ORDINANCE 2010-83

TO BE ENTITLED: "AN ORDINANCE TO ESTABLISH THREE-WAY STOP SIGN CONTROLS AT THE INTERSECTION OF McEWEN DRIVE AND WILSON PIKE."

WHEREAS, an engineering study has been conducted that indicates a basis for the three-way stop control imposed herein, and

WHEREAS, the existing intersection named above provides for stop control on McEwen Drive, and

WHEREAS, the Tennessee Department of Transportation has no objection if the City elects to install all-way stop control at this intersection, and

WHEREAS, the Tennessee Department of Transportation has no objection if the City elects to install a traffic signal at this intersection, as is planned as part of the Breezeway Elementary School roadway improvements.

NOW THEREFORE:

SECTION I: BE IT ORDAINED BY THE BOARD OF MAYOR AND ALDERMEN OF THE CITY OF FRANKLIN, TENNESSEE, that motor vehicles traveling in all directions for the intersection of McEwen Drive and Wilson Pike shall be required to come to a complete stop before entering the intersection, and remain standing until such motor vehicles can proceed through the intersection in safety. Section 15-505 of the Franklin Municipal Code shall apply to the movements of all motor vehicles traveling in any direction and approaching said intersections.

SECTION II: BE IT FURTHER ORDAINED BY THE BOARD OF MAYOR AND ALDERMEN OF THE CITY OF FRANKLIN, TENNESSEE, that the Director of the Streets Department shall be, and is hereby, authorized to install the proper signs to notify the general public of this revision.

SECTION III: BE IT FURTHER ORDAINED BY THE BOARD OF MAYOR AND ALDERMEN OF THE CITY OF FRANKLIN, TENNESSEE, that all violations of the Ordinance shall be enforced in accordance with Title 15 of the Franklin Municipal Code or in accordance with any pertinent provisions of the Tennessee Code Annotated.

SECTION III: BE IT FINALLY ORDAINED by the Board of Mayor and Aldermen of the City of Franklin, Tennessee, that this Ordinance shall take effect from and after its passage on second reading, the health, safety, and welfare of the citizens requiring it.

ATTEST **CITY OF FRANKLIN, TENNESSEE**

By: _____
ERIC S. STUCKEY
City Administrator

By: _____
JOHN C. SCHROER
Mayor

PASSED FIRST READING: _____

PASSED SECOND READING: _____

HISTORIC
FRANKLIN
TENNESSEE

MEMORANDUM

TO: **Eric Gardner**
Director of Engineering

FROM: **Carl Baughman**
Traffic/Transportation Engineer

DATE: **June 3, 2010**

SUBJECT: **McEwen Drive & Wilson Pike (SR 252) Intersection Studies**

The subject intersection has recently (May 11, 2010) been the object of a request for investigation due to safety concerns. The requester is an Emergency/Trauma physician who says his wife has witnessed four crashes here as she transports their child to Kenrose Elementary School. He suggests that traffic has nearly doubled since the opening of the Nissan headquarters. The severe challenge is to enter Wilson Pike without excessive delay and substandard gaps in Wilson Pike traffic.

The previous study of this intersection was for The Morgan Property "Azalea Park" and "Breezeway" developments with the count conducted in May 2004, long before the eastside improvements of the McEwen interchange and the Cool Springs Boulevard extension to Oxford Glen Drive. The traffic study for these developments made peak hour volume forecasts for 2009 assuming the expected completion of these developments and these network improvements. Now in May 2010 I have collected machine counts and the comparison of the peak hour data is as follows:

McEwen Drive & Wilson Pike Traffic Comparisons				
Time Period (year '09 / year '10)	Direction			
	Wilson SB	Wilson NB	McEwen EB	All Directions
AM Peak Hour	196 / 610	628 / 644	75 / 176	899 / 1430
PM Peak Hour	439 / 572	200 / 185	316 / 701	955 / 1458
Summation	635 / 1182	828 / 829	391 / 877	1854 / 2888

The '09 volume forecasts are based on completion of these developments, but in fact only 17 of the proposed 461 dwelling units are currently occupied. In general, the current traffic as an updated background traffic condition is roughly 55% above the forecasted total traffic. Clearly general growth plus network expansion since 2004 has led to the current traffic condition which is Level of Service F in both the AM and PM peak hours. Regarding crash experience, data from both Franklin Police and the Tennessee Highway Patrol shows six crashes since January 2007, with the one incident in 2010 being an injury crash. Therefore the crash rate and severity are moderately low.

The Morgan Property traffic impact study had the following recommendation: "The City of Franklin should monitor the need for a northbound left turn lane at this intersection if the McEwen Drive limited access thoroughfare project is not initiated or programmed. This lane is needed based upon background conditions according to our analysis." In fact, the critical intersection movement is the eastbound

McEwen stopped approach, and the Wilson Pike movements operate at an acceptable Level of Service even with turning traffic. Yet this intersection fails on account of the extreme delay and stacking on the stop sign approach. In looking for remedial measures, I first investigated for multi-way stop control warrants, with the finding that in also checking the signal warrants, both types of control are warranted. In this situation, multi-way stop control is sometimes used as an interim measure until signal control can be installed. Therefore I suggest that we request TDOT for approval to install multi-way stop control that should include advance warning signs on Wilson Pike with orange flags, and flashing solar red beacons on top of the Wilson Pike stop signs. We should then seek to program the signal project through the CIP Committee who would identify the available budget year for a traffic signal installation at this intersection. If you concur with this recommendation I will prepare a letter with the required documentation for TDOT review.

C: David Parker, City Engineer/CIP Executive
Joe York, Street Department Director

November 23, 2010

Carl Baughman
City of Franklin Traffic Engineer
109 Third Avenue South, Suite 142
Franklin, TN
37064

Re: Traffic Study
Intersection of SR252 (Wilson Pike) and McEwen Drive
Franklin, Williamson County

Dear Mr. Baughman:

This letter is in response to the traffic study submitted by your office at the intersection of SR252 (Wilson Pike) and McEwen Drive in Franklin. This office has reviewed the traffic study as requested.

Based on your evaluation of the traffic study and your recommendations, our office does not object if the city elects to install a traffic signal at the intersection. However, in conjunction with a traffic signal, we recommend that a left turn lane be installed for SR252 Northbound traffic making a left turn onto McEwen Drive. To proceed with the installation of turn lanes on state right of way, please contact Randy Hazelwood at 615-350-4400 to begin the permit application process.

As an interim measure, our office does not object if the city elects to install an all way stop at the intersection.

If you have any questions or if I can further assist you please let me know.

Ali Farhangi, PE
Transportation Management Center Manager
Region 3 Traffic Office
6603 Centennial Blvd.
Nashville, TN. 37243-0360

CC: Phil Trammel, PE
Winston Gaffron, PE

HISTORIC
FRANKLIN
TENNESSEE

MEMORANDUM

December 1, 2010

TO: Board of Mayor and Aldermen

FROM: Eric S. Stuckey, City Administrator
Eric J. Gardner, P.E., Director of Engineering
Carl Baughman, Traffic/Transportation Engineer
Joe York, Street Department Director

SUBJECT: Discussion of Appropriate Traffic Control at McEwen Drive & Wilson Pike (TN252)

Purpose

The purpose of this memorandum is to provide the Board of Mayor and Aldermen (BOMA) with information to consider upgrading the traffic control at this three-legged intersection where McEwen Drive ends at Wilson Pike.

Background

Currently, McEwen Drive is the only STOP-controlled approach to the intersection. The speed limit on Wilson Pike is 40 mph and on McEwen Drive is 30 mph. A citizen concern about safety received in May prompted a traffic investigation which is summarized in the attached memo dated June 3, 2010. Based on that data the City supplied TDOT with materials indicating that all-way stop control is warranted, as well as traffic signalization. When both types of traffic controls are concurrently warranted, sometimes the all-way stop is installed as an interim condition until signalization can be installed. TDOT has responded that they have no objection to the all-way stop installation. They also have no objection to a signal installation, but recommend that a northbound left turn lane be installed with the signal. The left turn lane and signalization recommendation is in line with that of the Breezeway School Traffic Impact Study. Per the Interlocal Agreement with the Williamson County School Board (COF Contract 2010-0125) the County will fund these improvements and then release the signal to the City for ownership.

Options

Option 1 – Approve an Ordinance to install an all-way stop at the three legs of this intersection. As the school seeks to open in August 2011 the all-way stop would be in effect from about January through the activation of the signal.

Option 2 – No action, the intersection has a moderate safety record based on the number of crashes here, although there was one injury crash earlier in 2010.

Financial Impact

The Street Department would bear the cost to manufacture, install and maintain the signs. We recommend that flashing red beacons be placed above the new STOP signs on Wilson Pike for up to two months from installation. Special STOP AHEAD signing with red flags should also be placed on Wilson Pike in advance of the intersection. The peak hour critical vehicle delay (McEwen Drive) will

decrease from approximately 375 seconds to approximately 150 seconds; average vehicle delay (overall intersection) will change from about 90 seconds to 120 seconds.

Recommendation

Staff recommends Option 1. It would add safety to the right-of-way situation here and prepare the motoring public for the eventual signalization. A side benefit would be safety during the signal construction.