

BEFORE THE LEET TOWNSHIP ZONING HEARING BOARD

Re: Application of Quaker Valley School District (“QVSD” or “District”) for Special Exception, 200-210 Camp Meeting Road

MEMORANDUM IN OPPOSITION TO QUAKER VALLEY SCHOOL DISTRICT’S SPECIAL EXCEPTION APPLICATION

Everyone in Quaker Valley School District wishes to have a brand new, state of the art High School. However, QVSD’s current proposal to construct a new High School at the proposed site in Leet Township – despite widespread opposition – is fiscally irresponsible, dangerous, against public policy, and contrary to the applicable Leet Township (the “Township”) zoning ordinance.

As the testimony to be provided at the hearing will demonstrate, the construction of a new High School at the proposed location will necessarily result in various negative environmental impacts, increase traffic congestion and create hazardous traffic conditions, and impose a greater tax burden on the residents of Leet. There is no justification for constructing a new High School and imposing the attendant burdens on Leet’s residents, particularly in light of the fact that several alternate options – including, *inter alia*, the renovation of the current High School – remain viable. This project, as currently contemplated, defies common sense.

As set forth more fully below, QVSD will not meet, and cannot meet, the requirements for obtaining a special exception to construct the new High School in the proposed location because it cannot establish that the proposed use meets the specific objective criteria of the zoning ordinance or that the proposed use will not offend the general public interest.

Governing Law and the Special Exception Application

Article VI of the Pennsylvania Municipalities Planning Code, Act 247 of 1968, P.L. 805, as reenacted and amended, 53 P.S. § 10101, *et seq.* (“MPC”) provides enabling authority and procedural requirements pertaining to zoning. Section 912.1 sets forth the Zoning Hearing Board’s functions in the case of special exceptions:

Where the governing body, in the zoning ordinance, has stated special exceptions to be granted or denied by the board pursuant to express standards and criteria, the board shall hear and decide requests for such special exceptions in accordance with such standards and criteria. In granting a special exception, the board may attach such reasonable conditions and safeguards, in addition to those expressed in the ordinance, as it may deem necessary to implement the purposes of this act and the zoning ordinance.

See 53 P.S. § 10912.1.

“An applicant for a special exception has the burden to show that its application complies with the specific criteria delineated in the ordinance.” *Blancett-Maddock v. City of Pittsburgh Zoning Bd. of Adjustment*, 6 A.3d 595, 600 (Pa. Cmwlth. 2010). “By showing compliance with the specific criteria, the applicant establishes that the proposal is presumptively consistent with the promotion of the public health, safety and welfare.” *Id.* To overcome this presumption, an objector must

prove that the impact from the proposed use will substantially affect the health, safety and welfare of the community to a greater extent than would be expected normally from that type of use. *Id.*

Section 27-301 of the Leet Township Zoning Ordinance (the “Ordinance”) provides that schools are a special exception Use in the Township’s AAA Residence District. Thus, to prevail on its request for a special exception QVSD must establish that the proposed High School meets the specific criteria set forth in the zoning ordinance.

Section 27-601 of the Ordinance¹ sets forth the following criteria for granting a special exception:

A. A written application for approval of a use by special exception is submitted to the Township. The application shall indicate the section of this chapter under which approval of the use by special exception is sought and shall state the grounds upon which it is requested. The application shall include the following:

- (1) A current property survey indicating all existing and proposed structures and all proposed construction, additions or alterations on the site in sufficient detail to determine the feasibility of the proposed development and compliance with all applicable requirements of this chapter.
- (2) A written statement showing compliance with the applicable express standards and criteria of this article for the proposed use.
- (3) In the case of a plan that meets the criteria, a traffic impact study prepared in accordance with the requirements of the Township.
- (4) The application fee.
- (5) A detailed statement demonstrating how the special exception will be beneficial to the public at the proposed location.
- (6) That the special exception shall be more suitable at the proposed location than on other properties in the same district because of the size, shape, topography, surroundings and physical condition of the proposed location.
- (7) That the special exception shall not involve any element or cause any element or condition that may be dangerous, injurious or noxious to any other property or persons, and shall comply with the performance standards of § 27-701.
- (8) That the special exception shall be sited, oriented and landscaped to produce a harmonious relationship of buildings and grounds to adjacent buildings and properties

¹ Chapter 27, Part 6 of the Leet Township Zoning Code was amended by Ordinance No. 2019-02 on March 11, 2019.

(9) The special exception shall be approved by the Zoning Hearing Board, hereinafter referred to as "Board," after public hearing as in the case of variances and exceptions.

(10) The special exception must also meet all special regulations or conditions, if same are set forth, for a particular special exception.

(11) Traffic. In a residential district, for approval of a special exception, the use shall abut a public street, except where the applicant agrees to pave and widen existing roads as required by the Planning Commission. In Commercial and Manufacturing Districts, all uses shall abut public streets.

(12) The special exception shall organize vehicular access and parking to minimize traffic congestion in the neighborhood.

(13) The Board may make such other and additional conditions and safeguards as they deem necessary to protect the best interests of the surrounding property or neighborhood.²

The Ordinance also sets forth the relevant burdens of proof for a special exception application:

D. In proceedings involving a request for a use by special exception, both the duty of initially presenting evidence and the burden of persuading the Zoning Hearing Board that the proposed use is available by special exception and satisfies the specific or objective requirements for the grant of a use by special exception as set forth in this chapter rest upon the applicant. The burden of persuading the Zoning Hearing Board that the proposed use will not offend general public interest, such as the health, safety and welfare of the neighborhood, rests upon the applicant.

Applying the above criteria to the present application, as will be shown through the testimony presented that the hearing, QVSD cannot demonstrate that the proposed special exception meets the specific objective criteria of the Ordinance. Therefore, the denial of QVSD's application for a special exception is warranted.

Moreover, even assuming that QVSD could meet its burden that the proposed High School satisfies the Ordinance's objective criteria, QVSD still must meet the burden of persuading the Zoning Hearing Board that the High School will not offend the general public interest. For the reasons set forth below, QVSD cannot meet this burden because the construction of the proposed High School would create numerous issues affecting the health, safety, and welfare of the residents of Leet Township.

² The District asserts in its Pre-Hearing Brief that none of these criteria apply here because "a special exception school use has been designated as a permitted use." See District's Pre-Hearing Brief at 2. This tortured reading of the Ordinance is simply incorrect and has no basis whatsoever in law. The Ordinance and case law are clear that a special exception applicant must demonstrate compliance with the specific requirements set forth in the applicable ordinance.

Argument

1. The Special Exception Is Not Beneficial to the Public at the Proposed Location.

QVSD currently operates facilities in four of the 13 municipalities that it serves (Sewickley, Edgeworth, Osborne, and Leetsdale). As the evidence presented at the hearing will show, the proposed new High School is to be located exclusively within Leet Township – a bedroom community that is limited in terms of both land area and population. Leet Township’s residents represent a fraction of the student body occupying any of the schools within the District, and less than 1% of land area in Leet Township is dedicated to non-residential uses. *See June 15, 2021 Report of Mark Zappala (“Zappala Report”) at 2.*³

The fact and expert testimony will further demonstrate that, aside from demographic concerns, the construction of the High School at the proposed location would result in environmental and safety impacts that would be detrimental – not beneficial – to the public. The proposed location is described as being “situated along a wooded hilltop flanked by forested side slopes...Mature forest...dominates the habitat...(which) drains to Little Sewickley Creek.” *See Zappala Report at 2.* Constructing the High School at the proposed site will require the destruction of 50 acres of mature forest, increase the possibility of soil erosion and landslides, and fundamentally alter the character of the surrounding neighborhood. *See id.; see also June 15, 2021 Report of Lynn Truskie (“Truskie Report”) at 1.*⁴

QVSD’s request for Leet Township to grant a special exception to accommodate the proposed High School because no other site within the Township can accommodate it fails to recognize these facts and disregards the plain language of the Ordinance.

Building the High School in Leet will inevitably raise the tax burden to the residents of Leet and create dangerous conditions within the community. When viewed in the context of the entire Quaker Valley community, it is clear that the request for a special exception to construct the High School in Leet Township – where relatively few QVSD students reside – would not benefit the public at the proposed location.

2. The Special Exception Is Not More Suitable at the Proposed Location than on other Properties in the Same District.

The proposed site is not more suitable for construction of a high school than the existing high school site or other options available throughout the 13 municipalities that comprise the Quaker Valley School District.

Significantly, while the proposed site is nearly 160 acres, the development will yield a mere 25 acres. By imposing a minimum threshold of more than double what the proposed location will

³ A copy of the Zappala Report is attached as **Exhibit A**.

⁴ A copy of the Truskie Report is attached as **Exhibit B**.

yield, the District eliminated from consideration several viable options, including, but not limited to, the acquisition of adjacent properties that would have created a usable area, at a potentially lower cost, without the need for a special exception. *See Zappala Report at 3.* This fundamental flaw in the site selection process, alone, demonstrates that the District has failed to meet its burden and that the requested special exception is not warranted.

Moreover, as the evidence presented at the hearing will demonstrate, the topography and geography of the proposed location are inferior to those of other sites in the Township. The site proposed by the District is not suited for a flat campus and dense traffic. The area is heavily wooded, contains wetlands and other environmentally sensitive areas and habitats, and sits atop unstable soils (Pittsburgh Redbed) and rock that will require blasting and the cutting and filling of millions of cubic feet of soil. Moreover, the proposed site is situated in the middle of a residential neighborhood, consisting primarily of single family homes, and the blasting required to construct the High School will jeopardize the safety of nearby residents and/or their property. *See Zappala Report at 3; Truskie Report at 1.*

3. The Special Exception Would Create Dangerous, Injurious, and Noxious Conditions and Does Not Comply with the Ordinance's Performance Standards.

The evidence presented at the hearing will demonstrate that the special exception, if granted, would create a number of conditions that may be dangerous, injurious or noxious to other property or persons. In addition to the specific safety concerns addressed at length below, generally speaking, the introduction of hundreds of students and staff, teenage drivers, school buses, athletic fields, parking lot lighting, and a stadium is, on its face, noxious to adjacent property owners. *See Zappala Report at 3.*

The Pennsylvania Supreme Court has held that such results warrant the denial of a special exception. In *Kotzin v. Plymouth Township Zoning Board of Adjustment*, 149 A.2d 116, 129 (Pa. 1959), the Court upheld a zoning board's denial of a request for a special exception to use land as a non-commercial recreational swimming club and day camp, explaining:

The influx of such a great number of patrons (1,200 swimming club members and 150 day camp children) would cause congested traffic, induce noise, disturb the quiet and peacefulness of the neighborhood and so impinge upon its tranquility that the objectives of the comprehensive zoning plan would be jeopardized and the health, safety and general welfare of the whole neighborhood adversely affected.

Moreover, the special exception does not comply with the Performance Standards set forth in Section 27-701 of the Ordinance because it would result in increased traffic and unacceptable levels of noise and pollution.

a. The Special Exception Would Create a Number of Dangerous Conditions.

The testimony will demonstrate that the construction of a new High School at the proposed site would create a number of dangerous conditions. One significant area of concern is the safety of Camp Meeting Road. Among the various issues with Camp Meeting Road are inadequacies at its intersection with Beaver Street, the curvature and steepness of the road, the presence of numerous

roadside hazards, substandard signage and pavement markings, and dark areas along the road due to gaps in lighting. *See* June 15, 2021 Report of French Engineering, LLC (“French Report”).⁵ These concerns are magnified when taking into consideration the fact that the proposed construction of the High School nearby will substantially increase the number of young, relatively inexperienced drivers on Camp Meeting Road.

In addition to the various issues with Camp Meeting Road, the proposed construction of the High School also raises numerous geotechnical concerns, including the risk of landslides, various environmental risks, and the need for extensive blasting that are likely to cause unforeseen issues and create problems for adjacent landowners.

i. Issues with Camp Meeting Road

The various issues with Camp Meeting Road discussed below constitute dangerous conditions that warrant the denial of the requested special exception. *See, e.g., Shipley v. Fayette County Zoning Hearing Bd.*, No. 370 C.D. 2007, 2008 WL 9405037, at *2 n. 3 (Pa. Cmwlth. Jan. 24, 2008) (affirming denial of special exception where several area residents testified as to unsafe road conditions in the area of the proposed special exception use).

The area of Camp Meeting Road between Beaver Street and the proposed High School is a steep, two-lane road with no turn lanes at any driveway or intersection. At Camp Meeting Road’s intersection with Beaver Street, all but a few feet of the road are hidden by a wall and utility pole. This restricted sight distance will increase the risk that a motorist on Camp Meeting Road will pull out in front of an eastbound motorist on Beaver Street:

⁵ A copy of the French Report is attached as **Exhibit C**.



See French Report at 3.

Moreover, entering Beaver Street from Camp Meeting Road is difficult due to the cross traffic on Beaver Street, which does not have a stop sign:



See French Report at 4.

There is also a slight skew in Beaver Street at the intersection of Camp Meeting Road. As a result, westbound traffic must turn to the left to continue travelling on Beaver Street. If a westbound driver failed to navigate that turn, the driver would hit a retaining wall and utility pole, as demonstrated in the photograph below. The below photograph demonstrates that skew, as well as the absence of any pavement markings (such as double yellow center lines, white edge lines, or crosswalks) on Beaver Street:



See French Report at 5-6.

As demonstrated in the below photographs, the turning radii in the intersection are inadequate to turn larger sized vehicles, including school buses. This problem is compounded by the sight obstructions caused by the retaining wall and utility pole:



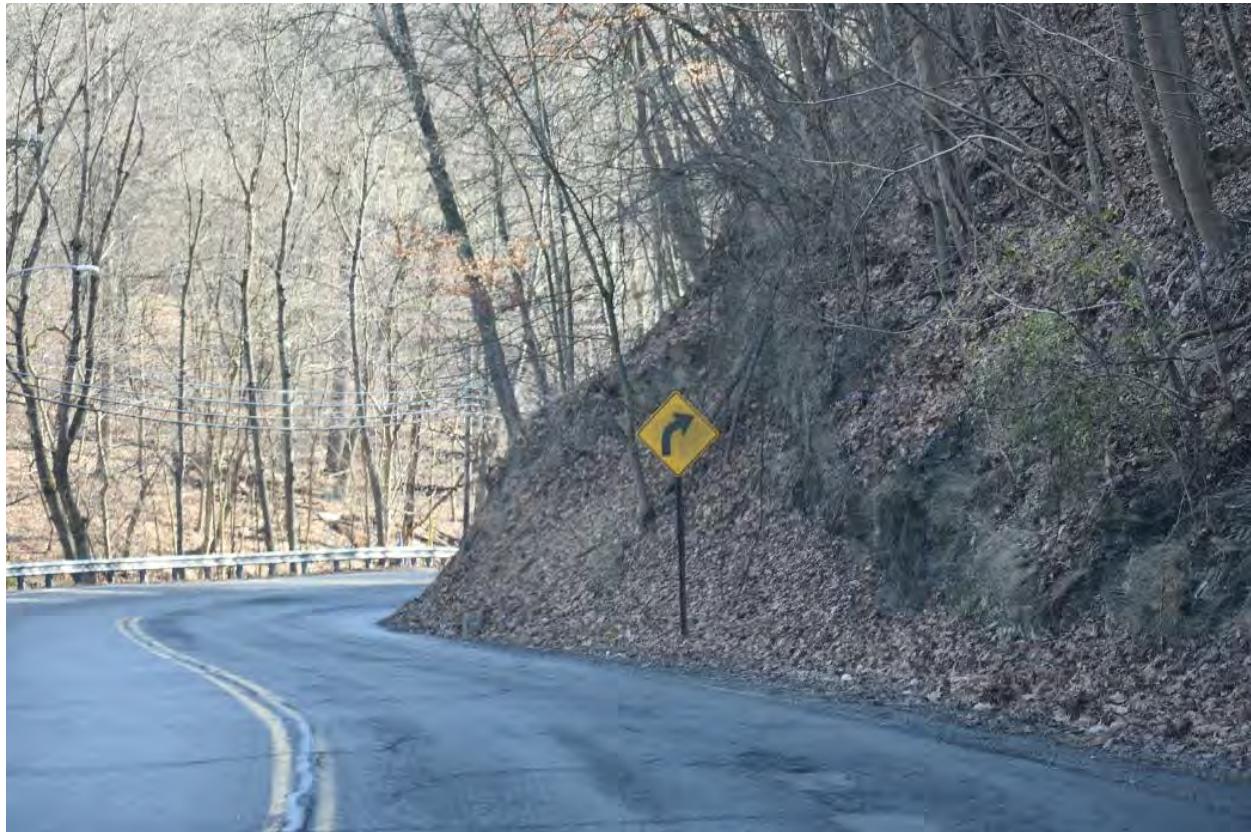


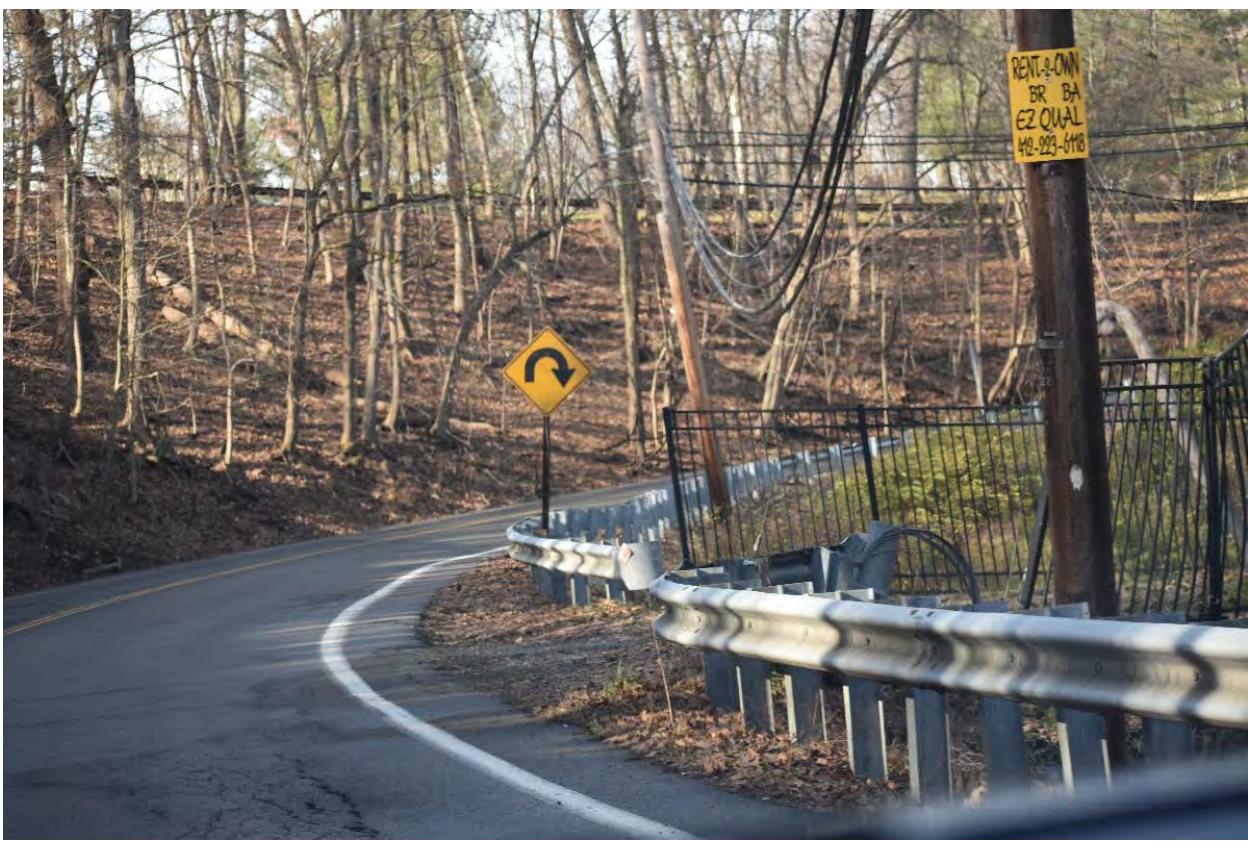
LEGEND

- PASSENGER CAR - SOUTHBOUND CAMP MEETING ROAD PASSENGER CAR CONFLICTS WITH BEAVER STREET SCHOOL BUS INGRESS MOVEMENTS.
- 36' SCHOOL BUS - BEAVER ST EASTBOUND LEFT MOVEMENT CONFLICTS WITH SOUTHBOUND CAMP MEETING ROAD PASSENGER CAR.

See French Report at 6-7.

The curvature and steepness of Camp Meeting Road create additional safety concerns. The grade on Camp Meeting Road between the proposed high school driveway and Beaver Street is approximately 10%, which is considered a steep roadway by most highway standards. Downgrades increase braking distance and difficulty stopping and slowing in poor weather conditions. Downgrades can also increase the likelihood of sliding off sharp horizontal curves, of which there are many along Camp Meeting Road, as depicted in the below photographs:





See French Report at 8-13.

There are also numerous roadside hazards along Camp Meeting Road, which increase the likelihood and severity of crashes. These hazards include rock outcroppings, trees, rollover embankments, retaining walls, and inlet headwalls. The narrow shoulder of the road, inadequate guide rails, non-compliant signing, lack of delineation, and inadequate lighting along Camp Meeting Road all intensify the danger caused by these hazards. *See French Report at 13-21.*

The cost of addressing the various inadequacies of the area of Camp Meeting Road near the proposed high school would be extensive. The school driveway intersection with Camp Meeting Road requires major improvement to Camp Meeting to achieve a minimum level of safety.

Even the most basic safety improvements, such as upgrading signage, marking pavement, and installing delineation on guide rails, would cost nearly \$100,000.00 to implement. *See French Report at 22.* Intermediate improvements, such as upgrading guiderails, replacing inlets, and installing additional lighting and high friction surfacing, could the Township an additional \$100,000-\$300,000. *Id.* at 22-23. If the installation of a traffic signal at the intersection of Beaver Street and Camp Meeting Road becomes necessary, the cost of that project, including the necessary related improvements, would increase exponentially, as that project, alone, could cost upwards of \$500,000. *See French Report at 23.*

ii. Geotechnical Concerns

The hearing testimony will demonstrate that, in addition to the various safety concerns relating to Camp Meeting Road, the proposed special exception use presents a number of geotechnical issues.

Notably, the proposed plan contemplates construction in several areas with steep slopes, including, but not limited to, the High School's main entrance and a significant portion of the roadway to the secondary entrance, areas along Camp Meeting Road, the northern parking lot, tennis courts, and proposed football stadium. Certain areas that are the subject of the proposed construction likely overlay the notoriously landslide-prone Pittsburgh Redbed formation. There is substantial risk that the slide-prone soil bed cannot be controlled and there is proof of previous slides in and around the subject site. Indeed, Little Sewickley Creek Road is currently closed due to unusually high landslide activity that has violated the integrity of the road, and certain road surface has fallen downhill. The portion of Camp Meeting Road leading to Ohio River Boulevard has been closed for more than four years due to soil erosion. The required cutting and filling of approximately 3 million cubic yards will necessitate extensive blasting of the bedrock, which led to previous landslides in the area and will increase the likelihood of future landslides. *See Zappala Report at 2; Truskie Report at 1, 3.*

These geotechnical concerns clearly constitute dangerous conditions warranting the denial of the requested special exception. In light of the foregoing, the District cannot meet its burden of proving compliance with the Ordinance's requirements.

b. The Special Exception Does Not Comply with the Performance Standards of Section 27-701 of the Ordinance.

Section 27-701 of the Ordinance sets forth the following performance standards with which a special exception must comply:

1. No use, land or structure in any district shall involve any element or cause any condition that may be dangerous, injurious or noxious to any other property or persons in the Township. Furthermore, every use of land or structures in any district must observe the following performance requirements:
 - A. Fire Hazards. Any activity involving the use or storage of flammable or explosive materials shall be protected by adequate firefighting and fire suppression equipment and by such safety devices as are normally used in the handling of any such material.
 - B. Radioactivity or Electrical Disturbance. No activity shall emit dangerous radioactivity at any point, or electrical disturbance adversely affecting the operation at any point of any equipment other than that of the creator of such disturbance.
 - C. Noise. Noise which is objectionable as determined by the Board due to volume, frequency or beat shall be muffled or otherwise controlled, except that fire or aid raid sirens and related apparatus used solely for public purposes are exempt from this requirement.
 - D. Vibration. No vibration shall be permitted which is discernible without instruments on any adjoining lot or property.
 - E. Odors. No malodorous gas or matter shall be permitted which is discernible on any adjoining lot or property.
 - F. Glare. No direct or reflected glare shall be permitted which is visible from any property or from any public street, road or highway.
 - G. Water Pollution. Pollution of water shall be subject to the requirements and regulations established by the Pennsylvania Department of Environmental Protection.

As the evidence presented at the hearing will show, the requested special exception would not comply with several of these performance standards. The increased traffic resulting from the proposed High School, particularly at the intersections of Camp Meeting/ Beaver Road and Ferry St/Ohio River Blvd, would lead to unacceptable levels of noise, which alone justifies the denial of a special exception application. *See, e.g., William Chersky Joint Enterprises v. Board of Adjustment of the City of Pittsburgh*, 231 A.2d 757 (Pa. 1967) (upholding denial of a special exception solely on the basis of noise); *Copeechean Fish and Game Club v. Zoning Hearing Bd.*

of North Whitehall Tp., 378 A.2d 1303, 1305 (Pa. Cmwlth. 1977) (“Excessive noise and its affect upon the surrounding residential area provide a sufficient basis for the denial of a special exception”).

The construction of the proposed High School would also result in additional water pollution. Little Sewickley Creek – one of the few high-quality watersheds in Southwestern Pennsylvania - would be subject to increased pollution and could further be affected by future landslides if the special exception is granted.

4. The Special Exception Would Not Be Harmonious with Adjacent Buildings and Properties.

The grant of a special exception to construct the proposed High School would not be harmonious with adjacent buildings and properties. Several Leet Township residents will testify to this fact. It would be impossible to design, build and landscape the proposed school so as to be harmonious with the adjacent buildings and properties, as those adjacent properties consist exclusively of single family structures. The increased noise level and traffic resulting from athletic events and other school functions also would not be harmonious with, and create a nuisance to, the surrounding residential neighborhood.

5. The Special Exception Would Substantially Increase Traffic Congestion in the Township

Finally, the testimony will show that the increase in traffic that would result from the construction of the High School further supports the objectors’ position that the special exception request should be denied. The intersection of Camp Meeting Road and Beaver Street is already heavily congested, and the addition of a school nearby will make the traffic problem exponentially worse. *See* Truskie Report at 1.

Conclusion

Based on the foregoing, and the testimony given at the hearing, QVSD has failed to meet its burden of proving compliance with the specific, objective requirements for the grant of a use by special exception as set forth in the Ordinance. Even *assuming arguendo* that QVSD can meet its burden of demonstrating compliance with the Ordinance’s objective requirements, the objectors to the special exception request will produce sufficient evidence to demonstrate that the proposed special exception will substantially affect the health, safety and welfare of the community. Accordingly, the objectors request that the Zoning Hearing Board deny QVSD’s special exception application.

Dated: June 25, 2021

Respectfully submitted,

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EXHIBIT A

My name is Mark Zappala and I submit this report in advance of the hearing before the Leet Township Zoning Hearing Board scheduled to begin on June 28, 2020.

I. Background, Education and Experience.

My wife of thirty seven years and I currently reside at 360 Backbone Road. We have been residents of the greater Sewickley area, more specifically the Quaker Valley School District (“QVSD”), for more than thirty years. Two of our children graduated from Sewickley Academy and the third from Quaker Valley High School.

I hold a Masters of Business Administration degree in Real Estate and Regional Studies from Southern Methodist University, the curriculum of which focused on developing competencies in real estate law, structural real estate transactions and real estate valuations techniques. I spent seven years in the commercial banking industry analyzing, underwriting, originating and servicing over \$1 Billion in commercial real estate construction loans throughout the South. I have spent the last thirty years in the planning, development, renovation and management of over one million (1,000,000) square feet of commercial and residential property including a multi-family townhouse development in the Borough of Sewickley.

I have served on the Sewickley Planning Commission, the Sewickley Academy Board of Trustees, the asset committee for an international real estate investment entity and on the Board for condominium associations in Florida and Mexico.

Given my above experience, I intend to provide testimony in opposition to Quaker Valley School District’s request for a Special Exception.

Through the careful and thorough application of the fundamental analysis of determining a site’s “Highest and Best Use”, it is in my professional opinion that a continued “Residential” designation for the property that is the subject of the request for a special exception is most appropriate and beneficial to the citizens of Leet Township.

II. Materials Reviewed.

In conjunction with this writing, I have reviewed the following: Leet, Leetsdale, Edgeworth and Sewickley Zoning Ordinances; Gavin, Boward, Beitko Report of a Preliminary Geotechnical Exploration (GBB); Phillips Proposal for Preliminary Engineering Studies (Phillips); Due Diligence Executive Summary; Site Selection presentation; Brainspace Study; and the various development scenarios put forth by QVSD.

III. Opinion

When analyzing the adequacy of a site for development, it is typical to first determine its “Highest and Best Use” defined as the reasonable, probable and legal use of vacant land which use is physically possible, appropriately supported and financially feasible resulting in the highest value. These criteria must be satisfied in sequential order before the ultimate determination of value is made. And while the ultimate determination of “value” is not germane to the question in front of the Leet Zoning Hearing Board, the methodology of pursuing same is sound and established real estate practice.

A. The Requested Special Exception is Not Beneficial to the Public at the Proposed Location.

- The Proposed Location is described as being “situated along a wooded hilltop flanked by forested side slopes...Mature forest...dominates the habitat...(which) drains to Little Sewickley Creek.”
- Based upon engineering estimates, over 50 acres of the mature forest would have to be cut down to accommodate the grading plan. The resulting “denuding” of the hilltop will significantly increase the possibility of soil erosion, adversely effecting the Little Sewickley Creek watershed while forever changing the fundamental character of the immediate area.
- “The Gateway test borings and research indicated that the east-west aligned ridge is composed of a sandstone cap underlain by the notoriously landslide-prone Pittsburgh Redbed formation, The Gateway test borings also revealed the presence of prehistoric, as well as relatively recent landslide deposits.”
- Little Sewickley Creek Road is currently closed due to unusually high landslide activity which have threatened the integrity of the road and resulted in significant undermining of the road bed in numerous locations.
- Grading estimates require the cutting and filling of approximately 3 million cubic yards and will involve significant blasting of the bedrock, an event that purportedly immediately preceded the WalMart slide.
- By their engineer’s own admission, “Regardless of the thoroughness of a geotechnical exploration, there is always the possibility that conditions between borings will be different from those at specific boring locations, and conditions will not be as anticipated by the designers and contractors”.
- Neither the designers, engineers nor the contractor will specifically guarantee grading performance or site stability now or in the future. It is an uninsurable risk whose consequences no reasonable developer would assume, especially with the foreknowledge of the WalMart fiasco. The personal liability would be far too great with damages potentially reaching into the tens of millions of dollars. Whether assumed by an individual or an entity, the downside risk of loss would far outweigh any economic incentive to warrant further consideration.

The Proposed Location is currently zoned “AAA Residence”, the most restrictive classification in the Leet ordinance. It is surrounded on three sides by properties bearing a similar designation and on the fourth by properties carrying the “AA Residence” classification. In actuality, Leet is, for all intents and purposes, a bedroom community with less than an estimated 1% of land area dedicated to non-residential uses. I am not aware of any argument that can be put forth that would conclude that the health, safety, welfare or property values would be enhanced by the development of a high school in this location.

B. The Proposed Location is not more suitable than other properties in Leet Township.

- The Subject, until recently, was not a singular site but, rather, represents an assemblage of several parcels the majority of which were acquired for the sole purpose of developing a family compound for an individual that prizes privacy;
- While the Proposed Location comprises nearly 160 acres, its development is yielding a paltry 25 acres or 15% of the total. If 25 acres is all that is necessary to accommodate the development of the “high school of the future”, the site selection process was fundamentally flawed. By stipulating a minimum threshold more than double what the Proposed Location will purportedly yield, it eliminated from consideration several viable options from consideration including, but not limited to, the acquisition of adjacent properties which would have created a usable area similar to the subject at a potentially lower cost with consistent uses and superior ingress/egress, obviating the need for a zoning change.
- As outlined above, the topography and geography of the Proposed Location is grossly inferior to those that are not located in a forested area, or on top of a hill, or in the middle of a single family neighborhood or on top of Redbed.

C. Portions of the Proposed Location will be dangerous, injurious and/or noxious.

Noxious uses are those that adversely effect the quiet enjoyment of the adjacent property owners including, but not limited to: noise, traffic safety, vibration, congestion and light wash. Using the standard single family occupancy of a four person household, the introduction of 650 young adults, hundreds of support staff, teenage drivers, school busses, sports fields, parking lot lights and a stadium, is, by definition, noxious to adjacent property owners.

D. The Proposed Location will not produce a Harmonious Relationship with the Adjacent Buildings and Property.

The development of the Proposed Location as a high school as previously described is the equivalent of introducing two Quaker Village Shopping Centers both in land area and square footage on to the Subject. It is impossible to insert the proposed building mass along with ancillary parking and expect it to be considered “harmonious” with the surrounding single family homes.

E. The Proposed Location is Likely not Financially Feasible for Leet Township.

While acknowledging that, in this instance, the determination of the Proposed Location’s value is not, per se, at issue, the process of determining same provides a widely acceptable methodology to determine the appropriateness of a proposed use. Since I am restricted from pursuing that line of testimony, I offer a direct quote from the proposal to provide engineering services wherein the principal of the firm opined “However, based on observations during the request for proposal (RFP) site meeting, which revealed such elements as significant landslide activity, springs and massive/very hard bedrock outcroppings,...we contacted QVSD and indicated that this particular site may not be workable from a typical budget perspective even if the site was effectively “gifted” or donated to QVSD”.

F. Constructing a High School in the Proposed Location is Not in the Best Interests of the Surrounding Property or Neighborhood.

The development of the Proposed Location for the proposed use is fraught with such significant risk no reasonable person (individual or entity) would assume. Given the failure to meet the criteria detailed above, the determination for the Subject zoning use to remain Residential is the only reasonable conclusion to be drawn.

Respectfully submitted this 15th day of June, 2021.



Mark Zappala

EXHIBIT B

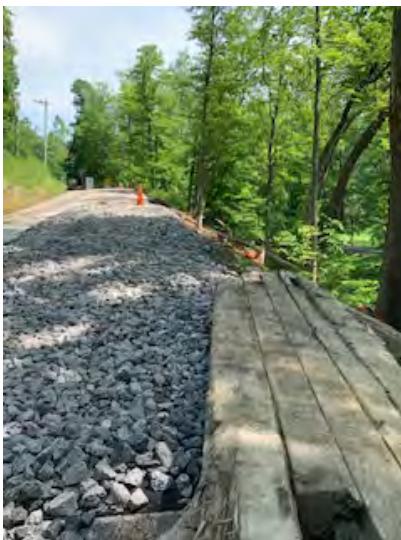
Lynn Truskie

Education: B. Architecture; Associates in Real Estate; MBA (Real Estate & Finance)

Profession: Real Estate Development, Finance, Brokerage, Acquisition, Appraisal/Valuation

I am a real estate site acquisition manager by profession. Specifically, I assess sites for development/redevelopment and have many concerns about the proposed location for the new high school. When selecting sites for development, we look at a number of factors when determining suitability and feasibility. These factors include but are not limited to 1.) Vehicular accessibility; 2. Topography; 3.) Walkability/Access to amenities (i.e. restaurants etc.) & neighborhoods; 4.) acceptable use context (i.e. zoning). This site wouldn't make the preliminary list let alone short list. It appears to be selected by a group out of their element professionally or promoted by non-stakeholders/consultants with various self-serving agendas. In other words, the selection of this site defies common sense.

1. The general area and topography is not suited for a flat campus and dense traffic.
2. Specifically, the topography of the site and soil is not suited for mass redistribution. The current plans to blast regrade the site are unsafe and jeopardize the safety of nearby residents. (i.e. Kilbuck site.)
3. The increased traffic and loss of privacy changes the nature and overall feel of the area. Many of our residents wouldn't have moved up here if we knew the HS was going to be relocated off Camp Meeting.
4. There are multiple road closures due to soil instability and landslides in our general area. Currently, Camp Meeting is the only road opened that allows the residents to get to & from town/Ohio River Boulevard. Both Camp Meeting (Bell Acres) and Little Sewickley Creek Road are closed due to soil erosion. The former has been closed for more than 4 years. Insert exhibits/photos.
5. Camp Meeting is already a bottleneck at the intersection with Beaver street. There is a line to turn right/left at the bottom of Camp Meeting road. It is already very congested during rush hour. School traffic will make this exponentially worse. The requirement of traffic lights is an inconvenience that Leet township residents shouldn't have to bear.
6. The proposed entrance to the school is in a blind spot and will cause a safety issue with high speed traffic turning the bend.
7. Children will not be able to walk to school or go to the strip center & restaurants during lunch or after school. The site is exceedingly isolated from a physical perspective. This will increase road traffic. It may also create hardship for children without after school transportation and prohibitive their participation in sports, clubs and activities.



Sewickley Creek Road

EXHIBIT C



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June 15, 2021

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Pittsburgh, PA 15219

RE: Safety Review of Camp Meeting Road
Quaker Valley High School Relocation
Leet Township, Allegheny County, Pennsylvania

French Engineering has performed a review of the impacts of the proposed relocation of Quaker Valley High School to Camp Meeting Road in Leet Township, Allegheny County, Pennsylvania. At this time, the first draft of the traffic study prepared by the school district is complete. The focus of the traffic study prepared by the school district is primarily related to capacity, level of service, and queuing. French Engineering reviewed the study developed by the school district and identified numerous concerns. To address safety more fully, an independent review of potential safety concerns was conducted by French Engineering and documented in this technical memo. The limits of the safety review were Camp Meeting Road between the proposed high school and Beaver Street. These concerns may have some bearing on special exception criteria, particularly:

The special exception shall not involve any element or cause any element or condition that may be dangerous, injurious or noxious to any other property or persons, and shall comply with the performance standard of § 27-701.

The project area was field viewed on Thursday, January 14, 2021 during daylight hours; Sunday, January 17, 2021 during nighttime / snow conditions; and Thursday May 6, 2021 during daylight hours. In general, the roadway was found to have one lane in each direction with no turn lanes at any driveway or intersection. It had a steep upgrade in the northbound direction (away from Beaver Street), numerous horizontal curves, and a posted speed limit of 25 mph. According to PennDOT functional class maps, it is classified as an urban major collector. It is owned by Allegheny County and is a non-state federal aid roadway. It was last counted on September 19, 2019 (Thursday), at which time 2,800 vehicles were counted in a 24-hour period.

Numerous concerns were identified during the field view, which are categorized into the following general areas:

- (1) Inadequacies at the Beaver Street / Camp Meeting Road intersection
- (2) Poor geometry for Camp Meeting Road between the proposed High School and Beaver Street
- (3) Roadside hazards along Camp Meeting Road
- (4) Substandard signing and pavement markings on Camp Meeting Road

(5) Dark areas along Camp Meeting Road due to gaps in the street lighting

Organization of this Document

This document has three main parts:

1. Discussion of the specific challenges presented by teenaged drivers, which will be a major component of the traffic generated by the high school.
2. Discussion of the specific safety concerns observed on Camp Meeting Road and the Camp Meeting Road / Beaver Street intersection.
3. Approximate costs of improvements that would be considered to address some of the safety concerns.

Teenaged Drivers

As the safety concerns are presented in this document, special consideration should be given to the high school aged drivers that will be attracted to this area with the proposed high school. Their inexperience will compound the identified issues. According to the Center for Disease Control (CDC), motor vehicle crashes are the second leading cause of death for U.S. teens. The CDC noted:

The risk of motor vehicle crashes is higher among teens aged 16–19 than among any other age group. In fact, per mile driven, teen drivers in this age group are nearly three times as likely as drivers aged 20 or older to be in a fatal crash.

The following materials from the CDC outline the specific risk factors associated with teenaged drivers:

- *Inexperience - Teens are more likely than older drivers to underestimate or not be able to recognize dangerous situations. Teens are also more likely than adults to make critical decision errors that can lead to serious crashes.*
- *Nighttime and Weekend Driving - In 2018, 37% of motor vehicle crash deaths among teen drivers and passengers aged 13–19 occurred between 9 pm and 6 am, and 52% occurred on Friday, Saturday, or Sunday.*
- *Not Using Seat Belts - Compared with other age groups, teens and young adults often have the lowest seat belt use rates. Among teen drivers and passengers 16–19 years of age who died in car crashes in 2018, almost half were unrestrained at the time of the crash (when restraint use was known).*
- *Speeding - Teens are more likely than older drivers to speed and allow shorter headways. In 2018, 30% of male drivers aged 15–20 years and 18% of female drivers aged 15–20 years who were involved in fatal crashes were speeding. These were the highest percentages by sex as compared with all other age groups*
- *Alcohol Use - Drinking any amount of alcohol before driving increases crash risk among teen drivers as compared with older drivers. Teen drivers have a much higher risk for*

being involved in a crash than older drivers at the same blood alcohol concentration (BAC), even at BAC levels below the legal limit for adults.

Source: https://www.cdc.gov/transportationsafety/teen_drivers/teendrivers_factsheet.html

Safety Concerns

(1) Inadequacies at the Beaver Street / Camp Meeting Road intersection

The following are specific concerns related to the Beaver Street / Camp Meeting Road intersection.

- A. Restricted sight distance looking right from Camp Meeting Road at Beaver Street due to a wall and utility pole in the northwestern corner. This leads to an increased risk that a motorist on Camp Meeting Road will pull out in front of a motorist heading eastbound on Beaver Street, resulting in an angle collision.



View of Camp Meeting Road from eastbound Beaver Street. As can be seen, all but the last few feet are hidden by the wall and utility pole. This photo also shows the lack of pavement markings on Beaver Street in the Camp Meeting Road intersection.



View looking right from Camp Meeting Road from the perspective of a vehicle stopped at the stop sign. The stop sign is well behind the wall lining Beaver Street.

- B. General difficulty pulling out of Camp Meeting Road at Beaver Street due to cross traffic, the three-way stop to west, and the VFW parking lot. This could lead to vehicles pulling out in front of traffic on Beaver Street, either due to confusion or risk-taking behavior caused the lack of acceptable gaps in Beaver Street traffic. The consequences of such actions are typically angle collisions in the intersection.



The stop sign has a supplemental sign indicating "OPPOSING TRAFFIC DOES NOT STOP USE CAUTION AT INTERSECTION".

During the field view, the driver also experienced difficulty in finding a gap in Beaver Street traffic due to overall congestion conditions. It is anticipated that this will be identified and addressed in the traffic study being conducted by the school district. It is expected that alternative traffic control (i.e., signalization, all-way stop, etc) will be evaluated and proposed by the traffic study.

C. Skew in Camp Meeting Road / Beaver Street intersection

There is a slight skew (<10 degrees) in Beaver Street near the Camp Meeting Road intersection. Westbound traffic must turn to the left to continue following the Beaver Street alignment. Eastbound traffic must turn to the right. If a westbound driver fails to make the turn, they will hit the wall and utility pole in the northwest quadrant. (see photo below). Skewed intersections are generally undesirable because they complicate driver tasks such as navigating the intersection and identifying gaps in traffic into which to turn.



Photo shows skew in Beaver Street at its intersection with Camp Meeting Road. It also shows the lack of pavement markings.

D. Lack of pavement markings on Beaver Street

As can be seen in the photos above, Beaver Street lacks double yellow center lines. White edge lines are generally not required next to curb but could be beneficial in this case given the width of the road and low curb reveal. Pavement markings may help to delineate the skew of the intersection. Also to be noted, the "Pedestrian" sign with supplemental "Yield to Peds in Crosswalk" sign is shown in the photo above with no visible crosswalk on the pavement. The purpose of pavement markings are to provide guidance to the driver and can be used to convey regulations, guidance, and warnings in ways that are not obtainable by the use of other devices. The consequences of missing pavement markings are typically related to drivers leaving their assigned path, such as run-off-the road crashes, opposite direction sideswipe crashes, and head-on crashes.

E. Inadequate turning radii in the intersection to turn larger sized vehicles, including school buses.

The two figures below show school buses turning in and out of Camp Meeting Road from each direction of Beaver Street with a vehicle waiting on Camp Meeting Road attempting to turn out. This illustrates the tight radii on each corner, as well as how the sight obstructions caused by the wall and utility pole in the northwestern quadrant greatly reduce what limited room is available in the intersection for turning. The consequences of the poor turning radii include the potential for buses to hit the obstructions in the corner while turning, or to hit other vehicles in

the intersection because the buses are forced into opposing traffic lanes while turning around the obstructions in the corner.



Turning simulation showing the school bus turning right into Camp Meeting Road



Turning simulation showing the school bus turning left into Camp Meeting Road

(2) The curvature and steepness of Camp Meeting Road.

A. Steep grade on Camp Meeting Road

The grade on Camp Meeting Road between the proposed high school driveway and Beaver Street was estimated at 10% using measurements and tools in Google Earth. This would be considered a steep roadway by most highway standards. Downgrades increase braking distance, speeding, and difficulty stopping and slowing in poor weather conditions. The consequences include an increased risk of hitting fixed objects in the roadside or hitting other vehicles on Camp Meeting Road. Downgrades can also increase the likelihood of sliding off of sharp horizontal curves, which the corridor has many. The following photo shows the W7-1 "hill" sign installed on Camp Meeting Road, which is warranted in the Manual on Uniform Traffic Control Devices (MUTCD) based on the steepness and length of the grade. According to the MUTCD, this sign *should be used in advance of a downgrade where the length, percent of grade, horizontal curvature, and/or other physical features require special precautions on the part of road users.*



Hill (W7-1) and Winding Road (W-15) signs on southbound Camp Meeting Road approaching the school area

Note the W-15 "winding road" sign that has also been installed. This sign is correctly applied and is warranted when there are three or more changes in roadway alignment each separated by a tangent distance of less than 600 feet.

B. Speeding and aggressive driving on Camp Meeting Road

During the field view, the engineer drove downgrade at the posted speed limit of 25 mph and had a queue of vehicles form behind it, including those honking horns and aggressively driving. It is anticipated that a spot speed study on the roadway would reveal that operating speeds are in excess of the 25-mph speed limit. Speeding increases the likelihood and consequences of crashes and can reduce the effectiveness of certain roadway design elements, such as guide rail, guide rail end treatments, and superelevation on horizontal curves. It also requires increased sight distance to safety stop in response to hazards, which may not be available.

C. Inadequate sight distance on select horizontal curves on Camp Meeting Road

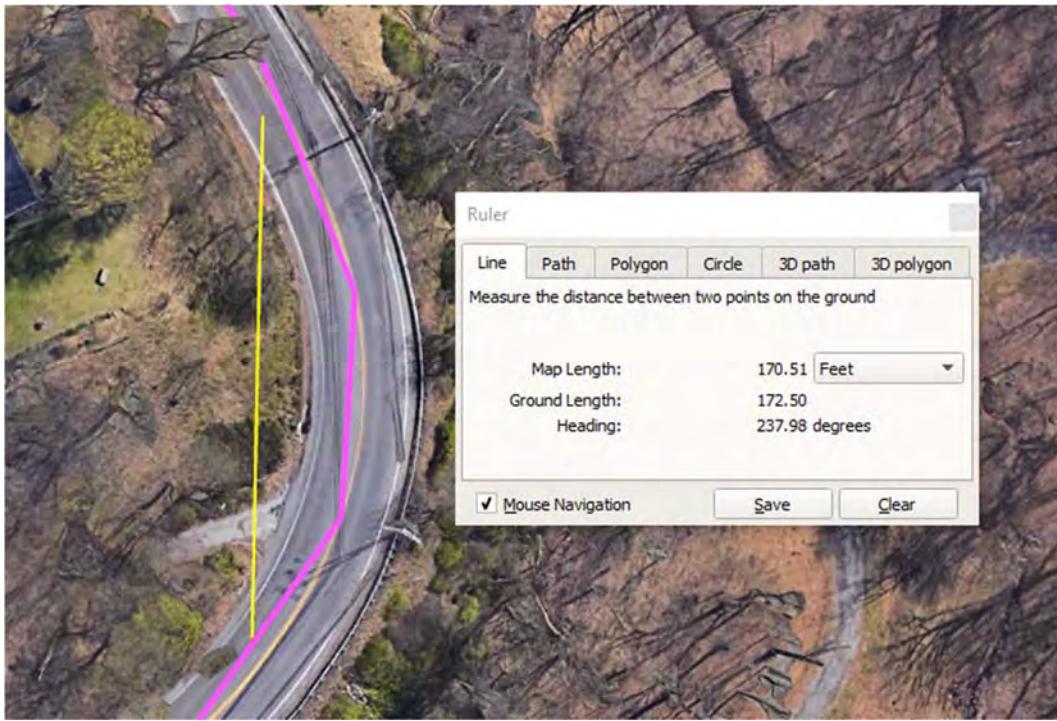
According to the Policy on Geometric Design of Highways and Streets, Table 3-2 Stopping Sight Distance on Grades, the stopping sight distance for 25 mph speeds on 9% grades are as follows:

Upgrade = 140-ft

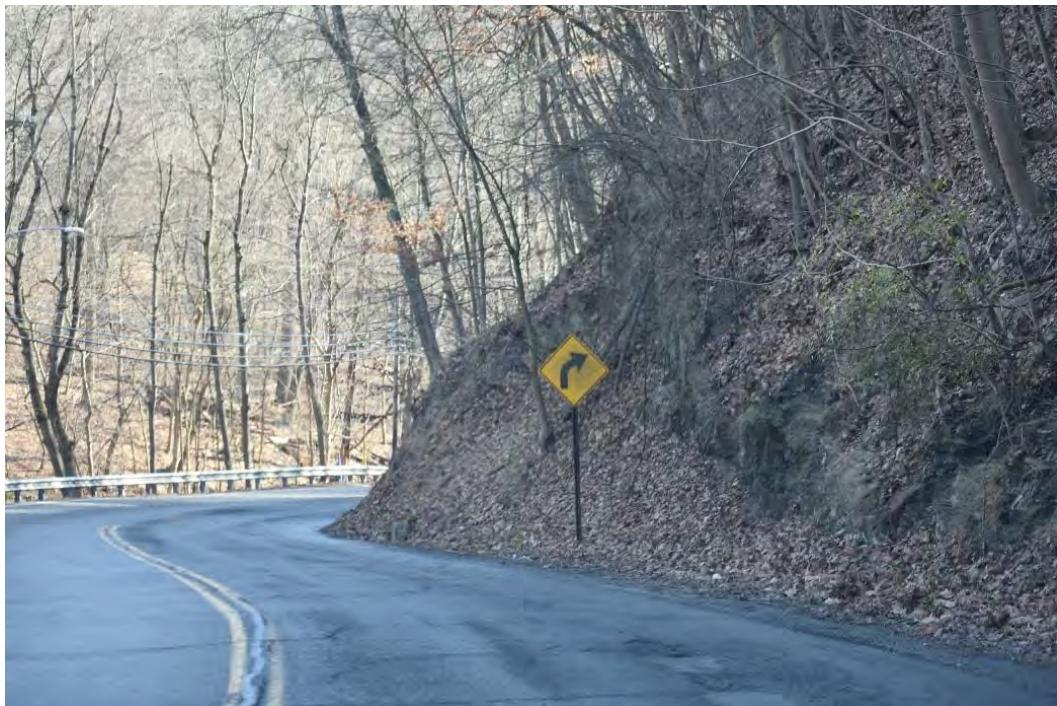
Downgrade = 173-ft

There are multiple examples along Camp Meeting Road where these minimums are not met because of embankments and / or vegetation on the inside of horizontal curves obstructing visibility. The consequences of inadequate sight distance are an increased risk of hitting objects in the road, including other vehicles, such as those that might be moving slow or queued due to congestion.

The following three figures illustrate this point. The first is an aerial photo that shows a measured distance of 173-ft being blocked by a wall / embankment. The final two are photos taken from ground view upstream of horizontal curves with sight distance limited by obstructions on the inside of the curve.



Measured length of 170-ft blocked by embankment that is located at the edge of road on the inside of the curve.



Sight distance in horizontal curve approximately 1200-ft from Beaver Street



Sight distance in horizontal curve approaching stop sign at Beaver Street

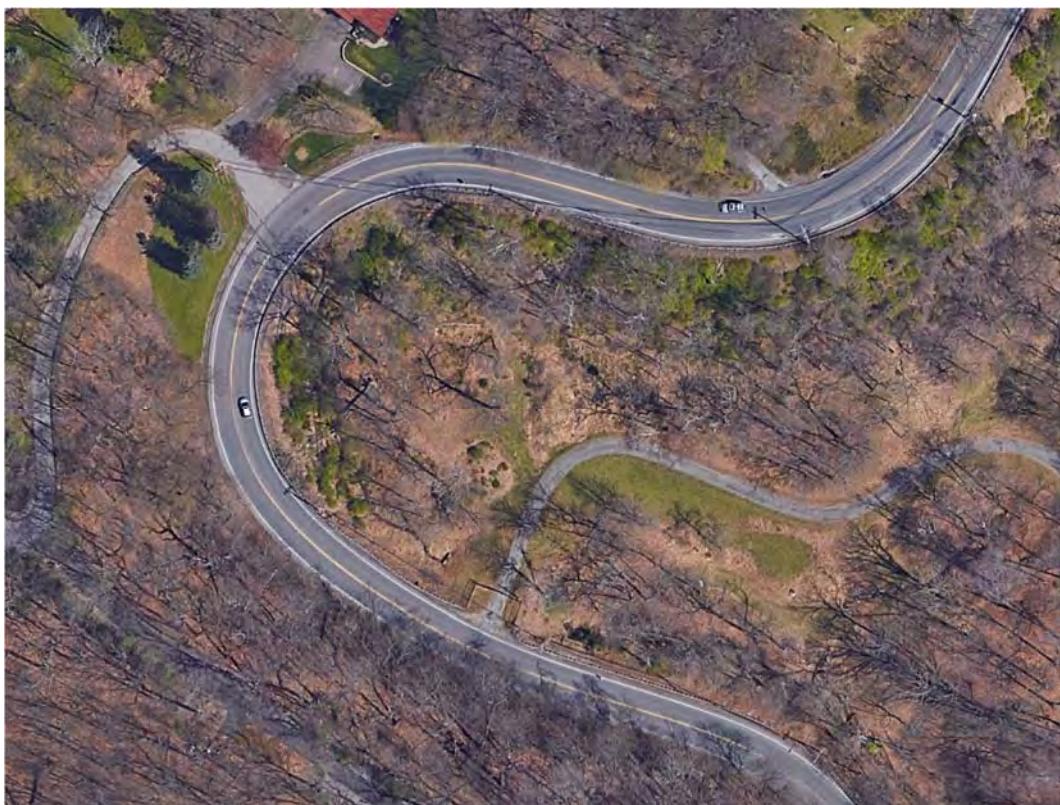
In addition, a driveway on a horizontal curve was observed with a mirror across the road to assist with sight distance. The following photo shows this mirror. PennDOT policy generally discourages the use of mirrors and will only allow them if there are no other practical alternatives for improving the sight distance or providing an alternate method of traffic control. They are a last resort for sight distance problems and should be considered atypical.



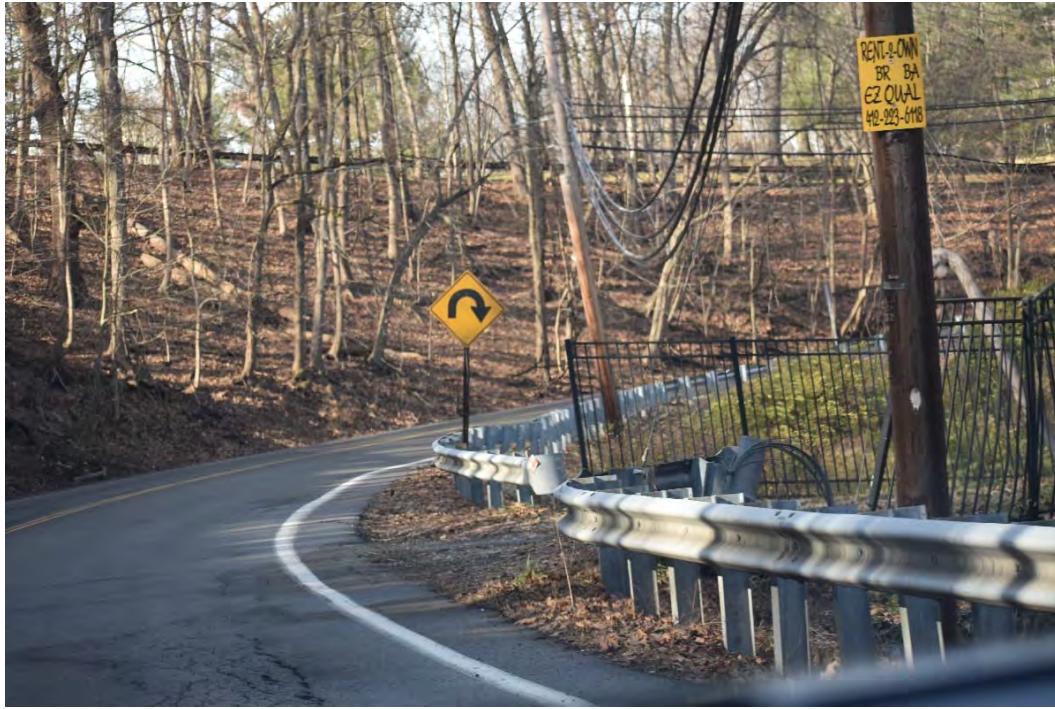
Mirror at a driveway along Camp Meeting Road due to poor sight distance

D. The series of horizontal curves on Camp Meeting Road (winding road conditions)

Camp Meeting Road has a series of reverse and broken back horizontal curves between the proposed school site and Beaver Street. The curves are of such frequency and spacing that the winding road sign is warranted and installed in both directions, as noted previously. In addition, one curve of particular concern is the curve with the intersection of Myrtle Hill Road. This curve has the “hairpin curve” (W1-11) sign installed because the MUTCD indicates it can be applied when *the curve has a change in horizontal alignment of 135 degrees or more*. In this case, the change in horizontal alignment is approaching 180 degrees, as shown in the following aerial photograph. Horizontal curves carry increased risk of sliding off the road or rolling over. A series of horizontal curves increase demands on the driver. Reverse curves complicate efforts to provide proper superelevation around curves, especially at the entrances to the curves. Substandard superelevation makes the curves even more susceptible to run off the road crashes.



Curve with “Hairpin Curve” (W1-11) sign installed



"Hairpin Curve" sign (W1-11) in the northbound direction. A second sign is installed southbound.

(3) Camp Meeting Road has numerous roadside hazards that can cause or worsen crashes for vehicles leaving the traveling lane. The roadside hazards include the following:

A. Narrow shoulders on Camp Meeting Road

While the lane widths on Camp Meeting Road appear to be approximately 12-ft, shoulder widths are narrow and on the order of a couple of feet. This leaves very little buffer / recovery area between the travel lane and hazards present in the roadside, which increases the likelihood of the hazards being struck. Most of the previous photos presented along Camp Meeting Road illustrate the narrow shoulders.

It was also noted that there are drop offs of a few inches at the edge of pavement. These can grab a wheel and yank the vehicle towards the edge of road if the driver drifts their outside wheel over them. According to PennDOT Publication 242, Pavement Policy Manual, drop-offs of greater than 2" are problematic and require correction, typically by the installation of a "Safety Edge." The following photo shows an example on the outside of the curve near Myrtle Hill Road.



Exposed pavement edge on the outside of curve near Myrtle Hill Road

- B. Unprotected fixed object hazards including rock outcroppings, trees, rollover embankments, retaining walls, and inlet headwalls. Trees and utility poles do not generally need to be protected unless they are likely to be hit due to geometric roadway conditions (outside of a curve, steep grade at beginning of a curve, etc.).

The following photos show a few examples of items in the immediate roadside that would cause or worsen a crash by a vehicle leaving the traveling lane.



Blunt end of a retaining wall sitting at the back of the shoulder, only a couple of feet from the travel lane. In addition, in the background, pieces from the wall can be seen laying on the shoulder. Blunt fixed objects can lead to high deceleration in the crash and / or spearing of the vehicle, the consequences of which are more severe crashes.



Headwall of an inlet that presents a blunt end fixed object hazard. In addition, some of the inlets have broken or depressed grates / sidewalls that could grab a tire, thus increasing the potential severity of the crash.



One example of a rock outcropping that presents a fixed object hazard. PennDOT Design Manual 2, Chapter 12, indicates *a steep, rough-sided rock cut should normally begin outside the clear zone or be shielded. A rock cut is normally considered to be rough-sided when the face can cause excessive vehicle snagging rather than provide relatively smooth redirection.*



Trees greater than 4" in diameter are considered fixed object hazards. Steep embankments can cause rollover crashes or fixed object crashes. The photo also shows another inlet headwall protruding prominently from the earth around it.

C. Inadequate guide rail including outdated equipment, lack of guide rail backup, fixed object hazards right behind guide rail, and guide rail damage

The following photos show guide rail that has been hit and not repaired, as well as guide rail that is sliding due to sliding of the earth into which it is imbedded. The purpose of guide rail is to protect drivers from the hazards that are behind it by redirecting motorists back into the roadway. If it is not functioning properly or designed and installed in accordance with the latest standards, it can fail in this regard and / or simply be another roadside hazard.

With respect to sliding guide rail, it should be noted that there should be 2-ft of somewhat level earth behind the guide rail posts to secure them in the ground. This is not likely to be present throughout, especially if the posts are sliding.

In addition, there should be a clear area behind the guide rail posts that is at least equal to the deflection distance of the guide rail. Without a detailed examination, of the guide rail, it will not be possible to know the deflection distance. According to the PennDOT Roadside Safety Pocket Guide, deflection distances range from 1.5-ft to 9-ft. It is likely that there are obstructions, namely utility poles and trees, within the deflection distance of the guide rail that has been installed.

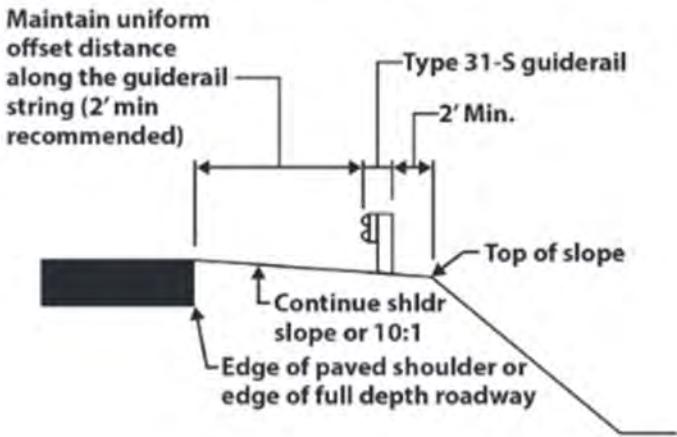
**Deflection Table
(Minimum Unobstructed Distance)***

| | Type | Deflection (ft) | Post Spacing (ft-in) | Mounting Height |
|------------|------------------|-----------------|----------------------|-----------------|
| Flexible | 2-W | 9 | 12' - 6" | 32" |
| | 2-WC | 6.5 | 6' - 3" | |
| | 2-WCC | 5.5 | 3' - 1 ½" | |
| Semi-Rigid | 31-S | 4 | 6' - 3" | 31" |
| | 31-SC | 3 | 3' - 1 ½" | |
| | 31-SCC | 1.5 | 1' - 6 ¾" | |
| Rigid | Concrete Barrier | 0 | - | 32" or 50" |

*Measured from the rear face of the guide rail post to the front face of the obstruction.

Excerpt from PennDOT Roadside Safety Pocket Guide showing deflection distances of guide rail.

For Optimum Performance



Excerpt from PennDOT Roadside Safety Pocket Guide showing 2-ft minimum distance between the back of the guide rail post and the top of slope on embankments.

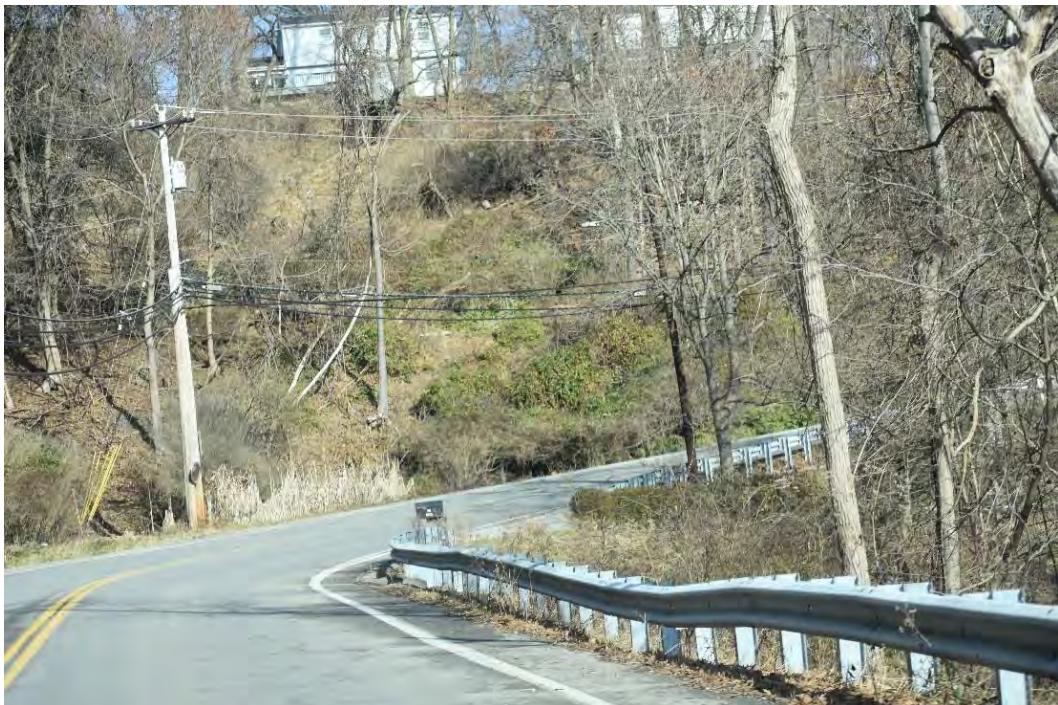
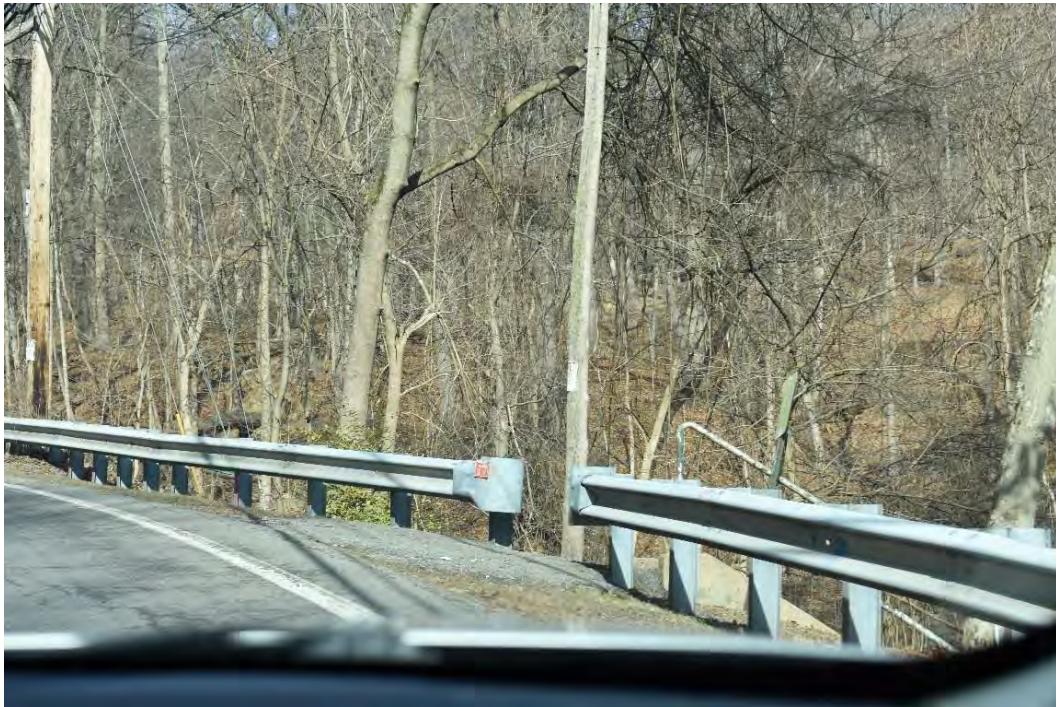


Photo shows sliding guide rail, likely due to earth sliding behind it.



Damaged guide rail. Also, potential fixed object hazards behind the guide rail within the deflection distance.



Earth around guide rail posts is eroding away from the posts in the background of the photo.

D. Old pavement, including cracking and rutting

The pavement appears old and worn, including cracking and rutting. Old pavement can have reduced friction and increase driving difficulty. The following photo illustrates the cracking in the pavement.



Cracked, distressed pavement on Camp Meeting Road

E. Shadows on the road due to the wooded nature of the area

The adjacent trees in this heavily wooded area cast shadows on various portions of pavement. Pavements in the shadow tend to stay colder, which could lead to frozen / icy pavement in the winter when other parts of the roadway are just wet, lack of foliage in the winter notwithstanding. The following photo shows an area that is almost entirely covered in shadow. Areas that are in near-perpetual shade during the winter because the roadway is oriented east-west with the trees on the southern side are particularly prone to this phenomenon.



Section of Camp Meeting Road in shadow

(4) Substandard signing and pavement markings on Camp Meeting Road

A. Non-compliant horizontal curve signing

Design criteria for horizontal curve signing needed to be brought into compliance with new requirements in the MUTCD by the end of 2019. It does not appear that the signing on Camp Meeting Road has been updated to these new standards. However, further detailed study would be required to make a final determination. Consistent signing on horizontal curves is essential to helping drivers successfully navigate the roadway alignment. Failure to do so increases the risks of run off the road crashes.

B. Lack of delineation

As a roadway through a wooded area with only sporadic lighting, the roadway would benefit from delineation in accordance with PennDOT standards (TC-8604). If uniform lighting were provided, delineation would not be beneficial. Like pavement markings, delineation guides drivers along the alignment of the roadway. If drivers fail to follow the alignment, they leave the roadway and are subject to hitting objects in the roadside.

(5) Dark areas along Camp Meeting Road due to gaps in the street lighting

Generally speaking, Camp Meeting Road has a series of light and dark areas because lighting is only provided in the horizontal curves. Additional lighting could be installed to uniformly light the entire roadway. Roadway lighting can reduce nighttime crashes that result from poor visibility.

Cost of Safety Improvements

While it is beyond the scope of this review to conduct a detailed estimate of the cost to improve Camp Meeting Road, the following “order of magnitude” construction cost estimations are provided in this regard. Note that other costs including but not limited to design, utilities, right-of-way, maintenance and operation are not included.

It may be possible to address some of the concerns with low-cost safety improvements, such as signing, pavement markings, and delineation:

- The estimated cost for a typical post-mounted sign (e.g., 36” x 36”) is approximately \$600. It is reasonable to expect that the signing could be upgraded for \$5,000 to \$10,000.
- The estimated cost for durable thermoplastic pavement markings is approximately \$5.00 per linear foot. This is a high-quality pavement marking that is superior and more expensive than paint. Installing it along the 0.67-mile length of Camp Meeting Road between Beaver Street and the proposed school driveway would cost approximately \$70,000. Installing similar markings along Beaver Street through the Camp Meeting Road intersection area would cost approximately \$2,500.
- Post mounted delineators cost approximately \$50 each and delineators on guide rail cost approximately \$20 each. Installing delineation along the corridor would cost approximately \$5,000.

Some medium cost items include upgrading the guide rail / end treatments, replacing the inlets, installing additional lighting, and installing high friction surfacing on the curves.

- Guide rail – Typical guide rail costs approximately \$25 per linear foot, with end treatments estimated at \$3,500 each. Guide rail currently runs along the eastern side of Camp Meeting for nearly all of the length between Beaver Street and proposed school. Replacing this guide rail would cost approximately \$50,000 (includes end treatments). This also gives an idea of what it might cost to add guide rail at select locations on the other side of the roadway, acknowledging that hazards on the other side of the roadway would likely most be dealt with by removing them.
- Inlets – We estimate that replacing one of the older style inlets will cost approximately \$7,500 each. A quick investigation revealed at least six of these inlets, which amounts to a total of \$45,000.
- Lighting – Between Beaver Street and the vicinity of the proposed high school driveway, there are seven existing street lights, and up to 6 more could be added to provide more uniform lighting. It is anticipated that most of these could be added by mounting them

on an existing utility pole. It may be necessary to install one or two on new poles depending on the outcome of the lighting design. It is roughly estimated at \$1,500 to mount a new light on an existing utility pole and \$7,000 if a new pole is required. Using these assumptions, the cost to improve the lighting is estimated at \$15,000 to \$20,000 plus the ongoing costs of electrifying them.

- High Friction Surface – Given the steep grades, series of closely-spaced horizontal curves, and intersection at the bottom of the grade, it is assumed that high friction surface would be applied along most of the length of roadway. At an estimated cost of \$50 per square yard, applying the treatment in both lanes along the entire length would cost \$236,000, which serves as the upper limit on the cost of the improvement.

If a traffic signal becomes necessary at the intersection of Beaver Street and Camp Meeting Road, this will cost upwards of \$250,000 plus the cost of any roadway improvements required to accommodate the signalization, which could include turning lanes, improved turning radii in the corners, and other modifications required to place the signal equipment. A project such as this could cost upwards of \$500,000 depending on the magnitude of the roadway improvements.

Finally, some concerns will not be feasible to address, including some of the major concerns related to the steep grades and sharp horizontal curves. It is also questionable as to whether all of the roadside hazards can be satisfactorily addressed without impacting adjacent properties and / or acquiring right-of-way. It is also uncertain what can be done about the speeding and aggressive driving in the corridor without additional law enforcement. Ultimately, even if unlimited funds were available, there is only so much that can be done with the roadway given its existing alignment and the topography through which it runs.