APPENDIX G

TRANSPORTATION SYSTEMS

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Transportation systems have a great impact on a community's growth and development, including established land use practices and quality of life for residents. Understanding the general regional impact of traffic facilities, the following traffic related elements are reviewed from a countywide perspective. However, individual communities have unique transportation issues, and any specific issues or opportunities are noted separately.

Road Network

According to the Federal Highway Administration (FHWA), functional classification is the process by which streets and highways are grouped into classes, or systems, according to the character of service they are intended to provide. Most travel involves movement through a network of roads, and these roads receive a functional classification according to the character of traffic service intended for that roadway. There are two systems of roadway classifications, Urban and Rural, and four functional classifications.

Functional Classifications

Roads are generally classified into four major groups: (See Map G2)

Interstate: These roads have trip lengths and travel density characteristics that indicate substantial statewide or interstate travel. These roads serve almost all urban areas of 50,000 and over population and a large majority of those with a population of 25,000 or greater.

Arterial: These roadways are designed to carry relatively high traffic volumes throughout the community and to major trip-generating destinations such as centers of employment and large shopping districts.

Collector: These roadways are designed to collect traffic from the local street system and carry it to the arterial roadway system. While experiencing greater volumes than the local road network, these roadways also provide access to neighboring properties.

Local: These roads serve to access adjacent lands and provide travel over relatively short distances.

There are no interstate highways that pass through Ware County. Interstate 10 (I-10), which runs east/west through the State of Florida between Pensacola and Jacksonville, and Interstate 95 (I-95), which runs north/south through GA from Savannah to Camden County, are the closest interstates to the county.

Arterial roadways within Ware County include: US 82/GA 520, US 84/GA38, US 1/US 23/GA 4, and GA 158. US 82 runs from New Mexico to Georgia's Coast East-West. Throughout much of Georgia it is paired with GA 520 and designated as "Corridor Z" and "South GA Pkwy." It runs from Brunswick in the East through Waycross to Tifton, through Sylvester and on to Albany. It meets up with Interstate 95 (I-95) in Brunswick and Interstate 75 (I-75) in Tifton. US 84 runs East-West from Hinesville to Pagosa Springs, Colorado. It travels from Donaldsonville at the Georgia/Alabama line through Bainbridge to Thomasville and on through Valdosta to Waycross, continuing through Ludowici to Hinesville. This is a major route through South Georgia, most of which sees AADT (annual average daily traffic) of 5,000 vehicles and up, with numbers increasing near 20,000 in and around the City of Waycross. Most of the route is a 4-lane divided highway, however between Homerville and Ware County it is a two lane highway, with plans for widening. US 1 is a major North-South US Highway that serves the East Coast from Key West to Fort Kent, Maine. The highway connects many major East Coast cities including Miami, FL; Jacksonville, FL; Augusta, GA; Columbia, SC; Raleigh, NC; Richmond, VA; Washington, D.C.; Baltimore, MD; Philadelphia, PA; Newark, NJ; New York City, NY; New Haven, Connecticut; Providence, RI; Boston, MA; and Portland, Maine. In Georgia, US 1 is generally rural, passes from Folkston through Waycross and on through Swainsboro and Augusta. GA 158 moves from Douglas to Ware County where it connects with US

82. Major roadways within Ware County include GA 177, GA 122, Manor Millwood Road, Old Nichols Highway, Bickley Highway, Telmore Dixie Union Road, Jamestown Road, and Pebble Hill Road.

Alternative Modes:

Bicycle Facilities

Currently, there are three established bike routes that pass through Ware County, SR10, SR20, and the Okefenokee Bike Path. State Route 10 begins in Seminole County, GA and follows GA 122 and US 82 through Clinch, Ware, and Brantley counties in South East Georgia. State Route 20 begins in Early County, GA and ends in Ware County at the CSX overpass. This route follows GA 206, Georgia 32, US 221, and GA 158 and US 82 through Coffee County and Ware County. The Okefenokee Bike Path is entirely within Ware County. It begins at Knight Avenue and ends at the entrance to the Okefenokee Swamp on US 1.

Walking/Hiking Trails

Downtown Waycross has a one mile walking trail that has a corresponding "historic sites" brochure. The trail is marked with light blue banners with arrows. The trailhead is located next to the Phoenix on the Plant Avenue side.

Sidewalks

GIS

Public Transportation

Ware County has a 5311 RPT program operated by MIDS, Inc. The cost is $3 in the county up to 10 miles, $5 in the county over 10 miles, and a $5 flat rate + $0.50/mile each additional mile outside of the county. The county also provides DHS transportation services that provide transportation for seniors to and from senior centers, hospitals, etc.

Railroads, Trucking, and Airports

Rail Transportation

Railroads were pivotal in the founding of Waycross, which gets its name from the City's location to key railroad junctions. Rail lines from six directions meet in Waycross. Today, five of the rail lines entering the city are operated by CSX, whose major hub is located in nearby Jacksonville, FL and one is in St. Mary's West Railway, a shortline railroad from Pearson to Waycross. The line that runs from Waycross to Jacksonville through Folkston is one of, if not the busiest stretches of railroad in Georgia, carrying around 110 million gross tons of cargo every year.

Truck Freight

There are two NHS routes, US 84 and US 1, in Ware County and one "non-interstate" STRAHNET route, US 82, in Ware County.

Aviation

The Waycross-Ware County Airport is the only airport in Ware County. It is situated on 1040 acres, owned and operated by Waycross and Ware County. The airport is three miles northwest of the central

business district of Waycross between Albany Avenue and Alma Highway (US 1). The airport accommodates a variety of aviation related activities including recreational flying, agriculture spraying, corporate/business jets, shipping of just-in-time, police/law enforcement, prisoner transport, forest fire fighting, ultra-lights, experimental aircraft, and aerial photography/surveying.

The airport currently has three runways, with the primary runway 18/36 being 6,000 ft. long and 100 ft. wide with MIRL and a full parallel taxiway with MITL. Runway 18 has a VASI and MALSR. Runway 05/23 is the secondary runway and is 5,035 ft. long and 100 ft. wide. The third runway 13/31 is 3,528 ft. long and 100 ft. wide. The airport has a rotating beacon, segmented circle, wind cone, AWOS-3 and a GCO. The airport has an ILS, NDB, and GPS approach to runway 18 and a GPS approach to runway 36. Current facilities include a full service FBO and maintenance facility, AV Gas and Jet Fuel, and a 3,500 sq. ft. terminal/administration building. There are 20 auto parking spaces, 21 apron parking spaces, 34 hanger spaces, and rental cars are available. There are currently 26 single engine aircraft, 1 multi-engine aircraft, 2 helicopters, and 3 ultra-lights based on the field. The airport is a level III airport, which is a business airport of regional impact.

Current Traffic and Transportation Studies

US 1 Corridor Study

In 2007 the City of Waycross working with Edwards Engineering developed a traffic and corridor study for US 1 from Sycamore Street to Osborne Road on the southeast side of the City. This area is a developed commercial and retail corridor, with many acres of land still available for development. The goals of the study are to:

- determine the long-term development and cumulative traffic impacts on the corridor;
- estimate future development traffic in the corridor;
- examine existing median breaks, traffic signal locations and intersection designs;
- recommend future median breaks, traffic signal locations and intersection designs;
- and to document access recommendations for us by the City, County and State DOT in meeting future development needs.

The analysis of existing and future conditions on Memorial Drive (U.S. 1) and Corridor Z (Ga. 520) highlights some of the existing and future operational problems that will occur unless improvements are made. The Memorial Drive (U.S 1) corridor, carrying almost 24,000 vehicles per day in 2007 is expected to have an additional 25,000 trips per day added by 2015 due to proposed developments in the area. This mandates careful planning and implementation of traffic operational improvements to mitigate congestion and accidents. To respond to these needs a list of improvements is included in Parts III and VI of the report. For emphasis and clarity, a summary of the most important recommendations is included in this Executive Summary. These improvements are further divided into Immediate Action Improvements and Long Range Improvements.

Immediate Action Improvements are those improvements that are relatively easy to implement and are needed now. These improvements are based upon the evaluation of the conditions in the existing corridor described in Part III. Several intersections exhibit safety problems with turning vehicles and high operating speeds. Improved access controls are needed to improve safety.

Intersection 2: Memorial Drive (U.S. 1) and Corridor Z (Ga. 520)
Left -turning movements on the westbound and east bound approaches are operating at “E” and “F” respectively. Accident rates are also high with many side-swipe accidents occurring with the dual left-turn movements. Improve the delineation of left turn paths with buttons to reduce side-swipe accidents. A high number of rear-end accidents also occur at the right turn westbound merge onto U.S. 1 from Brunswick Road. Provide rumble strips prior to the stop-bar and consider changing the Yield to a Stop Condition.

Adjacent to the intersection there are numerous rear-end and right angle accidents due to the access movements to the adjacent commercial development. There is a need to improve access control and signing.

Intersection 5: Memorial Drive (U.S.1) and Mall Access/Pafford Lake Road
The major Waycross Mall access is opposite Pafford Lake Drive. This is a poorly designed intersection with multiple driveways, poor alignment of the crossroad and unsignalized operation. This intersection is presently un-signalized and the Level of Service is "F". Accident rates are high with 26 accidents recorded in the six year period. Especially disturbing is the high number of injury accidents due to left turns into the Mall. Over one-third of all accidents at this location are injury accidents. Traffic signalization and intersection redesign are a high priority here. We recommend realignment of the Mall Access to provide more stack space and a improved approach angle.

Intersection 9: Osborn/Ambrose Street
This intersection is currently un-signalized. The A.M. peak left turn volumes from Ambrose Street are high due to the school traffic and considerable delay occurs especially with the school busses. Traffic signalization and some minor geometric changes to make the turning lanes align better are recommended.

The following improvements for the intersections are longer range in nature and are dependent on the proposed commercial development as outlined by the participating land owners and developers. Some of these improvements will require land donations by the developers to be implemented and may be done through the development regulations of the City and the County.

Intersection 2: Corridor "Z" and U.S. 1
This is the most heavily trafficked intersection in the corridor. Changes in signal timing, improvements in turning lanes and some diversion of right turn traffic via Old Dixie Highway and/or an unused right of way between Corridor "Z" and U.S. 1 can improve the level of service here. A parallel route to divert some development traffic will be necessary to serve the traffic demand.

Intersection 3: Memorial Drive (U.S. 1) and City Boulevard
There are some conflicting operations on the eastbound approach of City Boulevard due to the proximity of the Reynolds Road intersection to the U.S. 1 intersection. We are recommending the relocation of Old Dixie Highway 100-200 feet south to give adequate stacking space for the northbound traffic on City Boulevard. We also recommend the closure of the existing street at City Boulevard.

Other Roadway Improvements
It is apparent that U.S. 1 alone cannot handle the existing traffic and all the additional traffic anticipated with the 2015 development program in the corridor. Some parallel route must be developed in conjunction with developers to provide additional access to the developing area. Figure 10 indicates conceptually how such a route could be developed using part of existing rights of way and existing road segments including an extension of Old Dixie Highway and /or Marion Street. See Part VI for more details on the recommended improvements.

A parallel minor arterial should be a part of the ongoing major thoroughfare planning effort. As new developments are announced and site plans are submitted, right of way could be dedicated and new roadway connections built. It is understood that these improvements are more long range in nature and are dependent on the pace of development in the study corridor.

Hatcher Point Road Corridor Study
The purpose of this report is to evaluate the existing and future performance of Hatcher Point Road in Waycross, Georgia. Hatcher Point Road runs in the north and south directions and intersects SR 4/US1 US 23 on the south end and King Avenue/SR 520 on the north end.

Initial evaluations were made to assess the current conditions in the vicinity of the project. Peak hour turning movement counts (TMCs) were conducted on Wednesday, July 11 and Thursday, July 12, 2007 at the following intersections:

- Hatcher Point Road at SR 4/US 1 IUS 23
- Hatcher Point Road at Wal-Mart Driveway
- Hatcher Point Road at Waycross Mall Driveway
- Hatcher Point Road at Cactus Street
- Hatcher Point Road at Canal Street
- Hatcher Point Road at King Avenue/SR 520

In addition to the TMCs, Automatic Traffic Recorder (ATR) counts were taken on Wednesday, July 11, 2007 at the following locations:

- Hatcher Point Road North of SR 4/US 1/US 23
- Hatcher Point Road North of Canal Street

The TMCs and 24-hour counts are contained in Appendices A and B, respectively.

Traffic on Hatcher Point Road and the surrounding roadways are expected to increase as a result of continuing development in the region. Historical count data for the immediate area was obtained from the Georgia Department of Transportation (GDOT) in order to establish a historical traffic growth rate. The existing traffic was grown to provide an estimate for the build year (2010) and design year (2030) volumes.

Based on the analysis documented in this report, Wolverton and Associates, Inc. make the following conclusions and recommendations:

- A five-lane undivided facility will accommodate the projected traffic.
- Add left: turn lanes at all intersection on Hatcher Point Road. Include a two-way-left:-turn-lane (TWLTL) from the Wal-Mart Driveway to King Avenue/SR 520. This TWLTL will provide refuge for vehicles, especially large trucks, to enter and exit Hatcher Point Road. It will also assist trucks entering the Wal-Mart truck driveway between the Wal-Mart Driveway and Cactus Street. Also, include access control through the section between Intersections #1 and #2.

Intersection #1:

- Add an additional left: turn lane to the eastbound approach at SR 4/US 23/US 1 providing dual left: turn lanes with 400-foot storage length.
- Extend the southbound left: turn lane to Intersection #2.
- Add a right turn lane with a 150-foot storage to the southbound approach.

Intersection #2:

- Realign the Waycross Mall Driveway to align with the Wal-Mart Driveway. This will reduce the possibility of grid lock between the two existing intersections on Hatcher Point Road at Waycross Mall Driveway and Wal-Mart Driveway.
- Add a traffic signal and coordinate with the signal at Intersection # 1. To progress the dual left: turn traffic effectively, the cycle length of this signal should be half of the cycle length of the timing at Intersection #1.
- Add a left: turn lane with a ISO-foot storage to the eastbound approach.
- Add a shared through/right lane with a 70-foot storage length and a channelized lane for the right turn movements to the westbound movement.
- Add a left: turn lane for the northbound and southbound movements.
- Maintain a northbound right turn lane into the Wal-Mart Driveway.

Intersection #4:

- Add a though lane for the northbound and southbound traffic at Cactus Street and Canal Street.

Intersection # 5:

- Add an eastbound right turn lane and a northbound left: turn lane at the King Avenue/SR 520 intersection.