



HOWARD COUNTY

Fueling Stations Task Force



December 1, 2014

**Task Force
Members**

Dick King
Petroleum Expert
Chair

Sharonlee Vogel
Howard County
Transportation Board
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Regina Aris
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Meagan Braganca
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Larry Twele
Vernon Thompson
Howard County
Economic Development
Authority

The Honorable Calvin Ball
County Council Chairman
Howard County Council
George Howard Building
3430 Courthouse Drive
Ellicott City, Maryland 21043

Dear Dr. Ball:

On behalf of the Fueling Station Task Force, I respectfully submit our recommendations. From our initial meeting, which was held on Thursday, June 19, 2014 to our final work session on November 19, 2014, every member worked extremely hard to accomplish the objectives that were set out in Resolution 39 – 2014 that was approved unanimously by the County Council.

Throughout the entire process, the Task Force members who are listed on page 10, worked diligently to achieve the objectives identified in the Resolution by studying existing regulations from Counties across Maryland, regulations in other states, listening to experts from various Maryland State departments, as well as environmentalists. Attorneys representing opposing viewpoints spoke and submitted materials, and a public hearing was held as well.

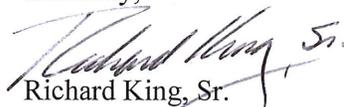
We believe that the recommendations which identify needed changes to Howard County's zoning regulations reflect what the Task Force believes is in the best interest of the citizens of Howard County. Due to the significant changes in the petroleum industry, we have addressed issues relative to fuel station location siting such as environmental, health, safety and blighting impacts that will affect all citizens and areas within the County. Therefore, based on our research, we encourage the County Council to adopt the changes to the Conditional Use regulations that are proposed.

On behalf of the Task Force, I would like to thank the County Council for its foresight and leadership in addressing these issues. In addition, we could not have accomplished all we did without the help and support of Mr. Theo Wimberly and Ms. Lisa Harold who were outstanding to work with.

It has been a pleasure working with my fellow members and it has been a privilege to serve the County in which I have resided for more than 50 years.

We are available to meet with you in the event you have questions or concerns regarding the recommendations.

Sincerely,



Richard King, Sr.
Chair, 2014 Fueling Station Task Force

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EXECUTIVE SUMMARY

Purpose:

Based on the changes in retail petroleum marketing, the advent of alternative fuels and the direction established in Plan Howard 2030, and the County's General Plan, the Council recognized the need to study the siting of motor fuel service stations within the County, including New Town.

Background:

The Task Force completed a thorough review of Resolution 39 by the Task Force and further refined the charges of the Task Force to facilitate and enhance the ability to the Task Force to comprehensively address the identified issues. The Task Force created 6 specific areas of study and broke into teams to address each issue. Between Task Force meetings the teams gathered information and conducted research which was presented at each subsequent Task Force meeting and discussed. Questions were raised and answered and a consensus was reached on each issue.

Witnesses and industry experts both in support and in opposition to the various issues under consideration by the Task Force made presentations and supplied plentitudes of information supporting their position. In addition, the Task Force heard from environmental experts and the State of Maryland's Clean Cities Coordinator, on issues relative to alternative fuels. At the public hearing held on November 3, a total of 11 witnesses testified before the Task Force, 3 were opposed, 7 were in favor, and 1 witness was neutral on the issue of enacting new zoning requirements. We received written testimony from 10 witnesses which are included in the attachments.

Conditional Use/Special Exception Regulations from a variety of Maryland counties were researched for comparative purposes, as well as information from Virginia and other States. Additional information was obtained from a number of other sources, including:

- US Energy Information Administration
- National Highway Traffic Safety Administration
- National Association of Convenience Stores
- Fuels Institute
- National Petroleum News
- Environmental Protection Agency
- Comptroller's Office of Maryland
- Maryland Department of the Environment

Findings:

The research conducted by the Task Force led to the following conclusions:

- 1) The demand for motor fuels in the US is on the decline.
- 2) New high volume fueling stations, commonly referred to as hypermarkets, which sell over 3.6 million gallons of fuel annually pose health risks to the young and elderly due to the number of cars queuing at the facilities and raise safety issues such as traffic overflow onto public roadways.

- 3) The restrictions on the Village Center gas stations, coupled with declining demand, put these locations at significant risk due to blighting influences.
- 4) The large hypermarket locations should be located at Interstate interchanges in order to attract motorists who otherwise would not be coming into the County and also anywhere within the County where they meet all of the recommended requirements.
- 5) The Task Force's recommended regulations should be applied to new locations only, encouraging the acquisition and redevelopment of existing locations by others.
- 6) Siting a gas station near environmentally sensitive areas is an unnecessary risk that the County can/should avoid.
- 7) The issues of fuel station siting transcend New Town zoning and should be applied to the entire County, including the New Town zone.
- 8) The County should continue to monitor trends in alternative fuels and advancing automobile technology.

Recommendations:

The Task Force recommends the following changes to the Conditional Use Regulations for Gasoline Service Stations in Howard County. These recommended regulations should apply to new-to-industry sites only and should not apply to the redevelopment or expansion of existing locations. The basis for the regulation is identified in parentheses.

1. A Needs Assessment to determine whether a fueling station is necessary should be required. This should be based on objective criteria for demand in a defined market area. (Blight)
2. A new fueling station location should be at least 2,500 feet from the boundaries of any other lot or parcel containing a motor vehicle fuel sale use; except on a Principal Arterial Highway (a fully divided roadway) as defined in the Howard County Design Manual. (Blight)
3. A fueling station should not be sited within 500 feet from any public or private school, parks, playground, day care or assisted living facility or any outdoor use categorized as cultural, entertainment or recreation. An environmental study addressing the impacts of air quality should be required if a station is proposed within 501 to 1,000 feet of any of the above categories. New stations proposed that are located at a distance farther than 1,000 feet, should not be required to conduct an environmental study. (Health)
4. A fueling station should not be sited within 500 feet from any wetlands, streams, rivers, flood plains or environmentally sensitive areas. (Environmental)
5. A proposed site plan should accommodate efficient traffic flow and queuing at the pump islands. (Safety)
6. A site should have a minimum of 180 feet of public street frontage. (Safety)

7. A site should be a minimum of 40,000 square feet. (Safety)
8. These regulations should be applied throughout the entire County, including the New Town zone. (Health, Environmental, Safety & Blight)
9. New large volume fueling stations should be sited in areas of the County where they meet the recommended requirements and specifically at Interstate interchange locations along I-95 & I-70. (Health, Environmental, Safety & Blight)

Beyond the scope of the proposed changes to the Conditional Use regulations above, we believe the items below should be considered by the County Council:

A. Business & Community Incentives

- a. Create tax incentives for businesses installing alternative charging stations such as electric
- b. Create tax incentives for consumers purchasing electric vehicles

B. General Plan

- a. Due to the changing marketplace, alternative fuels and technology, gasoline service station regulations should be reviewed at least every 10 years.

C. A setback for electric charging stations from flammable products should be established county-wide to ensure safety.

D. Zoning & Site Development

- a. The parking space requirements for common parking areas such as shopping centers and office buildings need to be re-evaluated based on the expansion of electric charging stations.

FUELING STATION TASK FORCE
RESOLUTION 39-2014

Plan Howard 2030, the County's General Plan recommended the update of regulations relating to gasoline stations.

During the Comprehensive Zoning process in 2013, the County considered adding specific standards for alternative fueling stations throughout the County, without adopting related legislation. The County recognizes the need to continue the analysis initiated in the Comprehensive Plan and General Plan.

As alternative fuels become more popular, the demand for conventional gasoline will decrease, while the demand for alternative fueling stations and associated parking will increase.

The issues regarding the retail petroleum industry and alternative fuels transcends the entire County, including New Town zoning.

The County Council voted unanimously for a Task Force to be created to study these issues and specifically provide its input regarding the tasks on the following page.

RESOLUTION DELIVERABLES

1. Review findings of applicable scientific studies to ascertain pertinent safety and environmental issues related to the siting of fueling stations, including those published by the United States Environmental Protection Agency and other Maryland State Agencies; and
2. Review best practices for placing and regulating alternative fueling stations;
3. Review the standard adopted by Montgomery County, Charles County and the United States Environmental Protection Agency related to the siting of fueling stations; and
4. Review New Town Zoning Regulations and any other related documents, including village center master plans and the Columbia Market Analysis and Economic Development Services study, to ensure that fueling station standards will fit with the overall vision of New Town; and
5. Review the standards for locating gasoline stations as a conditional use in the 2013 Comprehensive Plan and Zoning Regulations; and
6. Evaluate the supply, demand and practices of fueling stations over the last decade in the county, state and nationally; and
7. Evaluate the research findings pertaining to the need for and requirements of alternative fueling stations; and
8. Make recommendations for developing standards for fueling stations in New Town and in areas allowing these facilities; and
9. Make recommendations, incorporating the findings of science and the best practices available, concerning the regulation and siting of fueling stations; and
10. Make recommendations for possible amendments to the Howard County Zoning Regulations addressing the standards for conditional use approval of fueling stations.

MEMBERS

Fueling Station Task Force - Members

Dick King, Sr. – Chair
Petroleum Expert

Sharonlee Vogel – Vice Chair
Public Transportation Board of Howard County

Regina Aris
Baltimore Metropolitan Council

Meagan Braganca
Kathleen Sheedy
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Village Board Member

Ron Meliker
Howard County Chamber of Commerce

Rizwan Siddiqi
Howard County Environmental Sustainability Board

Larry Twele
Vernon Thompson
Howard County Economic Development Authority

MEETING SCHEDULE

<u>Date</u>	<u>Time</u>	<u>Place</u>	<u>Purpose</u>
June 19, 2014	3:00 PM	C. Vernon Gray Room	Introductory Meeting/ Work Session
July 16, 2014	9:00 AM	Banneker Room	Work Session #2
August 12, 2014	9:00 AM	C. Vernon Gray Room	Work Session #3
September 10, 2014	9:00 AM	C. Vernon Gray Room	Work Session #4
September 24, 2014	9:00 AM	C. Vernon Gray Room	Work Session #5
October 8, 2014	9:00 AM	C. Vernon Gray Room	Work Session #6
October 22, 2014	9:00 AM	Columbia/Ellicott Room	Work Session #7
November 3, 2014	6:00 PM	Columbia/Ellicott Room	Public Response - Solicit Comments and Suggestions
November 19, 2014	9:00 AM	Police HQ/Warfield Bldg	Work Session #8

FINDINGS

Gasoline Demand

Demand for motor fuels in the US and Maryland is on the decline. The Maryland Comptroller's Office has reported that gasoline demand in the state through the first 6 months of 2014 has declined 3.6% versus demand in 2013. This can be attributed to a number of factors which include more fuel-efficient vehicles, shifts to alternative fuels, growing numbers of hybrid vehicles, and growing numbers of electric vehicles (EV's). In addition, there has been an increased use in public transportation, particularly by Millennials who are driving less than previous generations.

The US Energy Information Administration projects the demand for gasoline in the US to decline by 24% by 2040. Only one year ago that number was 18.4%. As technology improvements are realized and introduced, the decrease in demand will only accelerate.

The federal government had mandated an increase in the Corporate Average Fuel Economy (CAFÉ) standards from 27.3 mpg today to 35.5 mpg in 2016 to 54.5 mpg in 2025. Automobile manufacturers are developing new technologies to meet this government mandate.

In Maryland, there are currently 10 biodiesel (B20 and above) stations, 9 compressed natural gas (CNG) stations, 34 ethanol flex fuel E85 stations, 280 electric vehicle (EV) charging stations with 652 charging outlets, no hydrogen and liquefied natural gas (LNG) stations, and 20 propane or liquefied petroleum gas (LPG) stations totaling 725 alternative fuel stations in Maryland.

The Maryland Electric Vehicle Infrastructure Council (EVIC) has developed a target of 60,000 electric vehicles (EV's) registered in Maryland by 2020. EVIC is assessing infrastructure needs for electric vehicles in Maryland.

According to the US Department of Energy (DOE) Alternative Fuels Data Center, there are not currently any E85 fueling stations in Howard County, however, there are some nearby: one at the SHA facility in Hanover, two in Laurel, and one at the Social Security Administration in Gwynn Oak. In addition, there are 9 E85 stations along I-270 in Montgomery County.

Health/Safety

In recent years, there has been growing concerns about the health and safety impacts of gasoline stations on the general community and nearby health-sensitive facilities – daycare centers, senior centers, schools, playgrounds, houses of worship, etc. Pollutants from automobiles, gasoline dispensing facilities and other fuels have been a central focus of Clean Air Act regulation since the establishment of the EPA in 1970. Reducing air pollution associated with transport and fuel services accounts for much of the Clean Air Act and thousands of health and safety regulations have been established since 1970.

The Clean Air Act of 1970, and its subsequent major revisions in 1977 and 1990, established regulations for automotive emissions and for vapor recovery during the delivery and dispensing of fuel. These include Phase I vapor recovery, Phase II vapor recovery, on-board

vehicle vapor recovery, establishment of geographic non-attainment areas and specific formulas for environmentally friendly fuel formulations (summer/winter blends), and the mandated use of ethanol to reduce emissions and leverage renewable sources (corn).

National Ambient Air Quality Standards (NAAQS) under the Clean Air Act requires the EPA to establish standards for pollutants considered harmful to public health and the environment. Additionally, states and regions are required to establish State Implementation Plans (SIP's) to ensure that the region as a whole meets or "attains" these air quality goals. Howard County is 1 of 6 counties in Maryland that is a non-attainment area for ozone and does not meet the Clean Air Act requirements. Between the years 2008-2013, Howard County's Air Quality Index has been at about 183 (on a scale of 1-500), which places the County solidly within the "Unhealthy" category.

Nearly all emissions associated with cars and trucks have been identified as hazardous and a threat to health. These include carbon monoxide, nitrogen dioxide, particulates (especially fine and very fine – PM_{2.5}), hydrocarbons, volatile organic compounds (VOC's) such as benzene and toluene, ground level ozone (GLO) that forms when auto and truck emissions react with sunlight, and now carbon dioxide (CO₂) not previously identified as hazardous.

The proliferation of high-volume gas station locations (hypermarkets), such as Costco, WaWa, Sheetz and Royal Farms has raised new concerns about these toxic pollutants (PM_{2.5}, CO, NO₂, VOC's, and GLO) and their impact on health and safety. As a result, new guidelines have been published by EPA regarding the proximity of gas stations to nearby health-sensitive facilities (daycare centers, senior centers, schools, playgrounds, houses of worship, etc.). Under the EPA's guidance for siting schools, authorities should take precautions for prospective locations within 1,000 feet of existing large gas stations (those with throughputs of 3.6 million gallons or greater per year). The California Air Resources Board (CARB) recommends to "avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons or greater)." As was discussed during testimony offered before the Task Force, when siting gas stations, the opposite can be said to be true – that precautions should be taken for prospective locations within 1,000 feet of existing schools. According to the MDE, baseline Greenhouse Gases (GHG) inventory indicates that approximately 30% of the state GHG's are generated by the Transportation sector.

Setback requirements for gas stations have been established by a number of nearby counties and other jurisdictions based on the separation requirements of CARB's 300 foot setback. Montgomery County, MD requires a buffer of 300 feet from the edge of a large gasoline station to the lot line of any public or private school or any park, playground, daycare center, or any other outdoor use categorized as cultural, entertainment and recreation use as a measure to protect public health.

In Prince Georges County, MD, a gasoline station must be located at least 300 feet from any lot on which a school, outdoor playground, library or hospital is located, in addition to its review as a special exception.

In the City of Gaithersburg, MD, a gasoline station must be located at least 300 feet from the entrance to a public or parochial school, playground, library, or hospital in the C-3 zone.

Village Centers

Howard County's village centers were based on a specific concept of retail centers designed to serve the local community – non-conspicuous retail centers located off of major thoroughfares to avoid creating congested roads like Routes 1 and 40. Village Centers were conveniently located for residents to provide one-stop shopping for items such as groceries, dry cleaning, fuel, restaurants, automotive repair, and personal services such as nail salons and barber shops. Gasoline stations located in the Village Centers were required through covenants and deed restrictions to offer certain desirable services, such as auto repair, yet restricted in some of their retail offerings.

The Village Centers, by their very nature and location, offer poor visibility and traffic counts versus the nearby parkways and other major roads. In fact, the traffic count at Village Centers is about one fifth of the traffic count on Howard County's parkways. The County has always recognized the need to weigh carefully the impact of outside development on its Village Centers. The Owen Brown Village Board offered testimony reiterating their concern about the long term impact of allowing large scale fueling stations outside the Village Center concept. Their stated concerns include health impacts, safety, environmental, economic, blighting and traffic issues. With regard to traffic specifically, the Owen Brown Village Board cited concerns about new gasoline stations having direct access on nearby parkways, creating additional congestion on already crowded thoroughfares. They also pointed out the potential difficulty of redeveloping abandoned/defunct gas stations.

Abandoned/defunct gas stations have been shown in the County to be difficult to repurpose. Examples include the former Exxon station in the Oakland Mills Village Center, having sat unoccupied for nearly 15 years. The former Mobil station on Route 40 and St. John's Lane has sat vacant for over 10 years. It should be noted that restrictive deeds and covenants on many of the existing village center gas station properties will further limit and entangle any repurposing in the event of a future closure. Based on this, it is clear that a needs assessment should be employed to determine whether a proposed new fueling station is required for a defined market area. Additionally, any new fueling station in the County must be at least 2,500 feet from the boundaries of any other lot or parcel containing a motor vehicle fuel sale use, except on a Principal Arterial Highway as denoted in the Howard County Design Manual. Charles County already has this separation requirement for all new gasoline stations, regardless of the type of road in question (single lane, double lane, etc.).

Lastly, any new large volume fueling stations should be sited in areas of the County where they meet the proposed requirements, and specifically, at the interstate interchange locations along I-95 & I-70. In addition, competitors wishing to enter the Howard County market always have the option to acquire existing gasoline stations and rebrand the acquired site.

Environmental

Large gasoline stations receive, store and distribute large volumes of gasoline. Underground Storage Tanks (UST's) and lines have been improved over the years but are still susceptible to failure or damage that can create leaks/releases of volatile chemicals into the ground. The greater throughputs of these large stations increases both the probability and potential consequences of accidental leaks and spills. Once gasoline leaks into the ground, the gasoline and its chemical constituents can migrate to environmentally sensitive areas through storm sewers, soils, bedrock, groundwater, and surface drainage ways (rills, streams, and rivers).

Large spills can occur during tanker truck refueling of the gas station's underground storage tanks. The probability of such accidents increases with the number of deliveries. In the example of a proposed 12 million gallon station in Montgomery County (Wheaton Westfield Mall), refueling would occur via tanker truck 4 times per day or nearly 1500 deliveries per year.

As of 2013, Maryland has 7,954 Underground Storage Tanks (UST's). The Maryland Department of the Environment conducts an annual inspection program of all UST's to ensure that they are functioning properly. Of the total number of UST's in Maryland, 71% were found to be compliant, but of that percentage, there were 174 confirmed leaks. These leaks can lead to very dangerous consequences for nearby environmentally sensitive areas.

Leaks from underground storage tanks and piping can occur suddenly in large gushes, or in the more likely scenario, as slow seeps which can go undetected for long periods of time. Large accidental releases of gasoline from gas stations often occur when construction work is being done at the location by contractors. In a case in Jacksonville, MD, a heavy equipment operator accidentally ruptured an underground line. Although alarms went off inside, the contractor did not know, and 23,000 gallons of gasoline leaked into the water table. After receiving an initial report in February 2006 that 15 feet of gasoline was discovered in an onsite monitoring well, located the closest to the service station's tank field. Eight (8) feet of gasoline was observed in a down gradient monitoring well. Detectable concentrations of gasoline constituents were measured several thousands of feet from the gas station. Activated carbon treatment systems were installed at 13 homes and an area bank received an alternate water supply.

Accordingly, large gasoline stations (4 MPD's or greater) should be located at least a minimum of 500 feet from the nearest natural resource or ecologically sensitive area including private and public wells, reservoirs, natural areas, nature preserves and protected areas, streams, rivers, flood plains, wetlands, parks, woodlands, and critical groundwater recharge areas.

FINAL RECOMMENDATIONS

HOWARD COUNTY FUELING STATION TASK FORCE
FINAL RECOMMENDATIONS
Wednesday, November 19, 2014

The Task Force recommends the following changes to update the Conditional Use Regulations for Gasoline Service Stations in Howard County. These recommended regulations should apply to new-to-industry sites only and should not apply to the redevelopment or expansion of existing locations. The basis for the regulation is identified in parentheses.

1. A Needs Assessment to determine whether a fueling station is necessary should be required. This should be based on objective criteria for demand in a defined market area. (Blight)

2. A new fueling station location should be at least 2,500 feet from the boundaries of any other lot or parcel containing a motor vehicle fuel sale use; except on a Principal Arterial Highway (a fully divided roadway) as defined in the Howard County Design Manual. (Blight)

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4. A fueling station should not be sited within 500 feet from any wetlands, streams, rivers, flood plains or environmentally sensitive areas. (Environmental)

5. A proposed site plan should accommodate efficient traffic flow and queuing at the pump islands. (Safety)

6. A site should have a minimum of 180 feet of public street frontage. (Safety)
7. A site should be a minimum of 40,000 square feet. (Safety)
8. These regulations should be applied throughout the entire County, including the New Town zone. (Health, Environmental, Safety & Blight)
9. New large volume fueling stations should be sited in areas of the County where they meet the recommended requirements and specifically at Interstate interchange locations along I-95 & I-70. (Health, Environmental, Safety & Blight)

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- a. Create tax incentives for businesses installing alternative charging stations such as electric
- b. Create tax incentives for consumers purchasing electric vehicles

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- a. Due to the changing marketplace, alternative fuels and technology, gasoline service station regulations should be reviewed at least every 10 years.

C. A setback for electric charging stations from flammable products should be established county-wide to ensure safety.

D. Zoning & Site Development

- a. The parking space requirements for common parking areas such as shopping centers and office buildings need to be re-evaluated based on the expansion of electric charging stations.