			1.00	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1734	1825	1552	1761	1841			1761	3522	1575		1787	3575	1599
Flt Permitted	0.49	1.00	1.00	0.09	1.00			0.27	1.00	1.00		0.05	1.00	1.00
Satd. Flow (perm)	901	1825	1552	158	1841			506	3522	1575		92	3575	1599
Volume (vph)	188	466	79	117	159	7	1	74	1352	121	20	11	679	67
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	204	507	86	127	173	8	1	80	1470	132	22	12	738	73
RTOR Reduction (vph)	0	0	23	0	1	0	0	0	0	63	0	0	0	38
Lane Group Flow (vph)	204	507	63	127	180	0	0	81	1470	69	0	34	738	35
Turn Type	pm+pt		Perm	pm+pt			pm+pt	pm+pt		Perm	pm+pt	pm+pt		Perm
Protected Phases	3	8		7	4		5	5	2		1	1	6	
Permitted Phases	8		8	4			2	2		2	6	6		6
Actuated Green, G (s)	61.3	49.3	49.3	56.5	46.9			88.5	81.6	81.6		84.7	79.7	79.7
Effective Green, g (s)	65.3	51.3	51.3	60.5	48.9			93.0	83.6	83.6		89.2	81.7	81.7
Actuated g/C Ratio	0.38	0.30	0.30	0.36	0.29			0.55	0.49	0.49		0.52	0.48	0.48
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0			6.5	6.0	6.0		6.5	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	5.0	5.0		3.0	5.0	5.0
Lane Grp Cap (vph)	415	551	468	166	530			346	1732	775		123	1718	768
v/s Ratio Prot	c0.04	c0.28		c0.05	0.10			c0.01	c0.42			0.01	0.21	
v/s Ratio Perm	0.15		0.04	0.22				0.12		0.04		0.13		0.02
v/c Ratio	0.49	0.92	0.13	0.77	0.34			0.23	0.85	0.09		0.28	0.43	0.05
Uniform Delay, d1	37.0	57.4	43.2	43.5	47.8			19.9	37.7	23.0		31.1	28.9	23.4
Progression Factor	1.00	1.00	1.00	1.00	1.00			0.86	0.79	0.46		1.24	0.99	1.11
Incremental Delay, d2	0.9	20.8	0.1	18.7	0.4			0.3	4.9	0.2		1.1	0.7	0.1
Delay (s)	38.0	78.2	43.3	62.3	48.2			17.5	34.6	10.8		39.6	29.3	26.1
Level of Service	D	E	D	E	D			B	C	B		D	C	C
Approach Delay (s)		64.1			54.0				31.9				29.5	
Approach LOS		E			D				C				C	

Intersection Summary

HCM Average Control Delay	40.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	170.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	85.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

5: Mulkey Rd & Austell Rd

5/19/2009

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-3%			-1%				-1%				-2%	
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	0.95	1.00		1.00	0.95	1.00
Frt	1.00	0.92		1.00	0.98			1.00	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1796	1738		1778	1841			1778	3557	1591		1787	3575	1599
Flt Permitted	0.52	1.00		0.36	1.00			0.27	1.00	1.00		0.18	1.00	1.00
Satd. Flow (perm)	979	1738		681	1841			508	3557	1591		331	3575	1599
Volume (vph)	138	80	94	47	105	13	11	284	1249	23	4	40	777	180
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	150	87	102	51	114	14	12	309	1358	25	4	43	845	196
RTOR Reduction (vph)	0	29	0	0	3	0	0	0	0	2	0	0	0	41
Lane Group Flow (vph)	150	160	0	51	125	0	0	321	1358	23	0	47	845	155
Turn Type	Perm			Perm			pm+pt	pm+pt		Perm	pm+pt	pm+pt		Perm
Protected Phases		8			4		1	1	6			5	5	2
Permitted Phases	8			4			6	6		6	2	2		2
Actuated Green, G (s)	26.6	26.6		26.6	26.6			130.9	119.7	119.7		109.9	104.7	104.7
Effective Green, g (s)	29.1	29.1		29.1	29.1			132.9	121.7	121.7		113.9	106.7	106.7
Actuated g/C Ratio	0.17	0.17		0.17	0.17			0.78	0.72	0.72		0.67	0.63	0.63
Clearance Time (s)	6.5	6.5		6.5	6.5			6.0	6.0	6.0		6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	5.0	5.0		3.0	5.0	5.0
Lane Grp Cap (vph)	168	298		117	315			563	2546	1139		283	2244	1004
v/s Ratio Prot		0.09			0.07			c0.07	0.38			0.01	0.24	
v/s Ratio Perm	c0.15			0.07				c0.37		0.01		0.10		0.10
v/c Ratio	0.89	0.54		0.44	0.40			0.57	0.53	0.02		0.17	0.38	0.15
Uniform Delay, d1	68.9	64.3		63.1	62.6			7.5	11.1	7.0		10.1	15.4	13.1
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00		0.75	0.70	0.57
Incremental Delay, d2	40.1	1.9		2.6	0.8			1.4	0.8	0.0		0.3	0.5	0.3
Delay (s)	109.1	66.2		65.7	63.5			8.9	11.9	7.0		7.8	11.3	7.7
Level of Service	F	E		E	E			A	B	A		A	B	A
Approach Delay (s)		85.1			64.1				11.3				10.5	
Approach LOS		F			E				B				B	

Intersection Summary

HCM Average Control Delay	21.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	170.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
20: Amy Ln & Austell Rd

5/19/2009

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕			↕	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	10	12	10	12	12	12	12	12	12	12	12	12	12
Grade (%)		6%			0%				-1%				1%	
Total Lost time (s)		4.0			4.0			4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00			1.00			1.00	0.95			1.00	0.95	
Fr _t		0.96			0.94			1.00	1.00			1.00	1.00	
Fl _t Protected		0.97			0.97			0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1580			1724			1778	3546			1761	3514	
Fl _t Permitted		0.72			0.77			0.18	1.00			0.03	1.00	
Satd. Flow (perm)		1173			1362			341	3546			59	3514	
Volume (vph)	185	3	80	54	0	40	5	27	2007	42	32	16	1146	16
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	201	3	87	59	0	43	5	29	2182	46	35	17	1246	17
RTOR Reduction (vph)	0	9	0	0	15	0	0	0	1	0	0	0	1	0
Lane Group Flow (vph)	0	282	0	0	87	0	0	34	2227	0	0	52	1262	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Perm			Perm			Perm	Perm			Perm	Perm		
Protected Phases		8			4				6				2	
Permitted Phases	8			4			6	6			2	2		
Actuated Green, G (s)		34.0			34.0			123.0	123.0			123.0	123.0	
Effective Green, g (s)		36.0			36.0			126.0	126.0			126.0	126.0	
Actuated g/C Ratio		0.21			0.21			0.74	0.74			0.74	0.74	
Clearance Time (s)		6.0			6.0			7.0	7.0			7.0	7.0	
Vehicle Extension (s)		3.0			3.0			5.0	5.0			5.0	5.0	
Lane Grp Cap (vph)		248			288			253	2628			44	2604	
v/s Ratio Prot									0.63				0.36	
v/s Ratio Perm		c0.24			0.06			0.10				c0.88		
v/c Ratio		1.14			0.30			0.13	0.85			1.18	0.48	
Uniform Delay, d1		67.0			56.4			6.3	15.3			22.0	8.9	
Progression Factor		1.00			1.00			0.42	0.49			1.00	1.00	
Incremental Delay, d2		99.6			0.6			0.9	3.0			194.0	0.6	
Delay (s)		166.6			57.0			3.6	10.5			216.0	9.5	
Level of Service		F			E			A	B			F	A	
Approach Delay (s)		166.6			57.0				10.4				17.7	
Approach LOS		F			E				B				B	

Intersection Summary			
HCM Average Control Delay	25.5	HCM Level of Service	C
HCM Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	170.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis

2: Blue Ridge Dr & Austell Rd

5/19/2009

Movement	EBL	EBR	EBR2	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	NWL	NWR	
Lane Configurations			↗		↖	↕			↘	↕			↗	
Sign Control	Stop					Free			Free		Yield			
Grade	-9%					0%			0%		-5%			
Volume (veh/h)	0	0	7	11	16	1312	11	5	127	1812	9	0	201	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	0	0	8	0	17	1426	12	0	138	1970	10	0	218	
Pedestrians														
Lane Width (ft)														
Walking Speed (ft/s)														
Percent Blockage														
Right turn flare (veh)														
Median type	None						None							
Median storage (veh)														
Upstream signal (ft)						1317			548					
pX, platoon unblocked	0.71	0.71	0.58	0.00	0.58			0.00	0.75			0.71	0.75	
vC, conflicting volume	2998	3711	990	0	1979			0	1426			3722	719	
vC1, stage 1 conf vol														
vC2, stage 2 conf vol														
vCu, unblocked vol	2368	3376	270	0	1965			0	1239			3392	301	
tC, single (s)	7.5	6.5	6.9	0.0	4.1			0.0	4.1			6.5	6.9	
tC, 2 stage (s)														
tF (s)	3.5	4.0	3.3	0.0	2.2			0.0	2.2			4.0	3.3	
p0 queue free %	100	100	98	0	90			0	67			100	58	
cM capacity (veh/h)	5	3	425	0	171			0	421			3	524	
Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	NW 1						
Volume Total	8	17	951	487	138	1313	666	218						
Volume Left	0	17	0	0	138	0	0	0						
Volume Right	8	0	0	12	0	0	10	218						
cSH	425	171	1700	1700	421	1700	1700	524						
Volume to Capacity	0.02	0.10	0.56	0.29	0.33	0.77	0.39	0.42						
Queue Length 95th (ft)	1	8	0	0	35	0	0	51						
Control Delay (s)	13.6	28.5	0.0	0.0	17.7	0.0	0.0	16.7						
Lane LOS	B	D			C			C						
Approach Delay (s)	13.6	0.3			1.2			16.7						
Approach LOS	B							C						
Intersection Summary														
Average Delay			1.8											
Intersection Capacity Utilization			67.0%		ICU Level of Service				C					
Analysis Period (min)			15											

HCM Unsignalized Intersection Capacity Analysis

3: Austell Rd & Floyd Rd

5/19/2009

	↑	↖	↙	↓	↘	↗
Movement	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations	↑↑		↖	↑↑		↗
Sign Control	Free			Free	Yield	
Grade	0%			0%	0%	
Volume (veh/h)	1319	8	393	1794	0	397
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1434	9	427	1950	0	432
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None		
Median storage (veh)						
Upstream signal (ft)	874			634		
pX, platoon unblocked			0.68	0.54	0.68	
vC, conflicting volume			1442	3267	721	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1178	2559	114	
tC, single (s)			4.1	6.8	6.9	
tC, 2 stage (s)						
tF (s)			2.2	3.5	3.3	
p0 queue free %			0	0	31	
cM capacity (veh/h)			399	0	622	
Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3	NW 1
Volume Total	956	487	427	975	975	432
Volume Left	0	0	427	0	0	0
Volume Right	0	9	0	0	0	432
cSH	1700	1700	399	1700	1700	622
Volume to Capacity	0.56	0.29	1.07	0.57	0.57	0.69
Queue Length 95th (ft)	0	0	363	0	0	138
Control Delay (s)	0.0	0.0	97.5	0.0	0.0	22.9
Lane LOS			F			C
Approach Delay (s)	0.0		17.5			22.9
Approach LOS						C
Intersection Summary						
Average Delay			12.1			
Intersection Capacity Utilization			68.0%	ICU Level of Service		C
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

27: Story Pl & Austell Rd

5/19/2009

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗		↕	↗		↕	
Sign Control		Stop			Stop			Free			Free	
Grade		-6%			0%			4%			-4%	
Volume (veh/h)	0	0	25	0	0	28	0	1296	50	0	1758	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	27	0	0	30	0	1409	54	0	1911	22
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)								576			1289	
pX, platoon unblocked	0.71	0.71	0.58	0.71	0.71	0.74	0.58			0.74		
vC, conflicting volume	2657	3385	966	2391	3341	704	1933			1463		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1844	2869	227	1471	2807	259	1884			1278		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	94	100	100	94	100			100		
cM capacity (veh/h)	31	12	453	59	13	551	183			401		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2					
Volume Total	27	30	704	704	54	1274	659					
Volume Left	0	0	0	0	0	0	0					
Volume Right	27	30	0	0	54	0	22					
cSH	453	551	1700	1700	1700	1700	1700					
Volume to Capacity	0.06	0.06	0.41	0.41	0.03	0.75	0.39					
Queue Length 95th (ft)	5	4	0	0	0	0	0					
Control Delay (s)	13.5	11.9	0.0	0.0	0.0	0.0	0.0					
Lane LOS	B	B										
Approach Delay (s)	13.5	11.9	0.0			0.0						
Approach LOS	B	B										
Intersection Summary												
Average Delay			0.2									
Intersection Capacity Utilization			59.2%			ICU Level of Service			B			
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis

1: Hurt Rd & Austell Rd

5/19/2009

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		4%			1%				1%				-2%	
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00	0.95	1.00		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.99			1.00	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1734	1825	1552	1761	1844			1761	3522	1575		1787	3575	1599
Flt Permitted	0.09	1.00	1.00	0.38	1.00			0.05	1.00	1.00		0.07	1.00	1.00
Satd. Flow (perm)	159	1825	1552	701	1844			87	3522	1575		137	3575	1599
Volume (vph)	137	239	121	180	578	21	35	163	1264	142	13	60	1486	248
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	149	260	132	196	628	23	38	177	1374	154	14	65	1615	270
RTOR Reduction (vph)	0	0	66	0	1	0	0	0	0	77	0	0	0	102
Lane Group Flow (vph)	149	260	66	196	650	0	0	215	1374	77	0	79	1615	168
Turn Type	pm+pt		Perm	pm+pt			pm+pt	pm+pt		Perm	pm+pt	pm+pt		Perm
Protected Phases	3	8		7	4		5	5	2		1	1	6	
Permitted Phases	8		8	4			2	2		2	6	6		6
Actuated Green, G (s)	53.3	44.0	44.0	53.3	44.0			91.3	82.8	82.8		93.1	83.7	83.7
Effective Green, g (s)	57.3	46.0	46.0	57.3	46.0			95.8	84.8	84.8		97.6	85.7	85.7
Actuated g/C Ratio	0.34	0.27	0.27	0.34	0.27			0.56	0.50	0.50		0.57	0.50	0.50
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0			6.5	6.0	6.0		6.5	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	5.0	5.0		3.0	5.0	5.0
Lane Grp Cap (vph)	158	494	420	307	499			157	1757	786		194	1802	806
v/s Ratio Prot	c0.06	0.14		0.04	c0.35			c0.09	0.39			0.03	0.45	
v/s Ratio Perm	0.26		0.04	0.17				c0.68		0.05		0.21		0.11
v/c Ratio	0.94	0.53	0.16	0.64	1.30			1.37	0.78	0.10		0.41	0.90	0.21
Uniform Delay, d1	81.0	52.7	47.2	45.9	62.0			55.4	35.0	22.4		27.1	38.1	23.4
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.17	0.78	1.18		1.53	0.88	1.36
Incremental Delay, d2	54.5	1.0	0.2	4.3	150.5			196.4	3.0	0.2		0.1	0.8	0.1
Delay (s)	135.6	53.7	47.4	50.2	212.5			261.1	30.3	26.8		41.7	34.2	31.9
Level of Service	F	D	D	D	F			F	C	C		D	C	C
Approach Delay (s)		74.7			174.9				58.5				34.2	
Approach LOS		E			F				E				C	

Intersection Summary

HCM Average Control Delay	70.2	HCM Level of Service	E
HCM Volume to Capacity ratio	1.31		
Actuated Cycle Length (s)	170.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	104.7%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

5: Mulkey Rd & Austell Rd

5/19/2009

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↖	↗	↖		↖	↗	↖
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-3%			-1%				-1%				-2%	
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	0.95	1.00		1.00	0.95	1.00
Frt	1.00	0.92		1.00	0.95			1.00	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1796	1734		1778	1781			1778	3557	1591		1787	3575	1599
Flt Permitted	0.46	1.00		0.16	1.00			0.06	1.00	1.00		0.11	1.00	1.00
Satd. Flow (perm)	865	1734		305	1781			108	3557	1591		215	3575	1599
Volume (vph)	252	194	241	101	150	72	13	106	1158	27	20	111	1369	186
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	274	211	262	110	163	78	14	115	1259	29	22	121	1488	202
RTOR Reduction (vph)	0	28	0	0	11	0	0	0	0	3	0	0	0	36
Lane Group Flow (vph)	274	445	0	110	230	0	0	129	1259	26	0	143	1488	166
Turn Type	Perm			Perm			pm+pt	pm+pt		Perm	pm+pt	pm+pt		Perm
Protected Phases		8			4		1	1	6		5	5	2	
Permitted Phases	8			4			6	6		6	2	2		2
Actuated Green, G (s)	52.7	52.7		52.7	52.7			99.5	86.9	86.9		98.1	86.2	86.2
Effective Green, g (s)	55.2	55.2		55.2	55.2			103.5	88.9	88.9		102.1	88.2	88.2
Actuated g/C Ratio	0.32	0.32		0.32	0.32			0.61	0.52	0.52		0.60	0.52	0.52
Clearance Time (s)	6.5	6.5		6.5	6.5			6.0	6.0	6.0		6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	5.0	5.0		3.0	5.0	5.0
Lane Grp Cap (vph)	281	563		99	578			209	1860	832		258	1855	830
v/s Ratio Prot		0.26			0.13			c0.05	0.35			0.05	c0.42	
v/s Ratio Perm	0.32			c0.36				0.32		0.02		0.29		0.10
v/c Ratio	0.98	0.79		1.11	0.40			0.62	0.68	0.03		0.55	0.80	0.20
Uniform Delay, d1	56.7	52.2		57.4	44.5			37.1	29.9	19.7		22.9	33.7	22.0
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00		1.80	0.67	0.76
Incremental Delay, d2	46.4	7.5		123.6	0.5			5.3	2.0	0.1		1.6	2.4	0.3
Delay (s)	103.1	59.6		181.0	45.0			42.4	31.9	19.7		42.7	25.1	16.9
Level of Service	F	E		F	D			D	C	B		D	C	B
Approach Delay (s)		75.6			87.6				32.6				25.5	
Approach LOS		E			F				C				C	

Intersection Summary

HCM Average Control Delay	41.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	170.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 13: Park Trail Townhomes & Austell Rd

5/19/2009

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-2%			1%				1%				1%	
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0			4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	0.95			1.00	0.95	1.00
Frt	1.00	0.85		1.00	0.85			1.00	0.99			1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00			0.95	1.00	1.00
Satd. Flow (prot)	1787	1599		1761	1575			1761	3503			1761	3522	1575
Flt Permitted	1.00	1.00		0.55	1.00			0.04	1.00			0.04	1.00	1.00
Satd. Flow (perm)	1881	1599		1016	1575			69	3503			70	3522	1575
Volume (vph)	32	0	21	341	0	29	20	42	1680	61	4	80	2259	37
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	35	0	23	371	0	32	22	46	1826	66	4	87	2455	40
RTOR Reduction (vph)	0	23	0	0	27	0	0	0	1	0	0	0	0	3
Lane Group Flow (vph)	35	0	0	371	5	0	0	68	1891	0	0	91	2455	37
Turn Type	pm+pt			pm+pt			pm+pt	pm+pt			pm+pt	pm+pt		Perm
Protected Phases	3	8		7	4		5	5	2		1	1	6	
Permitted Phases	8			4			2	2			6	6		6
Actuated Green, G (s)	10.3	3.3		39.6	28.6			116.3	108.2			120.5	110.3	110.3
Effective Green, g (s)	10.3	3.3		39.6	28.6			116.3	108.2			120.5	110.3	110.3
Actuated g/C Ratio	0.06	0.02		0.23	0.17			0.68	0.64			0.71	0.65	0.65
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	110	31		378	265			128	2230			151	2285	1022
v/s Ratio Prot	0.01	0.00		c0.19	0.00			0.03	0.54			c0.04	c0.70	
v/s Ratio Perm	0.01			c0.04				0.34				0.39		0.02
v/c Ratio	0.32	0.01		0.98	0.02			0.53	0.85			0.60	1.07	0.04
Uniform Delay, d1	76.5	81.8		63.7	59.0			80.2	24.4			42.6	29.8	10.7
Progression Factor	1.00	1.00		1.00	1.00			1.66	0.40			1.76	0.55	0.63
Incremental Delay, d2	1.7	0.2		41.1	0.0			3.4	3.5			3.4	38.5	0.0
Delay (s)	78.2	81.9		104.8	59.0			136.7	13.2			78.4	54.8	6.8
Level of Service	E	F		F	E			F	B			E	D	A
Approach Delay (s)		79.7			101.2				17.5				54.9	
Approach LOS		E			F				B				D	

Intersection Summary

HCM Average Control Delay	44.3	HCM Level of Service	D
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	170.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	101.4%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
20: Amy Ln & Austell Rd

5/19/2009

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	10	12	10	12	12	12	12	12	12	12	12	12	12
Grade (%)		6%			0%				-1%				1%	
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0			4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	0.95			1.00	0.95	
Fr _t	1.00	0.85		1.00	0.86			1.00	0.99			1.00	1.00	
Fl _t Protected	0.95	1.00		0.95	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (prot)	1717	1433		1652	1593			1778	3533			1761	3510	
Fl _t Permitted	0.74	1.00		0.43	1.00			0.03	1.00			0.09	1.00	
Satd. Flow (perm)	1335	1433		751	1593			64	3533			169	3510	
Volume (vph)	24	0	23	63	1	25	9	72	1430	67	17	48	2148	46
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	26	0	25	68	1	27	10	78	1554	73	18	52	2335	50
RTOR Reduction (vph)	0	24	0	0	25	0	0	0	1	0	0	0	1	0
Lane Group Flow (vph)	26	1	0	68	3	0	0	88	1626	0	0	70	2384	0
Turn Type	pm+pt			pm+pt			pm+pt	pm+pt			pm+pt	pm+pt		
Protected Phases	3	8		7	4		1	1	6		5	5	2	
Permitted Phases	8			4			6	6			2	2		
Actuated Green, G (s)	8.9	3.6		21.4	10.1			125.2	113.6			135.0	120.0	
Effective Green, g (s)	12.9	5.6		23.4	12.1			128.2	116.6			138.6	123.0	
Actuated g/C Ratio	0.08	0.03		0.14	0.07			0.75	0.69			0.82	0.72	
Clearance Time (s)	6.0	6.0		6.0	6.0			4.0	7.0			7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	5.0			5.0	5.0	
Lane Grp Cap (vph)	118	47		177	113			165	2423			306	2540	
v/s Ratio Prot	0.01	0.00		c0.03	0.00			c0.04	0.46			0.02	c0.68	
v/s Ratio Perm	0.01			c0.02				0.36				0.16		
v/c Ratio	0.22	0.02		0.38	0.03			0.53	0.67			0.23	0.94	
Uniform Delay, d ₁	73.7	79.5		66.0	73.5			49.0	15.5			12.2	20.2	
Progression Factor	1.00	1.00		1.00	1.00			1.44	0.60			1.00	1.00	
Incremental Delay, d ₂	0.9	0.2		1.4	0.1			1.8	0.8			0.8	8.3	
Delay (s)	74.7	79.7		67.4	73.6			72.6	10.1			13.0	28.6	
Level of Service	E	E		E	E			E	B			B	C	
Approach Delay (s)		77.1			69.2				13.3				28.1	
Approach LOS		E			E				B				C	
Intersection Summary														
HCM Average Control Delay		23.7												C
HCM Volume to Capacity ratio		0.83												
Actuated Cycle Length (s)		170.0							12.0					
Intersection Capacity Utilization		84.1%												E
Analysis Period (min)		15												
c Critical Lane Group														

HCM Unsignalized Intersection Capacity Analysis
2: Blue Ridge Dr & Austell Rd

5/19/2009

Movement	EBL	EBR	EBR2	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	NWL	NWR
Lane Configurations													
Sign Control	Stop					Free				Free		Yield	
Grade	-9%					0%				0%		-5%	
Volume (veh/h)	0	0	3	1	1	1430	0	4	60	811	4	0	109
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	3	0	1	1554	0	0	65	882	4	0	118
Pedestrians													
Lane Width (ft)													
Walking Speed (ft/s)													
Percent Blockage													
Right turn flare (veh)													
Median type	None											None	
Median storage veh													
Upstream signal (ft)						1318				550			
pX, platoon unblocked	0.88	0.88	0.87	0.00	0.87			0.00	0.81			0.88	0.81
vC, conflicting volume	1793	2571	443	0	886			0	1554			2573	777
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	1317	2204	209	0	718			0	1451			2206	494
tC, single (s)	7.5	6.5	6.9	0.0	4.1			0.0	4.1			6.5	6.9
tC, 2 stage (s)													
tF (s)	3.5	4.0	3.3	0.0	2.2			0.0	2.2			4.0	3.3
p0 queue free %	100	100	100	0	100			0	83			100	72
cM capacity (veh/h)	63	32	693	0	764			0	375			32	423
Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	NW 1					
Volume Total	3	1	1036	518	65	588	298	118					
Volume Left	0	1	0	0	65	0	0	0					
Volume Right	3	0	0	0	0	0	4	118					
cSH	693	764	1700	1700	375	1700	1700	423					
Volume to Capacity	0.00	0.00	0.61	0.30	0.17	0.35	0.18	0.28					
Queue Length 95th (ft)	0	0	0	0	16	0	0	28					
Control Delay (s)	10.2	9.7	0.0	0.0	16.6	0.0	0.0	16.8					
Lane LOS	B	A			C			C					
Approach Delay (s)	10.2	0.0			1.1			16.8					
Approach LOS	B							C					
Intersection Summary													
Average Delay			1.2										
Intersection Capacity Utilization			59.8%		ICU Level of Service			B					
Analysis Period (min)			15										

HCM Unsignalized Intersection Capacity Analysis

3: Austell Rd & Floyd Rd

5/19/2009

	↑	↗	↘	↓	↖	↗
Movement	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations	↑↑		↘	↑↑		↘
Sign Control	Free			Free	Yield	
Grade	0%			0%	0%	
Volume (veh/h)	1595	5	352	689	0	265
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1734	5	383	749	0	288
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None		
Median storage (veh)						
Upstream signal (ft)	876			636		
pX, platoon unblocked			0.62	0.65	0.62	
vC, conflicting volume			1739	2876	870	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1580	3130	180	
tC, single (s)			4.1	6.8	6.9	
tC, 2 stage (s)						
tF (s)			2.2	3.5	3.3	
p0 queue free %			0	0	44	
cM capacity (veh/h)			256	0	517	
Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3	NW 1
Volume Total	1156	583	383	374	374	288
Volume Left	0	0	383	0	0	0
Volume Right	0	5	0	0	0	288
cSH	1700	1700	256	1700	1700	517
Volume to Capacity	0.68	0.34	1.49	0.22	0.22	0.56
Queue Length 95th (ft)	0	0	556	0	0	84
Control Delay (s)	0.0	0.0	277.7	0.0	0.0	20.4
Lane LOS			F			C
Approach Delay (s)	0.0		93.9			20.4
Approach LOS						C
Intersection Summary						
Average Delay			35.5			
Intersection Capacity Utilization			70.4%	ICU Level of Service		C
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

27: Story Pl & Austell Rd

5/19/2009

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗		↕	↗		↕	
Sign Control		Stop			Stop			Free			Free	
Grade		-6%			0%			4%			-4%	
Volume (veh/h)	0	0	4	0	0	0	0	1332	0	0	945	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	4	0	0	0	0	1448	0	0	1027	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)								578			1290	
pX, platoon unblocked	0.88	0.88	0.88	0.88	0.88	0.81	0.88			0.81		
vC, conflicting volume	1752	2476	514	1966	2476	724	1028			1448		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1294	2121	306	1539	2122	431	892			1321		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	99	100	100	100	100			100		
cM capacity (veh/h)	105	44	606	68	43	465	663			422		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2					
Volume Total	4	0	724	724	0	685	343					
Volume Left	0	0	0	0	0	0	0					
Volume Right	4	0	0	0	0	0	1					
cSH	606	1700	1700	1700	1700	1700	1700					
Volume to Capacity	0.01	0.00	0.43	0.43	0.00	0.40	0.20					
Queue Length 95th (ft)	1	0	0	0	0	0	0					
Control Delay (s)	11.0	0.0	0.0	0.0	0.0	0.0	0.0					
Lane LOS	B	A										
Approach Delay (s)	11.0	0.0	0.0			0.0						
Approach LOS	B	A										
Intersection Summary												
Average Delay			0.0									
Intersection Capacity Utilization			40.2%			ICU Level of Service			A			
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis

1: Hurt Rd & Austell Rd

5/19/2009

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		4%			1%				1%				-2%	
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00	0.95	1.00		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.99			1.00	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1734	1825	1552	1761	1841			1761	3522	1575		1787	3575	1599
Flt Permitted	0.49	1.00	1.00	0.09	1.00			0.27	1.00	1.00		0.05	1.00	1.00
Satd. Flow (perm)	901	1825	1552	158	1841			506	3522	1575		92	3575	1599
Volume (vph)	188	466	79	117	159	7	1	74	1352	121	20	11	679	67
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	204	507	86	127	173	8	1	80	1470	132	22	12	738	73
RTOR Reduction (vph)	0	0	23	0	1	0	0	0	0	63	0	0	0	38
Lane Group Flow (vph)	204	507	63	127	180	0	0	81	1470	69	0	34	738	35
Turn Type	pm+pt		Perm	pm+pt			pm+pt	pm+pt		Perm	pm+pt	pm+pt		Perm
Protected Phases	3	8		7	4		5	5	2		1	1	6	
Permitted Phases	8		8	4			2	2		2	6	6		6
Actuated Green, G (s)	61.3	49.3	49.3	56.5	46.9			88.5	81.6	81.6		84.7	79.7	79.7
Effective Green, g (s)	65.3	51.3	51.3	60.5	48.9			93.0	83.6	83.6		89.2	81.7	81.7
Actuated g/C Ratio	0.38	0.30	0.30	0.36	0.29			0.55	0.49	0.49		0.52	0.48	0.48
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0			6.5	6.0	6.0		6.5	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	5.0	5.0		3.0	5.0	5.0
Lane Grp Cap (vph)	415	551	468	166	530			346	1732	775		123	1718	768
v/s Ratio Prot	c0.04	c0.28		c0.05	0.10			c0.01	c0.42			0.01	0.21	
v/s Ratio Perm	0.15		0.04	0.22				0.12		0.04		0.13		0.02
v/c Ratio	0.49	0.92	0.13	0.77	0.34			0.23	0.85	0.09		0.28	0.43	0.05
Uniform Delay, d1	37.0	57.4	43.2	43.5	47.8			19.9	37.7	23.0		31.1	28.9	23.4
Progression Factor	1.00	1.00	1.00	1.00	1.00			0.86	0.78	0.48		1.43	1.03	1.69
Incremental Delay, d2	0.9	20.8	0.1	18.7	0.4			0.3	4.8	0.2		1.1	0.7	0.1
Delay (s)	38.0	78.2	43.3	62.3	48.2			17.4	34.2	11.2		45.5	30.4	39.8
Level of Service	D	E	D	E	D			B	C	B		D	C	D
Approach Delay (s)		64.1			54.0				31.6				31.8	
Approach LOS		E			D				C				C	

Intersection Summary

HCM Average Control Delay	40.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	170.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	85.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

5: Mulkey Rd & Austell Rd

5/19/2009

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-3%			-1%				-1%				-2%	
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	0.95	1.00		1.00	0.95	1.00
Frt	1.00	0.92		1.00	0.98			1.00	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1796	1739		1778	1841			1778	3557	1591		1787	3575	1599
Flt Permitted	0.53	1.00		0.38	1.00			0.26	1.00	1.00		0.18	1.00	1.00
Satd. Flow (perm)	1005	1739		716	1841			494	3557	1591		333	3575	1599
Volume (vph)	153	82	94	50	105	13	13	291	1249	23	5	47	777	180
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	166	89	102	54	114	14	14	316	1358	25	5	51	845	196
RTOR Reduction (vph)	0	28	0	0	3	0	0	0	0	2	0	0	0	44
Lane Group Flow (vph)	166	163	0	54	125	0	0	330	1358	23	0	56	845	152
Turn Type	Perm			Perm			pm+pt	pm+pt		Perm	pm+pt	pm+pt		Perm
Protected Phases		8			4		1	1	6			5	5	2
Permitted Phases	8			4			6	6		6	2	2		2
Actuated Green, G (s)	28.7	28.7		28.7	28.7			128.8	117.4	117.4		105.4	100.0	100.0
Effective Green, g (s)	31.2	31.2		31.2	31.2			130.8	119.4	119.4		109.4	102.0	102.0
Actuated g/C Ratio	0.18	0.18		0.18	0.18			0.77	0.70	0.70		0.64	0.60	0.60
Clearance Time (s)	6.5	6.5		6.5	6.5			6.0	6.0	6.0		6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	5.0	5.0		3.0	5.0	5.0
Lane Grp Cap (vph)	184	319		131	338			567	2498	1117		278	2145	959
v/s Ratio Prot		0.09			0.07			c0.08	0.38			0.01	0.24	
v/s Ratio Perm	c0.17			0.08				c0.36		0.01		0.12		0.10
v/c Ratio	0.90	0.51		0.41	0.37			0.58	0.54	0.02		0.20	0.39	0.16
Uniform Delay, d1	67.9	62.5		61.3	60.8			8.6	12.2	7.6		11.6	17.8	15.0
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00		1.07	0.73	0.57
Incremental Delay, d2	39.8	1.4		2.1	0.7			1.5	0.9	0.0		0.3	0.5	0.3
Delay (s)	107.7	63.9		63.4	61.5			10.2	13.0	7.7		12.7	13.6	9.0
Level of Service	F	E		E	E			B	B	A		B	B	A
Approach Delay (s)		84.3			62.0				12.4				12.7	
Approach LOS		F			E				B				B	

Intersection Summary

HCM Average Control Delay	22.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	170.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

13: Park Trail Townhomes & Austell Rd

5/19/2009

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	12	10	10	12	12	12	12	12	12	12	12
Grade (%)		-2%			1%			1%				1%	
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95			1.00	0.95	1.00
Frt	1.00	0.90		1.00	0.85		1.00	1.00			1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.95	1.00	1.00
Satd. Flow (prot)	1668	1576		1643	1470		1761	3515			1761	3522	1575
Flt Permitted	0.68	1.00		0.73	1.00		0.20	1.00			0.06	1.00	1.00
Satd. Flow (perm)	1199	1576		1267	1470		368	3515			110	3522	1575
Volume (vph)	24	11	24	48	0	12	13	1774	21	7	65	1118	8
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	26	12	26	52	0	13	14	1928	23	8	71	1215	9
RTOR Reduction (vph)	0	24	0	0	12	0	0	0	0	0	0	0	1
Lane Group Flow (vph)	26	14	0	52	1	0	14	1951	0	0	79	1215	8
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt	pm+pt		Perm
Protected Phases	3	8		7	4		1	6		5	5	2	
Permitted Phases	8			4			6			2	2		2
Actuated Green, G (s)	16.2	8.2		18.4	9.3		127.6	121.9			131.8	124.0	124.0
Effective Green, g (s)	20.2	10.2		18.4	9.3		132.6	124.9			136.8	127.0	127.0
Actuated g/C Ratio	0.12	0.06		0.11	0.05		0.78	0.73			0.80	0.75	0.75
Clearance Time (s)	6.0	6.0		4.0	4.0		6.0	7.0			6.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	170	95		157	80		350	2582			184	2631	1177
v/s Ratio Prot	0.01	0.01		c0.02	0.00		0.00	c0.55			c0.02	0.35	
v/s Ratio Perm	0.01			c0.02			0.03				0.32		0.01
v/c Ratio	0.15	0.14		0.33	0.01		0.04	0.76			0.43	0.46	0.01
Uniform Delay, d1	67.0	75.8		69.8	76.0		5.1	13.4			19.6	8.3	5.5
Progression Factor	1.00	1.00		1.00	1.00		0.42	0.30			3.48	0.56	0.64
Incremental Delay, d2	0.4	0.7		1.2	0.0		0.0	1.6			1.4	0.5	0.0
Delay (s)	67.5	76.4		71.0	76.0		2.1	5.6			69.6	5.2	3.5
Level of Service	E	E		E	E		A	A			E	A	A
Approach Delay (s)		72.8			72.0			5.5				9.1	
Approach LOS		E			E			A				A	

Intersection Summary

HCM Average Control Delay	9.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	170.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
20: Amy Ln & Austell Rd

5/19/2009

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	12	10	10	12	12	12	12	12	12	12	12	12
Grade (%)		6%			0%				-1%				1%	
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0			4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	0.95			1.00	0.95	
Fr _t	1.00	0.86		1.00	0.85			1.00	1.00			1.00	1.00	
Fl _t Protected	0.95	1.00		0.95	1.00			0.95	1.00			0.95	1.00	
Satd. Flow (prot)	1618	1456		1668	1492			1778	3546			1761	3514	
Fl _t Permitted	0.48	1.00		0.70	1.00			0.16	1.00			0.04	1.00	
Satd. Flow (perm)	824	1456		1227	1492			299	3546			67	3514	
Volume (vph)	185	3	80	54	0	40	5	27	2007	42	32	16	1146	16
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	201	3	87	59	0	43	5	29	2182	46	35	17	1246	17
RTOR Reduction (vph)	0	80	0	0	41	0	0	0	1	0	0	0	0	0
Lane Group Flow (vph)	201	10	0	59	2	0	0	34	2227	0	0	52	1263	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt			pm+pt			pm+pt	pm+pt			pm+pt	pm+pt		
Protected Phases	3	8		7	4		1	1	6		5	5	2	
Permitted Phases	8			4			6	6			2	2		
Actuated Green, G (s)	27.9	12.6		15.2	5.9				123.1	108.1			123.1	108.1
Effective Green, g (s)	29.9	14.6		19.2	7.9				128.1	111.1			128.1	111.1
Actuated g/C Ratio	0.18	0.09		0.11	0.05				0.75	0.65			0.75	0.65
Clearance Time (s)	6.0	6.0		6.0	6.0				6.0	7.0			6.0	7.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0				5.0	5.0			5.0	5.0
Lane Grp Cap (vph)	229	125		168	69				373	2317			220	2297
v/s Ratio Prot	c0.09	0.01		0.02	0.00				0.01	c0.63			c0.02	0.36
v/s Ratio Perm	c0.06			0.02					0.06				0.16	
v/c Ratio	0.88	0.08		0.35	0.03				0.09	0.96			0.24	0.55
Uniform Delay, d1	66.4	71.5		69.3	77.4				8.2	27.4			39.6	15.9
Progression Factor	1.00	1.00		1.00	1.00				0.83	0.42			1.00	1.00
Incremental Delay, d2	29.2	0.3		1.3	0.2				0.2	9.7			1.2	1.0
Delay (s)	95.6	71.8		70.6	77.6				7.0	21.0			40.8	16.9
Level of Service	F	E		E	E				A	C			D	B
Approach Delay (s)		88.2			73.5					20.8				17.8
Approach LOS		F			E					C				B

Intersection Summary

HCM Average Control Delay	26.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	170.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
2: Blue Ridge Dr & Austell Rd

5/19/2009

Movement	EBL	EBR	EBR2	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	NWL	NWR
Lane Configurations													
Sign Control	Stop					Free				Free		Yield	
Grade	-9%					0%				0%		-5%	
Volume (veh/h)	12	1	3	1	1	1430	0	4	60	811	4	0	109
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	1	3	0	1	1554	0	0	65	882	4	0	118
Pedestrians													
Lane Width (ft)													
Walking Speed (ft/s)													
Percent Blockage													
Right turn flare (veh)													
Median type	None											None	
Median storage (veh)													
Upstream signal (ft)						1313				555			
pX, platoon unblocked	0.88	0.88	0.87	0.00	0.87			0.00	0.82			0.88	0.82
vC, conflicting volume	1793	2571	443	0	886			0	1554			2573	777
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	1323	2202	209	0	718			0	1455			2205	506
tC, single (s)	7.5	6.5	6.9	0.0	4.1			0.0	4.1			6.5	6.9
tC, 2 stage (s)													
tF (s)	3.5	4.0	3.3	0.0	2.2			0.0	2.2			4.0	3.3
p0 queue free %	79	97	100	0	100			0	83			100	72
cM capacity (veh/h)	63	33	693	0	764			0	377			32	419
Direction, Lane #	EB 1	EB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	NW 1	NW 2			
Volume Total	13	4	1	1036	518	65	588	298	0	118			
Volume Left	13	0	1	0	0	65	0	0	0	0			
Volume Right	0	3	0	0	0	0	0	4	0	118			
cSH	63	114	764	1700	1700	377	1700	1700	1700	419			
Volume to Capacity	0.21	0.04	0.00	0.61	0.30	0.17	0.35	0.18	0.00	0.28			
Queue Length 95th (ft)	18	3	0	0	0	15	0	0	0	29			
Control Delay (s)	76.3	37.8	9.7	0.0	0.0	16.5	0.0	0.0	0.0	16.9			
Lane LOS	F	E	A			C			A	C			
Approach Delay (s)	66.7		0.0			1.1			16.9				
Approach LOS	F								C				
Intersection Summary													
Average Delay			1.6										
Intersection Capacity Utilization		59.8%		ICU Level of Service	B								
Analysis Period (min)		15											

HCM Unsignalized Intersection Capacity Analysis

3: Austell Rd & Floyd Rd

5/19/2009

	↑	↗	↘	↓	↖	↗
Movement	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations	↑↑		↘	↑↑		↘
Sign Control	Free			Free	Yield	
Grade	0%			0%	0%	
Volume (veh/h)	1596	5	352	704	0	265
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1735	5	383	765	0	288
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None		
Median storage (veh)						
Upstream signal (ft)	876					
pX, platoon unblocked			0.62	0.62	0.62	
vC, conflicting volume			1740	2885	870	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1582	3426	181	
tC, single (s)			4.1	6.8	6.9	
tC, 2 stage (s)						
tF (s)			2.2	3.5	3.3	
p0 queue free %			0	0	44	
cM capacity (veh/h)			256	0	516	
Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3	NW 1
Volume Total	1157	584	383	383	383	288
Volume Left	0	0	383	0	0	0
Volume Right	0	5	0	0	0	288
cSH	1700	1700	256	1700	1700	516
Volume to Capacity	0.68	0.34	1.50	0.23	0.23	0.56
Queue Length 95th (ft)	0	0	557	0	0	85
Control Delay (s)	0.0	0.0	278.8	0.0	0.0	20.4
Lane LOS			F			C
Approach Delay (s)	0.0		92.9			20.4
Approach LOS						C
Intersection Summary						
Average Delay			35.4			
Intersection Capacity Utilization			70.4%	ICU Level of Service		C
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

13: Park Trail Townhomes & Austell Rd

5/19/2009

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕			↕	↕	↕
Sign Control		Stop			Stop			Free				Free	
Grade		-2%			1%			1%				1%	
Volume (veh/h)	24	11	24	48	0	12	13	1774	21	7	65	1118	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	26	12	26	52	0	13	14	1928	23	0	71	1215	9
Pedestrians													
Lane Width (ft)													
Walking Speed (ft/s)													
Percent Blockage													
Right turn flare (veh)													
Median type		None			None								
Median storage (veh)													
Upstream signal (ft)												1313	
pX, platoon unblocked	0.87	0.87	0.87	0.87	0.87		0.87			0.00			
vC, conflicting volume	2362	3336	608	2749	3333	976	1224			0	1951		
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	2415	3533	402	2860	3530	976	1109			0	1951		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			0.0	4.1		
tC, 2 stage (s)													
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			0.0	2.2		
p0 queue free %	0	0	95	0	100	95	97			0	76		
cM capacity (veh/h)	11	4	521	0	4	251	545			0	296		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4				
Volume Total	64	65	14	1286	666	71	608	608	9				
Volume Left	26	52	14	0	0	71	0	0	0				
Volume Right	26	13	0	0	23	0	0	0	9				
cSH	12	0	545	1700	1700	296	1700	1700	1700				
Volume to Capacity	5.51	Err	0.03	0.76	0.39	0.24	0.36	0.36	0.01				
Queue Length 95th (ft)	Err	Err	2	0	0	23	0	0	0				
Control Delay (s)	Err	Err	11.8	0.0	0.0	21.0	0.0	0.0	0.0				
Lane LOS	F	F	B			C							
Approach Delay (s)	Err	Err	0.1			1.1							
Approach LOS	F	F											
Intersection Summary													
Average Delay			Err										
Intersection Capacity Utilization		69.9%		ICU Level of Service	C								
Analysis Period (min)		15											

HCM Unsignalized Intersection Capacity Analysis

27: Story Pl & Austell Rd

5/19/2009

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕	↗		↕	↕	
Sign Control		Stop			Stop				Free				Free	
Grade		-6%			0%				4%				-4%	
Volume (veh/h)	3	0	4	3	0	0	3	7	1332	0	1	7	945	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	0	4	3	0	0	0	8	1448	0	0	8	1027	1
Pedestrians														
Lane Width (ft)														
Walking Speed (ft/s)														
Percent Blockage														
Right turn flare (veh)														
Median type		None			None									
Median storage (veh)														
Upstream signal (ft)									576				1292	
pX, platoon unblocked	0.88	0.88	0.88	0.88	0.88	0.82	0.00	0.88			0.00	0.82		
vC, conflicting volume	1782	2506	514	1996	2507	724	0	1028			0	1448		
vC1, stage 1 conf vol														
vC2, stage 2 conf vol														
vCu, unblocked vol	1338	2159	308	1581	2160	446	0	893			0	1327		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	0.0	4.1			0.0	4.1		
tC, 2 stage (s)														
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	0.0	2.2			0.0	2.2		
p0 queue free %	97	100	99	95	100	100	0	99			0	98		
cM capacity (veh/h)	96	40	604	63	40	460	0	663			0	424		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3					
Volume Total	8	3	8	724	724	0	8	685	343					
Volume Left	3	3	8	0	0	0	8	0	0					
Volume Right	4	0	0	0	0	0	0	0	1					
cSH	185	63	663	1700	1700	1700	424	1700	1700					
Volume to Capacity	0.04	0.05	0.01	0.43	0.43	0.00	0.02	0.40	0.20					
Queue Length 95th (ft)	3	4	1	0	0	0	1	0	0					
Control Delay (s)	25.3	65.5	10.5	0.0	0.0	0.0	13.7	0.0	0.0					
Lane LOS	D	F	B				B							
Approach Delay (s)	25.3	65.5	0.1				0.1							
Approach LOS	D	F												
Intersection Summary														
Average Delay			0.2											
Intersection Capacity Utilization			46.8%		ICU Level of Service				A					
Analysis Period (min)			15											

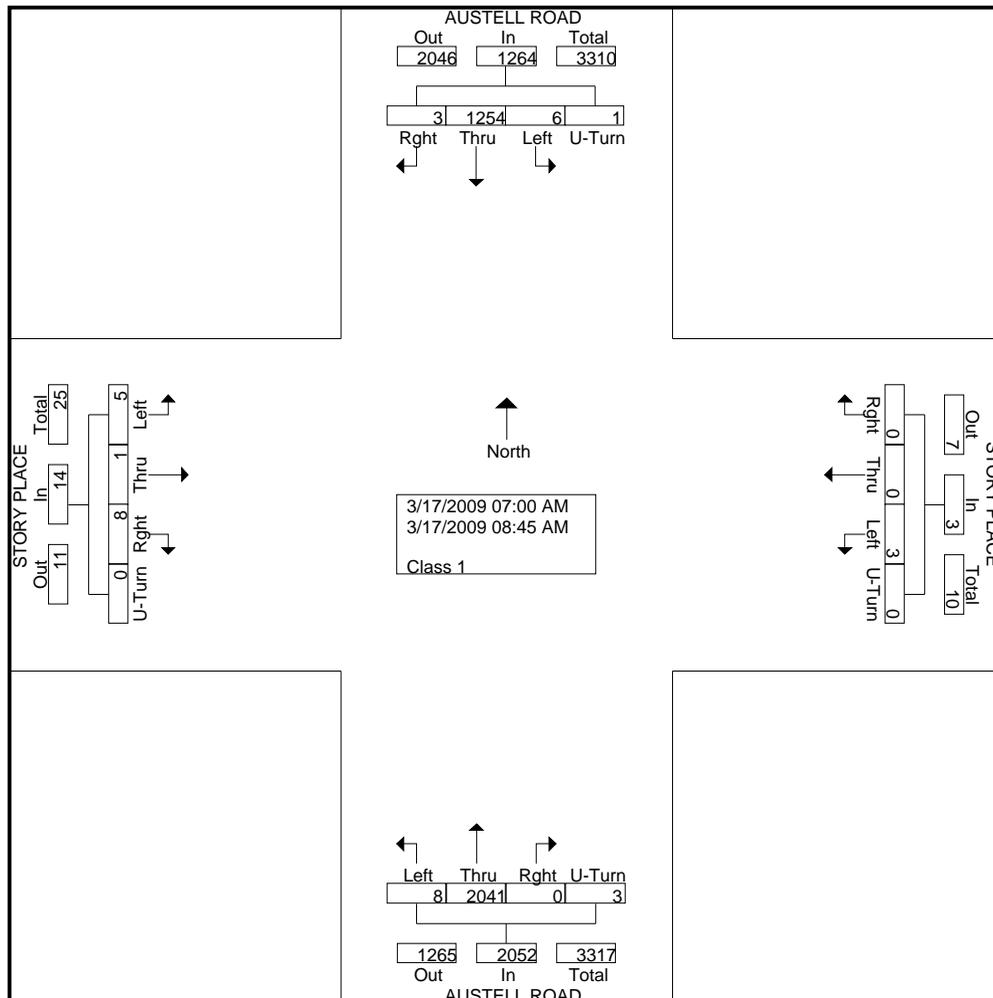
All Traffic Data Services, Inc

1336 Farmer Road
Conyers, Ga 30012
404-374-1283

File Name : AustellRd@StoryPIAM
Site Code : 00000000
Start Date : 3/17/2009
Page No : 1

Groups Printed- Class 1

Start Time	AUSTELL ROAD Southbound					STORY PLACE Westbound					AUSTELL ROAD Northbound					STORY PLACE Eastbound					Int. Total
	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	
07:00 AM	0	110	0	0	110	0	0	0	0	0	0	262	0	0	262	2	0	2	0	4	376
07:15 AM	0	145	0	0	145	0	0	0	0	0	0	285	1	0	286	2	0	1	0	3	434
07:30 AM	1	131	1	0	133	0	0	0	0	0	0	263	2	0	265	1	1	0	0	2	400
07:45 AM	1	182	3	0	186	0	0	0	0	0	0	280	1	0	281	0	0	1	0	1	468
Total	2	568	4	0	574	0	0	0	0	0	0	1090	4	0	1094	5	1	4	0	10	1678
08:00 AM	0	151	1	1	153	0	0	0	0	0	0	245	2	1	248	2	0	0	0	2	403
08:15 AM	0	184	1	0	185	0	0	2	0	2	0	218	1	0	219	0	0	1	0	1	407
08:30 AM	0	188	0	0	188	0	0	0	0	0	0	251	1	1	253	1	0	0	0	1	442
08:45 AM	1	163	0	0	164	0	0	1	0	1	0	237	0	1	238	0	0	0	0	0	403
Total	1	686	2	1	690	0	0	3	0	3	0	951	4	3	958	3	0	1	0	4	1655
Grand Total	3	1254	6	1	1264	0	0	3	0	3	0	2041	8	3	2052	8	1	5	0	14	3333
Apprch %	0.2	99.2	0.5	0.1		0	0	100	0		0	99.5	0.4	0.1		57.1	7.1	35.7	0		
Total %	0.1	37.6	0.2	0	37.9	0	0	0.1	0	0.1	0	61.2	0.2	0.1	61.6	0.2	0	0.2	0	0.4	



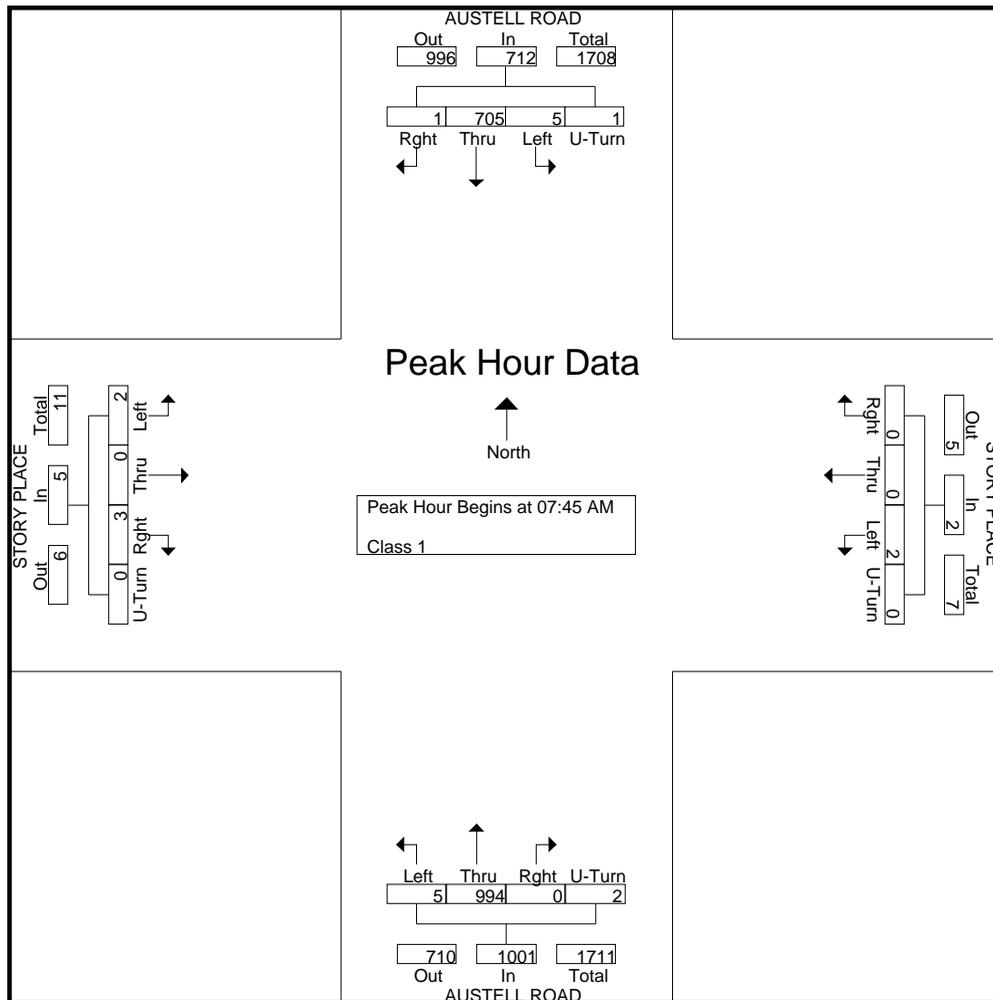
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1336 Farmer Road
Conyers, Ga 30012
404-374-1283

File Name : AustellRd@StoryPIAM
Site Code : 00000000
Start Date : 3/17/2009
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Start Time	AUSTELL ROAD Southbound					STORY PLACE Westbound					AUSTELL ROAD Northbound					STORY PLACE Eastbound					Int. Total
	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	
07:45 AM	1	182	3	0	186	0	0	0	0	0	0	280	1	0	281	0	0	1	0	1	468
08:00 AM	0	151	1	1	153	0	0	0	0	0	0	245	2	1	248	2	0	0	0	2	403
08:15 AM	0	184	1	0	185	0	0	2	0	2	0	218	1	0	219	0	0	1	0	1	407
08:30 AM	0	188	0	0	188	0	0	0	0	0	0	251	1	1	253	1	0	0	0	1	442
Total Volume	1	705	5	1	712	0	0	2	0	2	0	994	5	2	1001	3	0	2	0	5	1720
% App. Total	0.1	99	0.7	0.1		0	0	100	0		0	99.3	0.5	0.2		60	0	40	0		
PHF	.250	.938	.417	.250	.947	.000	.000	.250	.000	.250	.000	.888	.625	.500	.891	.375	.000	.500	.000	.625	.919

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 07:45 AM



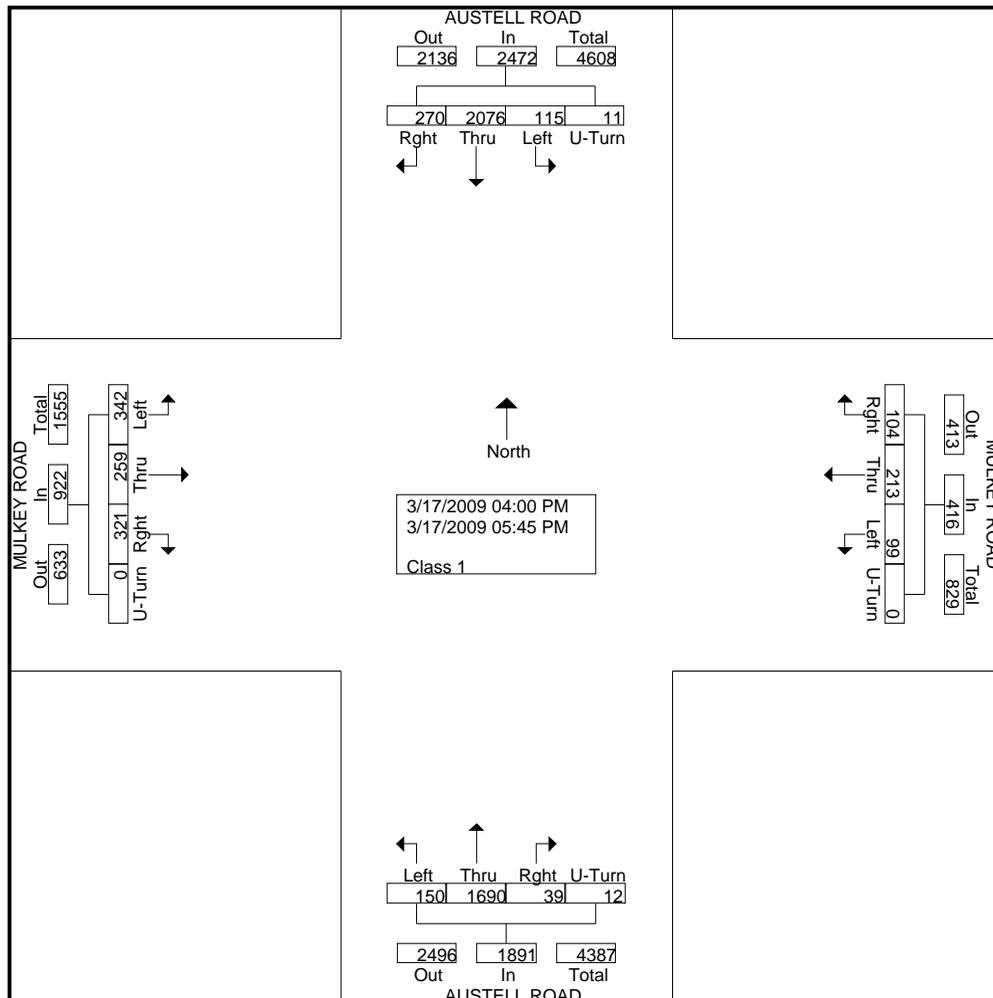
All Traffic Data Services, Inc

1336 Farmer Road
Conyers, Ga 30012
404-374-1283

File Name : AustellRd@MulkeyRdPM
Site Code : 00000000
Start Date : 3/17/2009
Page No : 1

Groups Printed- Class 1

Start Time	AUSTELL ROAD Southbound					MULKEY ROAD Westbound					AUSTELL ROAD Northbound					MULKEY ROAD Eastbound					Int. Total
	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	
04:00 PM	32	275	13	0	320	10	24	12	0	46	4	229	24	2	259	49	27	48	0	124	749
04:15 PM	21	270	23	1	315	12	17	17	0	46	2	198	29	4	233	25	35	31	0	91	685
04:30 PM	35	261	17	2	315	11	26	14	0	51	3	217	22	1	243	45	38	39	0	122	731
04:45 PM	31	263	16	0	310	13	23	10	0	46	7	205	27	2	241	41	24	42	0	107	704
Total	119	1069	69	3	1260	46	90	53	0	189	16	849	102	9	976	160	124	160	0	444	2869
05:00 PM	33	239	8	1	281	13	35	18	0	66	5	221	10	0	236	52	50	50	0	152	735
05:15 PM	40	259	12	3	314	17	28	12	0	57	5	221	12	3	241	42	32	50	0	124	736
05:30 PM	40	260	19	0	319	19	28	7	0	54	7	199	17	0	223	31	33	44	0	108	704
05:45 PM	38	249	7	4	298	9	32	9	0	50	6	200	9	0	215	36	20	38	0	94	657
Total	151	1007	46	8	1212	58	123	46	0	227	23	841	48	3	915	161	135	182	0	478	2832
Grand Total	270	2076	115	11	2472	104	213	99	0	416	39	1690	150	12	1891	321	259	342	0	922	5701
Approch %	10.9	84	4.7	0.4		25	51.2	23.8	0		2.1	89.4	7.9	0.6		34.8	28.1	37.1	0		
Total %	4.7	36.4	2	0.2	43.4	1.8	3.7	1.7	0	7.3	0.7	29.6	2.6	0.2	33.2	5.6	4.5	6	0	16.2	

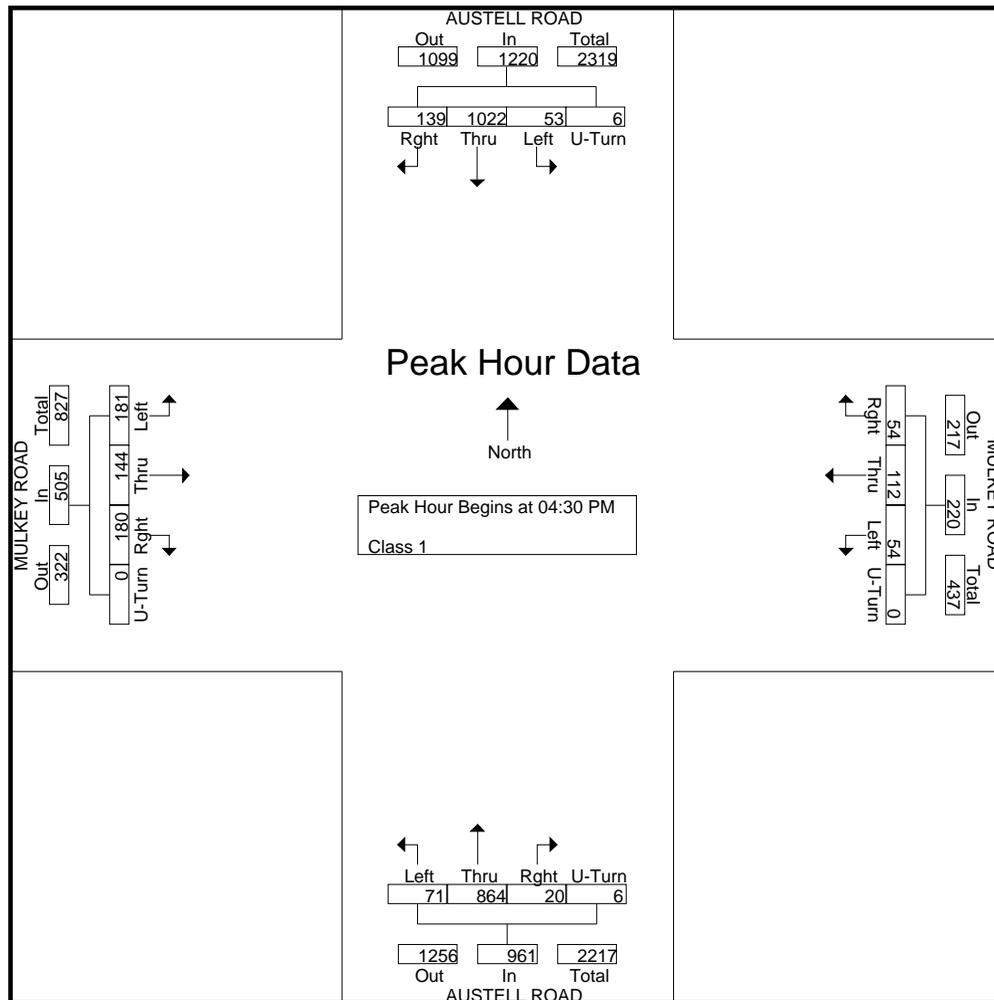


All Traffic Data Services, Inc

1336 Farmer Road
Conyers, Ga 30012
404-374-1283

File Name : AustellRd@MulkeyRdPM
Site Code : 00000000
Start Date : 3/17/2009
Page No : 2

Start Time	AUSTELL ROAD Southbound					MULKEY ROAD Westbound					AUSTELL ROAD Northbound					MULKEY ROAD Eastbound					Int. Total
	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	35	261	17	2	315	11	26	14	0	51	3	217	22	1	243	45	38	39	0	122	731
04:45 PM	31	263	16	0	310	13	23	10	0	46	7	205	27	2	241	41	24	42	0	107	704
05:00 PM	33	239	8	1	281	13	35	18	0	66	5	221	10	0	236	52	50	50	0	152	735
05:15 PM	40	259	12	3	314	17	28	12	0	57	5	221	12	3	241	42	32	50	0	124	736
Total Volume	139	1022	53	6	1220	54	112	54	0	220	20	864	71	6	961	180	144	181	0	505	2906
% App. Total	.869	.971	.779	.500	.968	.794	.800	.750	.000	.833	.714	.977	.657	.500	.989	.865	.720	.905	.000	.831	.987



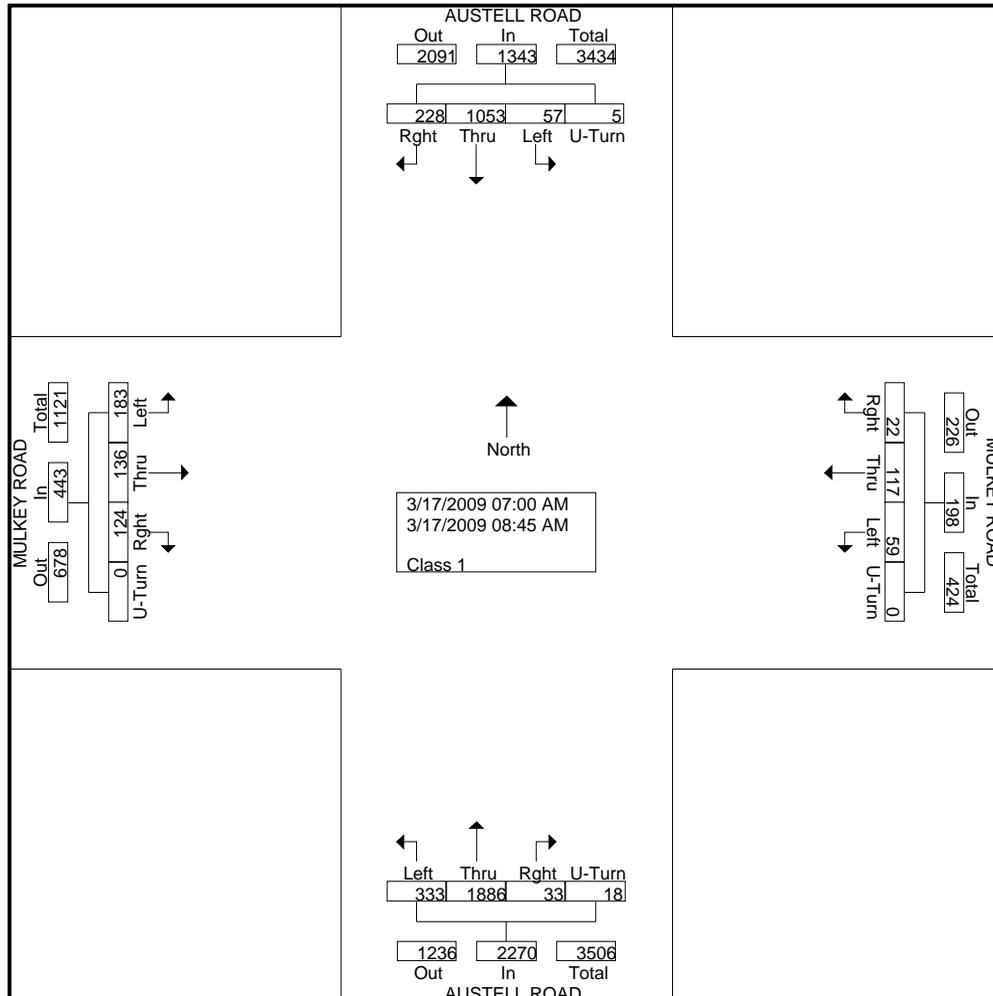
All Traffic Data Services, Inc

1336 Farmer Road
Conyers, Ga 30012
404-374-1283

File Name : AustellRd@MulkeyRdAM
Site Code : 00000000
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Groups Printed- Class 1

Start Time	AUSTELL ROAD Southbound					MULKEY ROAD Westbound					AUSTELL ROAD Northbound					MULKEY ROAD Eastbound					Int. Total
	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	
07:00 AM	19	107	7	0	133	0	2	7	0	9	4	248	17	3	272	9	11	18	0	38	452
07:15 AM	17	118	6	0	141	4	10	5	0	19	2	254	25	4	285	18	20	14	0	52	497
07:30 AM	23	113	7	0	143	7	15	4	0	26	4	246	31	0	281	11	18	31	0	60	510
07:45 AM	40	169	11	0	220	3	19	7	0	29	10	262	59	3	334	19	22	36	0	77	660
Total	99	507	31	0	637	14	46	23	0	83	20	1010	132	10	1172	57	71	99	0	227	2119
08:00 AM	26	129	8	0	163	4	26	10	0	40	3	223	52	1	279	20	13	28	0	61	543
08:15 AM	31	150	7	1	189	1	16	9	0	26	2	217	45	2	266	14	15	22	0	51	532
08:30 AM	37	132	4	2	175	2	17	9	0	28	2	230	56	2	290	17	10	17	0	44	537
08:45 AM	35	135	7	2	179	1	12	8	0	21	6	206	48	3	263	16	27	17	0	60	523
Total	129	546	26	5	706	8	71	36	0	115	13	876	201	8	1098	67	65	84	0	216	2135
Grand Total	228	1053	57	5	1343	22	117	59	0	198	33	1886	333	18	2270	124	136	183	0	443	4254
Approch %	17	78.4	4.2	0.4		11.1	59.1	29.8	0		1.5	83.1	14.7	0.8		28	30.7	41.3	0		
Total %	5.4	24.8	1.3	0.1	31.6	0.5	2.8	1.4	0	4.7	0.8	44.3	7.8	0.4	53.4	2.9	3.2	4.3	0	10.4	

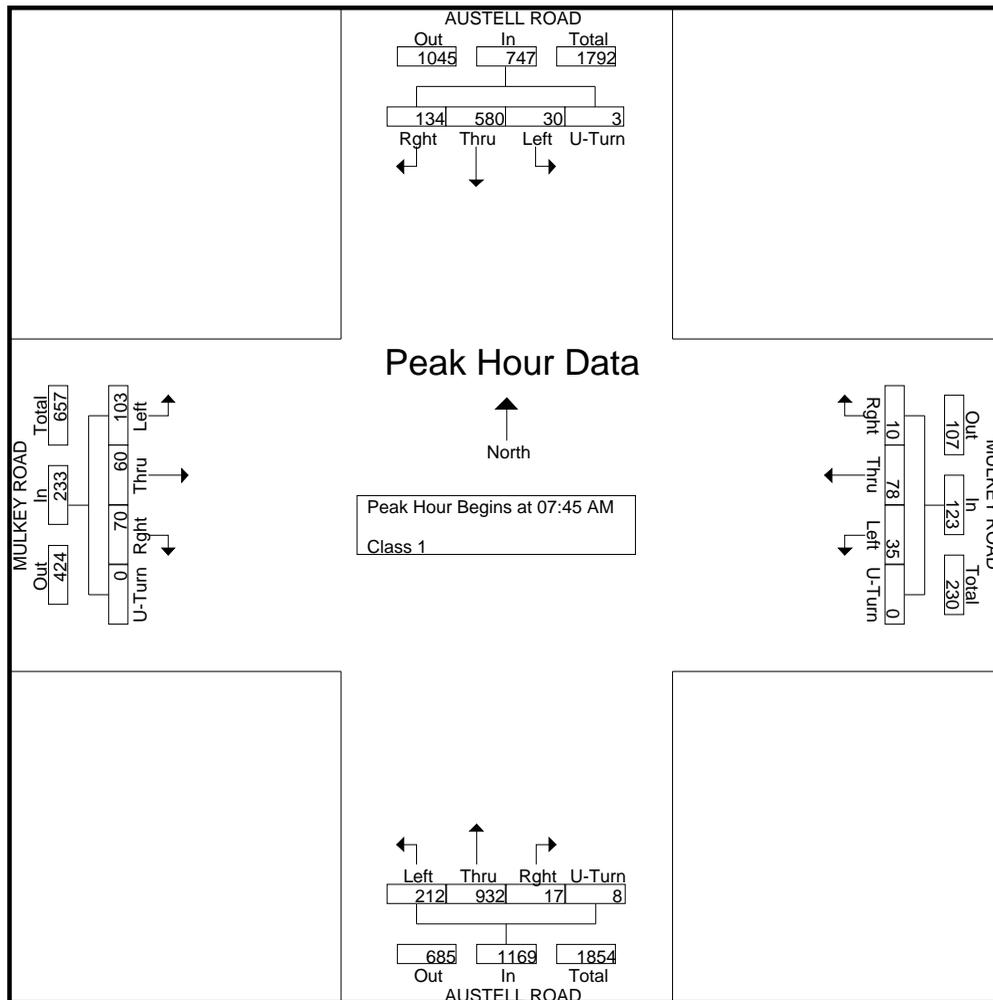


All Traffic Data Services, Inc

1336 Farmer Road
Conyers, Ga 30012
404-374-1283

File Name : AustellRd@MulkeyRdAM
Site Code : 00000000
Start Date : 3/17/2009
Page No : 2

Start Time	AUSTELL ROAD Southbound					MULKEY ROAD Westbound					AUSTELL ROAD Northbound					MULKEY ROAD Eastbound					Int. Total
	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	40	169	11	0	220	3	19	7	0	29	10	262	59	3	334	19	22	36	0	77	660
08:00 AM	26	129	8	0	163	4	26	10	0	40	3	223	52	1	279	20	13	28	0	61	543
08:15 AM	31	150	7	1	189	1	16	9	0	26	2	217	45	2	266	14	15	22	0	51	532
08:30 AM	37	132	4	2	175	2	17	9	0	28	2	230	56	2	290	17	10	17	0	44	537
Total Volume	134	580	30	3	747	10	78	35	0	123	17	932	212	8	1169	70	60	103	0	233	2272
% App. Total	17.9	77.6	4	0.4		8.1	63.4	28.5	0		1.5	79.7	18.1	0.7		30	25.8	44.2	0		
PHF	.838	.858	.682	.375	.849	.625	.750	.875	.000	.769	.425	.889	.898	.667	.875	.875	.682	.715	.000	.756	.861



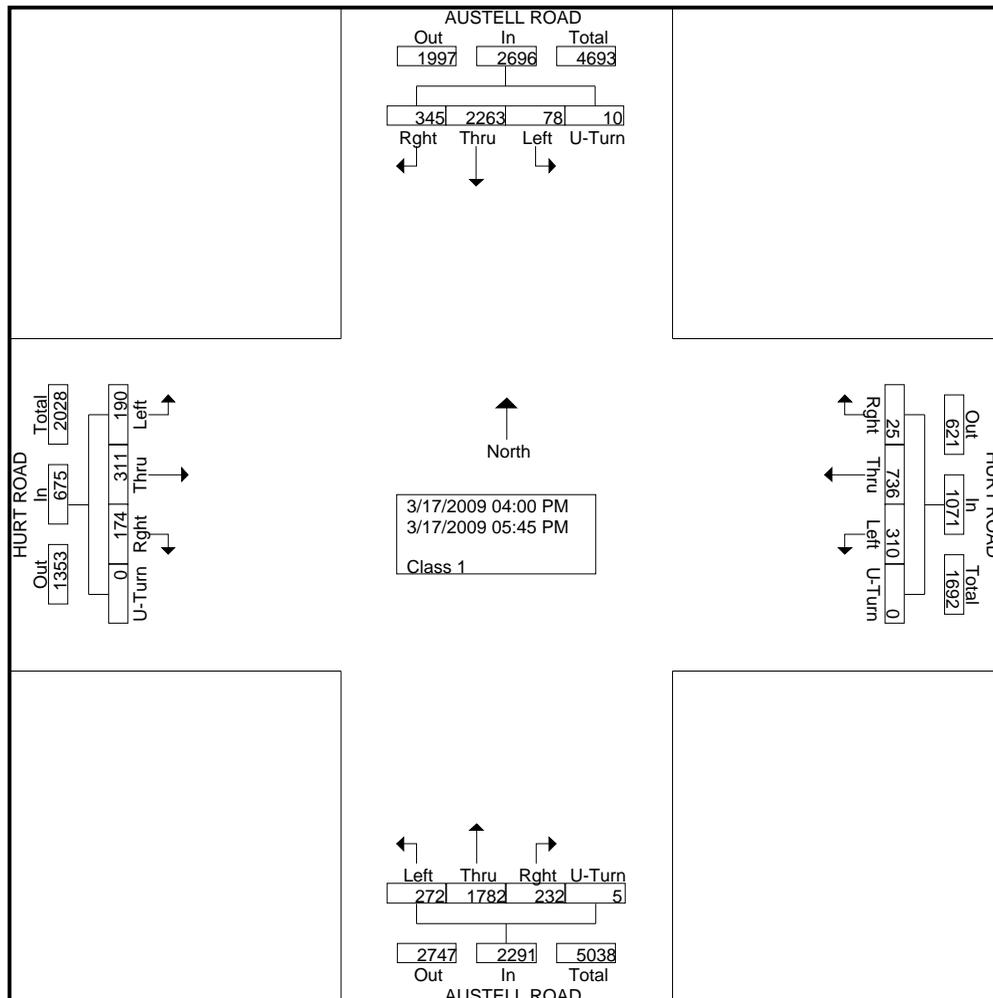
All Traffic Data Services, Inc

1336 Farmer Road
Conyers, Ga 30012
404-374-1283

File Name : AustellRd@HurtRdPM
Site Code : 00000000
Start Date : 3/17/2009
Page No : 1

Groups Printed- Class 1

Start Time	AUSTELL ROAD Southbound					HURT ROAD Westbound					AUSTELL ROAD Northbound					HURT ROAD Eastbound					Int. Total
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04:00 PM	28	290	9	3	330	2	66	54	0	122	40	200	32	0	272	25	31	31	0	87	811
04:15 PM	48	300	5	1	354	4	74	49	0	127	38	210	26	1	275	22	38	30	0	90	846
04:30 PM	46	280	11	1	338	4	79	41	0	124	23	215	54	1	293	19	30	14	0	63	818
04:45 PM	37	264	15	2	318	6	105	49	0	160	31	232	30	1	294	25	59	28	0	112	884
Total	159	1134	40	7	1340	16	324	193	0	533	132	857	142	3	1134	91	158	103	0	352	3359
05:00 PM	57	262	12	2	333	0	105	19	0	124	25	262	33	1	321	14	35	21	0	70	848
05:15 PM	38	305	8	0	351	5	109	28	0	142	26	225	35	1	287	26	42	25	0	93	873
05:30 PM	53	278	10	0	341	4	112	38	0	154	24	224	24	0	272	25	42	28	0	95	862
05:45 PM	38	284	8	1	331	0	86	32	0	118	25	214	38	0	277	18	34	13	0	65	791
Total	186	1129	38	3	1356	9	412	117	0	538	100	925	130	2	1157	83	153	87	0	323	3374
Grand Total	345	2263	78	10	2696	25	736	310	0	1071	232	1782	272	5	2291	174	311	190	0	675	6733
Approch %	12.8	83.9	2.9	0.4		2.3	68.7	28.9	0		10.1	77.8	11.9	0.2		25.8	46.1	28.1	0		
Total %	5.1	33.6	1.2	0.1	40	0.4	10.9	4.6	0	15.9	3.4	26.5	4	0.1	34	2.6	4.6	2.8	0	10	



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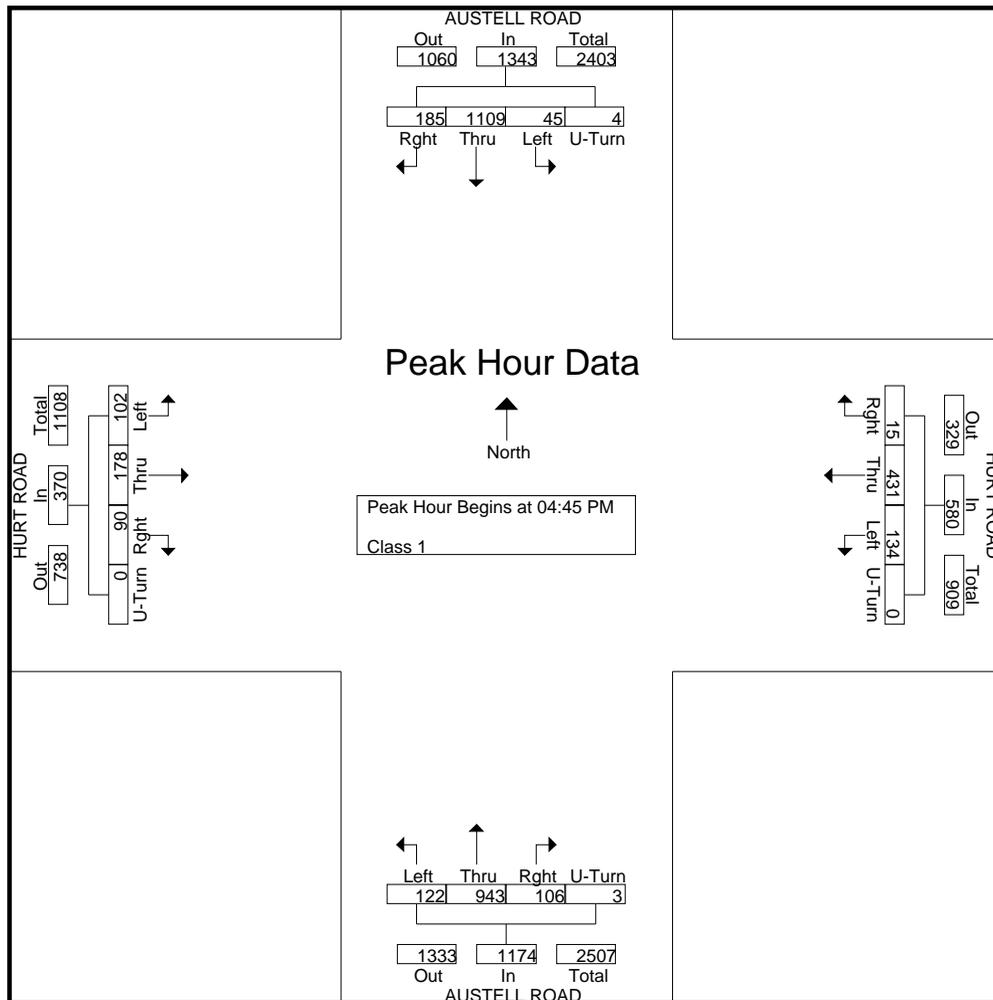
1336 Farmer Road
Conyers, Ga 30012
404-374-1283

File Name : AustellRd@HurtRdPM
Site Code : 00000000
Start Date : 3/17/2009
Page No : 2

Start Time	AUSTELL ROAD Southbound					HURT ROAD Westbound					AUSTELL ROAD Northbound					HURT ROAD Eastbound					Int. Total
	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	
04:45 PM	37	264	15	2	318	6	105	49	0	160	31	232	30	1	294	25	59	28	0	112	884
05:00 PM	57	262	12	2	333	0	105	19	0	124	25	262	33	1	321	14	35	21	0	70	848
05:15 PM	38	305	8	0	351	5	109	28	0	142	26	225	35	1	287	26	42	25	0	93	873
05:30 PM	53	278	10	0	341	4	112	38	0	154	24	224	24	0	272	25	42	28	0	95	862
Total Volume	185	1109	45	4	1343	15	431	134	0	580	106	943	122	3	1174	90	178	102	0	370	3467
% App. Total	.811	.909	.750	.500	.957	.625	.962	.684	.000	.906	.855	.900	.871	.750	.914	.865	.754	.911	.000	.826	.980

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:45 PM



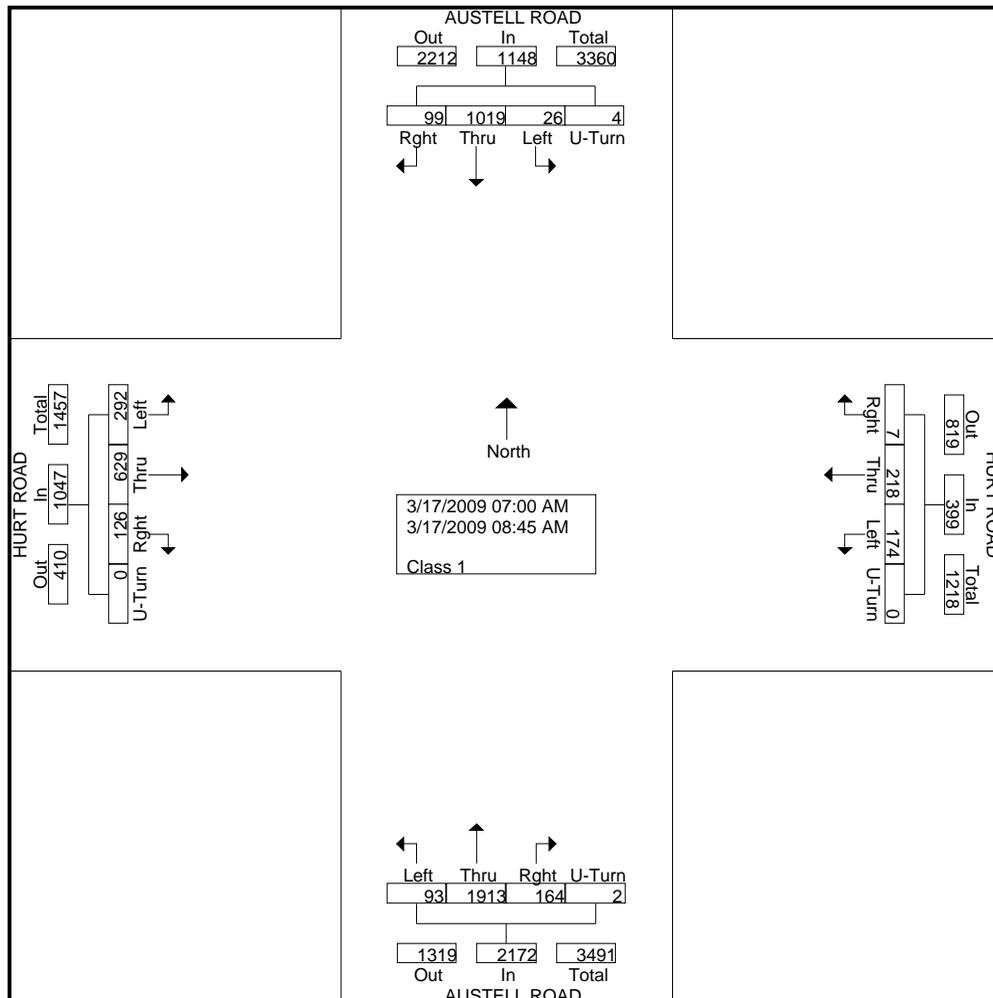
All Traffic Data Services, Inc

1336 Farmer Road
Conyers, Ga 30012
404-374-1283

File Name : AustellRd@HurtRdAM
Site Code : 00000000
Start Date : 3/17/2009
Page No : 1

Groups Printed- Class 1

Start Time	AUSTELL ROAD Southbound					HURT ROAD Westbound					AUSTELL ROAD Northbound					HURT ROAD Eastbound					Int. Total
	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	
07:00 AM	11	80	4	0	95	0	27	18	0	45	18	245	10	0	273	16	82	53	0	151	564
07:15 AM	11	122	0	2	135	1	30	15	0	46	19	274	10	0	303	14	84	43	0	141	625
07:30 AM	11	114	3	1	129	2	23	21	0	46	13	262	16	0	291	16	93	31	0	140	606
07:45 AM	13	150	3	1	167	2	37	26	0	65	29	258	14	1	302	16	92	35	0	143	677
Total	46	466	10	4	526	5	117	80	0	202	79	1039	50	1	1169	62	351	162	0	575	2472
08:00 AM	15	121	2	0	138	0	28	25	0	53	29	215	15	0	259	13	79	31	0	123	573
08:15 AM	11	150	5	0	166	1	31	22	0	54	18	200	7	1	226	14	67	25	0	106	552
08:30 AM	6	145	4	0	155	1	18	25	0	44	16	234	13	0	263	20	73	37	0	130	592
08:45 AM	21	137	5	0	163	0	24	22	0	46	22	225	8	0	255	17	59	37	0	113	577
Total	53	553	16	0	622	2	101	94	0	197	85	874	43	1	1003	64	278	130	0	472	2294
Grand Total	99	1019	26	4	1148	7	218	174	0	399	164	1913	93	2	2172	126	629	292	0	1047	4766
Approch %	8.6	88.8	2.3	0.3		1.8	54.6	43.6	0		7.6	88.1	4.3	0.1		12	60.1	27.9	0		
Total %	2.1	21.4	0.5	0.1	24.1	0.1	4.6	3.7	0	8.4	3.4	40.1	2	0	45.6	2.6	13.2	6.1	0	22	



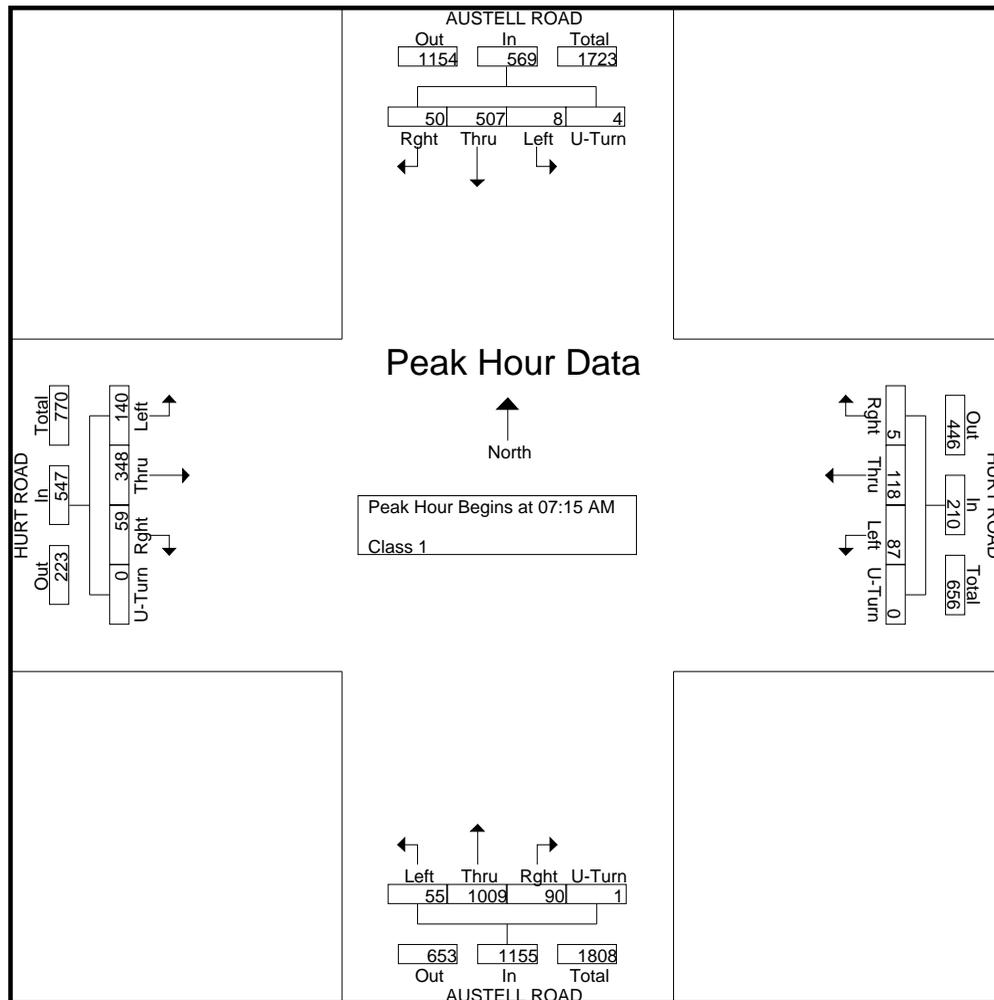
All Traffic Data Services, Inc

1336 Farmer Road
Conyers, Ga 30012
404-374-1283

File Name : AustellRd@HurtRdAM
Site Code : 00000000
Start Date : 3/17/2009
Page No : 2

Start Time	AUSTELL ROAD Southbound					HURT ROAD Westbound					AUSTELL ROAD Northbound					HURT ROAD Eastbound					Int. Total
	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	
07:15 AM	11	122	0	2	135	1	30	15	0	46	19	274	10	0	303	14	84	43	0	141	625
07:30 AM	11	114	3	1	129	2	23	21	0	46	13	262	16	0	291	16	93	31	0	140	606
07:45 AM	13	150	3	1	167	2	37	26	0	65	29	258	14	1	302	16	92	35	0	143	677
08:00 AM	15	121	2	0	138	0	28	25	0	53	29	215	15	0	259	13	79	31	0	123	573
Total Volume	50	507	8	4	569	5	118	87	0	210	90	1009	55	1	1155	59	348	140	0	547	2481
% App. Total	.833	.845	.667	.500	.852	.625	.797	.837	.000	.808	.776	.921	.859	.250	.953	.922	.935	.814	.000	.956	.916

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 07:15 AM



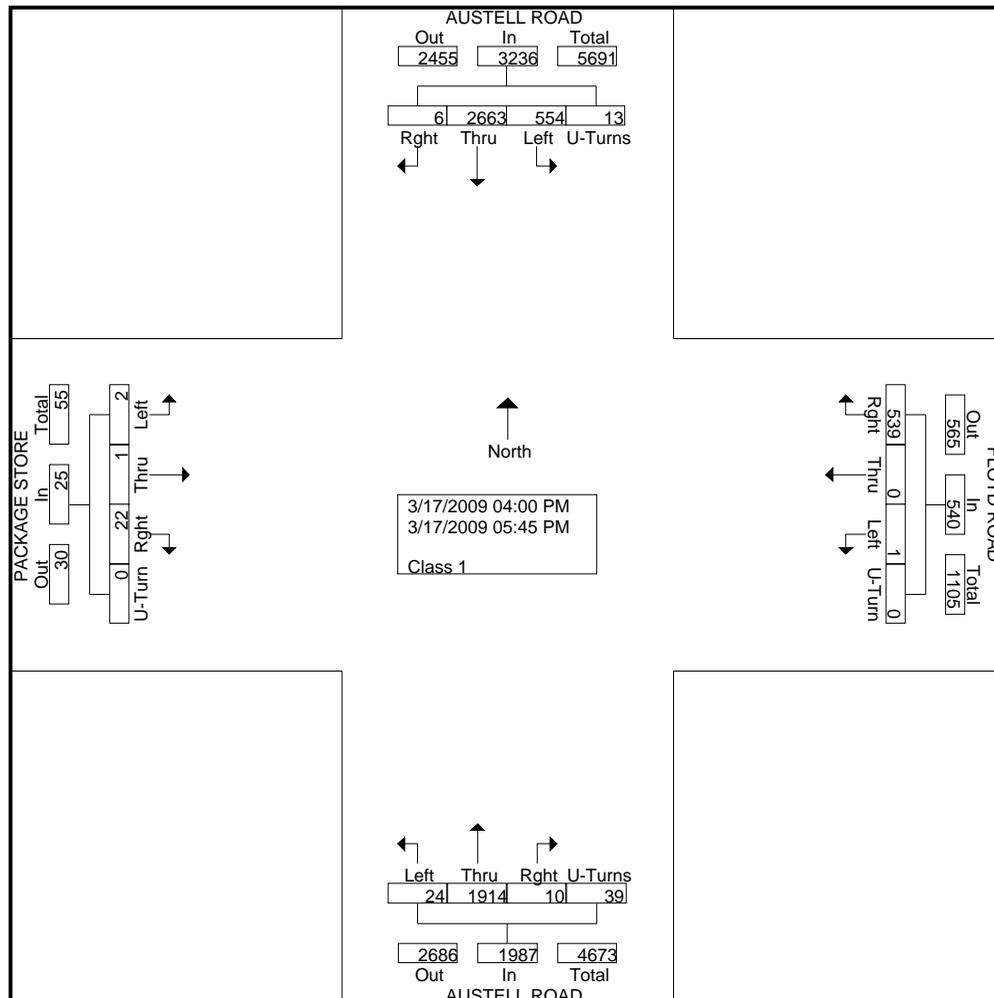
All Traffic Data Services, Inc

1336 Farmer Road
Conyers, Ga 30012
404-374-1283

File Name : AustellRd@FloydRdPM
Site Code : 00000000
Start Date : 3/17/2009
Page No : 1

Groups Printed- Class 1

Start Time	AUSTELL ROAD Southbound					FLOYD ROAD Westbound					AUSTELL ROAD Northbound					PACKAGE STORE Eastbound					Int. Total
	Rght	Thru	Left	U-Turns	App. Total	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turns	App. Total	Rght	Thru	Left	U-Turn	App. Total	
04:00 PM	0	328	64	4	396	71	0	1	0	72	1	221	2	4	228	0	0	0	0	0	696
04:15 PM	1	342	75	2	420	55	0	0	0	55	1	232	5	2	240	4	0	1	0	5	720
04:30 PM	0	339	47	0	386	63	0	0	0	63	1	223	1	5	230	2	1	0	0	3	682
04:45 PM	2	315	75	1	393	54	0	0	0	54	1	254	2	5	262	2	0	0	0	2	711
Total	3	1324	261	7	1595	243	0	1	0	244	4	930	10	16	960	8	1	1	0	10	2809
05:00 PM	1	329	73	2	405	66	0	0	0	66	3	274	1	6	284	3	0	1	0	4	759
05:15 PM	1	353	76	1	431	77	0	0	0	77	0	248	0	9	257	3	0	0	0	3	768
05:30 PM	0	336	69	0	405	78	0	0	0	78	3	239	7	2	251	4	0	0	0	4	738
05:45 PM	1	321	75	3	400	75	0	0	0	75	0	223	6	6	235	4	0	0	0	4	714
Total	3	1339	293	6	1641	296	0	0	0	296	6	984	14	23	1027	14	0	1	0	15	2979
Grand Total	6	2663	554	13	3236	539	0	1	0	540	10	1914	24	39	1987	22	1	2	0	25	5788
Approch %	0.2	82.3	17.1	0.4		99.8	0	0.2	0		0.5	96.3	1.2	2		88	4	8	0		
Total %	0.1	46	9.6	0.2	55.9	9.3	0	0	0	9.3	0.2	33.1	0.4	0.7	34.3	0.4	0	0	0	0.4	



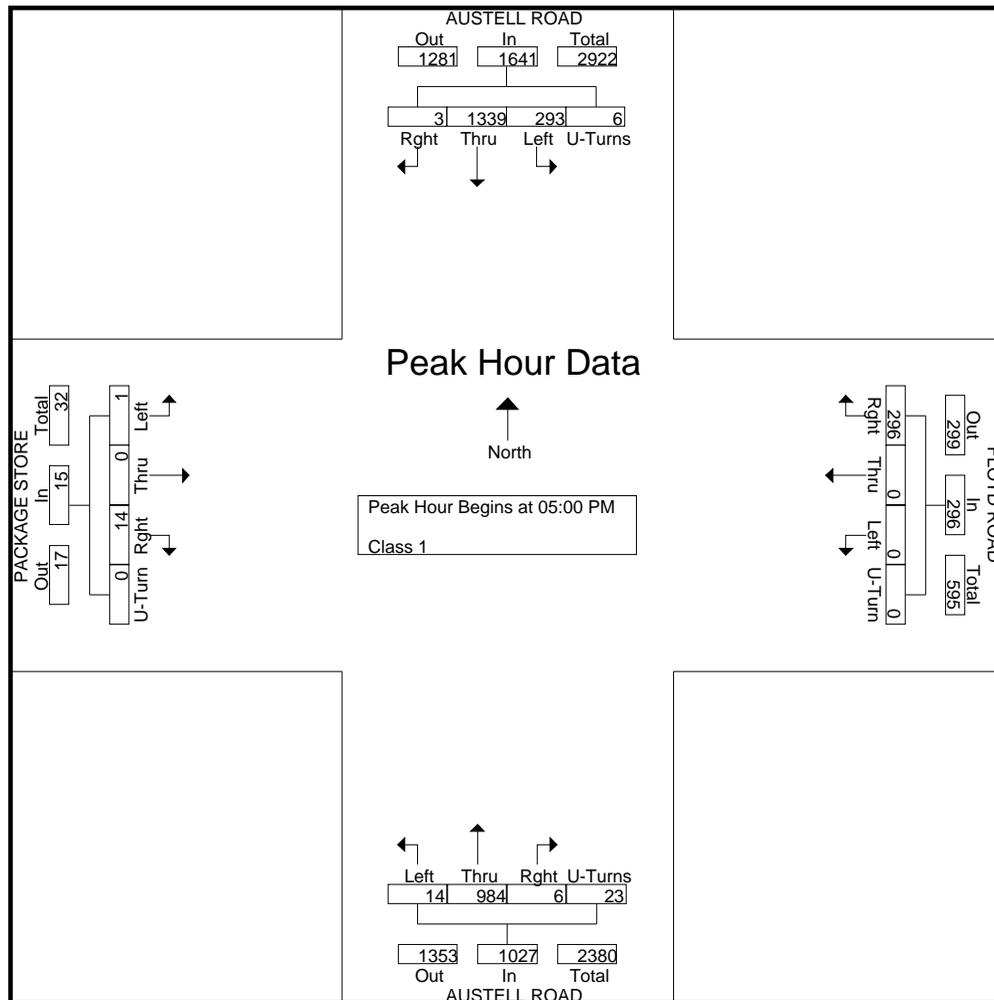
All Traffic Data Services, Inc

1336 Farmer Road
Conyers, Ga 30012
404-374-1283

File Name : AustellRd@FloydRdPM
Site Code : 00000000
Start Date : 3/17/2009
Page No : 2

Start Time	AUSTELL ROAD Southbound					FLOYD ROAD Westbound					AUSTELL ROAD Northbound					PACKAGE STORE Eastbound					Int. Total
	Rght	Thru	Left	U-Turns	App. Total	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turns	App. Total	Rght	Thru	Left	U-Turn	App. Total	
05:00 PM	1	329	73	2	405	66	0	0	0	66	3	274	1	6	284	3	0	1	0	4	759
05:15 PM	1	353	76	1	431	77	0	0	0	77	0	248	0	9	257	3	0	0	0	3	768
05:30 PM	0	336	69	0	405	78	0	0	0	78	3	239	7	2	251	4	0	0	0	4	738
05:45 PM	1	321	75	3	400	75	0	0	0	75	0	223	6	6	235	4	0	0	0	4	714
Total Volume	3	1339	293	6	1641	296	0	0	0	296	6	984	14	23	1027	14	0	1	0	15	2979
% App. Total	.750	.948	.964	.500	.952	.949	.000	.000	.000	.949	.500	.898	.500	.639	.904	.875	.000	.250	.000	.938	.970

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 05:00 PM



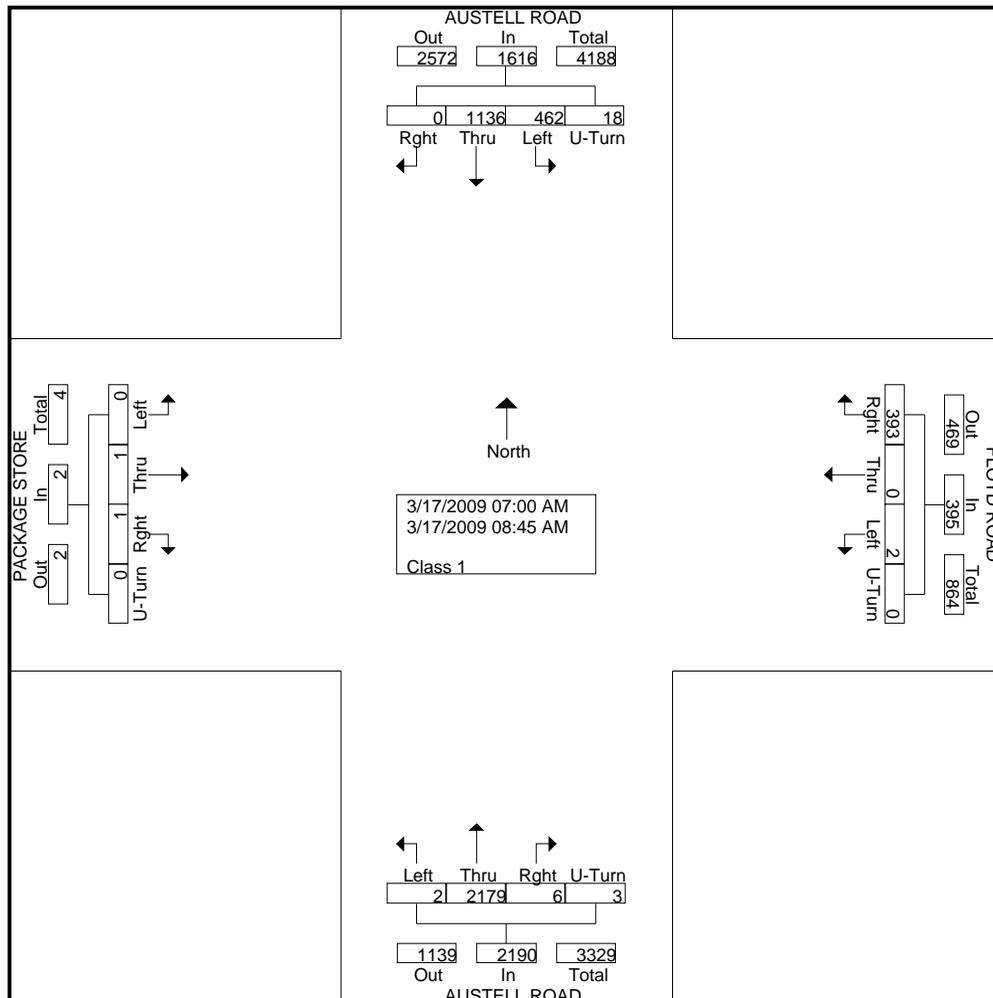
All Traffic Data Services, Inc

1336 Farmer Road
Conyers, Ga 30012
404-374-1283

File Name : AustellRd@FloydRdAM
Site Code : 00000000
Start Date : 3/17/2009
Page No : 1

Groups Printed- Class 1

Start Time	AUSTELL ROAD Southbound					FLOYD ROAD Westbound					AUSTELL ROAD Northbound					PACKAGE STORE Eastbound					Int. Total
	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	
07:00 AM	0	96	60	1	157	43	0	0	0	43	0	296	0	0	296	0	0	0	0	0	496
07:15 AM	0	132	56	5	193	45	0	0	0	45	1	310	0	0	311	0	0	0	0	0	549
07:30 AM	0	123	77	4	204	44	0	0	0	44	2	291	0	0	293	0	0	0	0	0	541
07:45 AM	0	163	70	1	234	66	0	1	0	67	1	293	0	1	295	0	0	0	0	0	596
Total	0	514	263	11	788	198	0	1	0	199	4	1190	0	1	1195	0	0	0	0	0	2182
08:00 AM	0	136	48	0	184	54	0	1	0	55	1	247	0	1	249	0	0	0	0	0	488
08:15 AM	0	167	43	2	212	40	0	0	0	40	1	224	0	0	225	0	0	0	0	0	477
08:30 AM	0	155	52	3	210	51	0	0	0	51	0	268	0	0	268	0	0	0	0	0	529
08:45 AM	0	164	56	2	222	50	0	0	0	50	0	250	2	1	253	1	1	0	0	2	527
Total	0	622	199	7	828	195	0	1	0	196	2	989	2	2	995	1	1	0	0	2	2021
Grand Total	0	1136	462	18	1616	393	0	2	0	395	6	2179	2	3	2190	1	1	0	0	2	4203
Apprch %	0	70.3	28.6	1.1		99.5	0	0.5	0		0.3	99.5	0.1	0.1		50	50	0	0		
Total %	0	27	11	0.4	38.4	9.4	0	0	0	9.4	0.1	51.8	0	0.1	52.1	0	0	0	0	0	



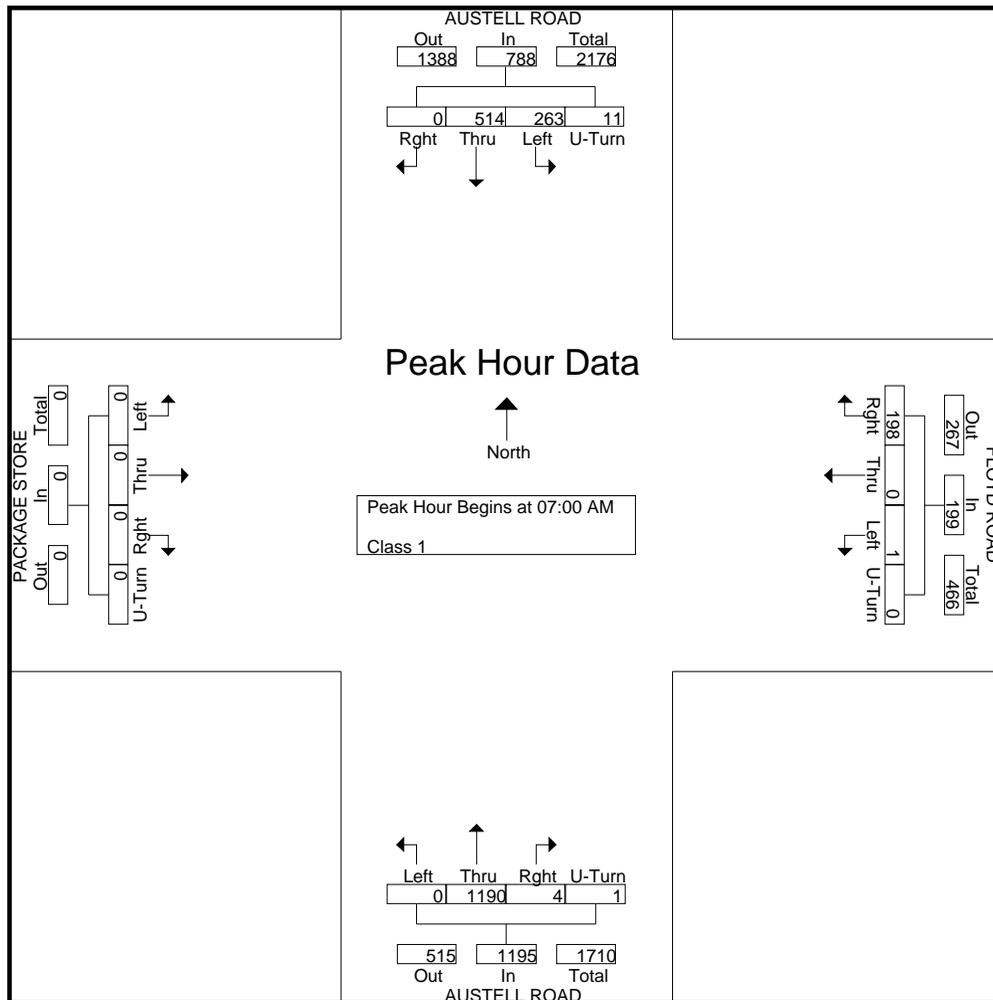
All Traffic Data Services, Inc

1336 Farmer Road
 Conyers, Ga 30012
 404-374-1283

File Name : AustellRd@FloydRdAM
 Site Code : 00000000
 Start Date : 3/17/2009
 Page No : 2

Start Time	AUSTELL ROAD Southbound					FLOYD ROAD Westbound					AUSTELL ROAD Northbound					PACKAGE STORE Eastbound					Int. Total
	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	
07:00 AM	0	96	60	1	157	43	0	0	0	43	0	296	0	0	296	0	0	0	0	0	496
07:15 AM	0	132	56	5	193	45	0	0	0	45	1	310	0	0	311	0	0	0	0	0	549
07:30 AM	0	123	77	4	204	44	0	0	0	44	2	291	0	0	293	0	0	0	0	0	541
07:45 AM	0	163	70	1	234	66	0	1	0	67	1	293	0	1	295	0	0	0	0	0	596
Total Volume	0	514	263	11	788	198	0	1	0	199	4	1190	0	1	1195	0	0	0	0	0	2182
% App. Total	.000	.788	.854	.550	.842	.750	.000	.250	.000	.743	.500	.960	.000	.250	.961	.000	.000	.000	.000	.000	.915

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:00 AM



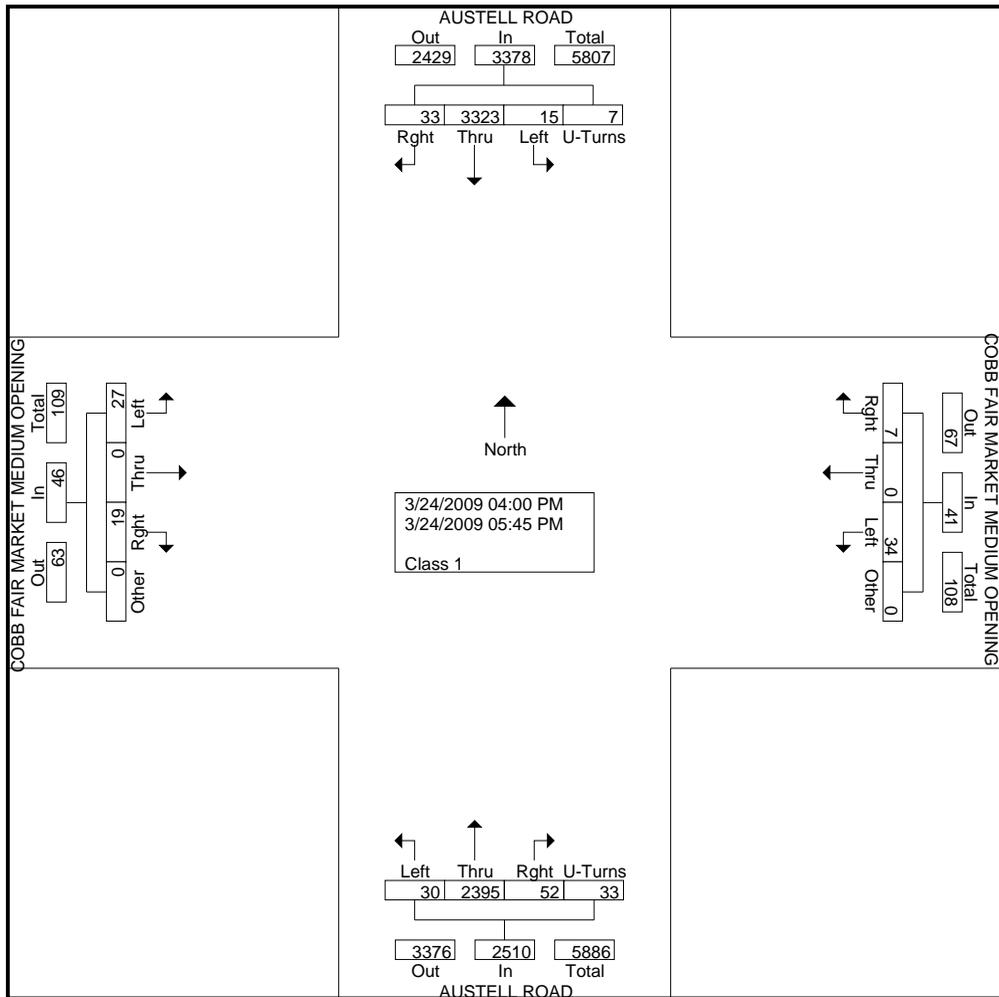
All Traffic Data Services, Inc

1336 Farmer Road
 Conyers, Ga 30012
 ph. 404-374-1283

File Name : AustellRd@CobbMarketMedPM
 Site Code : 00000000
 Start Date : 3/24/2009
 Page No : 1

Groups Printed- Class 1

Start Time	AUSTELL ROAD Southbound					COBB FAIR MARKET MEDIUM OPENING Westbound					AUSTELL ROAD Northbound					COBB FAIR MARKET MEDIUM OPENING Eastbound					Int. Total
	Rght	Thru	Left	U-Turns	App. Total	Rght	Thru	Left	Other	App. Total	Rght	Thru	Left	U-Turns	App. Total	Rght	Thru	Left	Other	App. Total	
04:00 PM	5	400	2	1	408	1	0	5	0	6	7	298	6	3	314	3	0	4	0	7	735
04:15 PM	4	423	2	1	430	1	0	4	0	5	5	254	4	9	272	3	0	6	0	9	716
04:30 PM	3	402	2	1	408	1	0	4	0	5	5	280	3	3	291	3	0	3	0	6	710
04:45 PM	5	443	1	0	449	2	0	5	0	7	8	311	4	5	328	2	0	2	0	4	788
Total	17	1668	7	3	1695	5	0	18	0	23	25	1143	17	20	1205	11	0	15	0	26	2949
05:00 PM	4	411	3	0	418	0	0	6	0	6	7	331	2	2	342	3	0	5	0	8	774
05:15 PM	2	423	2	1	428	0	0	3	0	3	6	312	3	3	324	2	0	2	0	4	759
05:30 PM	6	409	1	2	418	1	0	4	0	5	6	300	5	5	316	1	0	3	0	4	743
05:45 PM	4	412	2	1	419	1	0	3	0	4	8	309	3	3	323	2	0	2	0	4	750
Total	16	1655	8	4	1683	2	0	16	0	18	27	1252	13	13	1305	8	0	12	0	20	3026
Grand Total	33	3323	15	7	3378	7	0	34	0	41	52	2395	30	33	2510	19	0	27	0	46	5975
Apprch %	1	98.4	0.4	0.2		17.1	0	82.9	0		2.1	95.4	1.2	1.3		41.3	0	58.7	0		
Total %	0.6	55.6	0.3	0.1	56.5	0.1	0	0.6	0	0.7	0.9	40.1	0.5	0.6	42	0.3	0	0.5	0	0.8	

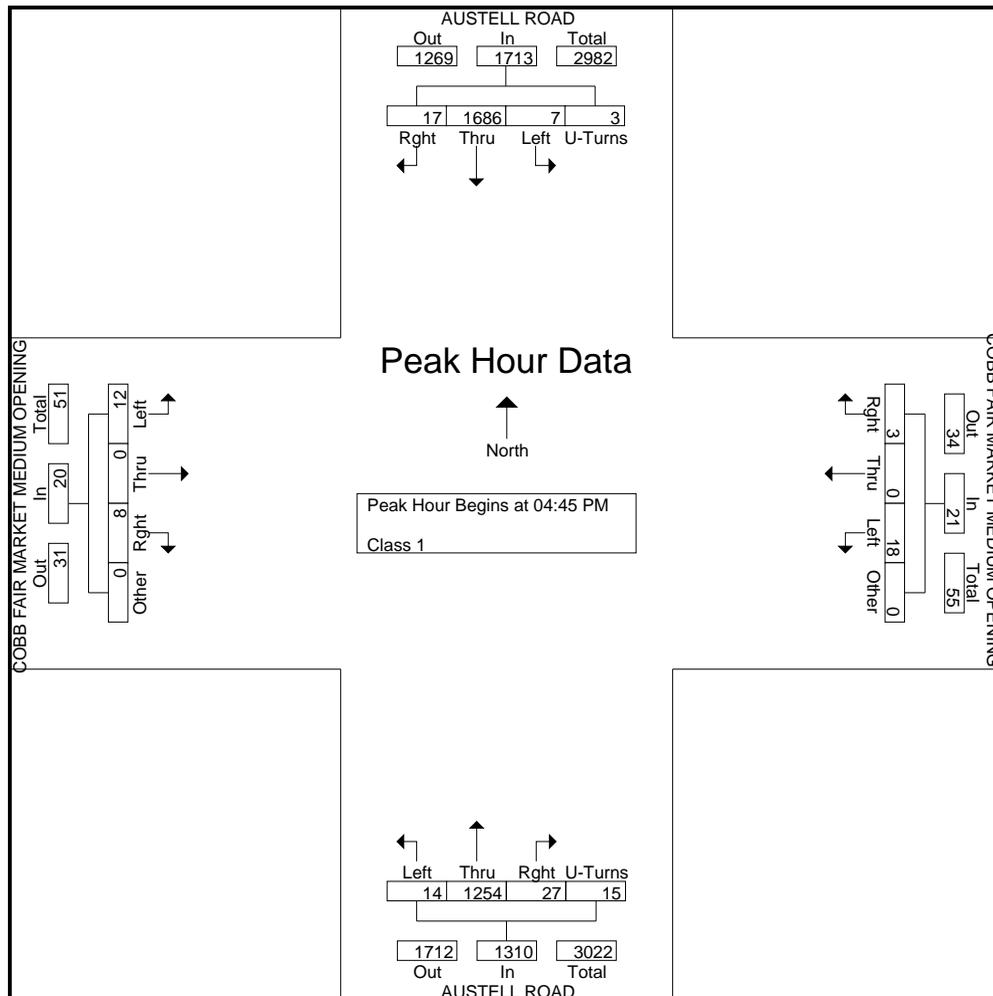


All Traffic Data Services, Inc

1336 Farmer Road
Conyers, Ga 30012
ph. 404-374-1283

File Name : AustellRd@CobbMarketMedPM
Site Code : 00000000
Start Date : 3/24/2009
Page No : 2

Start Time	AUSTELL ROAD Southbound					COBB FAIR MARKET MEDIUM OPENING Westbound					AUSTELL ROAD Northbound					COBB FAIR MARKET MEDIUM OPENING Eastbound					Int. Total
	Rght	Thru	Left	U-Turns	App. Total	Rght	Thru	Left	Other	App. Total	Rght	Thru	Left	U-Turns	App. Total	Rght	Thru	Left	Other	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	5	443	1	0	449	2	0	5	0	7	8	311	4	5	328	2	0	2	0	4	788
05:00 PM	4	411	3	0	418	0	0	6	0	6	7	331	2	2	342	3	0	5	0	8	774
05:15 PM	2	423	2	1	428	0	0	3	0	3	6	312	3	3	324	2	0	2	0	4	759
05:30 PM	6	409	1	2	418	1	0	4	0	5	6	300	5	5	316	1	0	3	0	4	743
Total Volume	17	1686	7	3	1713	3	0	18	0	21	27	1254	14	15	1310	8	0	12	0	20	3064
% App. Total	1	98.4	0.4	0.2		14.3	0	85.7	0		2.1	95.7	1.1	1.1		40	0	60	0		
PHF	.708	.951	.583	.375	.954	.375	.000	.750	.000	.750	.844	.947	.700	.750	.958	.667	.000	.600	.000	.625	.972



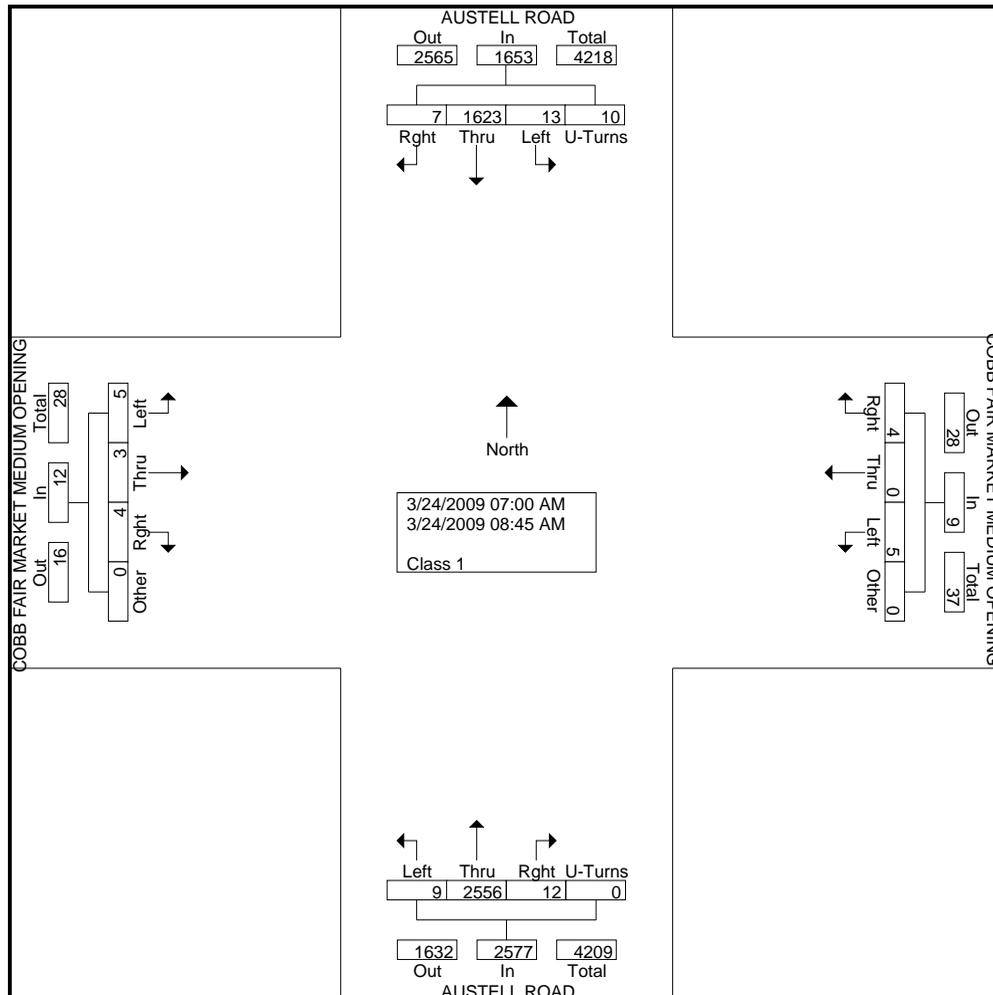
All Traffic Data Services, Inc

1336 Farmer Road
 Conyers, Ga 30012
 ph. 404-374-1283

File Name : AustellRd@CobbMarketMedAM
 Site Code : 00000000
 Start Date : 3/24/2009
 Page No : 1

Groups Printed- Class 1

Start Time	AUSTELL ROAD Southbound					COBB FAIR MARKET MEDIUM OPENING Westbound					AUSTELL ROAD Northbound					COBB FAIR MARKET MEDIUM OPENING Eastbound					Int. Total
	Rght	Thru	Left	U-Turns	App. Total	Rght	Thru	Left	Other	App. Total	Rght	Thru	Left	U-Turns	App. Total	Rght	Thru	Left	Other	App. Total	
07:00 AM	1	152	1	2	156	1	0	0	0	1	1	344	1	0	346	1	1	0	0	2	505
07:15 AM	0	200	1	1	202	0	0	1	0	1	2	350	0	0	352	0	0	0	0	0	555
07:30 AM	1	213	2	2	218	0	0	0	0	0	3	324	2	0	329	0	1	1	0	2	549
07:45 AM	2	221	1	0	224	1	0	1	0	2	1	350	1	0	352	0	0	0	0	0	578
Total	4	786	5	5	800	2	0	2	0	4	7	1368	4	0	1379	1	2	1	0	4	2187
08:00 AM	1	200	2	2	205	0	0	0	0	0	2	300	2	0	304	2	0	1	0	3	512
08:15 AM	0	213	3	2	218	1	0	0	0	1	1	289	0	0	290	0	1	0	0	1	510
08:30 AM	1	220	2	0	223	1	0	2	0	3	0	311	2	0	313	1	0	2	0	3	542
08:45 AM	1	204	1	1	207	0	0	1	0	1	2	288	1	0	291	0	0	1	0	1	500
Total	3	837	8	5	853	2	0	3	0	5	5	1188	5	0	1198	3	1	4	0	8	2064
Grand Total	7	1623	13	10	1653	4	0	5	0	9	12	2556	9	0	2577	4	3	5	0	12	4251
Apprch %	0.4	98.2	0.8	0.6		44.4	0	55.6	0		0.5	99.2	0.3	0		33.3	25	41.7	0		
Total %	0.2	38.2	0.3	0.2	38.9	0.1	0	0.1	0	0.2	0.3	60.1	0.2	0	60.6	0.1	0.1	0.1	0	0.3	

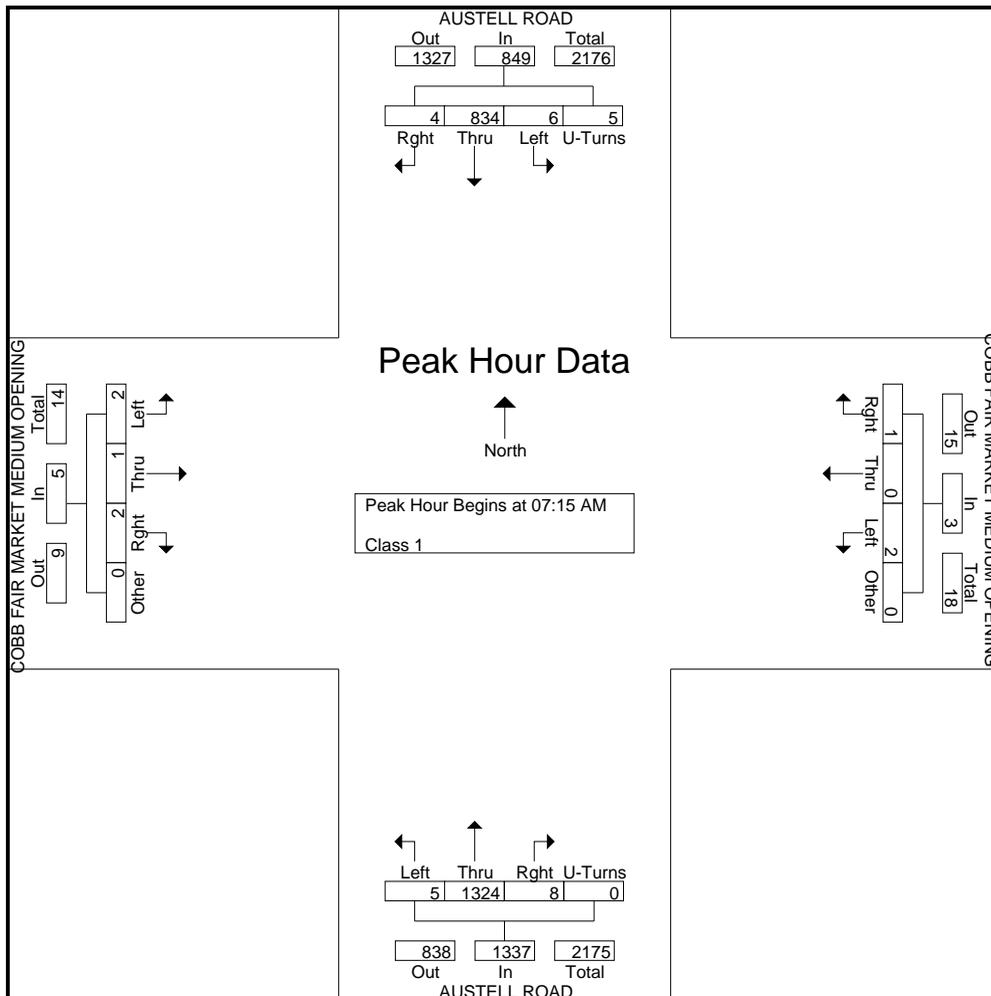


All Traffic Data Services, Inc

1336 Farmer Road
 Conyers, Ga 30012
 ph. 404-374-1283

File Name : AustellRd@CobbMarketMedAM
 Site Code : 00000000
 Start Date : 3/24/2009
 Page No : 2

Start Time	AUSTELL ROAD Southbound					COBB FAIR MARKET MEDIUM OPENING Westbound					AUSTELL ROAD Northbound					COBB FAIR MARKET MEDIUM OPENING Eastbound					Int. Total
	Rght	Thru	Left	U-Turns	App. Total	Rght	Thru	Left	Other	App. Total	Rght	Thru	Left	U-Turns	App. Total	Rght	Thru	Left	Other	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	0	200	1	1	202	0	0	1	0	1	2	350	0	0	352	0	0	0	0	0	555
07:30 AM	1	213	2	2	218	0	0	0	0	0	3	324	2	0	329	0	1	1	0	2	549
07:45 AM	2	221	1	0	224	1	0	1	0	2	1	350	1	0	352	0	0	0	0	0	578
08:00 AM	1	200	2	2	205	0	0	0	0	0	2	300	2	0	304	2	0	1	0	3	512
Total Volume	4	834	6	5	849	1	0	2	0	3	8	1324	5	0	1337	2	1	2	0	5	2194
% App. Total	0.5	98.2	0.7	0.6		33.3	0	66.7	0		0.6	99	0.4	0		40	20	40	0		
PHF	.500	.943	.750	.625	.948	.250	.000	.500	.000	.375	.667	.946	.625	.000	.950	.250	.250	.500	.000	.417	.949



All Traffic Data Services, Inc

1336 Farmer Road
Conyers, Ga 30012

File Name : AustellRd@BlueRidge-BrookwoodPM

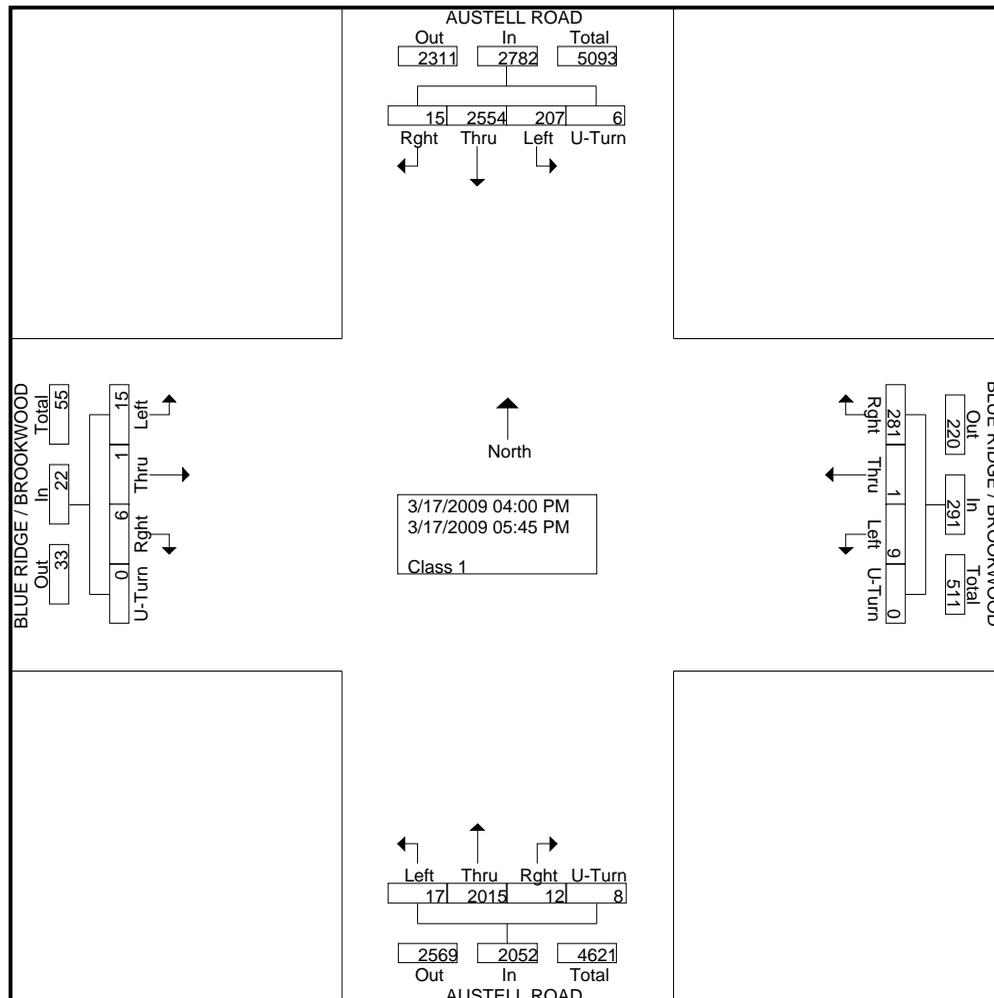
Site Code : 00000000

Start Date : 3/17/2009

Page No : 1

Groups Printed- Class 1

Start Time	AUSTELL ROAD Southbound					BLUE RIDGE / BROOKWOOD Westbound					AUSTELL ROAD Northbound					BLUE RIDGE / BROOKWOOD Eastbound					Int. Total
	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	
04:00 PM	0	350	20	0	370	38	0	0	0	38	2	232	6	1	241	1	0	4	0	5	654
04:15 PM	2	359	25	2	388	39	0	3	0	42	3	235	4	0	242	2	0	3	0	5	677
04:30 PM	4	321	22	0	347	42	0	1	0	43	2	250	1	1	254	2	0	2	0	4	648
04:45 PM	1	322	28	2	353	31	1	1	0	33	1	262	1	2	266	0	0	0	0	0	652
Total	7	1352	95	4	1458	150	1	5	0	156	8	979	12	4	1003	5	0	9	0	14	2631
05:00 PM	1	263	31	1	296	28	0	1	0	29	1	300	2	2	305	0	0	2	0	2	632
05:15 PM	0	326	31	0	357	33	0	1	0	34	0	254	1	1	256	1	0	3	0	4	651
05:30 PM	3	302	32	0	337	31	0	0	0	31	1	245	0	1	247	0	0	1	0	1	616
05:45 PM	4	311	18	1	334	39	0	2	0	41	2	237	2	0	241	0	1	0	0	1	617
Total	8	1202	112	2	1324	131	0	4	0	135	4	1036	5	4	1049	1	1	6	0	8	2516
Grand Total	15	2554	207	6	2782	281	1	9	0	291	12	2015	17	8	2052	6	1	15	0	22	5147
Approch %	0.5	91.8	7.4	0.2		96.6	0.3	3.1	0		0.6	98.2	0.8	0.4		27.3	4.5	68.2	0		
Total %	0.3	49.6	4	0.1	54.1	5.5	0	0.2	0	5.7	0.2	39.1	0.3	0.2	39.9	0.1	0	0.3	0	0.4	



All Traffic Data Services, Inc

1336 Farmer Road
Conyers, Ga 30012

404-374-1253 File Name : AustellRd@BlueRidge-BrookwoodPM

Site Code : 00000000

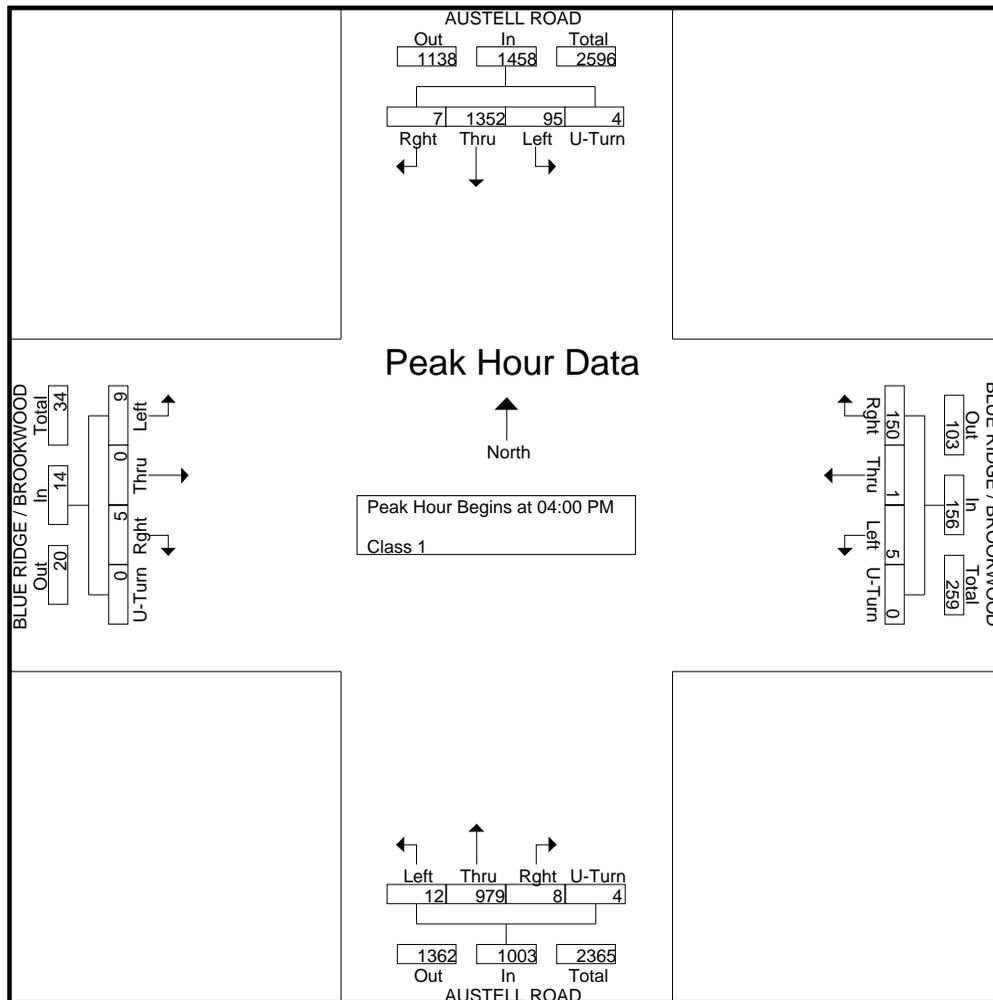
Start Date : 3/17/2009

Page No : 2

Start Time	AUSTELL ROAD Southbound					BLUE RIDGE / BROOKWOOD Westbound					AUSTELL ROAD Northbound					BLUE RIDGE / BROOKWOOD Eastbound					Int. Total
	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	
04:00 PM	0	350	20	0	370	38	0	0	0	38	2	232	6	1	241	1	0	4	0	5	654
04:15 PM	2	359	25	2	388	39	0	3	0	42	3	235	4	0	242	2	0	3	0	5	677
04:30 PM	4	321	22	0	347	42	0	1	0	43	2	250	1	1	254	2	0	2	0	4	648
04:45 PM	1	322	28	2	353	31	1	1	0	33	1	262	1	2	266	0	0	0	0	0	652
Total Volume	7	1352	95	4	1458	150	1	5	0	156	8	979	12	4	1003	5	0	9	0	14	2631
% App. Total	.438	.942	.848	.500	.939	.893	.250	.417	.000	.907	.667	.934	.500	.500	.943	.625	.000	.563	.000	.700	.972

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:00 PM



All Traffic Data Services, Inc

1336 Farmer Road
Conyers, Ga 30012

File Name : AustellRd@BlueRidge-BrookwoodAM

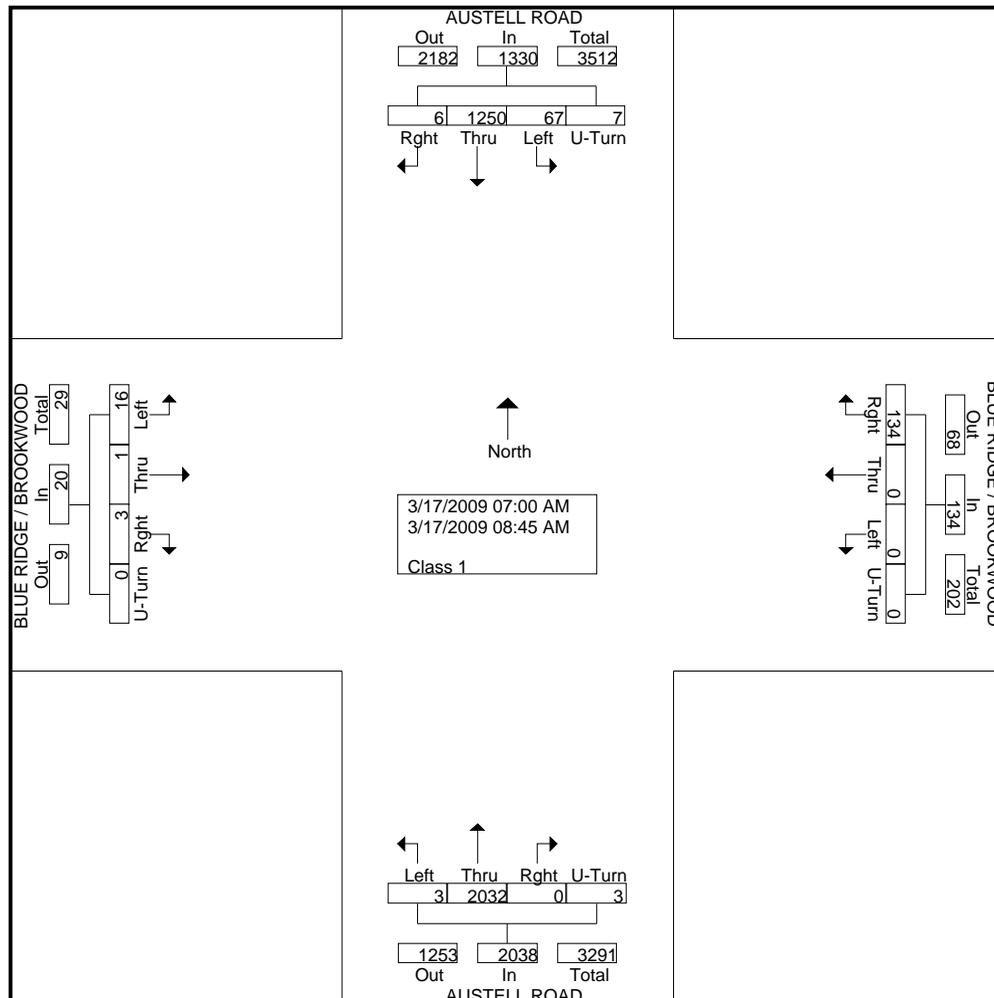
Site Code : 00000000

Start Date : 3/17/2009

Page No : 1

Groups Printed- Class 1

Start Time	AUSTELL ROAD Southbound					BLUE RIDGE / BROOKWOOD Westbound					AUSTELL ROAD Northbound					BLUE RIDGE / BROOKWOOD Eastbound					Int. Total
	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	
07:00 AM	0	110	5	0	115	11	0	0	0	11	0	262	0	0	262	0	0	0	0	0	388
07:15 AM	0	141	11	0	152	16	0	0	0	16	0	285	0	0	285	0	1	1	0	2	455
07:30 AM	0	131	15	0	146	29	0	0	0	29	0	262	0	0	262	2	0	1	0	3	440
07:45 AM	2	182	9	2	195	19	0	0	0	19	0	280	0	0	280	0	0	4	0	4	498
Total	2	564	40	2	608	75	0	0	0	75	0	1089	0	0	1089	2	1	6	0	9	1781
08:00 AM	1	151	10	1	163	17	0	0	0	17	0	240	1	1	242	0	0	3	0	3	425
08:15 AM	1	180	5	2	188	13	0	0	0	13	0	213	1	1	215	0	0	2	0	2	418
08:30 AM	1	188	2	0	191	11	0	0	0	11	0	252	0	0	252	0	0	0	0	0	454
08:45 AM	1	167	10	2	180	18	0	0	0	18	0	238	1	1	240	1	0	5	0	6	444
Total	4	686	27	5	722	59	0	0	0	59	0	943	3	3	949	1	0	10	0	11	1741
Grand Total	6	1250	67	7	1330	134	0	0	0	134	0	2032	3	3	2038	3	1	16	0	20	3522
Apprch %	0.5	94	5	0.5		100	0	0	0		0	99.7	0.1	0.1		15	5	80	0		
Total %	0.2	35.5	1.9	0.2	37.8	3.8	0	0	0	3.8	0	57.7	0.1	0.1	57.9	0.1	0	0.5	0	0.6	



All Traffic Data Services, Inc

1336 Farmer Road
Conyers, Ga 30012

404-374-1283 File Name : AustellRd@BlueRidge-BrookwoodAM

Site Code : 00000000

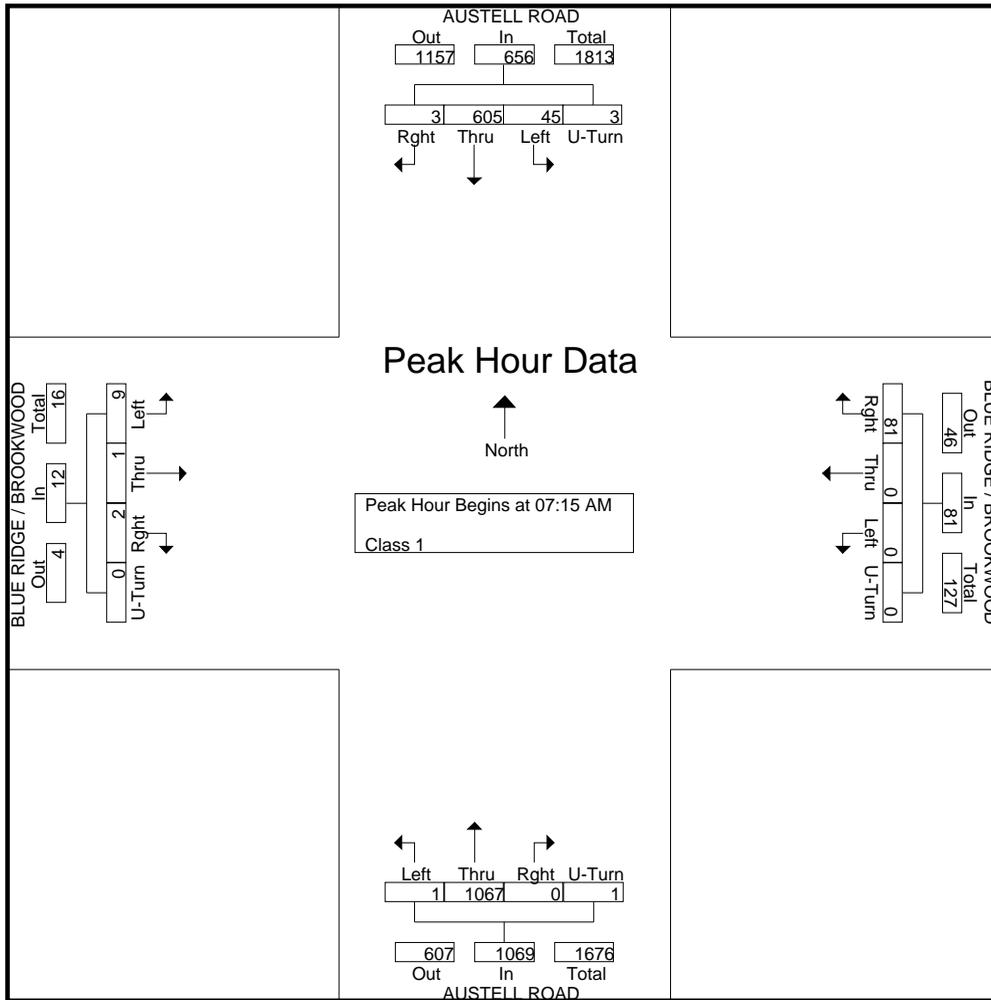
Start Date : 3/17/2009

Page No : 2

Start Time	AUSTELL ROAD Southbound					BLUE RIDGE / BROOKWOOD Westbound					AUSTELL ROAD Northbound					BLUE RIDGE / BROOKWOOD Eastbound					Int. Total
	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	
07:15 AM	0	141	11	0	152	16	0	0	0	16	0	285	0	0	285	0	1	1	0	2	455
07:30 AM	0	131	15	0	146	29	0	0	0	29	0	262	0	0	262	2	0	1	0	3	440
07:45 AM	2	182	9	2	195	19	0	0	0	19	0	280	0	0	280	0	0	4	0	4	498
08:00 AM	1	151	10	1	163	17	0	0	0	17	0	240	1	1	242	0	0	3	0	3	425
Total Volume	3	605	45	3	656	81	0	0	0	81	0	1067	1	1	1069	2	1	9	0	12	1818
% App. Total	.375	.831	.750	.375	.841	.698	.000	.000	.000	.698	.000	.936	.250	.250	.938	.250	.250	.563	.000	.750	.913

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM



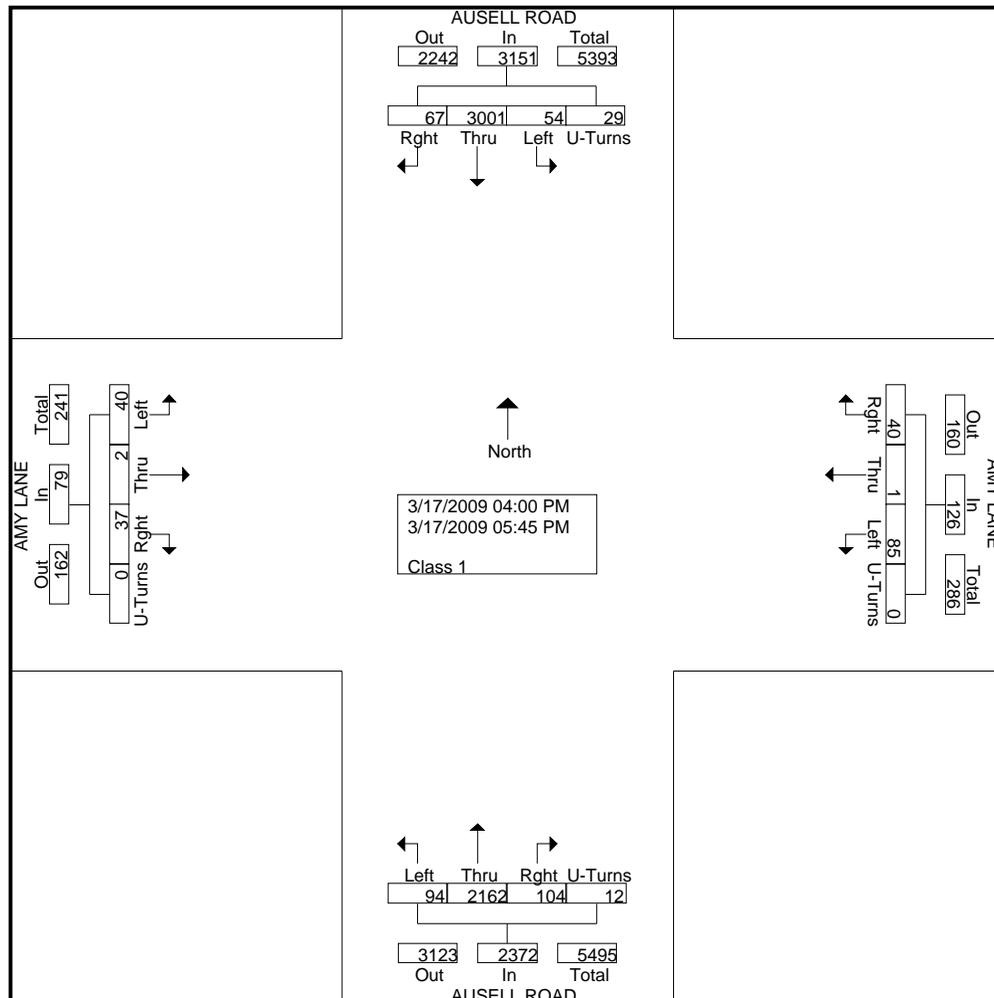
All Traffic Data Services, Inc

1336 Farmer Road
Conyers, Ga 30012
404-374-1283

File Name : AustellRd@AmyLnPM
Site Code : 00000000
Start Date : 3/17/2009
Page No : 1

Groups Printed- Class 1

Start Time	AUSELL ROAD Southbound					AMY LANE Westbound					AUSELL ROAD Northbound					AMY LANE Eastbound					Int. Total
	Rght	Thru	Left	U-Turns	App. Total	Rght	Thru	Left	U-Turns	App. Total	Rght	Thru	Left	U-Turns	App. Total	Rght	Thru	Left	U-Turns	App. Total	
04:00 PM	5	303	6	2	316	8	0	10	0	18	14	288	11	2	315	4	1	4	0	9	658
04:15 PM	8	359	4	6	377	2	0	9	0	11	14	265	8	1	288	3	0	7	0	10	686
04:30 PM	12	380	0	7	399	4	0	8	0	12	12	291	8	1	312	2	0	7	0	9	732
04:45 PM	8	356	8	1	373	7	0	11	0	18	14	251	13	1	279	11	1	4	0	16	686
Total	33	1398	18	16	1465	21	0	38	0	59	54	1095	40	5	1194	20	2	22	0	44	2762
05:00 PM	6	373	14	3	396	7	1	15	0	23	15	290	13	4	322	0	0	4	0	4	745
05:15 PM	8	363	2	1	374	4	0	14	0	18	13	266	16	1	296	5	0	5	0	10	698
05:30 PM	9	439	7	1	456	3	0	8	0	11	12	254	17	1	284	7	0	2	0	9	760
05:45 PM	11	428	13	8	460	5	0	10	0	15	10	257	8	1	276	5	0	7	0	12	763
Total	34	1603	36	13	1686	19	1	47	0	67	50	1067	54	7	1178	17	0	18	0	35	2966
Grand Total	67	3001	54	29	3151	40	1	85	0	126	104	2162	94	12	2372	37	2	40	0	79	5728
Approch %	2.1	95.2	1.7	0.9		31.7	0.8	67.5	0		4.4	91.1	4	0.5		46.8	2.5	50.6	0		
Total %	1.2	52.4	0.9	0.5	55	0.7	0	1.5	0	2.2	1.8	37.7	1.6	0.2	41.4	0.6	0	0.7	0	1.4	



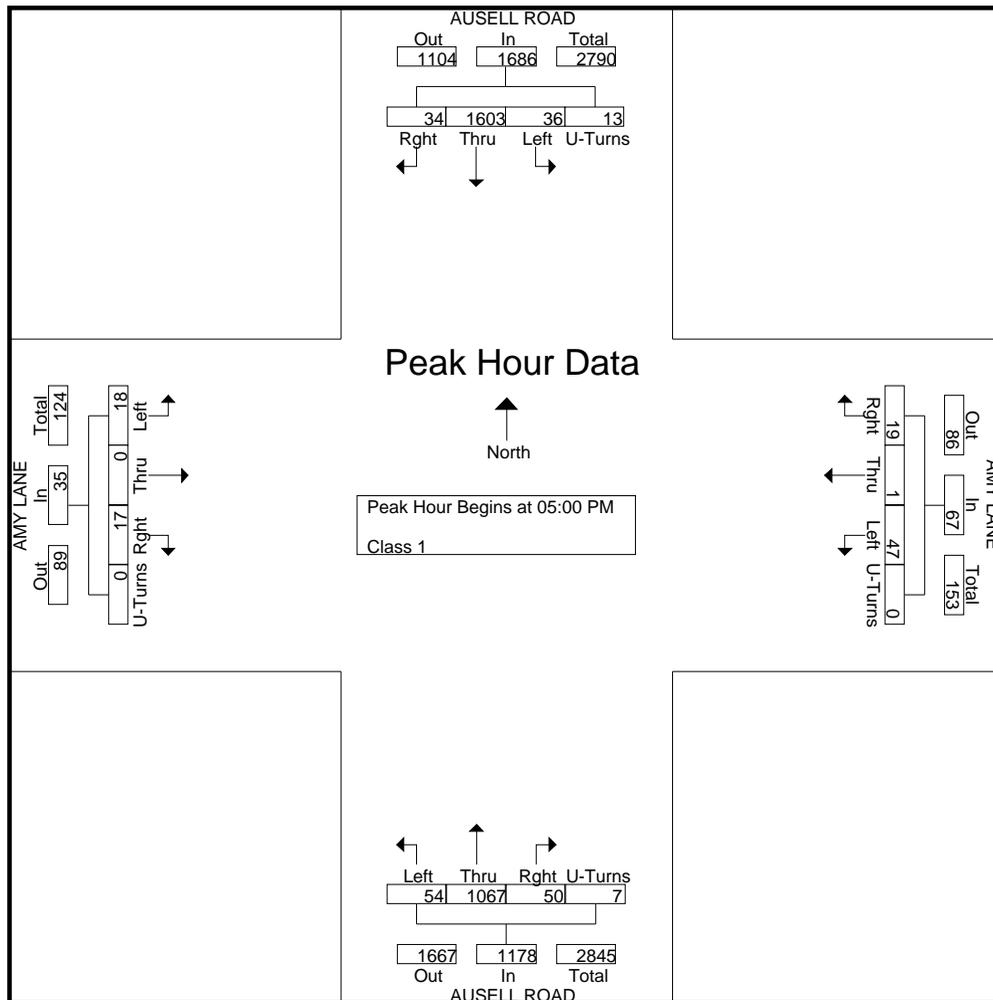
All Traffic Data Services, Inc

1336 Farmer Road
Conyers, Ga 30012
404-374-1283

File Name : AustellRd@AmyLnPM
Site Code : 00000000
Start Date : 3/17/2009
Page No : 2

Start Time	AUSELL ROAD Southbound					AMY LANE Westbound					AUSELL ROAD Northbound					AMY LANE Eastbound					Int. Total
	Rght	Thru	Left	U-Turns	App. Total	Rght	Thru	Left	U-Turns	App. Total	Rght	Thru	Left	U-Turns	App. Total	Rght	Thru	Left	U-Turns	App. Total	
05:00 PM	6	373	14	3	396	7	1	15	0	23	15	290	13	4	322	0	0	4	0	4	745
05:15 PM	8	363	2	1	374	4	0	14	0	18	13	266	16	1	296	5	0	5	0	10	698
05:30 PM	9	439	7	1	456	3	0	8	0	11	12	254	17	1	284	7	0	2	0	9	760
05:45 PM	11	428	13	8	460	5	0	10	0	15	10	257	8	1	276	5	0	7	0	12	763
Total Volume	34	1603	36	13	1686	19	1	47	0	67	50	1067	54	7	1178	17	0	18	0	35	2966
% App. Total	.773	.913	.643	.406	.916	.679	.250	.783	.000	.728	.833	.920	.794	.438	.915	.607	.000	.643	.000	.729	.972

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 05:00 PM



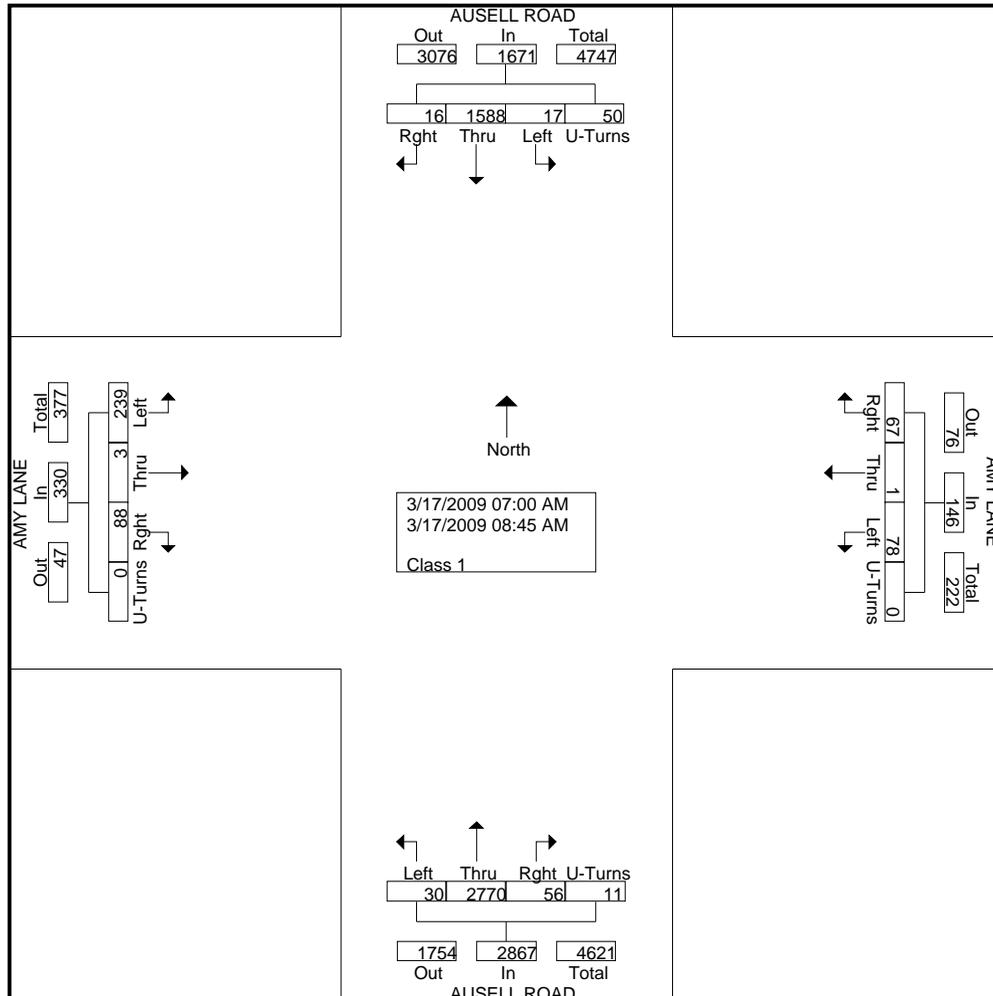
All Traffic Data Services, Inc

1336 Farmer Road
Conyers, Ga 30012
404-374-1283

File Name : AustellRd@AmyLnAM
Site Code : 00000000
Start Date : 3/17/2009
Page No : 1

Groups Printed- Class 1

Start Time	AUSELL ROAD Southbound					AMY LANE Westbound					AUSELL ROAD Northbound					AMY LANE Eastbound					Int. Total
	Rght	Thru	Left	U-Turns	App. Total	Rght	Thru	Left	U-Turns	App. Total	Rght	Thru	Left	U-Turns	App. Total	Rght	Thru	Left	U-Turns	App. Total	
07:00 AM	1	150	2	4	157	9	0	9	0	18	5	347	0	1	353	8	0	40	0	48	576
07:15 AM	2	177	0	3	182	12	0	14	0	26	9	342	3	1	355	8	0	39	0	47	610
07:30 AM	1	197	2	3	203	4	0	9	0	13	9	436	5	1	451	17	0	50	0	67	734
07:45 AM	2	229	5	7	243	8	0	21	0	29	6	391	3	1	401	19	0	37	0	56	729
Total	6	753	9	17	785	33	0	53	0	86	29	1516	11	4	1560	52	0	166	0	218	2649
08:00 AM	4	214	3	7	228	8	0	6	0	14	8	327	6	2	343	15	1	29	0	45	630
08:15 AM	5	215	2	7	229	10	0	4	0	14	8	344	6	0	358	9	1	22	0	32	633
08:30 AM	0	211	1	8	220	10	1	8	0	19	8	298	3	3	312	7	1	15	0	23	574
08:45 AM	1	195	2	11	209	6	0	7	0	13	3	285	4	2	294	5	0	7	0	12	528
Total	10	835	8	33	886	34	1	25	0	60	27	1254	19	7	1307	36	3	73	0	112	2365
Grand Total	16	1588	17	50	1671	67	1	78	0	146	56	2770	30	11	2867	88	3	239	0	330	5014
Approch %	1	95	1	3		45.9	0.7	53.4	0		2	96.6	1	0.4		26.7	0.9	72.4	0		
Total %	0.3	31.7	0.3	1	33.3	1.3	0	1.6	0	2.9	1.1	55.2	0.6	0.2	57.2	1.8	0.1	4.8	0	6.6	



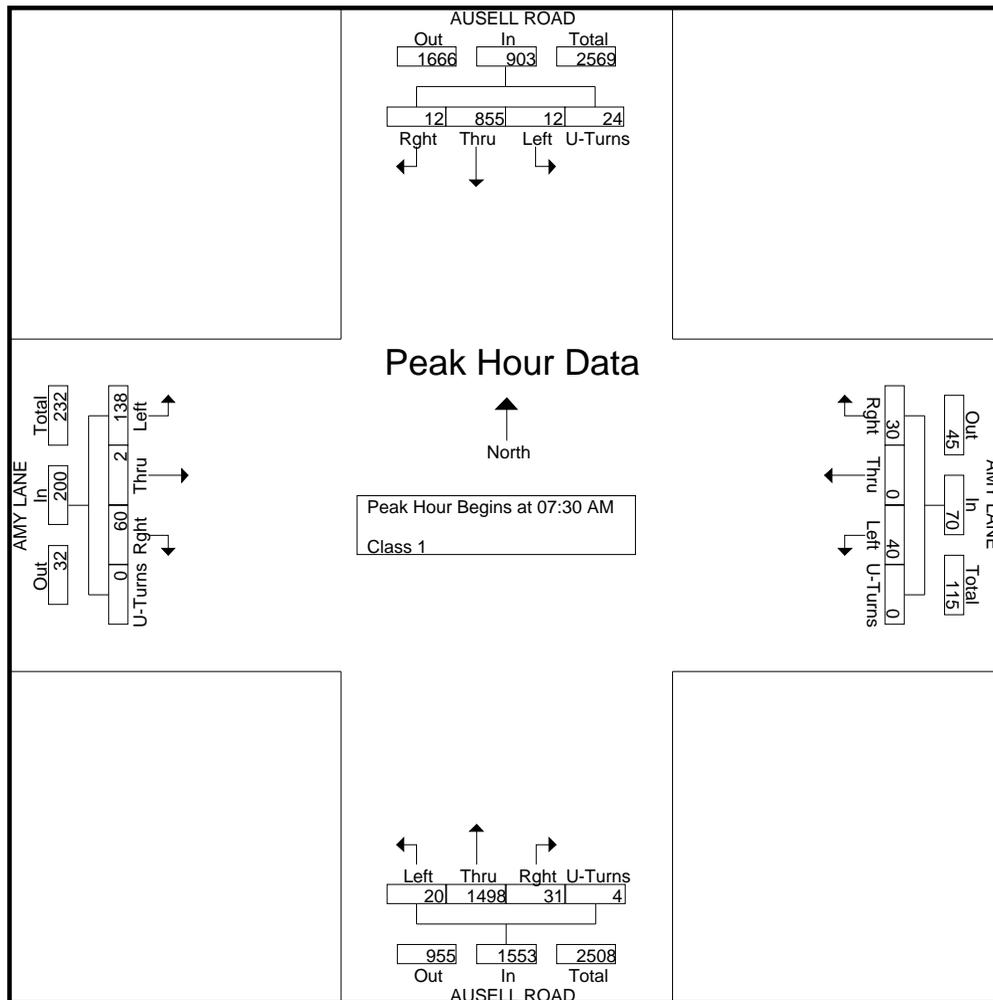
All Traffic Data Services, Inc

1336 Farmer Road
Conyers, Ga 30012
404-374-1283

File Name : AustellRd@AmyLnAM
Site Code : 00000000
Start Date : 3/17/2009
Page No : 2

Start Time	AUSELL ROAD Southbound					AMY LANE Westbound					AUSELL ROAD Northbound					AMY LANE Eastbound					Int. Total
	Rght	Thru	Left	U-Turns	App. Total	Rght	Thru	Left	U-Turns	App. Total	Rght	Thru	Left	U-Turns	App. Total	Rght	Thru	Left	U-Turns	App. Total	
07:30 AM	1	197	2	3	203	4	0	9	0	13	9	436	5	1	451	17	0	50	0	67	734
07:45 AM	2	229	5	7	243	8	0	21	0	29	6	391	3	1	401	19	0	37	0	56	729
08:00 AM	4	214	3	7	228	8	0	6	0	14	8	327	6	2	343	15	1	29	0	45	630
08:15 AM	5	215	2	7	229	10	0	4	0	14	8	344	6	0	358	9	1	22	0	32	633
Total Volume	12	855	12	24	903	30	0	40	0	70	31	1498	20	4	1553	60	2	138	0	200	2726
% App. Total	.600	.933	.600	.857	.929	.750	.000	.476	.000	.603	.861	.859	.833	.500	.861	.789	.500	.690	.000	.746	.928

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 07:30 AM



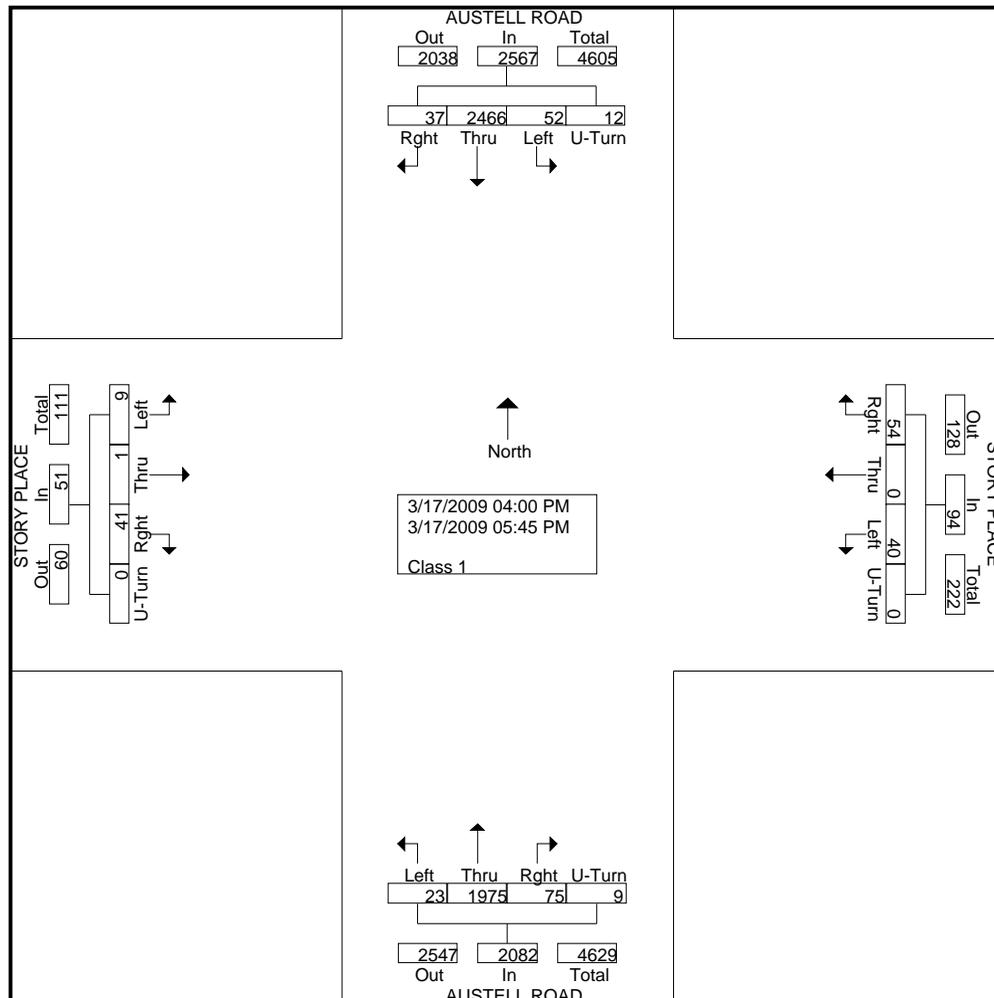
All Traffic Data Services, Inc

1336 Farmer Road
Conyers, Ga 30012
404-374-1283

File Name : AustellRd@StoryPIMM
Site Code : 00000000
Start Date : 3/17/2009
Page No : 1

Groups Printed- Class 1

Start Time	AUSTELL ROAD Southbound					STORY PLACE Westbound					AUSTELL ROAD Northbound					STORY PLACE Eastbound					Int. Total
	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	
04:00 PM	1	341	10	1	353	3	0	8	0	11	8	238	2	1	249	2	0	2	0	4	617
04:15 PM	3	350	5	3	361	4	0	5	0	9	11	238	1	1	251	7	0	1	0	8	629
04:30 PM	5	311	8	3	327	7	0	4	0	11	5	241	3	1	250	4	0	4	0	8	596
04:45 PM	6	310	7	2	325	7	0	4	0	11	13	250	2	1	266	6	1	0	0	7	609
Total	15	1312	30	9	1366	21	0	21	0	42	37	967	8	4	1016	19	1	7	0	27	2451
05:00 PM	1	252	5	1	259	7	0	3	0	10	7	293	1	2	303	3	0	0	0	3	575
05:15 PM	8	318	3	0	329	9	0	5	0	14	11	240	4	2	257	8	0	1	0	9	609
05:30 PM	6	290	5	2	303	7	0	5	0	12	9	240	4	0	253	4	0	1	0	5	573
05:45 PM	7	294	9	0	310	10	0	6	0	16	11	235	6	1	253	7	0	0	0	7	586
Total	22	1154	22	3	1201	33	0	19	0	52	38	1008	15	5	1066	22	0	2	0	24	2343
Grand Total	37	2466	52	12	2567	54	0	40	0	94	75	1975	23	9	2082	41	1	9	0	51	4794
Apprch %	1.4	96.1	2	0.5		57.4	0	42.6	0		3.6	94.9	1.1	0.4		80.4	2	17.6	0		
Total %	0.8	51.4	1.1	0.3	53.5	1.1	0	0.8	0	2	1.6	41.2	0.5	0.2	43.4	0.9	0	0.2	0	1.1	



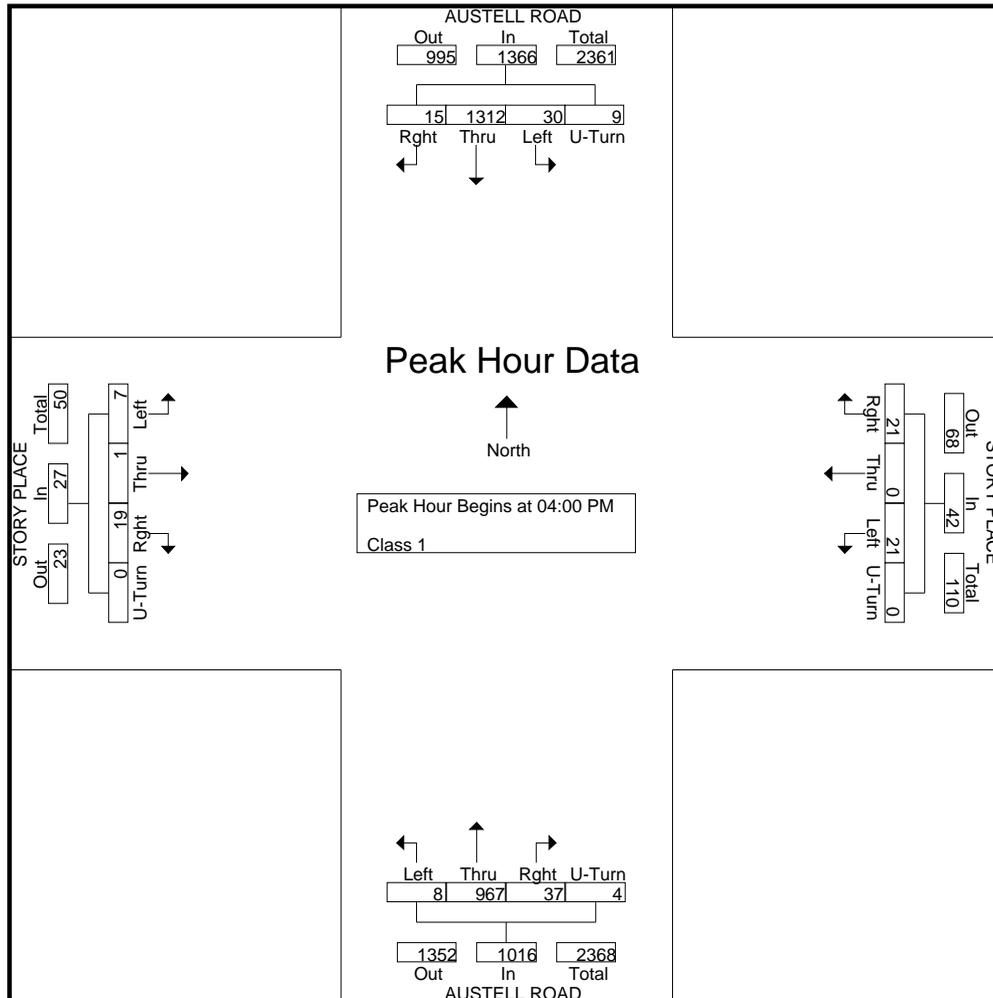
All Traffic Data Services, Inc

1336 Farmer Road
Conyers, Ga 30012
404-374-1283

File Name : AustellRd@StoryPIPM
Site Code : 00000000
Start Date : 3/17/2009
Page No : 2

Start Time	AUSTELL ROAD Southbound					STORY PLACE Westbound					AUSTELL ROAD Northbound					STORY PLACE Eastbound					Int. Total
	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	Rght	Thru	Left	U-Turn	App. Total	
04:00 PM	1	341	10	1	353	3	0	8	0	11	8	238	2	1	249	2	0	2	0	4	617
04:15 PM	3	350	5	3	361	4	0	5	0	9	11	238	1	1	251	7	0	1	0	8	629
04:30 PM	5	311	8	3	327	7	0	4	0	11	5	241	3	1	250	4	0	4	0	8	596
04:45 PM	6	310	7	2	325	7	0	4	0	11	13	250	2	1	266	6	1	0	0	7	609
Total Volume	15	1312	30	9	1366	21	0	21	0	42	37	967	8	4	1016	19	1	7	0	27	2451
% App. Total	.625	.937	.750	.750	.946	.750	.000	.656	.000	.955	.712	.967	.667	1.000	.955	.679	.250	.438	.000	.844	.974

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 04:00 PM



Austell Road AMP Trip Generation

Residential Development

LU Code 230 Residential Condominium/Townhouse (p.366)

AM Peak Hour		PM Peak Hour	
Units	77	Units	77
Ln	4.344	Ln	4.344
Formula	3.7350	Formula	3.8819
Total Trips (Ln Base)	42	Total Trips (Ln Base)	49
Formula: $Ln(T) = .80 Ln(X)+0.26$		Formula: $Ln(T) = .82 Ln(X)+0.32$	

LU Code 210 Single-Family Detached Housing (p.268)

AM peak hour		PM Peak Hour	
Units	9	Units	9
Trips	7	Trips	9
Formula (Avg Rate): $T = 0.75(X)$		Formula (Avg Rate): $T = 1.01(X)$	

Retail Development

LU Code 820 Shopping Center (p. 1452)

AM peak hour		PM peak hour	
SF	120,298	SF	120,298
Ln	4.790	Ln	4.790
Formula	5.1640	Formula	6.5614
Total Trips (Ln Base)	175	Total Trips (Ln Base)	707
Formula: $Ln(T) = .60 Ln(X)+2.29$		Formula: $Ln(T) = .66 Ln(X)+3.40$	

Land Use Code:		AM Peak Hour			PM Peak Hour		
232 High-Rise Residential Condominium/Townhouse	Dwelling Units	Total Trips	Enter	Exit	Total Trips	Enter	Exit
	77	42	7	35	49	33	16

Land Use Code:		AM Peak Hour			PM Peak Hour		
232 High-Rise Residential Condominium/Townhouse	Dwelling Units	Total Trips	Enter	Exit	Total Trips	Enter	Exit
	9	7	2	5	9	6	3

Total Residential Trip Generation

AM Peak Hour			PM Peak Hour		
Total Trips	Enter	Exit	Total Trips	Enter	Exit
49	9	40	58	39	20

Total Retail Trip Generation

ITE Trip Generation		AM Peak Hour			PM Peak Hour		
Land Use Code:	Square Feet	Total Trips	Enter	Exit	Total Trips	Enter	Exit
820 Shopping Center	120,298	175	107	68	707	339	368