



THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

MCPB
Item #1
03/07/02

DATE: March 1, 2002
TO: Montgomery County Planning Board
VIA: Michael Ma, Zoning Supervisor *MM*
FROM: Greg Russ, Zoning Coordinator *GR*
REVIEW TYPE: Transmittal to County Council for introduction as a Zoning Text Amendment
PURPOSE: To eliminate the special exception neighborhood and county need requirement for all affected uses (Sections 59-G-1.24 and 1.25 and 59-G-2.35)

TEXT AMENDMENT: Not applicable until introduced
REVIEW BASIS: Advisory to the County Council sitting as the District Council, Chapter 59, the Zoning Ordinance
INTRODUCED BY: N/A
INTRODUCED DATE: N/A

PLANNING BOARD REVIEW: March 7, 2002
PUBLIC HEARING: N/A

STAFF RECOMMENDATION: TRANSMIT to County Council for introduction

PURPOSE OF THE TEXT AMENDMENT

To eliminate the special exception neighborhood and county need requirement for all affected uses (Sections 59-G-1.24 and 1.25 and 59-G-2.35)

BACKGROUND

Staff is in the process of examining the purpose for reviewing neighborhood and County need for certain special exception uses as stated in Sections 59-G-1.24 and 1.25 and in Section 59-G-2.35 (senior housing). It should be noted that the need requirements for medical and dental clinics, senior housing and private educational institutions were proposed to be eliminated as part of the Comprehensive Zoning Ordinance Review for special exceptions located in the one-family residential zones. This project is currently in the final stages of review by the County Council.

ANALYSIS

As seen below, staff is recommending that the Zoning Ordinance requirement for neighborhood and county need for all affected special exception uses be eliminated.

The proposed zoning text amendment is as follows:

Underlining indicates text that is added to existing laws by the original text amendment. [Single boldface brackets] indicate text that is deleted from existing law by the original text amendment.

ARTICLE 59-G. SPECIAL EXCEPTIONS, VARIANCES, AND NONCONFORMING USES

Division 59-G-1. SPECIAL EXCEPTIONS-AUTHORITY AND PROCEDURES.

59-G-1.2. Conditions for granting.

59-G-1.24. [Neighborhood need] Reserved.

[In addition to the findings required in section 59-G-1.21 and division 59-G-2, the following special exceptions may only be granted when the board, the hearing examiner or the district council, as the case may be, finds from a preponderance of the evidence of record that, for the public convenience and service, a need exists for the proposed use for service to the population in the general neighborhood, considering the present availability of such uses to that neighborhood:

- (1) Automobile filling station.
- (2) Automobile and light trailer rental lot, outdoor.
- (3) Automobile, truck and trailer rental lot, outdoor.
- (4) Automobile sales and service center.
- (5) Medical or dental clinic.
- (6) Swimming pool, community.
- (7) Swimming pool, commercial.]

59-G-1.25. [County need] Reserved.

[In addition to the findings required in Section 59-G-1.21 and Division 59-G-2, the following special exceptions may only be granted when the Board, the Hearing Examiner, or the District Council, as the case may be, finds from a preponderance of the evidence of record that, for the public convenience and service, a need exists for the proposed use due to an insufficient number of similar uses presently available to serve existing population concentrations in the County, and that the uses at the location proposed will not result in a multiplicity or saturation of similar uses in the same general neighborhood of the proposed use:

- (1) Drive-in restaurant.
- (2) Educational institution, private.
- (3) Funeral parlors and undertaking establishment.
- (4) Hotel, motel or inn.
- (5) Rifle, pistol and skeet shooting range, outdoor.
- (6) Sanitary fill, incinerator, or private solid waste transfer station.
- (7) Public use heliport/helistop.
- (7) Conference center with lodging.]

59-G-2.35. Housing and related facilities for [elderly or handicapped] senior adults and persons with disabilities.

A special exception may be granted for housing and related facilities for [elderly or handicapped persons] senior adults or persons with disabilities, subject to the following provisions:

- [(2) Taking into account the size of the units, the services to be provided, the income levels to be served, and the location of the site, there is a need for such use because:
 - (A) There is an insufficient amount of such housing and facilities to serve the existing population of the County, and
 - (B) The need for such housing and facilities cannot be met by development in accordance with development standards not requiring a special exception.

In making this finding, the Board must consider demographic data, including projections and analyses provided by the Planning Board and County Government, as well as evidence provided by parties to the case. Such data will be evaluated by the technical staff of the Planning Board.]

Research Staff Review

Since the fall of 1999 the staff has reviewed proof of need studies for several automobile filling stations and one drive-in restaurant. In all of these cases staff saw that proof of need studies provided by applicants did not adequately address issues of community need. Instead they focused on the market demand needed to support a new establishment. They do not take the step of establishing why this is a good measure of the community's need.

The purpose of the special exception process is to guard against the overprovision of facilities that may have a negative community impact. It is not to assure that there is adequate market demand to support the facility.

Current Proof of Need Analyses

The proof of need studies from applicants' consultants attempt to prove need with the use of several measures. These are all variations on one basic theme: Is there adequate demand to support another of the same type of use (gas station, etc.)? They quantify the population, households, income and vehicles in the area and link these measures with sales of the product. They then convert this demand to the number of locations that can be supported at average levels of sales. This number of supported locations is then compared to the number of existing locations to see if, at these average sales levels, the market can support an additional use.

There is a fundamental flaw with this approach. It relies on the false presumption that a use cannot provide more than average sales for its type of product. In proof of need studies average sales are implicitly equated with feasible capacity for sales. More than average demand for a product from existing locations does not mean that this demand cannot be met by existing locations and therefore does not represent a need for another facility. Added demand does not equal unmet need. For example, gas stations have far more capacity to pump gas than the average volume for their class of station. In most cases the community can increase their purchases of gas and still easily buy it from existing stations. Market support for another station is not perceived as need by the community because the community has no difficulty in purchasing its gasoline.

The willingness of the applicant to invest in a new facility indicates that there is probably enough demand to support the facility but this is not an adequate measure of unmet community need.

Staff Responses to Need Analyses

In the past, there has been considerable muddled thinking about proof of need analyses by both the staff and applicants. Staff fell into the trap of arguing about the assumptions and details of the submitted proof of need analyses. Although there were many flaws in the analysts' assumptions and calculations to argue about, this was not a useful approach. It incorrectly assumed that if the details were corrected then the analysis would be valid. Staff was arguing about calculations related to economic viability. Instead we should have presumed from the applicant's willingness to invest in the facility that there is adequate market demand to support the facility.

Reliance on Market Forces

Market competition is very efficient at providing economically sustainable levels of service, quality and price. Analyses of likely commercial success are best left to the applicants since they have the best means to judge them and they bear the greatest risks if they misestimate them. There should be a presumption that if the applicant is undertaking to build a facility, the economic viability of the facility has been proven to the applicant's satisfaction. It is not the government's function to prevent the applicant

from making poor business decisions or to protect other businesses from competition. Therefore, the proof of need requirement, which has been satisfied by focus on these market issues for three decades, does not provide any protection to the community that our competitive economic system does not already provide.

Measuring Community Need

Staff believes that measurement of community need requires a couple of basic things:

- Measures of community need must measure unmet need, need that cannot be met by existing facilities serving the community area.
- The measures should be perceivable to members of the community.

If the Planning Board and the Board of Appeals wish to retain the proof of community need requirement for special exceptions they should receive analysis that helps them evaluate the needs of the community by conforming the above standards. Measures for the following criteria could help determine community need.

- **Community:** What are the boundaries of the community that bears the greatest impact of the proposed facility?
- **Convenience:** How many facilities are available within a convenient distance of this community?
- **Competition** to maintain low prices and good service
- **Choice** among different brands
- **Capacity** available at nearby stations to meet community needs

Possible Changes in Approach

Staff believes that although these criteria provide better indications of community need than do currently accepted proof of need analyses there are still difficult problems to be overcome if they are to be applied. Also, the benefits from implementing new standards of community need analysis seem slight compared to the costs of doing so.

Difficulties of Implementing New Analyses

- There are no established standards for applying the criteria listed above and it is probably impossible to establish one set that fits all situations well.
- Inadequate as they are, the currently accepted market oriented proof of need studies have been used for decades and it is likely to take a large effort to change this established way of doing business.
- To implement the new approach the zoning ordinance would probably need to be changed from its present vague language and require new types of analysis. If the new language is very concrete it will probably prove awkward in some situations. Vague language invites applicants to submit self-serving analysis that doesn't really analyze community need.
- Removing the requirement for needs analysis would maintain the status quo but at less cost and delay. Facilities would only be built when applicants perceived

adequate market demand but they would not have the cost and delay of hiring consultants to conduct proof of need studies. And the public sector would not have to expend its resources reviewing these studies that make a dubious contribution to the public good.

- If the proof of need requirement is retained, with modification, it should be because it will produce results superior to market forces alone.

Advantages of Eliminating the Proof of Need Requirement

- The market already helps provide competition, convenience, choice, and capacity.
- In the long run the market also provides protection for the community from proliferation of facilities.
- Market forces work all the time, not just at the time a new application is reviewed.
- Other issues of community impact from special exception uses such as conformity with the master plan, ingress/egress, visual impact, lighting, noise, and traffic congestion are best addressed by specific site plan and other regulations (special exception general conditions, etc.,).

Land Use Issues

The aforementioned analysis addresses technical reasons for eliminating the needs requirement. Staff also believes that the Zoning Ordinance would continue to protect neighborhoods from adverse impacts of the uses through the adherence to the special exception general conditions provided in Section 59-G-1.21. Additionally, general condition #7 of this section states the following:

(7) Will not, when evaluated in conjunction with existing and approved special exceptions in any neighboring one-family residential area, increase the number, intensity, or scope of special exception uses sufficiently to affect the area adversely or alter the predominantly residential nature of the area. Special exception uses that are consistent with the recommendations of a master or sector plan do not alter the nature of an area.

Condition #7 minimizes the proliferation of special exceptions in a neighborhood, thereby reducing the likelihood of having a number of abandoned or empty special exception use structures in an area (should a senior housing use, for example, cease to exist).

For these reasons, staff believes that the needs analysis requirement should be eliminated from special exceptions.

RECOMMENDATION

The staff recommends that the proposed amendments to eliminate the county and neighborhood needs requirement for those uses as established in Sections 59-G-1.24 and 1.25 and for senior housing uses be transmitted to the County Council for introduction.

Attachment 1 depicts the proposed amendments as proposed by staff.

GR

Attachments

1. Proposed Zoning Text Amendment
2. Memorandum from Fred Peacock to Michael Ma

ATTACHMENT 1

Zoning Text Amendment No: 02-
Concerning: Special Exception County and
Neighborhood Need Requirement
Draft No. & Date: March 1, 2001
Introduced:
Public Hearing:
Adopted:
Effective:
Ordinance No:

**COUNTY COUNCIL FOR MONTGOMERY COUNTY, MARYLAND
SITTING AS THE DISTRICT COUNCIL FOR THAT PORTION OF
THE MARYLAND-WASHINGTON REGIONAL DISTRICT WITHIN
MONTGOMERY COUNTY, MARYLAND**

By:

AN AMENDMENT to the Montgomery County Zoning Ordinance for the purpose of:

- To eliminate the neighborhood and county need requirement for all affected special exception uses (Sections 59-G-1.24 and 1.25 and 59-G-2.35)

and

- making plain language changes throughout.

By amending the following section of the Montgomery County Zoning Ordinance, Chapter 59 of the Montgomery County Code:

DIVISION 59-G-1	“SPECIAL EXCEPTIONS-AUTHORITY AND PROCEDURES”
Section 59-G-1.24	“Neighborhood need”
Section 59-G-1.25	“County need”
DIVISION 59-G-2	“SPECIAL EXCEPTIONS-STANDARDS AND REQUIREMENTS”
Section G-2.35	“Housing and related facilities for elderly or handicapped”

EXPLANATION: *Boldface indicates a heading or a defined term.*
Underlining indicates text that is added to existing laws by the original text amendment.
[Single boldface brackets] indicate text that is deleted from existing law by the original text amendment.

Double underlining indicates text that is added to the text amendment by amendment.

[[Double boldface brackets]] indicate text that is deleted from the text amendment by amendment.

* * * indicates existing law unaffected by the text amendment.

ORDINANCE

The County Council for Montgomery County, Maryland, sitting as the District Council for that portion of the Maryland-Washington Regional District in Montgomery County, Maryland, approves the following ordinance:

1 **Sec. 1. Division 59-G-1 is amended as follows:**

2 **DIVISION 59-G-1. SPECIAL EXCEPTIONS-AUTHORITY AND**
3 **PROCEDURES.**

4 **59-G-1.2. Conditions for granting.**

5 * * *

6 **59-G-1.24. [Neighborhood need] Reserved.**

7
8 [In addition to the findings required in section 59-G-1.21 and division 59-G-2, the
9 following special exceptions may only be granted when the board, the hearing
10 examiner or the district council, as the case may be, finds from a preponderance of
11 the evidence of record that, for the public convenience and service, a need exists
12 for the proposed use for service to the population in the general neighborhood,
13 considering the present availability of such uses to that neighborhood:

- 14
15 (1) Automobile filling station.
16 (2) Automobile and light trailer rental lot, outdoor.
17 (3) Automobile, truck and trailer rental lot, outdoor.
18 (4) Automobile sales and service center.
19 (5) Medical or dental clinic.
20 (6) Swimming pool, community.
21 (7) Swimming pool, commercial.]

22
23 **59-G-1.25. [County need] Reserved.**

24
25 [In addition to the findings required in Section 59-G-1.21 and Division 59-G-2, the
26 following special exceptions may only be granted when the Board, the Hearing
27 Examiner, or the District Council, as the case may be, finds from a preponderance
28 of the evidence of record that, for the public convenience and service, a need exists
29 for the proposed use due to an insufficient number of similar uses presently
30 available to serve existing population concentrations in the County, and that the
31 uses at the location proposed will not result in a multiplicity or saturation of similar
32 uses in the same general neighborhood of the proposed use:

- 33
34 (1) Drive-in restaurant.
35 (2) Educational institution, private.
36 (3) Funeral parlors and undertaking establishment.
37 (4) Hotel, motel or inn.

- 1 (5) Rifle, pistol and skeet shooting range, outdoor.
- 2 (6) Sanitary fill, incinerator, or private solid waste transfer station.
- 3 (7) Public use heliport/helistop.
- 4 (7) Conference center with lodging.]

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6 * * *

7 **Sec. 2. Division 59-G-2 is amended as follows:**

8 **DIVISION 59-G. SPECIAL EXCEPTIONS—STANDARDS AND**
9 **REQUIREMENTS.**

10 * * *

11 **59-G-2.35. Housing and related facilities for [elderly or handicapped] senior**
12 **adults and persons with disabilities.**

13
14 A special exception may be granted for housing and related facilities for [elderly or
15 handicapped persons] senior adults or persons with disabilities, subject to the
16 following provisions:

17
18
19 [(2) Taking into account the size of the units, the services to be
20 provided, the income levels to be served, and the location of the
21 site, there is a need for such use because:

22
23 (A) There is an insufficient amount of such housing and
24 facilities to serve the existing population of the County,
25 and

26 (B) The need for such housing and facilities cannot be met
27 by development in accordance with development
28 standards not requiring a special exception.

29
30 In making this finding, the Board must consider demographic data, including
31 projections and analyses provided by the Planning Board and County Government,
32 as well as evidence provided by parties to the case. Such data will be evaluated by
33 the technical staff of the Planning Board.]

1 **Sec. 3. Effective date.** This ordinance becomes effective 20 days after the
2 date of Council adoption.

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4 This is a correct copy of Council action.

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9 Mary A. Edgar, CMC

10 Clerk of the Council

M-NCPPC




MONTGOMERY COUNTY DEPARTMENT OF PARK & PLANNING

THE MARYLAND-NATIONAL CAPITAL
PARK AND PLANNING COMMISSION8787 Georgia Avenue
Silver Spring, Maryland 20910-3760

Memo

To: Michael Ma, Development Review

From: Fred Peacock, Research & Technology Center 

Date: October 1, 2001

Subject: Research Experience with Special Exception Proof of Need Studies

Conclusion and Recommendation

After extensive examination of this issue the Research staff has concluded that the requirement for proving community need serves little useful purpose and should be dropped from the zoning ordinance. This paper lays out the experience and reasoning that led to this conclusion.

Introduction

Since the fall of 1999 the Research Team has reviewed proof of need studies for several automobile filling stations and one drive-in restaurant. In all of these cases staff saw that proof of need studies provided by applicants did not adequately address issues of community need. Instead they focused on the market demand needed to support a new establishment. They do not take the step of establishing why this is a good measure of the community's need. This paper will show why demand is not a good measure of need.

The purpose of the special exception process is to guard against the overprovision of facilities that may have a negative community impact. It is not to assure that there is adequate market demand to support the facility. In a capitalist economy the market will take care of the balance of supply and demand.

Because of staff's greater experience reviewing gas stations, the examples in this memo mostly relate our experience with gas stations. However, the principles explored here apply to other special exception uses as well.

Current Proof of Need Analyses

The proof of need studies from applicants' consultants attempt to prove need with the use of several measures. These are all variations on one basic theme: Is there adequate

demand to support another gas station? They quantify the population, households, income and vehicles in the area and link these measures with sales of gasoline. They then convert this demand to the number of gas stations that can be supported at average levels of sales. This number of supported stations is then compared to the number of existing stations to see if, at these average sales levels, the market can support an additional station.

There is a **fundamental flaw** with this approach. It relies on the false presumption that a station cannot pump more than average sales for its type of station. In proof of need studies average sales are implicitly equated with feasible capacity for sales. More than average demand for gas from existing stations does not mean that this demand cannot be met by existing stations and therefore does not represent a need for another facility. Added demand does not equal unmet need. Gas stations have far more capacity to pump gas than the average volume for their class of station (see Peak Hour Pumping Capacity in Appendix 2 of this paper). In most cases the community can increase their purchases of gas and still easily buy it from existing stations. Market support for another station is not perceived as need by the community because the community has no difficulty in purchasing its gasoline.

The willingness of the applicant to invest in a new facility indicates that there is probably enough demand to support the facility but this is not an adequate measure of unmet community need.

Staff Response

In the past, there has been considerable muddled thinking about proof of need analyses by both the staff and applicants. Staff fell into the trap of arguing about the assumptions and details of the submitted proof of need analyses. Although there were many **flaws** in the analysts' assumptions and calculations to argue about, this was not a useful approach. It incorrectly assumed that if the details were corrected then the analysis would be valid. Staff was arguing about calculations related to economic viability. Instead we should have presumed from the applicant's willingness to invest in the facility that there is adequate market demand to support the facility. Conversations with the Montgomery County Planning Board have helped staff to clarify this hard-to-pin-down topic.

Reliance on Market Forces

Market competition is very efficient at providing economically sustainable levels of service, quality and price. Analyses of likely commercial success are best left to the applicants since they have the best means to judge them and they bear the greatest risks if they misestimate them. There should be a presumption that if the applicant is undertaking to build a facility, the economic viability of the facility has been proven to the applicant's satisfaction. It is not the government's function to prevent the applicant from making poor business decisions or to protect other businesses from competition. Therefore, the proof of need requirement, which has been satisfied by focus on these market issues for three decades, does not provide any protection to the community that our competitive economic system does not already provide.

Measuring Community Need

Staff believes that measurement of community need requires a couple of basic things:

- Measures of community need must measure unmet need, need that cannot be met by existing facilities serving the community area.
- The measures should be perceivable to members of the community.

If the Planning Board and the Board of Appeals wish to retain the proof of community need requirement for special exceptions they should receive analysis that helps them evaluate the needs of the community by conforming the above standards. Measures for the following criteria could help determine community need.

- **Community:** What are the boundaries of the community that bears the greatest impact of the proposed facility?
- **Convenience:** How many facilities are available within a convenient distance of this community?
- **Competition** to maintain low prices and good service
- **Choice** among different brands
- **Capacity** available at nearby stations to meet community needs

Let's look at some measures that might be used to assess these criteria.

Community: Since the concern of the special exception process is guarding against the overprovision of facilities that may have a negative community impact, what are the boundaries of the community most directly affected by the proposed facility? The Community Based Planning team responsible for the area containing the proposed facility can best determine these boundaries on a case-by-case basis.

Convenience: It is good for consumers to have the convenience of commercial facilities within a reasonable distance of their homes, jobs, or frequent travel routes. A reasonable service distance or travel time would apt to vary with type of facility and the density of the community. The competing facilities in the general area of the community and along main travel routes nearby could be mapped along with the proposed facility. This would help decision makers judge the present availability of service and how this might be augmented by the proposed facility. For instance, if there are already five gas stations easily accessible to the community, how much convenience is added by a sixth?

Competition is a positive force in our economy. It helps maintain competitive pricing and quality of service. It also eliminates businesses that cannot successfully compete in the market economy. One easy-to-measure indicator of competition is pricing differential for similar products. If all gas stations in an area charge near the same price for major brand regular gasoline it is a sign of adequate competition among those stations. On the other hand, if a station is able to charge several cents more than its closest competitors for the same gas it probably doesn't have much competition. Maps showing competitors' locations and prices for similar products would help decision makers understand the competitive landscape.

Choice is closely related to competition. It could be noted how many brands are available to consumers within a reasonable distance and whether the applicant's facility would expand the range of choice.

Capacity: Excessive queuing during peak hours of demand would be evidence that the capacity to serve the public was marginal at certain times. (See Appendix 2)

Possible Changes in Approach

Staff believes that although these criteria provide better indications of community need than do currently accepted proof of need analyses there are still difficult problems to be overcome if they are to be applied. Also, the benefits from implementing new standards of community need analysis seem slight compared to the costs of doing so.

Difficulties of Implementing New Analyses

- There are no established standards for applying the criteria listed above and it is probably impossible to establish one set that fits all situations well.
- Inadequate as they are, the currently accepted market oriented proof of need studies have been used for decades and it is likely to take a large effort to change this established way of doing business.
- To implement the new approach the zoning ordinance would probably need to be changed from its present vague language and require new types of analysis. If the new language is very concrete it will probably prove awkward in some situations. Vague language invites applicants to submit self-serving analysis that doesn't really analyze community need.
- Removing the requirement for needs analysis would maintain the status quo but at less cost and delay. Facilities would only be built when applicants perceived adequate market demand but they would not have the cost and delay of hiring consultants to conduct proof of need studies. And the public sector would not have to expend its resources reviewing these studies that make a dubious contribution to the public good.
- If the proof of need requirement is retained, with modification, it should be because it will produce results superior to market forces alone. Staff believes that current analytical tools are up to this task.

Advantages of Eliminating the Proof of Need Requirement

- The market already helps provide competition, convenience, choice, and capacity.
- In the long run the market also provides protection for the community from proliferation of facilities.
- Market forces work all the time, not just at the time a new application is reviewed.
- Other issues of community impact from special exception uses such as conformity with the master plan, ingress/egress, visual impact, lighting, noise, and traffic congestion are best addressed by specific site plan and other regulations.

For the above reasons research staff supports the elimination of the proof of need requirement for all special exceptions.

Appendix 1 Gas Stations and the Market

The reason for needs analysis is the concern that market forces alone may provide too many of a type of facility such as a gas station for the good of the community. This may be true in the short to medium run. Eventually market forces will almost certainly eliminate excess redundant stations through competition. This happened in the 1990s as larger more efficient stations forced out older ones. Stations hit their maximum numbers in 1986 with 250 and dropped to 206 in 1996. Over the next three years, 1997-1999, 15 stations were added.

Modern gas stations are very efficient with many fueling positions and features such as multi-product dispensers and pay-at-the-pump convenience. Presently the profit margins on the sale of gasoline alone are very thin and stations rely on other businesses in conjunction with gas sales in order to make a profit. Gas sales combined with convenience store sales are the currently favored mode. In fact it appears that the convenience store is now the main business at some new stations and gas sales are used mainly as an attractor to draw in customers. Recently, a large supermarket applied to add an ancillary gas station with 14 fueling positions. Since gas stations are more prevalent than convenience stores, (221 versus 83 respectively in 1999) it is likely, that as combined convenience mart/gas stations proliferate, this market will soon become over crowded and a shakeout will occur. Some of the gas stations and convenience stores will go out of business as this retail form evolves.

Appendix 2 Peak Hour Pumping Capacity

The following analysis of gas station capacity is from a staff review of an applicant's proof of need study dated January 2, 2001. Although it applies to a specific example it is illustrative of capacity estimation in general. Applicants have not included capacity analysis in their proof of need studies.

There are four existing filling stations along Woodfield Road within the market area. They have abundant capacity, to serve even the peak hour traffic without excessive queuing that might encourage customers to go to another station. Four stations x 12 fueling positions x 60 minutes = 2,880 pumping minutes divided by five minutes per fueling = peak hour capacity to fuel 576 vehicles. This is 38% of the daily peak hour two-way traffic in front of the proposed 7-11 station. If motorists fill up an average of once per week, the capacity in the peak hour is almost twice the total peak hour drive-by traffic. Every one of the vehicles driving by in the peak hour can fill up 1.9 times per week. There is plenty of existing capacity, even in the peak hour, even if all the motorists going in front of this proposed station purchased all of their gasoline at these four stations. The peak hour is the extreme case, a similar analysis shows that on a 12-hour average, only about one-fourth of the pumps are busy.

cc

Drew Dedrick
Gary Goodwin

