# COUNTY DEPARTMENT AGENDA REQUEST

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| Department: | Planning & Zoning | Presenter(s): | Peter A. Frisina |
| Meeting Date: | Thursday, May 28, 2009 | Type of Request: | Consent |

Wording for the Agenda:

Consideration of staff's recommendation that the request that McBride Road be designated as an authorized street for motorized cart travel be denied.

Background/History/Details:

Approval by the Board of Commissioners is required to designate roadways for motorized cart travel, in accordance with Ordinance 95-10. A request has been made that McBride Road be designated for use by motorized carts. The request has been evaluated by a process that includes review by Planning & Zoning, Public Works and the Sheriff's Department. McBride Road is classified as a Collector street/road in the Fayette County Thoroughfare Plan and upon applying established traffic/safety formulas, does not meet criteria for the safe use of carts. Visibility is problematic, as well as the average speed of vehicular traffic travelling the road.

What action are you seeking from the Board of Commissioners?

Vote to accept staff's recommendation not to approve the designation of McBride Road as an authorized street for motorized cart travel.

If this item requires funding, please describe:

Not Applicable.

| | | | |
|---|---|---|---|
| Has this issue come before the Commissioners in the past? | No | If so, when? | |
| Do you need audio-visual for the presentation? | No | Back-up Material Submitted? | Yes |

## STAFF USE ONLY

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|---|---|---|---|
| Approved by Finance | Yes | Reviewed by Legal | Yes |
| Approved by Purchasing | Yes | Approved by County Clerk | Yes |
| Administrator's Approval | Yes | | |

Staff Notes:

Fayette County GEORGIA

*Where Quality Is A Lifestyle*

To: Fayette County Board of Commissioners

From: Pete Frisina, Planning and Zoning
Phil Mallon, Public Works
Brian Eubanks, Sheriff's Office

Date: May 7, 2009

Subject: Authorization of McBride Road for Motorized Carts

The purpose of this memo is to address the request for the authorization of McBride Road for motorized carts. The request is being made by Robert Jones of 676 McBride Road.

Section 10-42. (Street Authorization) of the Fayette County Code outlines issues that can be considered in the BOC's designation of authorized streets. Section 10-42 reads as follows:

> The Board of Commissioners may designate authorized streets upon its own initiative or by request from a private citizen for the use of motorized carts. The Board of Commissioners may consider issues including, but not limited to, the street classification, posted speed limit, speed characteristics of the street as determined by studies, maximum grade of the road, minimum visibility distance, or any other existing conditions particular to the street in their designation of an authorized street. The Board of Commissioners may condition approval of the designation subject to safety measures on the street including, but not limited to, the reduction of the posted speed limit, additional signage/markings, and traffic calming devices to improve safety.

Staff has found the following:

**Street Classification:** McBride Road is a Collector per the Fayette County Thoroughfare Plan

**Posted Speed Limit:** 35 mph

**Speed Characteristics:** The Sheriff's Office conducted a speed study from 04/16/2009 to 04/17/2009 on McBride Road. The study found that the 85$^{th}$ percentile was more than 16 mph over the posted speed limit (19.16 mph). The "85$^{th}$ percentile" is a statistic used in traffic engineering commonly used to help characterize vehicle speed on a given section of roadway. More specifically, it is the speed at which 85 percent of all vehicles on that road are traveling at or below.

According to the National Safety Council, the average un-impaired driver of a motor vehicle takes 1 and ¾ seconds to observe, process, and react to a hazard. The distance a vehicle travels during this time is referred to this as the perception and reaction distance. At velocities of 35 mph, the perception and reaction distance is 90 feet, at 54 mph the distance is 139 feet. These distances are important when evaluated in conjunction with sight distance, described below.

**Visibility Distance:** In order to provide for a reasonable level of safety, we recommend that motorized carts only be allowed on streets that have characteristics that allow a driver adequate time and distance to identify a hazard (e.g., a golf cart) and react to it (i.e., stop their vehicle). Visibility distance indicates the minimum distance a driver can see given the road's horizontal and vertical curves, vegetation and other obstructions.

On average, the braking distance for an automobile in good weather conditions, with a normally operating vehicle, is within a range of 100 to 160 feet. Adding the braking distance with the perception and reaction distance yields the minimum required visibility distance. For McBride Road, this is a range of 239 to 299 feet (based on the 85$^{th}$ percentile). Per the Sheriff's Office, McBride Road does not have a minimum of 299 feet of driver visibility over its entire length. Visibility is an issue for the road.

**Grade of the Road:** The primary method for reducing instances of excessive vehicle speed is the employment of speed detection devices (RADAR/Laser). The use of speed detection devices is strictly governed be state law. The Official Code of Georgia Tile 40, Chapter 14, Section 9, states in part "…No speed detection device shall be employed by county, municipal, or campus law enforcement officers on any portion of any highway which has a grade in excess of seven (7) percent." McBride Road has a section of roadway, near Old Greenville Road, where the grade exceeds seven (7) percent.

**Recommendation:** Given the factors discussed above, Staff recommends that the **BOC not designate McBride Road** as an authorized street for motorized cart usage.

# Fayette County Sheriff's Office

## WAYNE HANNAH
## SHERIFF

Randall Johnson Law
Enforcement Center
155 Johnson Avenue
Fayetteville, Georgia 30214
(770) 461-6353
EMERGENCY: 9-1-1

April 28, 2009

To: Mr. Phil Mallon, Director
Fayette County Public Works Department

From: Captain Brian Eubanks
Field Operations Division
Traffic Enforcement Section

Re: Motorized Cart Recommendation for McBride Road

The Fayette County Sheriff's Office has received a request from the Fayette County Planning and Zoning Department for an assessment of McBride Road as an addition to the Fayette County Motorized Cart Ordinance. In accordance with the Sheriff's Office evaluation criterion for such requests, ***McBride Road is not recommended for inclusion*** in Fayette County ordinance 10-42 (Motorized Carts) as an authorized road for such uses.

McBride Road is classified as a "collector" in the Fayette County transportation plan. The posted speed limit is 35 miles per hour. McBride Road is included as a street designated for speed detection device use in Fayette County Ordinance 407-113 as approved by the Fayette County Board of Commissioners on June 14, 2007.

The Field Operations Division, Traffic Enforcement Section conducted a speed study using Nu-Metric Hi-Star Traffic Counting Sensors beginning on April 16, 2209, at 2:00 p.m. and ending on April 17, 2009 at 2:00 p.m.. The study revealed that the average 85$^{th}$ percentile for McBride Road during this period was 54.16 miles per hour which is 19.16 miles per hour over the posted speed limit.

McBride Road does not have a minimum of 299 feet of driver visibility over its entire length. Visibility is an issue for this road. McBride Road also has a section of roadway, near Old Greenville Road where the grade exceeds 7%.

If you have any questions, please do not hesitate to let me know.

cc: Sheriff Hannah
Major Woodie

enclosures

# Nu-Metrics Traffic Analyzer Study
# Computer Generated Summary Report
# City: Fayetteville
# Street: McBride Rd

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A study of vehicle traffic was conducted with HI-STAR unit number 4367. The study was done in the E/B lane on McBride Rd in Fayetteville, Ga in Fayette county. The study began on 04/16/2009 at 02:00 PM and concluded on 04/17/2009 at 02:00 PM, lasting a total of 24 hours. Data was recorded in 15 minute time periods. The total recorded volume of traffic showed 257 vehicles passed through the location with a peak volume of 12 on 04/16/2009 at 03:30 PM and a minimum volume of 0 on 04/16/2009 at 08:30 PM. The AADT Count for this study was 257.

## SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin.

**Chart 1**

| 0 to 9 | 10 to 14 | 15 to 19 | 20 to 24 | 25 to 29 | 30 to 34 | 35 to 39 | 40 to 44 | 45 to 49 | 50 to 54 | 55 to 59 | 60 to 64 | 65 to 69 | 70 to 74 | 75 > |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 0 | 3 | 5 | 18 | 47 | 79 | 59 | 24 | 13 | 5 | 2 | 1 | 0 |

At least half of the vehicles were traveling in the 40 - 44 mph range or a lower speed. The average speed for all classified vehicles was 44 mph with 89.4 percent exceeding the posted speed of 35 mph. The HI-STAR found 8.17 percent of the total vehicles were traveling in excess of 55 mph. The mode speed for this traffic study was 40 mph and the 85th percentile was 51.34 mph.

## CLASSIFICATION

Chart 2 lists the values of the eight classification bins and the total traffic volume accumulated for each bin.

**Chart 2**

| 0 to 20 | 21 to 27 | 28 to 39 | 40 to 49 | 50 to 59 | 60 to 69 | 70 to 79 | 80 > |
|---|---|---|---|---|---|---|---|
| 212 | 26 | 10 | 4 | 5 | 0 | 0 | 0 |

Most of the vehicles classified during the study were Passenger Cars. The number of Passenger Cars in the study was 238 which represents 92.60 percent of the total classified vehicles. The number of Small Trucks in the study was 10 which represents 3.90 percent of the total classified vehicles. The number of Trucks/Buses in the study was 4 which represents 1.60 percent of the total classified vehicles. The number of Tractor Trailers in the study was 5 which represents 1.90 percent of the total classified vehicles.

## HEADWAY

During the peak time period, on 04/16/2009 at 03:30 PM the average headway between the vehicles was 69.23 seconds. The slowest traffic period was on 04/16/2009 at 08:30 PM. During this slowest period, the average headway was 900.0 seconds.

## WEATHER

The roadway surface temperature over the period of the study varied between 56 and 111 degrees Fahrenheit. The HI-STAR determined that the roadway surface was Dry 100.00 percent of the time.

# Nu-Metrics Traffic Analyzer Study
# Computer Generated Summary Report
# City: Fayetteville
# Street: McBride Rd

A study of vehicle traffic was conducted with HI-STAR unit number 4380. The study was done in the W/B lane on McBride Rd in Fayetteville, Ga in Fayette county. The study began on 04/16/2009 at 02:00 PM and concluded on 04/17/2009 at 02:00 PM, lasting a total of 24 hours. Data was recorded in 15 minute time periods. The total recorded volume of traffic showed 215 vehicles passed through the location with a peak volume of 14 on 04/17/2009 at 07:45 AM and a minimum volume of 0 on 04/16/2009 at 02:30 PM. The AADT Count for this study was 215.

## SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin.

**Chart 1**

| 0 to 9 | 10 to 14 | 15 to 19 | 20 to 24 | 25 to 29 | 30 to 34 | 35 to 39 | 40 to 44 | 45 to 49 | 50 to 54 | 55 to 59 | 60 to 64 | 65 to 69 | 70 to 74 | 75 > |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 1 | 4 | 5 | 20 | 25 | 52 | 52 | 31 | 14 | 3 | 5 | 0 | 2 |

At least half of the vehicles were traveling in the 40 - 44 mph range or a lower speed. The average speed for all classified vehicles was 45 mph with 85.5 percent exceeding the posted speed of 35 mph. The HI-STAR found 11.1 percent of the total vehicles were traveling in excess of 55 mph. The mode speed for this traffic study was 40 mph and the 85th percentile was 53.67 mph.

## CLASSIFICATION

Chart 2 lists the values of the eight classification bins and the total traffic volume accumulated for each bin.

**Chart 2**

| 0 to 20 | 21 to 27 | 28 to 39 | 40 to 49 | 50 to 59 | 60 to 69 | 70 to 79 | 80 > |
|---|---|---|---|---|---|---|---|
| 188 | 19 | 4 | 3 | 0 | 0 | 1 | 0 |

Most of the vehicles classified during the study were Passenger Cars. The number of Passenger Cars in the study was 207 which represents 96.30 percent of the total classified vehicles. The number of Small Trucks in the study was 4 which represents 1.90 percent of the total classified vehicles. The number of Trucks/Buses in the study was 3 which represents 1.40 percent of the total classified vehicles. The number of Tractor Trailers in the study was 1 which represents 0.50 percent of the total classified vehicles.

## HEADWAY

During the peak time period, on 04/17/2009 at 07:45 AM the average headway between the vehicles was 60.0 seconds. The slowest traffic period was on 04/16/2009 at 02:30 PM. During this slowest period, the average headway was 900.0 seconds.

## WEATHER

The roadway surface temperature over the period of the study varied between 56 and 113 degrees Fahrenheit. The HI-STAR determined that the roadway surface was Dry 100.00 percent of the time.

# Nu-Metrics Traffic Analyzer Study
# Computer Generated Summary Report
# City: Fayetteville
# Street: McBride Rd

A study of vehicle traffic was conducted with HI-STAR unit number 8646. The study was done in the W/B lane on McBride Rd in Fayetteville, Ga in Fayette county. The study began on 04/16/2009 at 02:00 PM and concluded on 04/17/2009 at 02:00 PM, lasting a total of 24 hours. Data was recorded in 15 minute time periods. The total recorded volume of traffic showed 192 vehicles passed through the location with a peak volume of 12 on 04/17/2009 at 07:45 AM and a minimum volume of 0 on 04/16/2009 at 05:45 PM. The AADT Count for this study was 192.

## SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin.

**Chart 1**

| 0 to 9 | 10 to 14 | 15 to 19 | 20 to 24 | 25 to 29 | 30 to 34 | 35 to 39 | 40 to 44 | 45 to 49 | 50 to 54 | 55 to 59 | 60 to 64 | 65 to 69 | 70 to 74 | 75 > |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 3 | 8 | 23 | 43 | 44 | 42 | 14 | 8 | 3 | 4 | 0 |

At least half of the vehicles were traveling in the 45 - 49 mph range or a lower speed. The average speed for all classified vehicles was 48 mph with 94.2 percent exceeding the posted speed of 35 mph. The HI-STAR found 15.1 percent of the total vehicles were traveling in excess of 55 mph. The mode speed for this traffic study was 45 mph and the 85th percentile was 55.07 mph.

## CLASSIFICATION

Chart 2 lists the values of the eight classification bins and the total traffic volume accumulated for each bin.

**Chart 2**

| 0 to 20 | 21 to 27 | 28 to 39 | 40 to 49 | 50 to 59 | 60 to 69 | 70 to 79 | 80 > |
|---|---|---|---|---|---|---|---|
| 163 | 7 | 8 | 11 | 1 | 2 | 0 | 0 |

Most of the vehicles classified during the study were Passenger Cars. The number of Passenger Cars in the study was 170 which represents 88.50 percent of the total classified vehicles. The number of Small Trucks in the study was 8 which represents 4.20 percent of the total classified vehicles. The number of Trucks/Buses in the study was 11 which represents 5.70 percent of the total classified vehicles. The number of Tractor Trailers in the study was 3 which represents 1.60 percent of the total classified vehicles.

## HEADWAY

During the peak time period, on 04/17/2009 at 07:45 AM the average headway between the vehicles was 69.23 seconds. The slowest traffic period was on 04/16/2009 at 05:45 PM. During this slowest period, the average headway was 900.0 seconds.

## WEATHER

The roadway surface temperature over the period of the study varied between 54 and 113 degrees Fahrenheit. The HI-STAR determined that the roadway surface was Dry 100.00 percent of the time.

# Nu-Metrics Traffic Analyzer Study
# Computer Generated Summary Report
# City: Fayetteville
# Street: McBride Rd

A study of vehicle traffic was conducted with HI-STAR unit number 8648. The study was done in the E/B lane on McBride Rd in Fayetteville, Ga in Fayette county. The study began on 04/16/2009 at 02:00 PM and concluded on 04/17/2009 at 02:00 PM, lasting a total of 24 hours. Data was recorded in 15 minute time periods. The total recorded volume of traffic showed 263 vehicles passed through the location with a peak volume of 22 on 04/16/2009 at 03:30 PM and a minimum volume of 0 on 04/16/2009 at 02:00 PM. The AADT Count for this study was 263.

## SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin.

**Chart 1**

| 0 to 9 | 10 to 14 | 15 to 19 | 20 to 24 | 25 to 29 | 30 to 34 | 35 to 39 | 40 to 44 | 45 to 49 | 50 to 54 | 55 to 59 | 60 to 64 | 65 to 69 | 70 to 74 | 75 > |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 1 | 0 | 4 | 6 | 9 | 39 | 84 | 53 | 39 | 18 | 7 | 3 | 0 |

At least half of the vehicles were traveling in the 45 - 49 mph range or a lower speed. The average speed for all classified vehicles was 50 mph with 95.8 percent exceeding the posted speed of 35 mph. The HI-STAR found 25.4 percent of the total vehicles were traveling in excess of 55 mph. The mode speed for this traffic study was 45 mph and the 85th percentile was 58.53 mph.

## CLASSIFICATION

Chart 2 lists the values of the eight classification bins and the total traffic volume accumulated for each bin.

**Chart 2**

| 0 to 20 | 21 to 27 | 28 to 39 | 40 to 49 | 50 to 59 | 60 to 69 | 70 to 79 | 80 > |
|---|---|---|---|---|---|---|---|
| 224 | 8 | 12 | 10 | 6 | 2 | 1 | 0 |

Most of the vehicles classified during the study were Passenger Cars. The number of Passenger Cars in the study was 232 which represents 88.20 percent of the total classified vehicles. The number of Small Trucks in the study was 12 which represents 4.60 percent of the total classified vehicles. The number of Trucks/Buses in the study was 10 which represents 3.80 percent of the total classified vehicles. The number of Tractor Trailers in the study was 9 which represents 3.40 percent of the total classified vehicles.

## HEADWAY

During the peak time period, on 04/16/2009 at 03:30 PM the average headway between the vehicles was 39.13 seconds. The slowest traffic period was on 04/16/2009 at 02:00 PM. During this slowest period, the average headway was 900.0 seconds.

## WEATHER

The roadway surface temperature over the period of the study varied between 54 and 113 degrees Fahrenheit. The HI-STAR determined that the roadway surface was Dry 100.00 percent of the time.

# Nu-Metrics Traffic Analyzer Study
# Computer Generated Summary Report
# City: Fayetteville
# Street: McBride Rd

A study of vehicle traffic was conducted with HI-STAR unit number 8052. The study was done in the S/B lane on McBride Rd in Fayetteville, Ga in Fayette county. The study began on 04/16/2009 at 02:00 PM and concluded on 04/17/2009 at 02:00 PM, lasting a total of 24 hours. Data was recorded in 15 minute time periods. The total recorded volume of traffic showed 177 vehicles passed through the location with a peak volume of 13 on 04/17/2009 at 07:45 AM and a minimum volume of 0 on 04/16/2009 at 05:45 PM. The AADT Count for this study was 177.

## SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin.

**Chart 1**

| 0 to 9 | 10 to 14 | 15 to 19 | 20 to 24 | 25 to 29 | 30 to 34 | 35 to 39 | 40 to 44 | 45 to 49 | 50 to 54 | 55 to 59 | 60 to 64 | 65 to 69 | 70 to 74 | 75 > |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 1 | 0 | 5 | 28 | 39 | 45 | 37 | 14 | 6 | 2 | 0 | 0 | 0 |

At least half of the vehicles were traveling in the 40 - 44 mph range or a lower speed. The average speed for all classified vehicles was 42 mph with 80.7 percent exceeding the posted speed of 35 mph. The HI-STAR found 4.52 percent of the total vehicles were traveling in excess of 55 mph. The mode speed for this traffic study was 40 mph and the 85th percentile was 49.39 mph.

## CLASSIFICATION

Chart 2 lists the values of the eight classification bins and the total traffic volume accumulated for each bin.

**Chart 2**

| 0 to 20 | 21 to 27 | 28 to 39 | 40 to 49 | 50 to 59 | 60 to 69 | 70 to 79 | 80 > |
|---|---|---|---|---|---|---|---|
| 148 | 18 | 8 | 3 | 0 | 0 | 0 | 0 |

Most of the vehicles classified during the study were Passenger Cars. The number of Passenger Cars in the study was 166 which represents 93.80 percent of the total classified vehicles. The number of Small Trucks in the study was 8 which represents 4.50 percent of the total classified vehicles. The number of Trucks/Buses in the study was 3 which represents 1.70 percent of the total classified vehicles. The number of Tractor Trailers in the study was 0 which represents 0.00 percent of the total classified vehicles.

## HEADWAY

During the peak time period, on 04/17/2009 at 07:45 AM the average headway between the vehicles was 64.29 seconds. The slowest traffic period was on 04/16/2009 at 05:45 PM. During this slowest period, the average headway was 900.0 seconds.

## WEATHER

The roadway surface temperature over the period of the study varied between 54 and 113 degrees Fahrenheit. The HI-STAR determined that the roadway surface was Dry 100.00 percent of the time.

# Nu-Metrics Traffic Analyzer Study
# Computer Generated Summary Report
# City: Fayetteville
# Street: McBride Rd

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A study of vehicle traffic was conducted with HI-STAR unit number 2459. The study was done in the N/B lane on McBride Rd in Fayetteville, Ga in Fayette county. The study began on 04/16/2009 at 02:00 PM and concluded on 04/17/2009 at 02:00 PM, lasting a total of 24 hours. Data was recorded in 15 minute time periods. The total recorded volume of traffic showed 241 vehicles passed through the location with a peak volume of 18 on 04/16/2009 at 03:30 PM and a minimum volume of 0 on 04/16/2009 at 09:45 PM. The AADT Count for this study was 241.

## SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin.

**Chart 1**

| 0 to 9 | 10 to 14 | 15 to 19 | 20 to 24 | 25 to 29 | 30 to 34 | 35 to 39 | 40 to 44 | 45 to 49 | 50 to 54 | 55 to 59 | 60 to 64 | 65 to 69 | 70 to 74 | 75 > |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 8 | 2 | 1 | 13 | 12 | 28 | 28 | 62 | 40 | 25 | 18 | 2 | 1 | 1 |

At least half of the vehicles were traveling in the 45 - 49 mph range or a lower speed. The average speed for all classified vehicles was 46 mph with 85.0 percent exceeding the posted speed of 35 mph. The HI-STAR found 19.5 percent of the total vehicles were traveling in excess of 55 mph. The mode speed for this traffic study was 45 mph and the 85th percentile was 57.17 mph.

## CLASSIFICATION

Chart 2 lists the values of the eight classification bins and the total traffic volume accumulated for each bin.

**Chart 2**

| 0 to 20 | 21 to 27 | 28 to 39 | 40 to 49 | 50 to 59 | 60 to 69 | 70 to 79 | 80 > |
|---|---|---|---|---|---|---|---|
| 196 | 29 | 9 | 4 | 2 | 1 | 0 | 0 |

Most of the vehicles classified during the study were Passenger Cars. The number of Passenger Cars in the study was 225 which represents 93.40 percent of the total classified vehicles. The number of Small Trucks in the study was 9 which represents 3.70 percent of the total classified vehicles. The number of Trucks/Buses in the study was 4 which represents 1.70 percent of the total classified vehicles. The number of Tractor Trailers in the study was 3 which represents 1.20 percent of the total classified vehicles.

## HEADWAY

During the peak time period, on 04/16/2009 at 03:30 PM the average headway between the vehicles was 47.37 seconds. The slowest traffic period was on 04/16/2009 at 09:45 PM. During this slowest period, the average headway was 900.0 seconds.

## WEATHER

The roadway surface temperature over the period of the study varied between 56 and 115 degrees Fahrenheit. The HI-STAR determined that the roadway surface was Dry 100.00 percent of the time.