

Albemarle County Planning Commission  
401 McIntire Road  
Charlottesville, Virginia

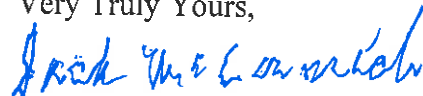
Re: Proposed gas station on  
Black Cat Road  
SP2019-0006

Dear Members of the Planning Commission:

My wife and I live directly across Black Cat Road from the proposed gas station/convenience store proposed by Tiger Fuel. I oppose this project. It would forever change my life and the character of my rural neighborhood, adversely affect traffic directly in front of my house, and would have bright lights at night that would unduly interrupt my life. Further, my neighborhood cannot withstand the water usage from a commercial development. I'm elderly and may not be able to attend the public hearings.

Please save me and my neighbors from this devastating, harmful project. Thank you very much for your attention to this matter.

Very Truly Yours,



Jack McCormick

**From:** Brian Fitzgerald <brianfitzgerald@live.com>  
**Sent:** Tuesday, February 4, 2020 9:38 AM  
**To:** Planning Commission; Tori Kanellopoulos  
**Subject:** Tiger Fuel Market @ Boyd Tavern

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Good morning,

My name is Brian Fitzgerald and my wife and I live at 4915 Moriah Way. We have lived here since 2016. I understand that there will be a hearing this evening for Tiger market's proposed project at Black Cat Rd and I-64. I wanted to take a moment to speak in favor of the project, for reasons that I note below. I will not be able to attend the meeting this evening.

While we appreciate the rural setting, there is a real lack of services for residents of our area. The only options are to travel on 250 all the way to the Legacy Markets at 250/22 and the traffic is often horrendous. Alternatively, one can drive all the way to Zion's Crossroads, which presents its own set of issues. As a father of a one-year old, having to drive 15 minutes, each way, to get milk for the baby is a real pain. Same goes for getting gas for the mower.

I appreciate the prior concerns that I have heard about increased traffic, potential light pollution, water use, etc., but the need for services in this area outweigh those concerns. My understanding is that Tiger has made a number of changes to their original plan to alleviate these concerns as much as possible.

Tiger Fuel is a great local company and they are present in our community. I fear that if this Tiger project fails, it's only a matter of time before another operator, who is NOT local, is able to push their project through. We will all wish we had supported a true partner in the community vs. an outsider with no local ties. Let's be honest here, if there ends up being an issue with the project after it is done, Tiger is going to take the necessary steps to rectify the issue. They will not want their reputation tarnished in the public eye. Also, most of us are on propane in this area, and we are customers of Tiger Fuel. The last thing they want to do is anger the locals and be a bad operator. I do not expect such loyalty to the locals from an outsider.

While others may not have written a note to the commission, I can tell you that a large number of people in the area are for this project. There is a vocal minority with a loud voice that has held this project up for too long. Please respect their concerns as we do, but ultimately allow this project to move forward for the betterment of the area that we call home.

Sincerely,  
Brian Fitzgerald

**From:** Tori Kanellopoulos  
**Sent:** Tuesday, February 4, 2020 12:09 PM  
**To:** Planning Commission  
**Subject:** FW: Public comment against (Request Information on ) Signs 50, 51

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**From:** Brian <[veerhoff69@aol.com](mailto:veerhoff69@aol.com)>  
**Sent:** Tuesday, February 4, 2020 12:09 PM  
**To:** Tori Kanellopoulos <[vkanellopoulos@albemarle.org](mailto:vkanellopoulos@albemarle.org)>; Donna Price <[dprice@albemarle.org](mailto:dprice@albemarle.org)>; Diantha McKeel <[dmckeel@albemarle.org](mailto:dmckeel@albemarle.org)>; Liz Palmer <[lpalmer@albemarle.org](mailto:lpalmer@albemarle.org)>; Ned Gallaway <[ngallaway@albemarle.org](mailto:ngallaway@albemarle.org)>; Ann Mallek <[amallek@albemarle.org](mailto:amallek@albemarle.org)>; Bea LaPisto-Kirtley <[bkirtley@albemarle.org](mailto:bkirtley@albemarle.org)>  
**Subject:** Re: Public comment against (Request Information on ) Signs 50, 51

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Mr Kanellopoulos, County Supervisors

Thank you for responding and providing more depth for me to understand the details around proposed Variances for signs 50 and 51.

I am not so sure that what I wrote previously is added to the "public commenting" as it seems that phase of the process has passed.

In the Staff report link you provided (thank you 😊), I read every concern shared by the People making public comments, and I share many of those. In the response "analysis" portion of the report, Community Members effected by such a zoning variance had their concerns addressed, rationalized, but in most cases were not assuaged. It is evident the process leans to support putting the gas station there. A mistake, in my opinion.

I find it hard to accept that a rezone made decades ago, during previous generations still apply in this time and place. This is especially true with the use plans at Rivanna Village and nearby Zion XRoads in Fluvanna

The fact the specific area has remained undeveloped while surrounding areas explode, speaks volumes to this site's character and its value.

It is also notable that the existing Boyd Tavern Market on US Rt 250, has experienced a 2 decade string of struggling and shuttered businesses. This illustrates very well the surrounding neighborhood is not in need of this proposed use.

The approval of this special use would serve mainly the Interstate highway traffic and the owners of the business, yet be a detriment to the County and the surrounding residents.

Please do not support a decision to permanently and completely alter this region, and based on wisdom and plans from 30 and 40 years ago that are no longer relevant nor sustainable.

I may not be able to attend tonight's meeting, I haveCc with the County Supervisors in this correspondence.

Kind Regards,  
Brian Veerhoff

Sent from my iPhone

-----Original Message-----

From: Marsha Alley <[malley3@albemarle.org](mailto:malley3@albemarle.org)>

Sent: Tuesday, February 4, 2020 8:01 AM

To: Brian <[veerhoff69@aol.com](mailto:veerhoff69@aol.com)>

Cc: Stephanie Banton <[sbanton@albemarle.org](mailto:sbanton@albemarle.org)>; Tori Kanellopoulos <[vkanellopoulos@albemarle.org](mailto:vkanellopoulos@albemarle.org)>

Subject: RE: Public comment against (Request Information on ) Signs 50, 51

Good morning! Thank you for your email!

It has been shared with the reviewer for this project.

Have a nice day!

Marsha

-----Original Message-----

From: Brian <[veerhoff69@aol.com](mailto:veerhoff69@aol.com)>

Sent: Monday, February 3, 2020 11:05 PM

To: Marsha Alley <[malley3@albemarle.org](mailto:malley3@albemarle.org)>

Cc: Stephanie Banton <[sbanton@albemarle.org](mailto:sbanton@albemarle.org)>

Subject: Public comment against (Request Information on ) Signs 50, 51

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Hi,

I am writing to inquire as to how this area is zoned Commercial (C-1)?

There are no public facing businesses along that corridor except the Liberty model home. That particular business has select clientele that typically visit by appointment, and its curb presence is architecturally consistent with the rural/residential nature of the area

Also...

A "public comment":

... gas stations are heavily trafficked locations.

One located beside the Interstate highway such as is proposed under the variance request, will likely service a huge amount of pass through motorists.

Another local service station serves little benefit to the local residents, who do not suffer for more Convenience Store and Fuel Pump availability.

While this will certainly give substantial financial benefits for the property owner(s), it's contribution to the local community will primarily be trash to dump and toxic wastewater flushed into a drainfield. At the present time, there are no municipal water or sewage services to this site

Additionally, this is a departure from the "open field" rural and historical nature of the neighborhood.

Let this sort of growth activity remain in the currently designated, nearby, "by-right" Rivanna Village development plan

Let's not add unneeded growth to this area. Such a heavy use for this site as is as proposed will only further stress the capacity of this natural ecosystem.

It is a mistake to open this place to this sort of development at this time.

As a resident of the historic Three Chopt / Boyd Tavern / Mechunk Creek area in Eastern Albemarle, I strongly oppose the variance of the zoning for signs 50 and 51 to build in this way.

Your consideration is requested.

Brian Veerhoff  
Richmond Rd

Sent from my iPhone

**From:** Tori Kanellopoulos  
**Sent:** Tuesday, February 4, 2020 5:10 PM  
**To:** Planning Commission  
**Subject:** FW: In favor of Market at Boyd Tavern

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**From:** Olivia Branch <[oebranch@gmail.com](mailto:oebranch@gmail.com)>  
**Sent:** Tuesday, February 4, 2020 4:26 PM  
**To:** Tori Kanellopoulos <[vkanellopoulos@albemarle.org](mailto:vkanellopoulos@albemarle.org)>  
**Subject:** In favor of Market at Boyd Tavern

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Albemarle Planning Commission

I am writing as a third generation resident on Black Cat Road in favor of the proposed development, Market at Boyd Tavern.

The placement of the proposed Market will help alleviate traffic in the area due to the convenience of products and services. The current options are to travel to Zion Crossroads or into Charlottesville. Having a market in the middle of the two options will help have less traffic on roads for a shorter drive time.

I feel conditions are in place to protect well water concerns; lighting at night; visual views from roads.

I enjoy the Markets at Tiger Fuel and visit 5th Street, and 250W locations. It will be a welcomed neighbor and save me time and gas! Plus, they have a delicious sandwich named Keswick!

Thank you,  
Olivia Branch  
734 Black Cat Road

**(This is my own personal endorsement and not in any form a voice on behalf of my position with Pantops Advisory Committee)**

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**Olivia E. Branch**  
[oebranch@gmail.com](mailto:oebranch@gmail.com)  
(434) 996~7201  
*"Be the change you wish to see in the world"*  
*Mahatma Ghandi*

**From:** Vlad Wojcik <vlad@cloverhillfarmllc.com>  
**Sent:** Monday, February 3, 2020 1:01 PM  
**To:** Planning Commission; Tori Kanellopoulos  
**Subject:** Boyd Tavern Market Support

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Dear Tori,

My name is Vlad Wojcik and my wife and I own property on Deerbonn Rd, off of Black Cat Rd, in Keswick. I am writing you today in support of the proposed Tiger Fuel Market at Boyd Tavern. Our family plans to build our dream home on our property at Deerbonn. I also manage Clover Hill Farm and Oakdale Farm which are both in close proximity to the proposed site. From our perspective the store would be a great addition to the community that would provide much needed services. I have a team of people that work with me running these two farms and our options to go get a decent meal or to go get the fuel we need to run all of our equipment are limited. We also like that Tiger is a local company that takes good care of its employees and seems to genuinely care about preserving the rural character of the area. I am a frequent customer at some of their other locations like Bellair Market and Mill Creek Market, and the architecture and just the general feel of the stores is very welcoming. I would hate to see some big national outfit come in and try to do something at the proposed property. Thank you for taking the time to read this e-mail. I fully endorse this project as do all the folks on my team.

Sincerely,

Vlad Wojcik

Vlad Wojcik  
Clover Hill, LLC  
434-960-1890 (m)  
300 Clover Hill Farm  
Keswick, VA 22947



**From:** Tori Kanellopoulos  
**Sent:** Monday, February 3, 2020 3:42 PM  
**To:** Planning Commission  
**Subject:** FW: Boyd Tavern Market SP201900006

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**From:** Don Thornhill <[dthornhill@bankersinsurance.net](mailto:dthornhill@bankersinsurance.net)>  
**Sent:** Monday, February 3, 2020 3:38 PM  
**To:** Tori Kanellopoulos <[vkanellopoulos@albemarle.org](mailto:vkanellopoulos@albemarle.org)>  
**Subject:** FW: Boyd Tavern Market SP201900006

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I cannot make the hearing on 02/04, but I am in favor of this project. I travel extensively on business and live off Route 616. Many mornings, I need fuel and have to go into Charlottesville or Zion Crossroads, which takes additional time. This market would provide convenience for the community. There was a Boyd Tavern Market for many years providing some of the same services mentioned in this application and that was a good thing for the community. I am not sure why others in the community oppose this project, but I feel if it is already zoned commercial the owners should have the right to proceed with this project.

Best Regards,

**Donald W. Thornhill, AFIS, CIC, LUTCF**  
Senior Vice President - West



630 Peter Jefferson Parkway, Suite 300 Charlottesville, VA 22911  
434-977-5313 Office or 1-800-541-1419  
434-977-3954 Fax

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**From:** Carolyn Shaffer  
**Sent:** Monday, February 3, 2020 7:19 AM  
**To:** Tori Kanellopoulos  
**Subject:** FW: Tiger fuel

Thank you,

*Carolyn Shaffer*

Carolyn Shaffer  
Clerk, Planning Commission and Boards  
Albemarle County  
Department of Community Development  
401 McIntire Road  
Charlottesville, VA 22902  
[www.albemarle.org](http://www.albemarle.org)  
email: [cshaffer2@albemarle.org](mailto:cshaffer2@albemarle.org)  
Phone: (434) 296-5832 ext 3437  
Fax: (434) 972-4126

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**From:** Gordon Giuliano <[gordon.giuliano@feltongroup.org](mailto:gordon.giuliano@feltongroup.org)>  
**Sent:** Sunday, February 2, 2020 7:56 AM  
**To:** Planning Commission <[PlanningCommission@albemarle.org](mailto:PlanningCommission@albemarle.org)>  
**Subject:** Tiger fuel

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Dear Tori,

My name is Gordon Giuliano and I live at 3817 Richmond Rd and I have lived here for 12 years. I am writing today in support of the Tiger Fuel project at Boyd Tavern. Our community desperately needs something like this to serve the rural area. Currently if I want to get a good healthy meal, gas or groceries my options are to drive all the way to Charlottesville or to Zion X roads where frankly the options are not that appealing. Tiger Fuel is a great local company that treats its people well and builds stores that are in sync with the rural character of this area. I think this project is the best possible option for this property that is zoned commercial and right on the interstate. If Tiger does not succeed here I am scared to think about what other big company like a Sheetz or a Wawa or maybe even worse would do here. Thank you for your time. My family and I and countless other neighbors are in favor of this project.

Sincerely,

Gordon Giuliano

Gordon Giuliano  
Chief Financial Officer  
Felton Group, LLC  
0 Court Square  
Charlottesville, VA 22902  
o: 434-270-8923  
f: 434-220-3179  
c: 434-466-7035

Sent from my BlackBerry 10 smartphone.

Original Message

From: Nancy Smaroff <[nsmaroff@gmail.com](mailto:nsmaroff@gmail.com)>

Sent: Friday, January 31, 2020 10:09

To: Julian Bivins

Subject: Boyd Tavern Market

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Hello. I have attached a document regarding the proposed Boyd Tavern Market which reflects my research and reasoning why this project should NOT be approved, Thank you for your time to review. If you have questions please feel free to call or email.

Nancy Smaroff, BS, MS  
540-624-3720

Albemarle County, Virginia Planning Commission  
Submitted by Nancy Smaroff, B.S., M.S.  
January, 2020

I would like to take this opportunity to address a few issues that are minimally considered or not included in the Special Use Permit for the Boyd Tavern Market, which was recently approved by County Planning Staff. I find this approval most disconcerting as it appears these issues were never adequately addressed or in some cases never mentioned.

- 1. The Boyd Tavern market is never identified as an interstate based hypermart, which it clearly is, as it is only about 0.1 miles from I-64. Yet, all data for traffic patterns and water usage provided by Tiger Fuel are for markets miles removed from any interstate.** The impact of **Interstate 64** traffic on Black Cat Road, Route 250, and the Boyd Tavern community are never really mentioned or addressed. **Why are not VDOT AADT data included for the volume of I-64 traffic at the 129 exit? Why were data from the 5th Street Market not used, as it is owned by Tiger fuel and clearly is an interstate market?**
- 2.** Additionally, there is never any mention of the impact traffic from Glenmore and now Rivanna Village (Breezy Hill) will have on the Route 250 and Black Cat Road intersection. When traffic is backed up in the morning commute from the Glenmore area, many drivers turn onto Route 250 east and travel to the Black Cat Road intersection to gain access to I-64.
- 3. There is no mention of the signage that will be erected on I-64 that will direct even more traffic onto Black Cat Road.** Interstate-based stations at Zions Crossroads (just one exit away), as well as hypermarkets at exits 143 and 159, draw many of their customers from I-64 traffic, often consisting of families, who are heavy users of water resources. This is well documented by national travel data, but never addressed by Tiger Fuel. Over 100 million travelers embark upon summer trips, most of whom will be interstate travelers.
- 4.** The topic of groundwater usage remains an elusive one, as the numbers keep changing with every new document from Shimp Engineering and Tiger Fuel and are often contradicted by their own statements and support documents. The last projection is now for 644 gpd water usage. But that was based upon only four months of data in a new location far from an interstate, with no summer months of heavy travel. Before the 644 -figure, it was 800 gpd, both of which are totally unrealistic, when interstate data are substituted. No reliable, documented source at an interstate based hypermart, would support this low number. **If Tiger fuel is so confident of this last number, then why not install a tamper-proof shutoff valve that shuts off at 644 gallons per day? Does Tiger Fuel plan to store groundwater so when the 644 gpd is reached, they can then turn on the reserve and circumvent the 644 gpd limit? Who**

on the county staff will monitor this water consumption and warrant the accuracy of on a daily basis?

**Unanswered questions regarding groundwater resources:**

- 1. Have any test wells been drilled on the property? If so, what is/are the well yields?**
  - 2. Why and how were the well yield sites chosen for the Evans Tier III Study? Some of the sites appear to be in the Everona Formation, which has much higher yields than the Chandler Formation, which underlies the proposed market? It appears that sites were chosen to skew data in favor of the applicant. I can find sites with much lower yields that fit the selection criteria. Why were dry well data, of which there are many in the area, not included in the Evans study?**
  - 3. Will the water for these wells come from the Chandler or Everona Formations, as the Everona Formation produces much more water?**
  - 4. As this market will be situated topographically at the highest point in the community, how much groundwater recharge will actually be generated on the market site? The underlying soils are Nason and Tatum and are clay-based soils, which have small porosities and thus low to moderate permeability. It appears that most groundwater recharge will end up near the fault zone and out of the well locations for the project.**
  - 5. What is the estimated size/volume of the aquifer under the proposed site?**
5. The **Community and Environmental Defense Services**, a leading national consumer advocacy group with much international research, provides detailed guidance on evaluating impacts of hypermarkets such as the Boyd Tavern Market on street and highway safety. For example, projected trips per day is never addressed within the SUP.

**“As a rough rule of thumb, each proposed pump at an interstate-based hypermarket station generates about 100 to 130 trips per day.” By “pump” I mean fueling position. The convenience store/restaurant itself alone will generate a minimum of 800 to 1,200 trips per day, and probably more. The standard reference for this comes from the Institute of Transportation Engineers trip generation manual. My own onsite data collection from a hypermarket one interstate exit east, show a similar trend. I have no idea where Shimp Engineering got their much lower data point of only 727 projected trips per day, which are for rural markets and not an interstate location. Why were data from the 5th Street Market, which clearly is an interstate market, not used?**

6. Language within the revised SUP talks about how stations with only 3-4 gasoline pumps continue to change ownership or go out of business. This statement is used to support the five gasoline pumps with 10 nozzles at the Boyd Tavern Market. In my research I can find no statistical correlations or objective analyses to support this

statement. Nor can I find any guarantees in the Comprehensive Plan that ensures profitability of any business venture.

**The Community and Environmental Defense Services has conducted extensive research on this topic of hypermarkets and their predatory impact on small businesses and found that it is entities such as the proposed Boyd Tavern Market that are a major factor in driving these small operations out of business.**

7. Health Effects: Is It Safe to Live Near a Gas Station? What impact does benzene and automobile exhaust have on levels of air pollution?

**It is never mentioned in any submission by Tiger Fuel, this Boyd Tavern Market would be in a residential community. There are houses directly across the street and within fifty meters of this proposed hypermarket site. Prevailing winds blow toward these homes.**

A number of compounds injurious to human health, such as benzene, are released while fueling a vehicle. Health effects range from nausea to cancer. The cancer risk posed by gas station emissions stems from benzene and other compounds released to the atmosphere while pumping gas. Following is a sampling of relevant research:

- A 2003-2004 study conducted in France documented a significant relationship between childhood leukemia and living near a gas station.
- A 2010 study conducted in Spain documented elevated air pollution within 100 meters (328 feet) of a gas station.
- In 2012, Brazilian researchers found that air quality was significantly degraded up to 150 meters (492 feet) from gas stations.
- A 2018 study of two U.S. gas stations found that benzene emissions from underground gasoline storage tank vents were sufficiently high to constitute a health concern at a distance of 160-meters (518-feet).

Benzene is arguably the gasoline constituent most harmful to human health. Adverse health effects of benzene include cancer, anemia, increased susceptibility to infections, and low birth weight. According to the World Health Organization Guidelines for Indoor Air Quality there is no safe level for benzene. The following studies document the extent of benzene releases from gas stations:

- A study published by the Canadian petroleum industry found average benzene concentrations of 146 and 461 parts per billion (ppb) at the gas station property boundary in summer and winter, respectively.

- A South Korean study examined outdoor and indoor benzene concentrations at numerous residences within 100 feet and between 196 to 328 feet of gas stations and found median outdoor benzene concentrations of 3.1 and 1.9 ppb, respectively. Median indoor concentrations at these locations were higher, reaching 4.1 and 5.2 ppb, respectively.
  - Another study found median ambient benzene levels of 1.9 ppb in houses both <165 and >328 feet from a service station.
  - Yet, another study found that benzene and other gasoline vapor releases from service stations can be discerned from traffic emissions as far as 246 feet from service stations and that the contribution of service stations to ambient benzene is less important in areas of high traffic density. **This is because vehicle exhaust is usually the most abundant volatile organic compound (VOC) in urban areas, often followed by gasoline vapor emissions from fuel handling and vehicle operation.**
8. Convenience store hypermart hold-ups/robberies account for about 6% of all robberies in the United States. One study noted that: "Convenience store employees suffer from high rates of workplace homicide, second only to taxicab drivers."

A study of this relationship found an increasing trend as the number of alcohol outlets in an area rose. Following is a principal finding from this study: "A larger number of alcohol outlets and a higher rate of violence might be expected in poorer neighborhoods or in neighborhoods with a larger population of young people. But as the research described above shows, even when levels of poverty and the age and the ethnic background of residents are factored into the equation, alcohol outlets are strongly related to violence regardless of a neighborhood's economic, ethnic or age status."

#### 9. How Do Hypermarts Affect Property Value?

A hypermart can lower the value of nearby homes. One of the most plausible effects is on mortgages. Federal Housing Administration (FHA) insured mortgages are not available for properties located within 600 feet of tanks capable of storing 1,000 gallons or more of gasoline or other flammable-explosive materials. This restriction appears in Section 2-2M of the HUD Handbook *Valuation Analysis for Single Family One- to Four- Unit Dwellings*. Most gas station storage tanks have a capacity far in excess of 1,000 gallons.

A Georgia study noted that commercial development in general can depress residential property value. However, this study examined homes located 0.5- to 1.0-miles distant. Several studies documented that commercial uses can depress nearby



property value but not at a distance. In King County, Washington commercial uses were found to depress residential properties within 300 feet but not beyond 1,000 feet or so.

#### 10. Fires and Explosions Associated with Gasoline Stations

The following excerpt is from a U.S. Department of Housing & Urban Development report and shows that while gas station fires-explosions may not be common, they do occur often enough to be a concern for nearby residents:

*“During the five-year period of 2004-2008, NFPA [National Fire Protection Association] estimates that U.S. fire departments responded to an average of 5,020 in service or gas station properties per year. These fires caused an annual average of two civilian deaths, 48 civilian fire injuries, and \$20 million in direct property damage.”*

**Homes directly across the street from this hypermart are downwind of prevailing winds and would be subject to fire and explosion damages.**

#### 11. Visual Impacts

Few homeowners would choose a hypermart as a positive in their viewshed. Well vegetated perimeters and other visual buffering methods can do much to reduce this impact. But, the buffer must be dense enough to achieve nearly 100% opacity. However, at the same time, trespassing after hours, increased littering, and increased rates of crime are associated with such buffers.

**Will trees that were cut down so as to allow a view of this hypermart from the interstate be replaced?**

**Conclusions: There are already ten hypermarts (combination gasoline, convenience store, and restaurant) located within a seven-mile radius of the proposed location. Do we really need one more in already existing residential community? If the rural environments in Albemarle County are to be preserved as described within the Comprehensive Plan, then this Boyd Tavern Market is simply in the WRONG LOCATION. Another interstate location where there is less environmental impact and water is more readily available would be more appropriate.**

**From:** MATTHEW J BASSIGNANI <Yhw3ETAy5@protonmail.com>  
**Sent:** Wednesday, January 29, 2020 1:04 PM  
**To:** Mako099 BASSIGNANI; Alan Higgins  
**Cc:** Donna Price; Planning Commission; Tori Kanellopoulos; Hays Lantz  
**Subject:** FW: SP2019-6 Boyd Tavern - agenda and staff report February 4

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Dear Albemarle County Board Supervisor member Ms. Donna Price, planning commission and planning staff (Tori Kanellopoulos):

My name is Matthew Bassignani. I live in Albemarle at 4653 Vista Court in Troy VA. This project will directly affect myself and my neighbors and I wanted to write and to express to you my complete **opposition** to this proposal.

We have a beautiful little neck of the county that is quite close to Charlottesville proper and all the conveniences that it has (e.g., gas stations, fast food and other amenities that this proposal is supposed to be touting as things that need to be placed at exit 129 at Boyd Tavern). The area is sometimes congested with traffic for those making their way to Charlottesville or other directions on route 64. But overall, we have a lovely, bucolic environment and neighborhood that is precisely my reason for living here. That is to say, it is AWAY from the hustle and bustle of Charlottesville and other developed areas of Albemarle. I am safe from the traffic jams, the noise, the refuse pollution, the light pollution, the car accidents, the gasoline fumes, the frustrated road-ragging drivers, etc. here in Troy. The proposal by South Creek Investments, Inc. will upend all of that and for no good reason other than to make some money. We do NOT need a gasoline station less than 9 miles from Charlottesville. We do not need fast food less than 9 miles from Charlottesville. We CERTAINLY do not need the added traffic and pollution. This proposal serves no practical purpose to the community here in Troy or surrounding communities given our proximity to all these services in Charlottesville 9 miles away. As far as I can tell it only serves the needs of South Creek Investments, Inc. What it does do is increase all the negatives that come with this proposed project as stated above (noise, traffic, pollution, etc.).

I cannot state any more forcefully that I OPPOSE this project. I am, unfortunately, out of town starting this Friday and I will miss the planning meeting. However, I. am an active participant in my right to vote and I will pay particular attention to those who support this project. I am counting on our country and it's elected officials to preserve my community as is and place themselves firmly on the side of your constituents.

Most sincerely,

Matthew J. Bassignani, MD

4653 Vista CT

Troy, VA 22974

**From:** Megan Nedostup  
**Sent:** Wednesday, January 29, 2020 3:58 PM  
**To:** Tori Kanellopoulos  
**Subject:** FW: Proposed gas station on 616

***Megan Nedostup, AICP***

(pronounced *nuh-DAHST-up*)

Principal Planner

Community Development Department

Planning Services

ph: 434.296.5832 ext. 3004

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**From:** Rick Randolph <[rrandolph@albemarle.org](mailto:rrandolph@albemarle.org)>  
**Sent:** Wednesday, January 29, 2020 3:30 PM  
**To:** Dana Tarrant <[keswickhoo@gmail.com](mailto:keswickhoo@gmail.com)>; Planning Commission  
<[PlanningCommission@albemarle.org](mailto:PlanningCommission@albemarle.org)>  
**Subject:** Re: Proposed gas station on 616

Dear Dana,

No such permit has been issued by the County. The first public hearing regarding the applicant's revised application is this Tuesday before the Planning Commission. Under Virginia law, regardless of what the Commission decides, the final decision whether to permit the SP rests with the Board of Supervisors at a subsequent meeting of that body.

Best regards,

Rick

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**From:** Dana Tarrant <[keswickhoo@gmail.com](mailto:keswickhoo@gmail.com)>  
**Sent:** Wednesday, January 29, 2020 10:05:48 AM  
**To:** Planning Commission <[PlanningCommission@albemarle.org](mailto:PlanningCommission@albemarle.org)>  
**Subject:** Proposed gas station on 616

CAUTION: This message originated outside the County of Albemarle email system. DO NOT CLICK on links or open attachments unless you are sure the content is safe.

Dear Sirs/Madams: It has come to my attention through recent emails that a special use permit has been approved for Tiger fuel to build a five pump gas station on state Route 616. I live on Mechunk Road which is just perhaps 25 yards from where the entrance to this gas station would be. This is already a very congested area and it is my understanding that the entrance to this gas station would be near the curve in the road with a potential for significant traffic accidents. The school bus stops at the end of our road and a number of children get on and off that bus twice a day during the week. I am very concerned about the water usage of this proposed gas station which will be much greater than the 670 gallons which they claim will be their daily usage. With a minimum of several hundred cars stopping there each and every day of the week, They can't possibly use that little water. And they state they would put on a

limiting device up to 700 gallons. No one will enforce that, especially not them. And what would happen if they use more? Is there a cut off of their water, certainly not! Tiger fuel is assuming people don't have common sense to think about what will happen. I would urge each and every member to reconsider and think about the long-term effects of having a filling station off of every exit of the interstate in Albemarle County. This is a rural community and it is just a shame to think what a filling station will do. Sincerely,  
Dana Tarrant

Sent from my iPhone

-----Original Message-----

From: Carol Crickenberger <[carol1540@comcast.net](mailto:carol1540@comcast.net)>

Sent: Tuesday, January 28, 2020 7:59 PM

To: Tori Kanellopoulos <[vkanellopoulos@albemarle.org](mailto:vkanellopoulos@albemarle.org)>

Subject: 616 market

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I live in Running Deer and do approve of the market at 616. I have to go to Zions for a small amount of groceries as Shadwell store is too difficult to park and get in and out. Thanks Sent from my iPhone

## **A Perspective on the Proposed Boyd Tavern Market**



**Mill Creek Market Showing One Less Pump than Proposed for the Boyd Tavern Market.  
This Mill Creek Market is over two miles from the nearest interstate, and all the patrons I spoke  
with this day (February 21, 2020) were local.**

**Dr. Hays Blaine Lantz, Jr.  
4640 Vista Ct.  
Troy, Virginia  
540-624-9109  
hayslantz@gmail.com**

**June, 2019  
Revised January, February 2020**

## Table of Contents

|   |    |
|---|----|
| Abstract .....  | 3  |
| Introduction .....  | 6  |
| Comparative Situations .....                              | 7  |
| Location, Location, Location .....                        | 8  |
| The Boyd Tavern Community .....                           | 9  |
| Availability of Water Resources .....                     | 10 |
| Shimp Engineering Letter of July 21, 2017 .....           | 12 |
| Evans Report .....  | 13 |
| Studies of Groundwater Resources .....                    | 17 |
| Current Database of Well Yields in Boyd Tavern Area ..... | 18 |
| Water Usage .....   | 18 |
| Comparative and/or Predictive Data .....                  | 19 |
| Unanswered Questions .....                                | 20 |
| Conclusions .....   | 21 |
| References .....  | 21 |

Video of Mill Creek Market (Tiger Fuel) Located More than Two Miles from I-64





**\*\*\*Reader Please Note:** Parts of this document appear in regular type and were drafted in 2017/2018 in response to various documents submitted by Shimp Engineering, including the original Special Use Permit. *Type which appears in italics builds upon my original response and is largely based upon the 2019 revised SUP.* Additional Comments have been added following the February 4, 2020 public hearing in which the Planning Commission voted unanimously to deny the SUP. If parts of this manuscript appear to be redundant, I apologize, for this has been revised and updated to reflect ongoing responses to many documents submitted, revised, and then resubmitted by Tiger Fuel, Shimp Engineering, and County Planners. Thank you for your time to review and if there are questions or comments, please feel free to contact me.

Dr. Hays Blaine Lantz, Jr. 2020  
4640 Vista Ct. Troy, Virginia 22974

### **Abstract**

The Boyd Tavern Market proposed by Tiger Fuel is a combination gasoline/convenience store/fast food restaurant (often defined as a hypermart in the literature) consisting of a one-story building of approximately 4,000 square feet, along with twelve gasoline pumps, and additional areas for eating outdoors and parking. This proposed venture has created much concern and consternation among residents of the Boyd Tavern community, as it would significantly and forever alter the rural environment of the community by bringing much increased volume of traffic, particularly off Interstate 64 at the 129-mile marker, along with associated noise and light pollution. Traffic would be routed off I-64 onto Black Cat Road, a narrow two-lane country road that already serves as a heavily traveled commuter route for people living in the far eastern part of Albemarle County and adjoining Fluvanna County. It is well documented both historically and scientifically, this hydrogeologic area of Albemarle County has issues of inadequate groundwater resources as it has produced many dry wells or wells of low water yields, which have been a challenge for residents of the Boyd Tavern community. **In fact, a number of dry wells and/or wells of low yield were drilled on the proposed site about fifteen years ago, but these were never reported by Shimp Engineering or Dr. Evans in his Tier II Groundwater review.** The applicant at that time withdrew their plans for a business venture, based upon these findings.

The Bellair and Mill Creek Markets, and now the Market at Ruckersville, used by Tiger Fuel for comparative and predictive purposes for traffic patterns and water usage, do not serve as comparable situations as none are an interstate market, and all are located miles from I-64. The Boyd Tavern Market would be only 0.1 miles from the interstate, and therefore is clearly an interstate market.

*Additional Response to Revised SUP Revision Dated December 10, 2019*

*Observations/Inferences: The revised SUP states the building will be about 4,000 square feet with five gasoline pumps and 10 nozzles. There has been a reduction of one gasoline pump from the original application. However, this still does not fit the definition of a rural market. Rural markets that sell gasoline are defined as having three or less pumps with a maximum of six nozzles. The justification for this minimal reduction in the number of pumps (i.e. stations with less than three pumps go out of business) is based upon speculation and little more, with no statistical or objective correlation provided by the applicant. Gasoline sales at hypermarts constitutes about 80% of their business.*

*The overall footprint of the building and site have changed little. The location of pumps, parking, lighting, and the building itself have been revised, but the overall original design is still there. For example, there are no reductions in the size of dining areas, food preparation and serving areas, number of tables, allotted parking spaces, or in the number of restrooms and associated plumbing fixtures. Traffic flow will largely be unaltered to and from the two-lane Black Cat Road and water consumption will unlikely be reduced from the original, but still largely unsubstantiated and elusive estimate of 800 gpd. The applicants are now projecting daily water usage of 644 gallons, with installation of a 700 gpd shutoff meter/valve. These water usage numbers are constantly shifting with no substantial data/evidence to support any of these metrics. In fact, none of these projections for water usage are consistent with national data for interstate based hypermarts. The increased volume of traffic with resultant noise, lighting, security, trash, etc. are still largely unaddressed. Route 250 and Black Cat Road are already gridlocked during commuting hours, and Rivanna Village and Glenmore will only add more traffic, for when Route 250 west toward Charlottesville is backed up, many drivers resort to travelling east on 250 instead to the I-64 Exit 129 Interchange.*

*The two sites (Mill Creek and Belair), which have been used before for comparative purposes in the original SUP, have not been included in the revised SUP. Why? Perhaps the applicant was well aware neither was an appropriate and/or comparable interstate location and thus had received much criticism for these choices; or could it simply be the data from the new site at Ruckersville are more favorable? Nevertheless, the Market at Ruckersville, which has been open for less than six months and is served by dual lane highways, is now the new site used for water consumption and traffic comparisons. **It should be noted these current comparative data for water usage are for four months only and do not include the heavily traveled summer months.***

*In the project narrative, there are two largely unsubstantiated and misleading quotes. The first of which, “A Tiger Fuel Market at this location would serve a portion of the county that is heavily traveled but largely underserved with appropriate services for the area.” Another quote is, “It also should be noted that many of the stations provided as examples with two or three gasoline dispensers continue to go out of business and undergo change of ownership.” Neither of these statements is backed up with any objective analyses or data and are a matter of opinion. There are currently ten (10) such hypermarts (defined as a combination of gasoline, convenience store, and restaurant) within a radius of seven (7) miles of the proposed site. Do we really need one more?*

*To justify the five pumps proposed for the Boyd Tavern Market, two stations are included in the revised SUP as being in the rural areas of the county and having four and five gasoline pumps – the Exxon at Louisa Road and route 250 three miles east of Charlottesville, and the BP off exit 107 in the Crozet area. Anyone travelling these two locations would not think of them as being rural, as both are heavily traveled by all types of vehicles, including 18-wheel tractor trailers, and are served by dual lane and/or multiple lane highways. The rush hour congestion at the intersection of routes 22 (Louisa Road) and 250 at the Exxon are well documented. Just ask the residents of Glenmore! To use these two sites as examples of rural stations is indeed a stretch. If these are great examples of rural stations with the number of pumps projected for the Boyd Tavern Market, then why are their water usage data not used as well, instead of a newly established market in Ruckersville? Because of the volume of traffic at the Route 250/Route 22 intersection, VDOT has recently added barriers on Route 250 to prevent traffic from exiting the Exxon Station directly onto Route 250. Additionally, I would hardly consider this a rural location as VDOT states the AADT (Annual Average Daily Trips) to be almost 15,000 vehicles.*

*Questions: Why is the 5<sup>th</sup> Street Market, which is owned and operated by Tiger Fuel, still not used for comparison data, as it is clearly an interstate -based location with years of usage data? I have requested these data repeatedly! Why is the proposed Boyd Tavern Market still not classified as an interstate- based station? Why is the Sheetz Station at Zions Crossroads still not used as a comparable situation, as it is comparable in footprint and support facilities? How can this part of Albemarle County be underserved when there are ten gasoline/fast food establishments within seven miles either way of the proposed market? If this part of the County is already heavily traveled with commuter traffic, why add to the congestion? If local traffic at Black Cat Road and Route 250 consists of an average of 9300 vehicles each day, where are the numbers for how much more I-64 traffic will add to this congestion?*

*Where are the statistical correlations or other objective analyses that stations with only two or three gasoline dispensers continue to go out of business? Are there not just as many other plausible variables which could account for and correlate to businesses changing ownership, other than the number of gasoline pumps? What role does predatory pricing from hypermarts play in such Mom and Pop businesses closing?*

#### **Additional Comments Following February 4, 2020 Public Hearing with Planning Commission**

1. Mr. David Sutton, President of Tiger Fuel, stated during the hearing that the reason he did not use data from the 5<sup>th</sup> Street Market is that “it would have been favorable for Tiger Fuel to have done so.” What - I am confused. If it had been of benefit, why would he have not used it? In fact, I have requested these data repeatedly from Shimp Engineering without any acknowledgement whatsoever.
2. Mr. Sutton also indicated he wanted the Market at Boyd Tavern to operate 24-hours a day for gasoline sales, so he could recoup his \$100,000 investment. Lighting would have to remain on

during this time as well he stated. Forget seeing the night sky from this community ever again. How does this concept of around the clock 24-hour gasoline sales fit the definition of a rural market/convenience store, as defined within the Comprehensive Plan? The proposed Boyd Tavern Market appears to be more of a convenience store disguised to largely support gasoline sales than anything else and to attract traffic from nearby I-64. Give an inch, take a mile seems to be the Tiger Fuel mantra not only here but anywhere such a market is approved! For example, at the Re-Store 'N Station on U.S. 250, an extension of hours of operation, additional fuel pumps and the ability to allow the fuel pumps to operate around the clock have been requested. These are called predatory practices!

### **Introduction**

From the time I first learned of the proposed Boyd Tavern Market by Tiger Fuel, I have become quite interested in the project as I live about 0.3 miles from the market site, just off Union Mills Road in Keswick Farms, and drive by the site almost daily. I have attended a number of meetings dating back to 2017, reviewed every document submitted by Tiger Fuel along with the County Planners' responses, and have researched groundwater studies and databases of well yields dating back 40-50 years.

My academic and professional background is in biology/environmental science and science education with degrees in biology from James Madison University and a doctorate from the University of Virginia. I do not pretend to be a hydrogeologist, but I do understand basic relationships and interactions of soil types, fault zones, water filtration/movement, surface water, ground water, aquifers, water quality, and general hydrology as they relate to environmental science and biodiversity. I have conducted and published water quality studies for Friends of the Shenandoah River; Friends of the North Fork of the Shenandoah River; Shenandoah University; and Lake Laura, Bryce Resort, Shenandoah County, Virginia. Although these were not primarily water quantity studies, they nevertheless had to touched upon groundwater resources as well, for water quality and quantity are certainly related issues.

I have spoken and asked questions at public meetings and hearings, emailed Shimp Engineering with questions, and have sought to gain a better understanding of the project over a period of about two years. I either get no answer, or generalized, nebulous, and evasive answers, which is frustrating when I would like details. I do not believe the applicant has been forthcoming with information, as was most evident during the recent community meeting on May 22, 2019, which was conducted at the East Rivanna Community Firehouse. After a brief talk by the President of Tiger Fuel extolling the virtues of the company, two visuals were shown with little to no explanation and then it was opened to questions. I had emailed Shimp Engineering (Kelsey Schlein) about one week prior to the Community meeting with a series of questions and received a reply about twenty-five minutes before the meeting convened, which gave me no time to digest her response and/or formulate additional comments and questions. Later in the week I followed up with additional email questions to Ms. Schlein, which centered mostly on the comparative data Tiger Fuel used from the Mill Creek and Bellair Markets and not the 5<sup>th</sup> Street Market; these data were used to calculate projected water usage at the Boyd Tavern Market. To date I have received no acknowledgment or response to this email.

As a greatly concerned citizen and potential neighbor to this project, I wanted to register my observations and inferences, as well as related analyses and syntheses for **opposing this project**. I am in no way opposed to business and industry, and am not anti-growth, as my family members and I have worked in construction, banking, medicine, education, retail, finance, and entrepreneurship. In fact, my propane is supplied by Tiger Fuel. **The biggest problem I have with this Boyd Tavern Market is simply location. I cannot think of a worse location for an interstate market than this site for the reasons I will detail below.** I have no problem with another site that is better suited for the volume of traffic and drain on groundwater resources this project will bring.

### **Comparative Situations**

Tiger Fuel representatives have often touted their experience with interstate-based gasoline/convenience store/fast food restaurants. Yet, none of the locations cited by them for their comparative and predictive data are located near an interstate, nor on a two-lane highway that already serves as a heavily traveled commuter route. The Bellair Market (2 miles from interstate I-64) and Mill Creek Market (3 miles from interstate I-64), which are often cited by them as interstate markets, are served by multilane highways, and are considerable distances off the interstate. In addition, there is no signage that would direct interstate travelers to either of these markets. In fact, if you did not know of the location of these two Markets, they would be difficult to find. I have visited both markets on a number of occasions over the past several years and the volume of traffic is nothing like what I see at interstate stations, such as their 5<sup>th</sup> Street Market or the Sheetz station at Zion Crossroads. The majority of customers I encounter at both Bellair and Mill Creek consist of local residents. However, online reviews of their 5<sup>th</sup> Street Market reveal things such as “the station is easy to get to from the interstate” and “it is usually a very busy station.” Why is this location not used for comparative purposes? In my opinion, neither the Mill Creek nor Bellair Market location serves as a positive or equivalent correlation. **Therefore, data extrapolated from these two Markets do not serve as a reliable or creditable foundation for interstate market/convenience store/fast food restaurant comparisons.**

*Additional Response to Revised SUP Revision Dated December 10, 2019*

*Observations: The Market at Ruckersville is now the site used for water consumption comparisons. It is a new location with little history of usage. Four months of water usage reveal a mean of 644 GPD, with no details of where on the premises (i.e. restrooms, dining, food preparation, etc.) this water was consumed. These current comparative data for this new site consist of four months only and do not include the heavily traveled summer months, nor is this an interstate-based location. In conversations with employees of both the 5<sup>th</sup> Street Market and the Sheetz station at Zions Crossroads, they readily acknowledge that much of their traffic and business consists of interstate travelers, often comprised of families who are heavy consumers of water in restroom facilities, food preparation, and drinking fountains. Little to no mention of the impact that interstate traffic will have on the Boyd Tavern Market appears in the revised SUP proposal.*

*Questions: Why is the 5<sup>th</sup> Street Market still not used for comparison data, as it is clearly an interstate -based location, as is the proposed Boyd Tavern Market? Why is not the Sheetz station at Zions Crossroads a comparable situation?*

### **Location, Location, Location**

The proposed Boyd Tavern Market would be the only commercial enterprise of note at mile marker 129 off I-64 exit, and is only 0.1 miles off the interstate exit. This exit routes traffic onto Black Cat Road, which is a narrow two-lane highway that already serves a large number of commuters and local traffic each day. The VDOT AADT data for this location is 9300. Additionally, a review of the site plan reveals the entrance to the Boyd Tavern Market would be on a blind curve. The traffic light at the intersection of routes 250 and Black Cat Road/Union Mills Road is often backed up 20-30 vehicles deep during the morning commuter traffic (7-9:00 am) and often extends back past the entrance to Keswick Farms. During the evening commute (4-6:00 pm) the traffic is often equally backed up in the opposite direction off the interstate exit. Noise levels along Union Mills Road and Black Cat Road are greatly elevated (up to 120 decibels) during the commuter rush hours, much due to jake-brake trucks. However, if one were to travel this route in the middle of the day they might be deceived as the volume of traffic then does not begin to mirror rush hour traffic. I travel this intersection often as it is my access to I-64 and route 250. So, this is an actual observation and not an inference. The president of Tiger Fuel stated during the May 22, 2019 community meeting the market would not service large diesel trucks, recreational vehicles, trailers, and other similar vehicles. How does he propose to stop them? Once on the two-lane Black Cat Road with a blind curve entrance/exit, where will these large vehicles turn around? A comparably situated interstate station/market (Sheetz) at the Zion Crossroads exit, with a comparable number of twelve gasoline pumps, is highly congested throughout most days with such vehicles. For example, on Tuesday June 4, 2019, I witnessed six large RV's and trailers at the gasoline pumps at Sheetz (more details on this later). How these large vehicles would navigate and turn on an already busy two-lane highway is going to be a significant challenge. The Sheetz station is serviced by a multilane highway (four lanes). **Traffic congestion on Black Cat Road and Union Mills will be a major issue.** I have attached recent video of the Sheetz station at Zion Crossroads, which I believe to be a comparable situation, that clearly demonstrates and reinforces this traffic congestion issue.

*Additional Response to Revised SUP Revision Dated December 10, 2019*

*Inference: Signage placed on Interstate 64 would clearly indicate the location of both an eating and gasoline facility at mile marker 129.*

*Questions: How will Tiger Fuel control the flow of traffic from the interstate, which will certainly contain large 18-wheel tractor trailers, RV's, travel trailers with tow-vehicles, box trucks, farm equipment and other similar vehicles? The height of the canopy at 14 feet 6 inches allows for all of these vehicles to enter the site. How much will traffic be impacted with such vehicles attempting to turn left out of the Market to get back to I-64? Does Tiger Fuel plan to propose the installation of a traffic light at this site, which will only add to traffic congestion*

## **The Boyd Tavern Community**

The Boyd Tavern Market would reside in a residential community, with surrounding homes less than fifty meters away. This is freely acknowledged by Tiger Fuel in their May 20, 2019 Shimp Engineering application document in which they also call the proposed Market a “community gathering place.” As I am sure Tiger Fuel knows at this juncture, the Boyd Tavern community does not perceive this as a community gathering place, but rather sees it as a community destroying venture. Mr. Greg Duncan, Esquire has over one hundred local signatures on a petition requesting this project be denied. The impact of interstate traffic on this “community gathering place” is in no way acknowledged or explained by Tiger Fuel. Obviously, the location of this Boyd Tavern Market is designed as a draw for interstate traffic. Greatly increased volume of traffic along with associated noise and light pollution will be introduced into this quiet neighborhood for much of the day and night. When asked at the May 22, 2019 Community Meeting whether Tiger Fuel would consider closing this market at dark, the answer was a resounding NO. Hours would extend to at least ten o’clock pm, according to the president of Tiger Fuel. The Tiger Fuel Markets at 5<sup>th</sup> Street and Mill Creek are open 24 hours, and Bellair is open until 11:00 pm. These adjacent families will never know any peace or quiet again, and I cannot imagine anyone wanting to purchase these properties in the future. So, these home/property values will necessarily be devalued because of the Boyd Tavern Market. There is much research to back this. The Markets at Bellair, Mill Creek, Ruckersville, Orange, and 5<sup>th</sup> Street Station are all located in commercial zones with many other businesses nearby, with residential housing being some distance removed. If one wants to change quickly the rural environment of the Boyd Tavern community, then this Market will accomplish that. **The communities of Boyd Tavern and other Tiger Fuel Market locations are NOT comparable.**

*Additional Response to Revised SUP Revision Dated December 10, 2019*

*Observations: Tiger Fuel has proposed the hours of operation to be 5:00 am to 11:00 pm (18 hours daily for seven days per week). Intermittent noise levels of 80-90 decibels and beyond can be anticipated, along with much increased lighting. Signage placed on Interstate 64 would clearly indicate the location of both an eating and gasoline facility at mile marker 129. None of the sites used for comparisons are located in residential communities.*

*Questions: When will nearby homeowners ever escape the increased noise and lighting issues just from increased traffic alone? How will the increased volume of traffic be handled without causing hazardous situations?*

### **Additional Comments Following February 4, 2020 Public Hearing with Planning Commission**

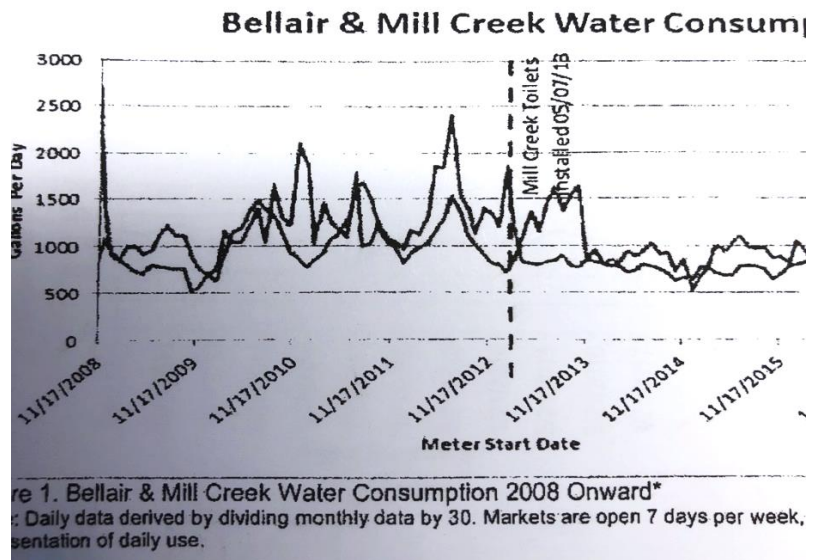
1. Elevated noise levels are a major concern for adjoining neighbors, about 50 yards across Black Cat Road and within sight of the proposed market. Diesel engines are most worrisome and LOUD. Engine braking (jake-brake) is prohibited in some residential areas because of the loud noise it creates. Typically, when an interstate or heavily traveled commuter route is located near a residential area this is when you will see signs prohibiting the use of jake-brakes. Typically, research shows the decibel level of jake-brakes to be the same as that of a large riding

lawnmower; but in early morning or late at night, the sound a jake-brake creates when engaged is very disruptive to local communities.

### Availability of Water Resources

The issue of water consumption in a water-challenged geographic/hydrogeologic area is a serious concern. **The original 800 gallons maximum daily consumption rate as proposed by Tiger Fuel appears to be based upon a questionable methodology and data set; to be unsubstantiated and even contradicted by their own existing correspondence and data; is in direct contradiction to other local and national reputable sources; and is never adequately addressed other than “we have experience in this area and water consumption will be about 800 gallons per day.”** Exactly what kind of number is the 800 gallons per day? How was it calculated? Is it a mean (an average)? Does it represent total water consumption or is it a subset? What is the time period, and what is the variance or standard deviation as water consumption in such an enterprise must vary widely throughout the year? How does this compare to the 5<sup>th</sup> Street Market location or Sheetz at Zion Crossroads?

The graph of water usage on page 2 (shown on right) of the Shimp Engineering letter dated July 21, 2017 to Mr. MacCall is at best nebulous and seems to show water consumption rarely ever drops to 800 gallons per day during any month at Bellair or Mill Creek. **Most data points are above 1000 and up to almost 2500 gpd.** In fact, in the letter Justin Shimp states, “To examine the accuracy of the 900 gpd for Boyd Tavern Market, we have reviewed usage data for the Mill Creek and the Market at Bellair.” The next paragraph contains, “Since the toilet replacements, water usage has stayed below 1,000 gpd for Mill Creek, versus the 1,100 gpd predicted by the standard calculations, and has only surpassed 1,000 gpd six times at Bellair, with a maximum of 1,107 gpd, significantly under the 1,350 gpd estimated.” These data are five years old and from the years 2013-2016. And neither site has the volume of traffic an interstate site would have.



Where did the 800 gpd metric then come from, or is it now 900? Or another number - 644? Or something much higher? What would more current data on water usage show? And why are these current data not presented? Why is the Sheetz station at Zion Crossroads never used as a correlation? It is similarly located just one exit east off the interstate, is comparable in its footprint, and is configured with a similar number of pumps, restroom facilities, seating capacity, convenience store, and restaurant.

*Additional Response to Revised SUP Revision Dated December 10, 2019*



*Inferences: It is more than obvious data from the Market at Ruckersville were used for the new comparison as these data are more favorable for Tiger Fuel. Signage placed on Interstate 64 would clearly indicate the location of both an eating and gasoline facility at mile marker 129 and attract a greatly increased volume of traffic. Tiger Fuel is now asking for a 644 gpd usage, with a 700-gallon meter/shutoff valve. This water metric is ever shifting and unsubstantiated with reliable data. National data on water consumption by comparable interstate markets far exceed any metrics cited by Tiger Fuel.*

*Questions: How are the data from the Market in Ruckersville applicable and/or reliable for projecting water usage at an interstate-based site? Why are these statistically unsupported and uncorrelated data used? What exactly is the anticipated water usage, as this number seems to be elusive and nebulous at best? When will nearby homeowners ever escape the increased noise and lighting issues just from increased traffic alone?*

### **Additional Comments Following February 4, 2020 Public Hearing with Planning Commission**

1. Mr. Sutton stated during his comments that a water storage tank would be installed on the premises for supplying water if the 700 gpd limit is reached and the valve shuts off water flow. **What?** How large is this tank? How is this consistent with a daily limit? Where on the architectural plans is this storage tank shown? Has this addition been approved by County Planners?
2. A representative of Shimp Engineering said by right they could use much more water than 700 gpd if they so desired. A number he cited was 1312 gpd. How is this consistent with a business that supposedly uses little water and is community oriented, as advanced by their spokespeople?
3. What is to prevent the installation of a bypass valve for the 700 gpd meter? Bypass valves are routinely used for such plumbing applications.

### **Shimp Engineering Letter of July 21, 2017**

The Shimp Engineering letter to Mr. Francis MacCall dated July 21, 2017, stated, “The best available guidelines for estimating water usage come from the Virginia Department of Health and the EPA.” A Virginia Department of Health guidelines chart (shown on next page) was attached to the letter (12 VAC 5-590, Waterworks Regulations). The chart showed that an Interstate or through highway restaurant water usage would be based upon the number of seats provided for patrons for dining. The proposed Boyd Tavern Market would have fourteen seats. Each seat would be allotted 180 gallons of water usage daily, based upon the Virginia Department of Health guidelines. **This would result in 2520 gallons (14 seats X 180 gallons = 2520) of water being used daily just for eating purposes alone.** This greatly exceeds and contradicts the projections from Tiger Fuel by at least a factor of 3. Additionally, the July 21, 2017 letter contained the statement, “The applicant shall install and maintain a tamper proof, flow restriction device limiting water flow to no more than 1,312 gpd.” Why then is the projected maximum daily consumption projected to be only 800 gallons?

Why does the applicant contradict their own conclusions by claiming they have experience with interstate markets, and clearly the proposed Boyd Tavern Market is an interstate location, but yet they want to use standard restaurant guidelines of water consumption, and not those of interstate or through restaurant/highway per seat?

Virginia Department of Health guidelines also stipulate an allowance of 10 gpd of water per vehicle served for service stations. This number is never factored into the 800 gpd metric anywhere. Mr. Shimp ignores the fact this Market is a gasoline station as well and states we should “treat the store as a mix of restaurant and convenience store.” No mention is ever made of gasoline sales. This definition allows him to dismiss entirely the 10 gpd water requirement per vehicle served at a service station, as recommended by the Virginia Department of Health. In a later document, he estimates over 500 vehicles per day for gasoline sales, which is further contradicted by state and national data. That in itself is a minimum of 500 gpd. No mention is ever made of I-64 traffic and its impact.

**If we were to use the Virginia Department of Health Guidelines shown on the right as Mr. Shimp recommends, then we could be looking at 3,220 gpd of water to operate this Market.**

**Evans Report**

Dr. Nick Evans of Virginia Groundwater LLC was commissioned to prepare a report for Tiger Fuel which was subsequently entitled *Boyd Tavern Market, TMP 94-39, Tier 3 Ground Water Assessment, Groundwater Management Plan* (dated March 31, 2017, Modified

May 4, 2018). In his report Dr. Evans’ findings were predicated entirely upon the premise that a maximum of 800 gallons of water would be consumed daily by the Market and consequently he built his entire report and key findings around this metric. Dr. Evans never explains why he chose to accept this metric of 800 gpd. Would his key findings change if indeed the Boyd Tavern Market were projected to use 2,520 gallons of water daily as predicted by other sources? Much earlier research has

VAC 5-590-690. Capacity of waterworks.

The design capacity of the waterworks shall exceed the maximum daily water demand of the system. Waterworks shall normally be designed on the following basis of water consumption. If deviations are made, they shall be based on sound engineering knowledge substantiated in the designer's report and approved by the division.

A. Daily water consumption rates (annual daily water demand):

|  |             |
|--|-------------|
| Dwellings, per person                                      | 100 gpd     |
| High schools with showers, per person                      | 16 gpd      |
| Elementary schools without showers, per person             | 10 gpd      |
| Boarding schools, per person                               | 75 gpd      |
| Motels at 65 gallons per person, minimum per room          | 130 gpd     |
| Trailer courts at three persons per trailer, per trailer   | 300 gpd     |
| Restaurants, per seat                                      | 50 gpd      |
| Interstate or through highway restaurants, per seat        | 180 gpd     |
| Interstate rest areas, per person                          | 5 gpd       |
| Service stations, per vehicle served                       | 10 gpd      |
| Factories, per person, per eight-hour shift                | 15-35 gpd   |
| Shopping centers, per 1,000 sq.ft. of ultimate floor space | 200-300 gpd |
| Hospitals, per bed   | 300 gpd     |
| Nursing homes, per bed                                     | 200 gpd     |
| Home for the aged, per bed                                 | 100 gpd     |
| Doctor's office in medical center                          | 500 gpd     |

been conducted on this hydrogeologic region. This is well documented in more comprehensive studies conducted by the Virginia State Water Control Board and DEQ (Sterrett and Hinkle, 1980; White, 2019) and previous investigations by Cross (1960) and Dekay (1972). Evans did not include any bibliography or cite information or data from any of these studies. Why not when the well yield data from these studies are much more inclusive and comprehensive? Seven hundred sixty-one (761) wells are included in the Sterrett and Hinkle DEQ study. Evans includes data for only eleven (11) domestic wells, all located within 2000 feet of the property. This is hardly an adequate statistical sample size from which to extrapolate much. **How is it his one sample of 11 shows well in the area to produce three times what they have historically produced?** And yet a number of dry wells have been drilled on the site, but Dr. Evans never includes them. He goes on to state, “The greater yields are likely due to increased bedrock fracture density in the Mountain Run fault.” He also commented there were no observable fissures or fractures on the proposed Boyd Tavern Market site. The wells cited in his report are at lower elevations, are mostly located on the opposite side (east) of the drainage divide, and are located often in draws and flats, which are more conducive to water production. How about the wells of lesser yield in this same area? Why were they not included? Are they due to the same fault zone? Why were well yield data included in the Evans report for the Everona limestone formation (a highly productive water source at some distance to the west of the Boyd Tavern Market), when the proposed market would be situated above a different underlying bedrock structure the Chandler Formation?

#### **Additional Comments Following February 4, 2020 Public Hearing with Planning Commission**

1. Why was the Tier III document of Dr. Evans the only groundwater study used to justify the County Planners “Factors Favorable” conclusion, when there exists a body of research and well data on this topic dating back fifty years, much of which contradicts his findings?
2. Who with expertise in hydrogeology peer reviewed this Tier III study and what were their comments?
3. What protocol was used to select only 11 domestic well sites out of hundreds, which were the foundation for this study, other than they had to be within 2000 feet of the proposed site? There are hundreds of such wells in other databases from DEQ, Virginia Water Control Board, the Timmons Group Study, which could have been selected. When I posed these questions above to individuals whose names Ms. Kanellopoulos had provided, the answer I received from them was quite disturbing - “I have no way of knowing. You might want to ask the author as his name and contact information are on the front page.”
4. Was this sample of 11 out of a population of 290, randomly selected to independently represent the total population of such wells? This appears not to be the case. The data points of well yield in gpm, selected by Dr. Evans were 45, 12, 20, 6, 30, 20, 60, 20, 0, 17, 23. Why is this his only sample? The data points of 45, 60, and 30 are clearly outliers, which badly skew the data in his favor. **A sample size calculator shows that a sample of 166 is needed to have a 95% confidence level.**
5. Why did Dr. Evans not include more descriptive statistics of his one sample to include minimally standard deviation and error term? I did the calculations (see table below) and the

mean for his one sample is 23.818 (3 times the historical and statistically documented mean of 7.7 gpm). The standard deviation for Dr. Evans one sample is 16.85, which further indicates there is a low confidence level for repeating these results and a large error term (42.96) at the 95% confidence level. Depending on the field of study, a confidence level of 95% (or statistical significance of 5%) is typically used for data representation. What statistical significance is there for the 11 wells among hundreds that could have been chosen? Little. Data outliers as appear in the one sample can greatly skew and bias statistics in one direction or another.

| Confidence Level              | Margin of Error           | Error Bar |
|-------------------------------|---------------------------|-----------|
| 68.3%, $s_{\bar{x}}$          | 23.818 ±5.081 (±21.92%)   |           |
| 90%, 1.645 $s_{\bar{x}}$      | 23.818 ±8.358 (±36.05%)   |           |
| 95%, 1.960 $s_{\bar{x}}$      | 23.818 ±9.958 (±42.96%)   |           |
| 99%, 2.576 $s_{\bar{x}}$      | 23.818 ±13.088 (±56.46%)  |           |
| 99.9%, 3.291 $s_{\bar{x}}$    | 23.818 ±16.721 (±72.13%)  |           |
| 99.99%, 3.891 $s_{\bar{x}}$   | 23.818 ±19.77 (±85.28%)   |           |
| 99.999%, 4.417 $s_{\bar{x}}$  | 23.818 ±22.442 (±96.81%)  |           |
| 99.9999%, 4.892 $s_{\bar{x}}$ | 23.818 ±24.855 (±107.22%) |           |

6. Who visited these data well sites to validate the data? Did Dr. Evans actually conduct well water yields by drawing water? Did he evaluate the topography, note the presence or absence of fissures or fractures, and whether the topography was a major factor correlated to water yields, which we know it is? None of these questions were ever addressed or results stated in the Evans report; but when questioned, Dr. Evans stated he had walked the sites, but he provided no further details or descriptions.
7. Why would the 11 wells included in the Evans Tier III study show yields three times above the historical mean of those in the surrounding community, and the databases of DEQ, Virginia Water Control Board, and the 1981 study of Sterrett and Hinkle? Could it be that 3 of the wells selected are near or in the Everona Limestone Formation (which produces wells of much higher yields); two are located in drainages and flats not far from the Everona Formation; and all are on the opposite sides of the drainage from the proposed Market. Why are there no well data from the same side of the drainage for the Boyd Tavern Market?
8. According to the Tier III Study, summary data were examined from 290 wells in the County database that were constructed in the same bedrock formation as underlies the property. **According to Evans the average yield of these wells is 7.7 GPM (gallon per minute), which is low to moderate relative to average yields from other geologic formations in the county. This 7.7 gpm statistic is gleaned from earlier studies. Evans went on to further state that dry holes or zero GPM wells are under reported in the database. A sample size**

calculator shows that Dr. Evans should have used a sample of 166 wells to have a 95% confidence level from the 290. The sample of 11 comes nowhere close.

9. A nearby Virginia Department of Highways facility, which is within 2000 feet, shows two wells on their site with yields of 1 and 8 gallons per minute respectively (Sterrett and Hinkle, 1980). Why were these data not included in the Tier III report? Or the data from residents along Mechunk Road and surrounding community, who have reported yields of 0-5 gpm? Or my well data of less than 5 gpm? How many Boyd Tavern homeowners were interviewed for their input on groundwater issues, well yields, and the water availability problems they have experienced and deal with on a daily basis? Many residents report reduced and compromised water usage due to fear of their wells going dry. Having spoken to many of my neighbors who live near this proposed facility and who have wells with low flow rates, the availability of water is a major concern for them for opposing the Boyd Tavern Market. One neighbor on Mechunk Road had to have two wells fracked just to get a flow of water, and even then, it was in the 1-5 gpm range. Why were these data ignored?
10. The findings in the Tier III study appear to contradict 40-50 years of independent research on well yields in the Chandler Formation, which is the geologic structure under the proposed site. Hundreds of wells exist countywide within the Chandler Geologic Formation, which historically has produced wells of low yield on average. The Boyd Tavern Market would be situated in the Chandler Formation.
11. I could have randomly selected 11 wells from the most recent Department of Environmental Quality database of well yield, which was provided by hydrologist Mr. Brad White, Manager of the Groundwater Characterization Program, Virginia, in which I could show diametrically opposite findings. Mr. White had provided a current database for water yield for one hundred eighty-seven (187) wells, all located within two miles of the proposed Market. All were located in similar bedrock formations. Eighteen of the wells were reported as dry wells. The mean for water yield for these 187 wells was 6.12 gpm. One hundred fourteen (114) of the 187 wells in this database had yields of 5 gpm or less. The standard deviation for these 187 wells was 8.458, indicating rather high variance, which was largely due to five outliers above 40 gpm.
12. In another extensive report, Sterrett and Hinkle of DEQ concluded – “When the topography of a site is at the highest point in an area, wells drilled in similar situations have had poor yields and had to be drilled deep (Sterrett and Hinkle, 1980).” The Boyd Tavern Market is the highest point in the community. This is further supported by local residents who confirm the number of dry wells that were drilled on the site about fifteen years ago.
13. In December 2017, another extensive study was published by the Timmons Group *Water and Wastewater Facilities Plan for Keswick Hall and Golf Club*. In the Timmons study the following was stated, “There are two geologic formations located in the Keswick area. A majority of the Keswick property is underlain by the Chandler Formation, which does not contain prolific subsurface anomalies conducive to high groundwater yields.”

Conclusions for the Tier III Study: The Tier III study and support of the county planning staff do little to dispel the alarming firsthand experiences and concerns of the community with regards to water quantity. **No test wells have been drilled recently on the proposed site, and with less than**

**independent and/or statistically significant data provided in the Tier III study, there is little confidence in the findings within Factors Favorable.** So, we really have no idea of water availability and/or impact on the local community for this hypermart. But we do know this - Wells in this hydrogeologic area of the county have historically underperformed and groundwater resources have always been a challenge. We live it each day, wondering if we will have water. This has not changed because of one study bought and paid for by Tiger Fuel.

### **Studies of Groundwater Resources**

Among the findings/conclusions in the independent Sterrett and Hinkle study (1980) were (1). “Wells developed in the metasedimentary rocks in the eastern part of the county offer the lowest ground water potential. **Over half the wells produce less than 5 gallons per minute and water bearing fractures are not encountered deeper than 100 feet.**”

Fifty-four percent (54%) of wells drilled in the Boyd Tavern area of Albemarle County have historically produced less than a flow of five gallons per minute, and of these many produced flows of three (3) gallons per minute or less. (2) The belts underlying this portion of the county have significantly lower ground water potential than the remainder of Albemarle County. To date, no test wells have been drilled on the Boyd Tavern Market site that could be used for predictive purposes. Dr. Evans cites the Mountain Run Fault Zone and its proximity to the proposed Market. However, “The permeability of fault zones impacts diverse geological processes such as hydrocarbon migration, hydrothermal fluid circulation, and regional groundwater flow, yet how fault zones affect groundwater flow at a regional scale (1–10 km) is highly uncertain (Malgrange and Gleeson, 2014).”

The bedrock associated with the aquifer underlying the proposed site is labeled as cpcl (abbreviation used to indicate geologic age of a water bearing unit – aquifer) and historically cpcl locations have very low yields countywide (DEQ, Sterrett and Hinkle, 1980). Numerous wells in cpcl formations were reported as dry wells. My well and others along Fox Hunt Drive in Keswick Farms fall into this cpcl category!

### **Additional Comments Following February 4, 2020 Public Hearing with Planning Commission**

1. Dr. Evans stated during the Planning Commission hearing that drilling a well or wells on the Boyd Tavern Market site would probably have no impact on wells in the surrounding community. Probably? Certainly not very reassuring! This represents to me a rather bold and somewhat reckless statement when there are few facts to support this and many unknowns regarding this site. **No exploratory wells have been drilled recently on the property, and many dry wells were drilled on the site about fifteen years ago.** So how deep the aquifer is in this location, the type of aquifer (confined, unconfined, or semi-confined), the rate and volume of groundwater recharge, percolation rates of soil, bedrock porosity, presence of fractures or fissures, etc. are still unknown variables. The history of the Boyd Tavern Community with wells of low yield or dry wells would seem to speak to their interconnectedness, not separateness.
2. According to the United States Geological Survey, “Another reason that wells “go dry” is the lowering of the water table by increased pumpage in the immediate area. Housing developments



with small lots and individual wells have been built in many rural areas. If the aquifer is low yielding so that pumping causes a large drawdown, a cone of depression will develop around each well. Thus, several domestic wells close together can create a steady lowering of the water table if pumpage exceeds the natural recharge to the system. A third major reason that rural wells "go dry" is the installation of *larger capacity wells for municipal, industrial, or agricultural purposes adjacent to residential areas*. The increased withdrawals may cause large widespread cones of depression that intersect one another and cause general water-level declines that affect nearby domestic wells."

3. The eastern Albemarle County geologic belt bordering Fluvanna and Louisa counties and underlying the communities of Chobham, Boyd Tavern, Blenheim, and Howardsville offer significantly lower ground water potential than other geologically central belts in the county. Fifty-four percent of all wells in this eastern belt yield less than 5 gpm and 70 percent produce less than 10 gpm. Only a small fraction of wells drilled deeper than 200 feet encountered water-bearing fractures. **Wells drilled in this area are generally suitable for domestic use only.** As a rule, larger yields are not available. So, without any exploratory wells, Tiger Fuel has no idea of the potential of groundwater resources underlying the property, or whether the wells are interconnected.
4. **Impact of drought in Virginia.** The U.S. **Drought** Monitor started in 2000. Since 2000, the longest duration of **drought** (D1-D4) in **Virginia** lasted 103 weeks beginning on May 1, 2007 and ending on April 14, 2009. The most intense period of **drought** occurred the week of August 20, 2002 where D4 affected 30.53% of **Virginia** land. Residents of the Boyd Tavern community remember this drought period well as wells failed, and/or had greatly reduced flow rates.

#### **Current Database of Well Yields in Boyd Tavern Area**

Mr. Brad White of the Virginia Department of Environmental Quality and Manager of the Groundwater Characterization Program recently provided a current database of water yield of one hundred eighty-seven (187) wells, all located within two miles of the proposed Market. All were located in similar bedrock formations. Eighteen of the wells were reported as dry wells. The mean for water yield for these 187 wells was 6.12 gpm. One hundred fourteen (114) of the wells in this database had yields of 5 gpm or less. A flow rate of 5 gpm is considered the absolute minimum for an adequate well for a single household. The standard deviation for these 187 wells was 8.458, indicating rather high variance, which was largely due to five outliers above 40 gpm.

*Additional Response to Revised SUP Revision Dated December 10, 2019*

*Observations: Water usage data from the Market at Ruckersville were used for the new comparison as these data are more favorable for Tiger Fuel. When asked to weigh in on this subject of water usage for the Boyd Tavern Market, Mr. Josh Kirtley of the Virginia Department of Health commented in an email to Tori Kanellopoulos, "I do not believe it is VDH's role to comment as to the suitability of a proposed project with regards to potential groundwater impacts." Yet this comment from Mr. Kirtley was used by county staff to justify the Tier III study as the sole basis for inclusion in Factors Favorable category.*

*Questions: Why does the topic of the availability of ground water resources remain an elusive one? Why do the water demand numbers keep changing, as we have far different projections of usage in the two SUP applications and their associated studies?*

### **Water Usage**

How much water does the average person use at home per day? Estimates vary, but each person uses about 80-100 gallons of water per day, according to various sources. The largest use of household water is to flush the toilet, and after that, to take showers and baths. Boyd Tavern homeowners are however incredulous when shown these numbers, for they must conserve everyday of their lives and claim they do begin to approach these levels of water usage. Many report showering on odd or even numbered days, wash clothes infrequently, and avoid washing of cars, watering lawns, etc.

When both the internet sites for the United States Geologic Survey (USGS) and Environmental Protection Agency (EPA) estimate that a person uses 75 gallons of water per day and an average family of four 300 gallons per day, how can it be that a business that will draw hundreds of customers daily will only use 800 gallons? The president of Tiger Fuel responding to my questions about this during the May 22, 2019 community meeting, stated, “all water used by the facility will go back into the drain field and then be returned to the aquifer.” Anyone familiar with the hydrologic cycle knows this is certainly not the case. Dr. Evans stated in his review that only about 15% of annual precipitation would contribute to groundwater recharge. This would amount to about 6.6 inches annually. And he went on to state water from the drain field would return to the aquifer. But he never addresses the impact vegetation in the form of trees and their root zone will have on recharge. Because of the topology of the site being the highest point around, “there would be little hydraulically-driven recharge from off-site.” This would imply the drain field for the Market by the force of gravity would feed downhill and off-site, and the source of groundwater for the facility would come from adjoining properties. Because of the topography of the site being the highest point in the area, wells drilled in similar situations have had poor yields and had to be drilled deep (Sterrett and Hinkle, 1980).

### **Comparative and/or Predictive Data**

For several years I have observed the operation at the Sheetz location at Zion Crossroads during my shopping forays in that area. I am one interstate exit removed from this location. More recently, my observations are based upon the belief this location and business model are very similar to what is being proposed for the Boyd Tavern Market and therefore would give me a realistic assessment of traffic patterns and water consumption. There are those who will argue this Sheetz station is not comparable to what is being proposed as it is surrounded by many other businesses that attract consumers. But, this is true also of Bellair, Mill Creek, and 5<sup>th</sup> Street Market locations as well. It is also true there are three other comparable gasoline/convenience stores/fast food restaurants at the Zion Crossroads exit. And obviously, they dilute the volume of traffic to Sheetz. Additionally, it has been my observation the bulk of the Sheetz traffic is interstate traffic, as upon exiting the Sheetz station the vast majority of vehicles return to Route 15 south, toward I-64. It is generally acknowledged interstate travelers are heavy users of restroom facilities, and the data below reinforce that. Employees at Sheetz



have supported this inference as well. **This Sheetz interstate location is certainly a better match than either the Bellair, Mill Creek, or Ruckersville Markets.**

I began to collect data on the number of vehicles serviced at the gasoline pumps, along with the number of large recreational vehicles and trailers, and the number of people using the restroom facilities during timed five-minute intervals at this Sheetz location. I purchase gasoline at this Sheetz location and often use the facilities and travel here for shopping at various times of the day and night, and average 3-4 trips each week typically to Sheetz, Lowes, Walmart, and nearby restaurants. It is during these times I have observed and collected these data. I purposely avoided data collection at peak hours of 7-9:00 am and 4-6:00 pm, as the Sheetz website showed these hours to be their peak business hours, and I certainly did not want to skew the data and/or be accused of cherry-picking data. Many online reviews by customers centered on how busy the location was and the lack of cleanliness of the restrooms.

The methodology I used was to record the date and time, and to count every passenger vehicle, and separately large recreational vehicles and trailers, that purchased gasoline and left, or were at a pump, or were in-line at the end of this five-minute interval. Often, vehicles were lined up two-deep at a single pump at the end of the five minutes. Other periods of observation included counting the total number of individuals who entered a restroom, with the assumption they used urinals and/or commodes, as well as sinks for washing hands. Based upon water consumption for these restroom facilities only, I calculate conservatively that each person would use 1.5 gallons of water per restroom visit.

The time period for my observations and data collection was from March to June 2019. The majority of the observations were during daylight hours between 9:00 am and 3:00 pm. Based upon a total of twenty (20) five-minute observations to this date, the mean for vehicles serviced was 22.38 per five minutes and the standard deviation was 7.37. The mean for the number of persons entering a restroom per five minutes was 23.55. And the standard deviation was 8.03. Based upon these calculations, the following conclusions can be extrapolated:

1. For every sampled five-minute interval, 35.32 gallons of water were used just for restroom facilities (23.55 persons x 1.5 gallons of water usage).
2. For every sampled five-minute interval 22.38 vehicles (both recreational and passenger vehicles) were either serviced, or at a pump, or in-line for gasoline.
3. **Similar observations and data have been gleaned from the 5<sup>th</sup> Street Market.**

### Unanswered Questions

1. How will Tiger Fuel effectively address congestion issues on an already busy two-lane highway, as no realistic solutions are now proposed?
2. How much traffic from I-64 will be added to the already 9300 AADT for Black Cat Road in front of the Market?
3. How much traffic will an online ordering app and mobile food option add to this congestion?  
“CHARLOTTESVILLE, Va. (CBS19 NEWS) -- Tiger Fuel will be rebranding as it celebrates its 29th anniversary. The Market convenience stores and All-American Car Wash locations will undergo a makeover in the coming weeks. The company will also introduce a new loyalty program and **a new mobile app so customers can gain rewards and make mobile orders.** **"Convenience is really important for us and our customers, so we thought it was important to implement this online ordering program and with our new rewards program that will be rolling out in the first quarter of 2020, we'll have some great incentives in the mobile app,"** said Tiger Fuel's Director of Marketing Sarah Whitney. Whitney said they aim to have everything rolled out by the spring 2020.
4. How will large recreational vehicles, trailers, and similar vehicles be stopped from using the I-64, 129 Exit, as Tiger Fuel states they will not be serviced at this Market? How will such vehicles exit the Market and turn left toward I-64?
5. What will be the hours of operation, as Mr. Sutton wants the gasoline pumps and associated lighting to operate 24 hours per day?
6. Does Tiger Fuel plan to request a traffic light at this location?
7. What security will be onsite 24 hours per day?
8. How will light and noise levels be minimized and controlled?
9. Who will collect litter that is bound to accumulate near the station and adjoining neighbors' yards?
10. Where did the 800 gpd water metric come from and how exactly was it calculated?
11. Are any of the 900, 800, 700, or 644 gpd estimates realistic ones, given the proposed Boyd Tavern Market is clearly an interstate Market and these numbers are for rural stations?
12. Why were water consumption data not used from the 5<sup>th</sup> Street Market or Sheetz for comparative purposes, rather than the Bellair, Mill Creek, or Ruckersville locations?
13. How large a water storage tank does Tiger Fuel propose to install to circumvent the daily allowance?
14. Is this supplemental water storage tank approved by County Planners?
15. Is this storage tank simply a way around any shutoff valve monitoring system?
16. What is to prevent the installation of bypass valves to any metered shutoff system?
17. Recharging the aquifer is mentioned in the Evans report, but there are no attempts to quantify it. Where is a more detailed explanation of the projected volume of this recharge?
18. Why was the Evans study based upon an 800 gpd consumption metric only?
19. Why were well yield data included in the Evans report for the Everona limestone formation (a highly productive water source to the west of the Boyd Tavern Market), when the proposed market would be situated above a different underlying bedrock structure?
20. Why were not more well yield data included in the Evans report when the data clearly were available?

21. How many wells does Tiger Fuel plan to drill on the property to get the water yield they will need?
22. How will water usage data be collected, validated, and reported for the Boyd Tavern Market if the SUP is approved?
23. Will Tiger Fuel be levied a monetary fine if they exceed the 700 gpd limit?
24. With ten such markets within a seven-mile radius, is one more really needed?
25. How much would the water consumption and traffic increase for the Sheetz station at exit 136, if it were not for the fact there are three other comparable gasoline/convenience stores/fast food restaurants at that same interstate location to absorb some of the traffic?
26. Is Tiger Fuel and/or Albemarle County prepared to compensate landowners for wells that fail as a result of the water demands of the Market?

### **Conclusions**

*For the reasons and support cited above, the proposed Boyd Tavern Market is simply in the wrong location. It adds nothing of value to the community, that is not already available nearby. With ten such hypermarts within a seven-mile radius, do we really need one more? Increased traffic congestion, noise, lighting, and water consumption are unacceptable to the Boyd Tavern Community, who will bear the brunt of this ill-conceived project. The revised SUP does little to address the primary issues of greatly increased traffic with associated noise, lighting, security, and water usage. To refer to this proposed location in glowing language such as a “community gathering place to have a cup of coffee in an underserved area” does little to minimize the many concerns of the community and, in fact, merely further adds fuel to the debate. The residents of the surrounding community feel this is nothing more than a profit-driven enterprise with little regard to how it will impact the environment, groundwater resources, or the surrounding community. And pertinent information from the applicant is often not provided, or if it is, it is misleading, contradictory, or less than candid.*

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**From:** Pat Young <youngpc@comcast.net>  
**Sent:** Tuesday, July 2, 2019 11:57 AM  
**To:** Tori Kanellopoulos  
**Subject:** RE: SP2019-6 Market at Boyd Tavern Review Comments

Tori, thank you for the updates. We all appreciate receiving them.

I did want to weigh in on this matter. I am totally, one hundred percent opposed to this gas station/market being located on 616, across from Mechunk Acres. I have lived on Mechunk Road for 31 years. I have never been afraid here. To my knowledge we have never had anything happen that meant the police needed to be called. If the gas station/market is located in the proposed location, that will all change. It will bring undesirables to the area at night; traffic on 616 will increase; tractor/trailer traffic will be a problem. This is definitely not the proper place for a gas station/market. We are rural, quiet, and SAFE now.

Please pass my comments along to the appropriate person.

Thank you,  
Pat Young  
4770 Mechunk Road

**From:** Jill Farrell <k9lcsw67@gmail.com>  
**Sent:** Thursday, June 27, 2019 12:28 PM  
**To:** Tori Kanellopoulos  
**Cc:** Rob Farrell  
**Subject:** Re: SP2019-6 Market at Boyd Tavern - Updates

Hello Tori-my name is Jill Farrell. I live on Mechunk Rd and am very opposed to the proposed market on Black Cat Road for the following reasons:

- The traffic on Black Cat Rd is already very heavy and it is often difficult to get out of our road. Increasing traffic will likely result in more congestion and delays.
- Traffic going to and leaving the market will require left turns into very heavy traffic. The curves and lack of turn lanes will increase congestion and the likelihood of accidents.
- We love our night sky in this rural area. The lights required by this project will intrude upon that benefit of living in a rural area.
- The risk of over use/depletion and contamination of our water supply from fuel run off.
- This project has 12 fuel pumps-that is more than is needed to serve members of our community, and will attract even more nonlocal traffic from I-64.

Please feel free to call me if needed at 434-962-3599.

Jill H Farrell

Sent from my iPhone

**From:** gregdun@ntelos.net  
**Sent:** Wednesday, June 26, 2019 11:26 AM  
**To:** Tori Kanellopoulos  
**Cc:** gregdun@ntelos.net; Pam Riley; 'Richard Randolph'  
**Subject:** FW: excerpt from 10 2 2006 ARB minutes and minutes from 10 3 2006 PC meeting  
**Attachments:** 2006\_10\_03\_Planning\_Commission\_Minutes.pdf

Good Morning Tori: A recent statement from the applicant for the proposed gas station on Black Cat Road that it did not seek to draw traffic off Interstate 64 struck me as stretching credulity past its breaking point. The applicant clear-cut most of the trees on the property in 2006 during an earlier application so that its proposed gas station could be seen clearly from the interstate. The ARB was "shocked and very disappointed" by that action. *See, below.* So much so, that it sent Chuck Lebo (then an ARB member) to the Planning Commission to highlight this activity. Minutes of the Planning Commission meeting are attached. (I encourage you to read the comments from the public on this proposed gas station in the attached minutes). Clearly, the applicant wants to increase traffic on our country road from the interstate and burden our resources from the increased numbers of people using them.

On this point, in the recent appeal of the County's zoning determination to the Board of Zoning Appeals (AP201700003), the County noted that the applicant's engineer based his water consumption projections on an assumption that traffic would not increase due to the market, but properly noted and stated "of course, the proposed market would exist precisely to generate customer traffic. In other words, the success of the appellant's business depends on its engineer being wrong."

I mention these things because I know you have had limited exposure to this matter and my neighbors and I have been exposed to it far too long.

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

Best Regards,

Greg

**From:** Karen S Johnson <karen\_07@yahoo.com>  
**Sent:** Monday, June 24, 2019 11:46 AM  
**To:** Tori Kanellopoulos  
**Cc:** gregdun@ntelos.net  
**Subject:** Re: SP2019-6 Market at Boyd Tavern - Updates

Tori,

Thanks you so much for putting this email together. I appreciate your hard work which makes this process so much easier for me.

My property joins the site of the proposed Market At Boyd Tavern. Because of that, I have the following concerns.

1. My biggest concern is the road safety. Rt 616 is already congested during the normal commute times and it is difficult for local residents to exit and enter their driveways and/or local streets. The location of the proposed site presents some major safety challenges for entering and exiting. It is difficult to impossible to see oncoming traffic because of how the road is laid out.

2. Our area has a history of a shortage of water access during drought conditions. Many of the wells are barely able to keep up with individual household use. This facility would put added stress on a system that is already pushed to the limits.

3. I am on the downhill side of the location and any "runoff" issues from petroleum products would affect me directly.

4. I value my access to the night time sky. Light pollution will be a significant issue for me because of my proximity to the location. We have put our property into a conservation easement to help preserve the rural character of the community. This addition will impact that character significantly and, I feel, it is unfair to those of us who have worked so hard to preserve it.

5. The community does not want to encourage traffic from off of the Interstate. It is difficult enough when there are accidents on I-64 and traffic must be re-routed to Rt 250. I truly believe that this is a "quality of life" issue and would ask that all involved please consider how they would feel if it were their community.

Thank you for allowing me to so easily express my concerns and know that they will be represented. I appreciate what you do for our community.



Best Regards,

Karen S Johnson  
4460 Richmond Road  
Keswick, VA 22947  
(717) 319-2353

**From:** gregdun@ntelos.net  
**Sent:** Friday, June 21, 2019 10:17 AM  
**To:** Tori Kanellopoulos  
**Cc:** gregdun@ntelos.net; Pam Riley  
**Subject:** proposed gas station on Black Cat Road  
**Attachments:** Tiger Fuel-Lease.pdf

Good Morning Tori: It was nice speaking with you yesterday. Pursuant to your request, attached please find a copy of the "Ground Lease" for the property on Black Cat Road(without exhibits). As you can see, this document provides that "Southcreek Investments, LLC" is the owner of the subject parcel. I have not performed a title search and have no independent knowledge of the chain of title at this time.

Paragraph 2 states that this lease "shall commence on the first day of the Commencement Month as defined in paragraph 5.B below." Paragraph 5.B states in bold letters "**this Lease shall commence the first day of the sixth month (herein "Commencement Month") following final site plan approval by all appropriate governmental and utility authorities...**" Thus, it would seem that this "lease" has not yet commenced and no one is paying any rent for this land pursuant to any lease. If you have any questions, or if I can be of further assistance to you, please do not hesitate to give me a call.

Best Regards,

Greg

Gregory S. Duncan, Esquire  
222 Court Square  
Charlottesville, Virginia 22902  
(434) 979 8556

*The content of this email is confidential and intended for the recipient specified in message only. It is strictly forbidden to share any part of this message with any third party, without a written consent of the sender. If you received this message by mistake, please reply to this message and follow with its deletion, so that we can ensure such a mistake does not occur in the future.*

**From:** gregdun@ntelos.net  
**Sent:** Thursday, May 23, 2019 4:53 PM  
**To:** Tori Kanellopoulos  
**Cc:** gregdun@ntelos.net; Pam Riley  
**Subject:** RE: Community Meeting for Special Use Permit for Boyd Tavern Application  
**Attachments:** Shimp-Letter.pdf

Good Afternoon Tori,

Thank you for the link to the initial documents related to this application. Sorry I did not get the chance to speak with you after last evening's community meeting. One of the first things I would like to mention is the amount of water to be used by this ill-conceived project. The applicant stated that it estimated it would use approximately 800 gallons of water per day. That is exponentially more than our area can stand for any extended length of time. Worse, however, is the fact that the applicant directly contradicts this estimate. On July 21, 2017, in an earlier discussion with the County about this project, the applicant's engineer stated in a letter to Francis MacCall that "**the best available guidelines for estimating water usage come from the Department of Health and EPA.**" A copy of this letter is attached. *Id.*, p. 1. This letter stated that the proposed gas station would have 14 seats for people to eat. *Id.* at p. 2. The Regulations are attached to the letter. While the applicant desires that its development be judged under the "Restaurants, per seat" category, clearly, the more appropriate category is "Interstate or through highway restaurants, per seat." *See*, attachment at p. 5. Under this state regulation, the proposed gas station/restaurant will consume 2,520 gallons of water per day, before the water used by the applicant's employees is added in. ( $14 \times 180 = 2,520$ ). This is the result dictated by "**the best available guidelines.**"

Kindly give this to Mr. Padalino when he returns from vacation. If you have any questions, please do not hesitate to let me know.

Best Regards,

Greg

## **A Perspective on the Proposed Boyd Tavern Market**



**Sheetz Station at Zions Crossroads Showing Same Number of Pumps as Planned  
for the Boyd Tavern Market  
Is this the Future of Boyd Tavern?**

**By Dr. Hays Blaine Lantz, Jr.  
4640 Vista Ct.  
Troy, Virginia  
540-624-9109  
hayslantz@gmail.com**

**June, 2019  
Revised January, 2020**

**Table of Contents**

Abstract ..... 4

Introduction ..... 5

Comparative Situations ..... 6

Location, Location, Location ..... 7

The Boyd Tavern Community ..... 8

Availability of Water Resources ..... 9

Shimp Engineering Letter of July 21, 2017 ..... 10

Evans Report ..... 10

Studies of Groundwater Resources ..... 11

Current Database of Well Yields in Boyd Tavern Area ..... 12

Water Usage ..... 12

Comparative and/or Predictive Data ..... 13

Unanswered Questions ..... 14

Conclusions... ..... 15

References ..... 15

**Please note:** Parts of this document were drafted in response to the original Special Use Permit and appear in regular type. *Type which appears in italics builds upon my original SUP response and is largely based upon the revised SUP.*

## Abstract

The Boyd Tavern Market proposed by Tiger Fuel is a combination gasoline/convenience store/fast food restaurant consisting of a one-story building of 3,739 square feet, along with twelve gasoline pumps, and additional areas for eating outdoors and parking. This venture has created much concern and consternation among residents of the Boyd Tavern community, as it would significantly and forever alter the rural environment of the community by bringing much increased volume of traffic, particularly off Interstate 64 at the 129-mile marker, along with noise and light pollution. Traffic would be routed off I-64 onto Black Cat Road, a narrow two-lane country road that already serves as a heavily traveled commuter route for people living in the far eastern part of Albemarle County and adjoining Fluvanna County. It is well documented historically and scientifically this hydrogeologic area of Albemarle County has issues of groundwater resources as it has produced many dry wells or wells of low water yields, which have been a challenge for residents of the Boyd Tavern community. The Bellair and Mill Creek Markets used by Tiger Fuel for comparative and predictive purposes for traffic patterns and water usage do not serve as comparable situations as neither is an interstate market, and both are located miles from I-64. The Boyd Tavern Market would be only 0.1 miles from the interstate, and therefore is clearly an interstate market. Currently, a Special Use Permit (SUP) application, dated May 20, 2019, has been submitted for review by Albemarle County staff planners.

### *Additional Response to Revised SUP Revision Dated December 10, 2019*

*Observations/Inferences: The revised SUP states the building will be less than 4,000 square feet with five gasoline pumps and 10 nozzles. There has been a reduction of one gasoline pump from the original application. The justification for this minimal reduction in the number of pumps (i.e. stations with less than three pumps go out of business) is based upon speculation and little more, with no statistical or objective correlation.*

*The overall footprint of the building and site have changed little. The location of pumps, parking, lighting, and the building itself have been revised, but the overall original design is still there. For example, there are no reductions in the size of dining areas, food preparation and serving areas, number of tables, allotted parking spaces, or in the number of restrooms and associated plumbing fixtures. Traffic flow will largely be unaltered to and from the two-lane Black Cat Road and water consumption will unlikely be reduced from the original, but still largely unsubstantiated and elusive estimate of 800 gpd. The applicants are now projecting daily water usage of 644 gallons. This number keeps changing with no substantial data/evidence to support any such projection. The increased volume of traffic with resultant noise, lighting, security, trash, etc. are still largely unaddressed. Route 250 and Black Cat Road are already gridlocked during commuting hours.*

*The two sites (Mill Creek and Belair), which had been used before for comparative purposes in the original SUP, are not been included in the revised SUP. Why? Perhaps the applicant was well aware neither was an appropriate and/or comparable interstate location and thus had received much criticism for these choices; or could it simply be the data from the new site at Ruckersville are more favorable?*

*Nevertheless, the Market at Ruckersville, which has been open for less than six months and is served by dual lane highways, is now the new site used for water consumption and traffic comparisons. **It should be noted these current comparative data for water usage are for four months only and do not include the heavily traveled summer months.***

*In the project narrative, there are two largely unsubstantiated and misleading quotes. The first of which, “A Tiger Fuel Market at this location would serve a portion of the county that is heavily traveled but largely underserved with appropriate services for the area.” Another quote is, “It also should be noted that many of the stations provided as examples with two or three gasoline dispensers continue to go out of business and undergo change of ownership.” Neither of these is backed with any objective analyses or data and are a matter of opinion.*

*To justify the five pumps proposed for the Boyd Tavern Market, two stations are cited in the revised SUP as being in the rural areas of the county and having four and five gasoline pumps – the Exxon at Louisa Road and route 250 three miles east of Charlottesville, and the BP off exit 107 in the Crozet area. Anyone travelling these two locations would not think of them as being rural, as both are heavily traveled by all types of vehicles, including 18-wheel tractor trailers, and are served by dual lane and/or multiple lane highways. The rush hour congestion at the intersection of routes 22 (Louisa Road) and 250 at the Exxon are well documented. Just ask the residents of Glenmore! To use these two sites as examples of rural stations is indeed a stretch. If these are great examples of rural stations with the number of pumps projected for the Boyd Tavern Market, then why are not their water usage data used as well, instead of a newly established market in Ruckersville?*

*Questions: Why is the 5<sup>th</sup> Street Market, which is owned and operated by Tiger Fuel, still not used for comparison data, as it is clearly an interstate -based location with years of usage data? Why is the proposed Boyd Tavern Market still not classified as an interstate- based station? Why is the Sheetz Station at Zions Crossroads still not used as a comparable situation, as it is comparable in footprint and support facilities? How can this part of Albemarle County be underserved when there are six gasoline and/or fast food establishments within 5-6 miles either way of the proposed market? If this part of the County is already heavily traveled with commuter traffic, why add to the congestion? If local traffic consists of an average of 8300 vehicles each day, where are the numbers for how much more I-64 traffic will add to this congestion? Where are the statistical correlations or other objective analyses that stations with only two or three gasoline dispensers continue to go out of business? Are there not just as many other plausible variables which could account for and correlate to businesses changing ownership, other than the number of gasoline pumps?*

## **Introduction**

From the time I first learned of the proposed Boyd Tavern Market by Tiger Fuel, I have become quite interested in the project as I live about 0.5 miles from the market site, just off Union Mills Road in Keswick Farms, and drive by the site almost daily. I have attended a number of meetings dating back to 2017 and have read everything I could find related to this endeavor. My background is in

biology/environmental science with degrees from James Madison University and a doctorate from the University of Virginia. I do not pretend to be a hydrogeologist, but I do understand basic relationships and interactions of soil types, fault zones, water filtration/movement, surface water, ground water, aquifers, water quality, and general hydrology as they relate to environmental science and biodiversity. I have asked questions at meetings, emailed Shimp Engineering, and have sought to gain a better understanding of the project. I either get no answer, or generalized, nebulous, and evasive answers, which is frustrating when I would like details. I do not believe the applicant has been forthcoming with information, as was most evident during the recent community meeting on May 22, 2019, which was conducted at the East Rivanna Community Firehouse. After a brief talk by the President of Tiger Fuel extolling the virtues of the company, two visuals were shown with little to no explanation and then it was opened to questions. I had emailed Shimp Engineering (Kelsey Schlein) about one week prior to the Community meeting with a series of questions and received a reply about twenty-five minutes before the meeting convened, which gave me no time to digest her response and/or formulate additional comments and questions. Later in the week I followed up with additional email questions to Ms. Schlein, which centered mostly on the comparative data Tiger Fuel used from the Mill Creek and Bellair Markets and not the 5<sup>th</sup> Street Market; these data were used to calculate projected water usage at the Boyd Tavern Market. To date I have received no acknowledgment or response to this last email.

As a greatly concerned citizen and potential neighbor to this project, I wanted to register my observations and inferences, as well as related analyses and syntheses for **opposing this project**. I am in no way opposed to business and industry, and am not anti-growth, as my family members and I have worked in construction, banking, medicine, education, retail, finance, and entrepreneurship. In fact, my propane is supplied by Tiger Fuel. **The biggest problem I have with this Boyd Tavern Market is simply location. I cannot think of a worse location for an interstate market than this site for the reasons I will detail below.** I have no problem with another site that is better suited for the volume of traffic and drain on groundwater resources this project will bring.

### **Comparative Situations**

Tiger Fuel representatives have often touted their experience with interstate-based gasoline/convenience store/fast food restaurants. Yet, none of the locations cited by them for their comparative and predictive data are located near an interstate, nor on a two-lane highway that already serves as a heavily traveled commuter route. The Bellair Market (2 miles from interstate I-64) and Mill Creek Market (3 miles from interstate I-64), which are often cited by them as interstate markets, are served by multilane highways, and are considerable distances off the interstate. In addition, there is no signage that would direct interstate travelers to either of these markets. In fact, if you did not know of the location of these two Markets, they would be difficult to find. I have visited both markets on a number of occasions over the past several years and the volume of traffic is nothing like what I see at interstate stations, such as their 5<sup>th</sup> Street Market or the Sheetz station at Zion Crossroads. The majority of customers I encounter at both Bellair and Mill Creek consist of local residents. However, online reviews of their 5<sup>th</sup> Street Market reveal things such as “the station is easy to get to from the interstate” and “it is usually a very busy station.” Why is this location not used for comparative purposes? In my



opinion, neither the Mill Creek nor Bellair Market location serves as a positive or equivalent correlation. **Therefore, data extrapolated from these two Markets do not serve as a reliable or creditable foundation for interstate market/convenience store/fast food restaurant comparisons.**

*Additional Response to Revised SUP Revision Dated December 10, 2019*

*Observations: The Market at Ruckersville is now the site used for water consumption comparisons. It is a new location with little history of usage. Four months of water usage reveal a mean of 644 GPD, with no details of where on the premises (i.e. restrooms, dining, food preparation, etc.) this water was consumed. These current comparative data for this new site consist of four months only and do not include the heavily traveled summer months, nor is this an interstate-based location. In conversations with employees of both the 5<sup>th</sup> Street Market and the Sheetz station at Zions Crossroads, they readily acknowledge that much of their traffic and business consists of interstate travelers, often comprised of families who are heavy consumers of water in restroom facilities, food preparation, and drinking fountains. Little to no mention of the impact that interstate traffic will have on the Boyd Tavern Market appears in the revised SUP proposal.*

*Questions: Why is the 5<sup>th</sup> Street Market still not used for comparison data, as it is clearly an interstate-based location, as is the proposed Boyd Tavern Market? Why is not the Sheetz station at Zions Crossroads a comparable situation?*

### **Location, Location, Location**

The proposed Boyd Tavern Market would be the only commercial enterprise of note at mile marker 129 off I-64 exit, and is only 0.1 miles off the interstate exit. This exit routes traffic onto Black Cat Road, which is a narrow two-lane highway that already serves a large number of commuters and local traffic each day. Additionally, a review of the site plan reveals the entrance to the Boyd Tavern Market would be on a blind curve. The traffic light at the intersection of routes 250 and Black Cat Road/Union Mills Road is often backed up 20-30 vehicles deep during the morning commuter traffic (7-9:00 am) and often extends back past the entrance to Keswick Farms. During the evening commute (4-6:00 pm) the traffic is often equally backed up in the opposite direction off the interstate exit. Noise levels along Union Mills Road and Black Cat Road are greatly elevated during the commuter rush hours. However, if one were to travel this route in the middle of the day they might be deceived as the volume of traffic then does not begin to mirror rush hour traffic. I travel this intersection often as it is my access to I-64 and route 250. So, this is an actual observation and not an inference. The president of Tiger Fuel stated during the May 22, 2019 community meeting the market would not service large diesel trucks, recreational vehicles, trailers, and other similar vehicles. How does he propose to stop them? Once on the two-lane Black Cat Road with a blind curve entrance/exit, where will these large vehicles turn around? A comparably situated interstate station/market (Sheetz) at the Zion Crossroads exit, with a comparable number of twelve gasoline pumps, is highly congested throughout most days with such vehicles. For example, on Tuesday June 4, 2019, I witnessed six large RV's and trailers at the gasoline pumps at Sheetz (more details on this later). How these large vehicles would navigate and turn on an already busy two-lane highway is going to be a significant challenge. The Sheetz station is

serviced by a multilane highway (four lanes). **Traffic congestion on Black Cat Road and Union Mills will be a major issue.** I have attached recent video of the Sheetz station at Zion Crossroads, which I believe to be a comparable situation, that clearly demonstrates and reinforces this traffic congestion issue.

*Additional Response to Revised SUP Revision Dated December 10, 2019*

*Inference: Signage placed on Interstate 64 would clearly indicate the location of both an eating and gasoline facility at mile marker 129.*

*Questions: How will Tiger Fuel control the flow of traffic from the interstate, which will certainly contain large 18-wheel tractor trailers, RV's, travel trailers with tow-vehicles, box trucks, farm equipment and other similar vehicles? How much will traffic be impacted with such vehicles attempting to turn left out of the Market to get back to I-64? Does Tiger Fuel plan to propose the installation of a traffic light at this site, which will only add to traffic congestion?*

### **The Boyd Tavern Community**

The Boyd Tavern Market would reside in a residential community, with surrounding homes on multiple sides. This is freely acknowledged by Tiger Fuel in their May 20, 2019 Shimp Engineering application document in which they also call the proposed Market a “community gathering place.” As I am sure Tiger Fuel knows at this juncture, the Boyd Tavern community does not perceive this as a community gathering place, but rather sees it as a community disrupter. Mr. Greg Duncan, Esquire has over one hundred local signatures on a petition requesting this project be denied. The impact of interstate traffic on this “community gathering place” is in no way acknowledged or explained by Tiger Fuel. Obviously, the location of this Boyd Tavern Market is designed as a draw for interstate traffic. Greatly increased volume of traffic along with associated noise and light pollution will be introduced into this quiet neighborhood for much of the day and night. When asked at the May 22, 2019 Community Meeting whether Tiger Fuel would consider closing this market at dark, the answer was a resounding NO. Hours would extend to at least ten o'clock pm, according to the president of Tiger Fuel. The Tiger Fuel Markets at 5<sup>th</sup> Street and Mill Creek are open 24 hours, and Bellair is open until 11:00 pm. These adjacent families will never know any peace or quiet again, and I cannot imagine anyone wanting to purchase these properties in the future. So, these home/property values will necessarily be devalued because of the Boyd Tavern Market. The Markets at Bellair, Mill Creek, and 5<sup>th</sup> Street Station are all located in commercial zones with many other businesses nearby, with residential housing being some distance removed. If one wants to change quickly the rural environment of the Boyd Tavern community, then this Market will accomplish that. **The communities of Boyd Tavern and other Tiger Fuel Market locations are NOT comparable.**

*Additional Response to Revised SUP Revision Dated December 10, 2019*

*Observation: Tiger Fuel has proposed the hours of operation to be 5:00 am to 11:00 pm (18 hours daily for seven days per week). Intermittent noise levels of 80-90 decibels and beyond can be*

*anticipated, along with much increased lighting. None of the sites used for comparisons are located in residential communities.*

*Inference: Signage placed on Interstate 64 would clearly indicate the location of both an eating and gasoline facility at mile marker 129.*

*Questions: When will nearby homeowners ever escape the increased noise and lighting issues just from increased traffic alone? How will the increased volume of traffic be handled without causing hazardous situations?*

### **Availability of Water Resources**

The issue of water consumption in a historically water-challenged geographic/hydrogeologic area is a serious concern. **The 800 gallons maximum daily consumption rate as proposed by Tiger Fuel appears to be based upon a questionable methodology and data set; to be unsubstantiated and even contradicted by their own existing correspondence and data; is in direct contradiction to other reputable sources; and is never adequately addressed other than “we have experience in this area and water consumption will be about 800 gallons per day.”** Exactly what kind of number is the 800 gallons per day? How was it calculated? Is it a mean (an average)? If so what is the time period, and what is the variance or standard deviation as water consumption in such an enterprise must vary widely throughout the year? How does this compare to the 5<sup>th</sup> Street Market location? Or Sheetz at Zion Crossroads?

The graph of water usage on page 2 of the Shimp Engineering letter dated July 21, 2017 to Mr. MacCall is at best nebulous and seems to show water consumption rarely ever drops to 800 gallons per day during any month at Bellair or Mill Creek. Most days are 900 gallons and more. In fact, in the letter Justin Shimp states, “To examine the accuracy of the 900 gpd for Boyd Tavern Market, we have reviewed usage data for the Mill Creek and the Market at Bellair.” The next paragraph contains, “Since the toilet replacements, water usage has stayed below 1,000 gpd for Mill Creek, versus the 1,100 gpd predicted by the standard calculations, and has only surpassed 1,000 gpd six times at Bellair, with a maximum of 1,107 gpd, significantly under the 1,350 gpd estimated.” These data are from the years 2013-2016. Where did the 800 gpd metric then come from? What would more current data on water usage show? And why are these current data not presented? Why is the 5<sup>th</sup> Street Market data never used for comparisons and correlations, as it is clearly an interstate location (0.15 miles from interstate)? Why is the Sheetz station at Zion Crossroads never used as a correlation? It is similarly located just one exit east off the interstate, is comparable in its footprint, and is configured with a similar number of pumps, restroom facilities, seating capacity, convenience store, and restaurant.

*Additional Response to Revised SUP Revision Dated December 10, 2019*

*Inferences: It is more than obvious that data from the Market at Ruckersville were used for the new comparison as these data are more favorable for Tiger Fuel. Signage placed on Interstate 64 would*

*clearly indicate the location of both an eating and gasoline facility at mile marker 129 and attract a greatly increased volume of traffic.*

*Questions: How are the data from the Market in Ruckersville applicable and/or reliable for projecting water usage at an interstate-based site? Why are these statistically unsupported and uncorrelated data used? What exactly is the anticipated water usage, as this number seems to be elusive and nebulous at best? When will nearby homeowners ever escape the increased noise and lighting issues just from increased traffic alone?*

### **Shimp Engineering Letter of July 21, 2017**

Additionally, the Shimp Engineering letter to Mr. Francis MacCall dated July 21, 2017, stated, “The best available guidelines for estimating water usage come from the Virginia Department of Health and the EPA.” A Virginia Department of Health guidelines chart was attached to the letter (12 VAC 5-590, Waterworks Regulations). The chart showed that an Interstate or through highway restaurant water usage would be based upon the number of seats provided for patrons for dining. The proposed Boyd Tavern Market would have fourteen seats. Each seat would be allotted 180 gallons of water usage daily, based upon the Virginia Department of Health guidelines. This would result in 2520 gallons (14 seats X 180 gallons = 2520) of water being used daily just for this purpose alone. This greatly exceeds and contradicts the projections from Tiger Fuel by at least a factor of 3. Additionally, the July 21, 2017 letter contained the statement, “The applicant shall install and maintain a tamper proof, flow restriction device limiting water flow to no more than 1,312 gpd.” Why then is the projected maximum daily consumption projected to be only 800 gallons? **Why does the applicant contradict their own conclusions by claiming they have experience with interstate markets, and clearly the proposed Boyd Tavern Market is an interstate location, yet they want to use standard restaurant guidelines of water consumption, and not those of interstate or through restaurant/highway per seat? Additionally, Virginia Department of Health guidelines stipulate an allowance of 10 gpd of water per vehicle served for service stations. This number is never factored into the 800 gpd metric anywhere.**

### **Evans Report**

Dr. Nick Evans of Virginia Groundwater LLC was commissioned to prepare a report for Tiger Fuel which was subsequently entitled *Boyd Tavern Market, TMP 94-39, Tier 3 Ground Water Assessment, Groundwater Management Plan* (dated March 31, 2017, Modified May 4, 2018). In his report Dr. Evans’ **findings were predicated entirely upon the premise that a maximum of 800 gallons of water would be consumed daily by the Market and consequently he built his entire report and key findings around this metric.** Would his key findings change if indeed the Boyd Tavern Market were to use 2,520 gallons of water daily as projected by other sources? The Evans report is primarily a restatement of that which has already been documented in more comprehensive studies conducted earlier by the Virginia State Water Control Board and DEQ (Sterrett and Hinkle, 1980; White, 2019) and previous investigations by Cross (1960) and Dekay (1972). Evans did not include any bibliography or cite any of these studies. Why not when the well yield data from these

studies are much more inclusive and comprehensive? Seven hundred sixty-one (761) wells are included in the Sterrett and Hinkle study. Evans includes eleven (11) domestic wells and four (4) public water wells located within 2000 feet of the property. He goes on to state, “The greater yields are likely due to increased bedrock fracture density in the Mountain Run fault.” He also commented there were no observable fissures or fractures on the proposed Boyd Tavern Market site. The fifteen wells cited in his report are at lower elevations, are mostly located on the opposite side (east) of the drainage divide, and are located often in draws and flats, which are more conducive to water production. How about the wells of lesser yield in this same area? Why were they not included? Are they due to the same fault zone? Why were well yield data included in the Evans report for the Everona limestone formation (a highly productive water source at some distance to the west of the Boyd Tavern Market), when the proposed market would be situated above a different underlying bedrock structure?

### **Studies of Groundwater Resources**

In December 2017, another study was published by the Timmons Group *Water and Wastewater Facilities Plan for Keswick Hall and Golf Club*. In the Timmons study the following was stated, “There are two geologic formations located in the Keswick area. A majority of the Keswick property is underlain by the Loudoun Formation, also known as the Chandler Formation, which does not contain prolific subsurface anomalies conducive to high groundwater yields.” The proposed Boyd Tavern Market would be located in the Chandler Formation.

Among the findings/conclusions in the Sterrett and Hinkle study were (1). “Wells developed in the metasedimentary rocks in the eastern part of the county offer the lowest ground water potential. **Over half the wells produce less than 5 gallons per minute and water bearing fractures are not encountered deeper than 100 feet.**” Fifty-four percent (54%) of wells drilled in the Boyd Tavern area of Albemarle County have historically produced less than a flow of five gallons per minute, and of these many produced flows of three (3) gallons per minute or less. (2) The belts underlying this portion of the county have significantly lower ground water potential than the remainder of Albemarle County. To date, no test wells have been drilled on the Boyd Tavern Market site that could be used for predictive purposes. Dr. Evans cites the Mountain Run Fault Zone and its proximity to the proposed Market. However, “The permeability of fault zones impacts diverse geological processes such as hydrocarbon migration, hydrothermal fluid circulation, and regional groundwater flow, yet how fault zones affect groundwater flow at a regional scale (1–10 km) is highly uncertain (Malgrange and Gleeson, 2014).”

According to Evans, summary data were examined from 290 wells in the County database that were constructed in the same bedrock formation as underlies the property. The average yield of these wells is 7.7 GPM (gallon per minute), which is low to moderate relative to average yields from other geologic formations in the county. He went on to further state that dry holes or zero GPM wells are under reported in the database. A nearby facility Virginia Department of Highways shows two wells on their site with yields of 1 and 8 gallons per minute respectively (Sterrett and Hinkle, 1980). Why were these data not included in the Evans report? or the data from residents along Mechunk Road, who have reported yields of 0-5 gpm? Having spoken to many neighbors who live near this proposed facility and

who have wells with low flow rates, the availability of water is a major concern for them for opposing the Boyd Tavern Market. One neighbor on Mechunk Road had to have two wells fracked just to get a flow of water, and even then, it was in the 1-5 gpm range. The bedrock associated with the aquifer underlying the proposed site is labeled as cpcl (abbreviation used to indicate geologic age of a water bearing unit – aquifer) and historically cpcl locations have very low yields countywide (Sterrett and Hinkle, 1980). Numerous wells in cpcl formations were reported as dry wells. My well and others along Fox Hunt Drive in Keswick Farms fall into this cpcl category! Without any exploratory wells, Tiger Fuel has no idea of the potential of groundwater resources underlying the property.

### **Current Database of Well Yields in Boyd Tavern Area**

Mr. Brad White of the Virginia Department of Environmental Quality and Manager of the Groundwater Characterization Program recently provided a current database of water yield of one hundred eighty-seven (187) wells, all located within two miles of the proposed Market. All were located in similar bedrock formations. Eighteen of the wells were reported as dry wells. The mean for water yield for these 187 wells was 6.12 gpm. One hundred fourteen (114) of the wells in this database had yields of 5 gpm or less. The standard deviation for these 187 wells was 8.458, indicating rather high variance, which was largely due to five outliers above 40 gpm.

*Additional Response to Revised SUP Revision Dated December 10, 2019*

*Observations: Water usage data from the Market at Ruckersville were used for the new comparison as these data are more favorable for Tiger Fuel. When asked to weigh in on this subject of water usage for the Boyd Tavern Market, Mr. Josh Kirtley of the Virginia Department of Health commented in an email to Tori Kanellopoulos, “I do not believe it is VDH’s role to comment as to the suitability of a proposed project with regards to potential groundwater impacts.”*

*Questions: Why does the topic of the availability of ground water resources remain an elusive one? Why do the water demand numbers keep changing, as we have far different projections of usage in the two SUP applications and their associated studies?*

### **Water Usage**

How much water does the average person use at home per day? Estimates vary, but each person uses about 80-100 gallons of water per day. The largest use of household water is to flush the toilet, and after that, to take showers and baths. When both the internet sites for the United States Geologic Survey (USGS) and Environmental Protection Agency (EPA) estimate that a person uses 75 gallons of water per day and an average family 300 gallons per day, how can it be that a business that will draw hundreds of customers daily will only use 800 gallons? The president of Tiger Fuel responding to my questions about this during the May 22, 2019 community meeting, stated, “all water used by the facility will go back into the drain field and then be returned to the aquifer.” Anyone familiar with the hydrologic cycle knows this is certainly not the case. Dr. Evans stated in his review that only about 15% of annual precipitation would contribute to groundwater recharge. This would amount to about 6.6

inches annually. And he went on to state water from the drain field would return to the aquifer. But he never states how much and seems to contradict his own projection. Because of the topology of the site being the highest point around, “there would be little hydraulically-driven recharge from off-site.” This would imply the drain field for the Market by the force of gravity would feed downhill and off-site, and the source of groundwater for the facility would come from adjoining properties. Because of the topography of the site being the highest point in the area, wells drilled in similar situations have had poor yields and had to be drilled deep (Sterrett and Hinkle, 1980).

### **Comparative and/or Predictive Data**

For several years I have observed the operation at the Sheetz location at Zion Crossroads during my shopping forays in that area. I am one interstate exit removed from this location. More recently, my observations are based upon the belief this location and business model are very similar to what is being proposed for the Boyd Tavern Market and therefore would give me a realistic assessment of traffic patterns and water consumption. There are those who will argue this Sheetz station is not comparable to what is being proposed as it is surrounded by many other businesses that attract consumers. But, this is true also of Bellair, Mill Creek, and 5<sup>th</sup> Street Market locations as well. It is also true there are three other comparable gasoline/convenience stores/fast food restaurants at the Zion Crossroads exit. And obviously, they dilute the volume of traffic to Sheetz. Additionally, it has been my observation the bulk of the Sheetz traffic is interstate traffic, as upon exiting the Sheetz station the vast majority of vehicles return to Route 15 south, toward I-64. It is generally acknowledged interstate travelers are heavy users of restroom facilities, and the data below reinforce that. Employees at Sheetz have supported this inference as well. **This Sheetz interstate location is certainly a better match than either the Bellair or Mill Creek Markets.**

I began to collect data on the number of vehicles serviced at the gasoline pumps, along with the number of large recreational vehicles and trailers, and the number of people using the restroom facilities during timed five-minute intervals at this Sheetz location. I purchase gasoline at this Sheetz location and often use the facilities and travel here for shopping at various times of the day and night, and average 3-4 trips each week typically to Sheetz, Lowes, Walmart, and nearby restaurants. It is during these times I have observed and collected these data. I purposely avoided data collection at peak hours of 7-9:00 am and 4-6:00 pm, as the Sheetz website showed these hours to be their peak business hours, and I certainly did not want to skew the data and/or be accused of cherry-picking data. Many online reviews by customers centered on how busy the location was and the lack of cleanliness of the restrooms.

The methodology I used was to record the date and time, and to count every passenger vehicle, and separately large recreational vehicles and trailers, that filled up with gasoline and left, or were at a pump, or were in-line at the end of this five-minute interval. Often, vehicles were lined up two-deep at a single pump at the end of the five minutes. I recorded also the total number of individuals who entered a restroom, with the assumption they used urinals and/or commodes, as well as sinks for

washing hands. Based upon water consumption for these restroom facilities only, I calculate conservatively that each person would use 1.5 gallons of water per restroom visit.

The time period for my observations and data collection was from March to June 2019. The majority of the observations were during daylight hours between 9:00 am and 3:00 pm. Based upon a total of twenty (20) five-minute observations to this date, the mean for vehicles serviced was 22.38 per five minutes and the standard deviation was 7.37. The mean for the number of persons entering a restroom per five minutes was 23.55. And the standard deviation was 8.03. Based upon these calculations, the following conclusions can be extrapolated:

1. For every sampled five-minute interval, 35.32 gallons of water were used just for restroom facilities (23.55 persons x 1.5 gallons of water usage).
2. For every sampled five-minute interval 22.38 vehicles (both recreational and passenger vehicles) were either serviced, or at a pump, or in-line for gasoline.
3. **Similar observations and data have been gleaned from the 5<sup>th</sup> Street Market.**

### Unanswered Questions

1. How will Tiger Fuel address congestion issues on a two-lane highway that is already quite busy?
2. How will large recreational vehicles, trailers, and similar vehicles be stopped from using the I-64, 129 Exit, as Tiger Fuel states they will not be serviced at this Market?
3. What will be the hours of operation?
4. Will it be open twenty-four hours as are many of Tiger Fuel Markets?
5. Does Tiger Fuel plan to request a traffic light at this location?
6. How will light and noise levels be minimized and controlled?
7. Who will monitor trespassing after hours?
8. Who will collect litter that is bound to accumulate near the station?
9. Where did the 800 gpd metric come from and how exactly was it calculated?
10. Is the 800 gpd estimate a realistic one, given the proposed Boyd Tavern Market is clearly an interstate Market?
11. Why were water consumption data not used from the 5<sup>th</sup> Street Market or Sheetz for comparative purposes, rather than the Bellair or Mill Creek locations?
12. How large a water storage tank do they proposed to install?
13. Recharging the aquifer is mentioned in the Evans report, but there are no attempts to quantify it. Where is a more detailed explanation of the projected volume of this recharge?
14. Why was the Evans study based upon an 800 gpd consumption metric only?
15. Why were well yield data included in the Evans report for the Everona limestone formation (a highly productive water source to the west of the Boyd Tavern Market), when the proposed market would be situated above a different underlying bedrock structure?
16. Why were not more well yield data included in the Evans report when the data clearly were available?



17. How many wells does Tiger Fuel plan to drill on the property to get the water yield they will need?
18. How will water usage data be collected and reported for the Boyd Tavern Market if the SUP is approved?
19. In light of the volume of traffic and water consumption at the Sheetz station, just one interstate exit removed, how reasonable is it to project only 800 gallons of daily water usage for the Boyd Tavern Market?
20. How much would the water consumption and traffic increase for the Sheetz station at exit 273, if it were not for the fact there are three other comparable gasoline/convenience stores/fast food restaurants at that same interstate location to absorb some of the traffic?
21. Is Tiger Fuel prepared to compensate landowners for wells that fail as a result of the water demands of the Market?
22. Is Tiger Fuel prepared to install a tamper-proof cutoff valve/device once the water usage reaches the 800 gpd level or the lesser amount cited at the Ruckersville location?

### **Conclusions**

*For the reasons and support cited above, the proposed Boyd Tavern Market is simply in the wrong location. Increased traffic congestion, noise, lighting, and water consumption are unacceptable to the Boyd Tavern Community, who will bear the brunt of this ill-conceived project. The revised SUP does little to address the primary issues of greatly increased traffic with associated noise, lighting, security, and water usage. To refer to this proposed location in glowing language such as a “community gathering place to have a cup of coffee in an underserved area” does little to minimize the many concerns and, in fact, merely further adds fuel to the debate. The residents of the surrounding community feel this is nothing more than a profit-driven enterprise with little regard to how it will impact the environment, groundwater resources, its neighbors, or the surrounding community.*

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**SP201900006**

**SUMMARY OF COMMENTS RECEIVED VIA PHONE CALLS**

**Phone call with Resident #1 on 06-20-19**

- Concerned about traffic and safety. Road busy and difficult to turn out of already. Concerned about kids waiting for the bus and their safety
- Not the right location for this proposal. The scale of Boyd Tavern (existing) is much more appropriate
- Will change the character of the neighborhood and cause detriment to neighbors

**Voicemail from Resident #2 on 06-20-19**

- Lives on Mechunk Road
- Expressing opposition to this proposal

**Voicemail from Resident #3 on 06-20-19**

- Neighbor in the area
- Greatly opposed to the proposal
- Thinks will be very detrimental to the area

**Phone call with Resident #1 on 01-13-20**

- Continue to be opposed to project even with resubmittal
- Not a single change has helped
- Gas station would change character of neighborhood
- Nothing would make gas station ok with Comp Plan – no tourist stop
- No one approves of it in nearby area
- Horses next to gas station – lights bad at night; farm has horses at corner
- Old Boyd Tavern only had 3 pumps w/ one nozzle each – real country store; reopening again
- 6 mins from Pantops and Zion Crossroads
- Many other uses on property instead
- Applicant knows this is rural area