

Ellinger

Myers

James

Blues

DeCamp

Beard

Crosbie

McChord

Blevins

Lane

SERVICES COMMITTEE

September 11, 2007

11:00 P.M.

A G E N D A

Brynell/Northside Multi-Way Stop - Stinnett (1-3)

Par 3 Golf Course - Stevens

Materials will be distributed at Committee Meeting

Items in Committee (4-6)

"Services Committee, to which should be referred matters relating to public safety, public works, urban county courts, and constitutional officers."

Council Rules & Procedures, Section 2.102(3)



Mayor Jim Newberry

LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT

Division of Traffic Engineering

MEMORANDUM

TO: Kevin O. Stinnett
Councilmember, 6th District

FROM: Joel Weber, P.E., Acting Traffic Engineer Manager
Division of Traffic Engineering

DATE: March 12, 2007

SUBJECT: Brynell Drive @ Northside Drive, multiway stop request

Based on a request from your office, a warrant study has been completed at the intersection of Brynell Drive and Northside Drive to determine the feasibility of installing a multiway stop this intersection. *Manual of Uniform Traffic Control Devices (MUTCD) – 2003 Edition* criteria were used in the analysis of the intersection to determine if a multi-way stop was warranted at this location. The following is the warrant criteria used in the analysis:

Section 2B.07 Multiway Stop Applications

Multiway Stop control can be useful as a safety measure at intersections if certain traffic conditions exist. Safety concerns associated with multiway stops include pedestrians, bicyclists, and all road users expecting other road users to stop. Multiway stop control is used where the volume of traffic on the intersecting roads is approximately equal.

The decision to install multiway stop control should be based on an engineering study.

The following criteria should be considered in the engineering study for a multiway STOP sign installation:

- A. Where traffic control signals are justified, the multiway stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.
- B. A crash problem, as indicated by 5 or more crashes in a 12-month period that are susceptible to correction by a multiway stop installation. Such crashes include right- and left-turn collisions as well as right-angle collisions.
- C. Minimum volumes:
 - 1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day, and
 - 2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour, but
 - 3. If the 85th-percentile approach speed of the major-street traffic exceeds 65 km/h (40 mph), the minimum vehicular volume warrants are 70 percent of the above results.
- D. Where no single criterion is satisfied, but where Criteria B, C.1, and C.2 are all satisfied to 80 percent of the minimum values. Criterion C.3 is excluded from this condition.

Source - *Manual of Uniform Traffic Control Devices – 2003 Edition*

Multiway stop signs comprise a form of intersectional control that may enhance or diminish traffic safety. The *Manual on Uniform Traffic Control Devices (MUTCD)* defines warrant criteria to determine whether multiway stop signs would have a greater potential for a positive or a negative impact on traffic conditions. The *MUTCD's* warrants for multiway stop controls focus on two areas of concern: (1) traffic volumes and congestion and (2) a collision history that would be susceptible to correction with the installment of multiway stop signs.

Speed data were collected on Brynell Drive near Northside Drive. Data revealed that the 85th percentile speeds were 37.3 mph on eastbound Brynell Drive and 34.5 mph on westbound Brynell Drive. Based on this speed data, there would not be a reduction in the volume requirements as allowed in the *MUTCD* warrant criteria. The 8-hour traffic volume which was collected on the major approaches of Brynell Drive revealed 123 vehicles per hour or 41% of the volume required. The 8-hour traffic volume which was collected on the minor approach of Northside Drive revealed a total of 57 vehicles per hour or 28% of the volume required. **The major and minor street approach volumes fall well short of the warrant criteria. Therefore, the volume warrants are not met at this time.**

A review of the collision history at this intersection revealed one collision in the three years prior to this analysis. Based on the warrant criteria, that is, a collision history of five (5) or more collisions in a 12-month period that are susceptible to correction by installation of a multiway stop, **the collision warrant is not met at the intersection of Brynell Drive and Northside Drive.**

A review of the intersection revealed that vehicles parked along both sides of Brynell blocked the sight distance of drivers on Northside Drive. Most of the parking problem appeared to be caused by parents picking up children from Deep Springs Elementary. Some yellow curb can be painted near the intersection to eliminate the sight distance problem and improve the safety of the intersection.

This intersection is only 350 feet from the 4-way stop at Brynell Drive and St. Anthony Drive and only 800 feet from the 4-way stop at Brynell Drive and Hi Crest Drive. Adding a third multiway stop in that short distance could lead to driver frustration and increase the number of drivers disregarding the stop control at all three intersections.

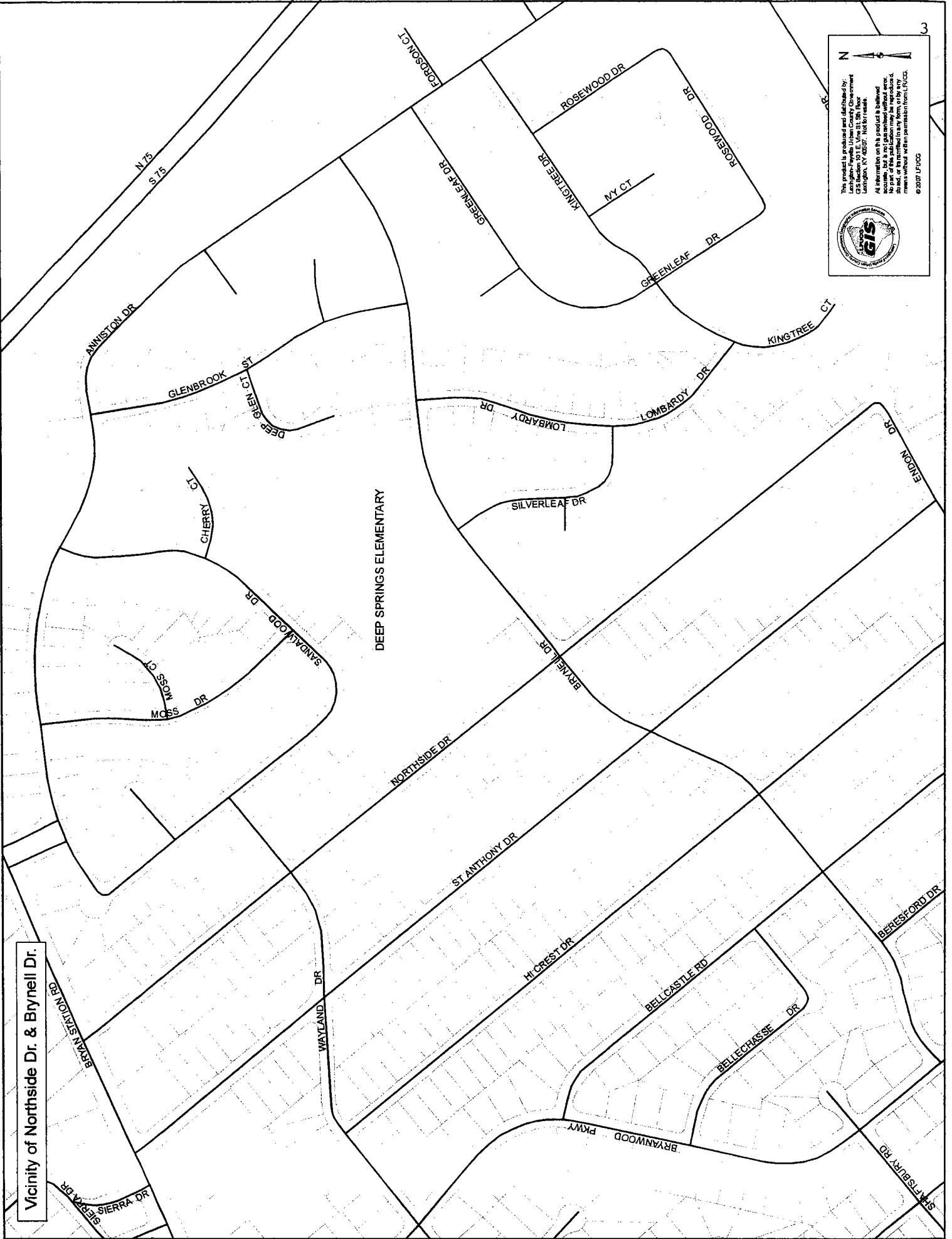
Conclusion

Neither the volume nor collision warrants for multiway stop control are met at this location at this time. A sight distance problem can be eliminated by painting some yellow curb. This intersection is close to two existing multiway stops on Brynell Drive. **The Division of Traffic Engineering recommends retention of the existing intersectional controls at the intersection of Brynell Drive and Northside Drive.**

If you need more information concerning this matter, please feel free to contact me at 258-3490.

xc: Commissioner Don C. Kelly, P.E.
Ron Herrington, P.E., P.L.S.
Jim Woods, P.E., P.L.S.

Vicinity of Northside Dr. & Brynell Dr.



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Services Committee Items

Revised 08.07.2007

<u>Date</u>	<u>Councilmember</u>	<u>Issue</u>
8-21-07	Stinnett	Multi-Way Stop Brynell Drive/Northside Drive
8-14-07	Stevens	Par 3 Golf Course
7-10-07	Stevens	School Event Noise
6-5-07	Beard	Inattentive Drivers
5-22-07	Moloney	Graffiti
5-15-07	DeCamp	News Rack Ordinance
3-27-07	McChord	Willow Oak Subdivision Traffic Issues
3-13-07	Moloney	Dispatching Inter-City Buses from Terminals
3-6-07	Beard	Multi-Way Stop Malibu Dr/Bellefonte Rd
2-27-07	Stinnett	Door to Door Peddlers
1-16-07	Myers	Multi-Way Stop Armstrong Mill/Crosby
Other Items (cont)		

<u>Date</u>	<u>Councilmember</u>	<u>Issue</u>
1-9-07	Stinnett	Multi-Way Stop Pleasure Ridge/Plaudit
12-12-06	Ellinger	Sunday Liquor Sales
11-14-06	McChord	Traffic Light at US 27/Waveland Museum Lane
11-14-06	Moloney	Imposing Fee for Signage in ROW
10-17-06	Moloney	Restrict Parking on Cambridge Drive from Oxford Circle to Village Drive
9-12-06	Wigginton	Tie Downs on Mobile Homes in Trailer Parks
9-12-06	Wigginton	Neighborhood Assistance Office
7-11-06	Moloney	Towing on Private Property
6-13-06	Wigginton	Review Zoning Ordinance re Issuance of Liquor Licenses
6-13-06	Stinnett	Car Radio Noise
5-23-06	Wigginton	Implementing a Hands Free Cell Phone Ordinance
3-21-06	Moloney	Red Light Issues
2-14-06	Myers	US Ombudsman Association Standards for Citizen's Advocate Office
2-7-06	Gorton	Private Fire Hydrants
Other Items (cont)		

<u>Date</u>	<u>Councilmember</u>	<u>Issue</u>
12-13-05	Gorton	Traffic Calming on Harvard Drive
12-13-05	Gorton	No Parking Signage on Belvoir between Malabu and crest of the hill
6-21-05	Moloney	Private Swimming Pool Safety
3-12-05	Gorton	Curb Replacement Program
2-22-05	Moloney	Mini Motorcycles
3-18-04	Wigginton	Honoring Employees Deceased or Disabled in the Line of Duty