

# DUE DILIGENCE EXECUTIVE SUMMARY

An Evaluation Team of professionals comprised of: Phillips & Associates, Inc. (PAI); Garvin, Boward Beitko Engineering, Inc. (GBBE); American Geosciences, Inc. (AGI); and Skelly and Loy, Inc. (SKI), was retained by Quaker Valley School District (QVSD) to conduct a Due Diligence Evaluation (DDE) on certain properties owned by Three Rivers Trust (TRT) and others, generally located between Camp Meeting and Little Sewickley Creek Roads in Edgeworth Borough, Leet Township, and Leetsdale Borough, Allegheny County, Pennsylvania. They are collectively referred to, hereafter as the “TRT Properties”. The “TRT Properties” include the following tax parcels:

- 705-P-280;
- 705-N-85;
- 705-N-90;
- 704-C-362;
- 704-O-186;
- 704-D-126; and
- 704-D-221.

The adjacent properties collectively referred to hereafter as “Adjacent Properties” are owned by members of the Murrer family and by Joseph Dohar. They include the following tax parcels:

## Murrer Family Parcels

- 704-G-399;
- 704-G-402;
- 704-G-403;
- 704-G-400;
- 704-C-360;
- 704-G-401; and
- 704-G-404.

## Dohar Parcels

- 704-L-66 (only a portion to be acquired); and
- 704-H-66-1.

The DDE consisted of Property Surveying, Phase I Environmental Site Assessments, Wetland and Surface Water Investigations, Preliminary Geotechnical Explorations and Evaluations, Site Evaluation – Related to Site/Civil Issues and generation of Conceptual Grading Plan Options. The DDE is intended to provide the QVSD and Board with sufficient information to decide whether to “Buy” or “Not Buy” the TRT Properties.

The QVSD originally contracted with the Evaluation Team in June 2017 to perform the DDE on the TRT Properties (seven Tax Parcels). In August 2017, QVSD expanded the contract with the Evaluation Team to include an ALTA survey of the TRT and associated properties. In September 2017 the Evaluation Team made a presentation to the QVSD Board which proposed acquiring, in addition to the TRT Properties, eight additional parcels and a portion of another parcel of property (not developed with structures) in order to make it a viable site for development of a future high school campus. The school board authorized the Evaluation Team to proceed with DDE as QVSD started the process of acquiring the nine additional parcels. Seven parcels were quickly acquired, referred to as the Murrer Family parcels. The two remaining parcels, referred to as the Dohar Parcels, were subsequently placed under Agreement. In addition, one of the Dohar Parcels would need to be subdivided. In April 2019, QVSD and the Evaluation Team entered an amendment to the original contract of June 2017, to perform DDE on the Dohar Parcels. The amended contract required a recommendation for the re-location of property lines necessary for subdivision of the Dohar parcel in Leetsdale Borough. The amended contract also included combining the DDE on the Dohar Properties with the DDE of the Murrer Family Properties and the original DDE of the TRT Properties into one DDE Report. The report below is the findings and recommendations on all 16 parcels, 14 already acquired by QVSD and the two presently under sales agreement with QVSD.

## **BACKGROUND**

QVSD is currently party to Agreements of Sale to purchase the seven tax parcels of TRT Properties, seven adjoining tax parcels of the Murrer Properties, and a portion of two adjoining tax parcels of the Dohar Properties, hereafter effectively referred to as the Project Evaluation Area, which all total approximately 159 +/- acres. QVSD intends to develop the Properties into a new high school campus with all the typical high school campus amenities, as well as a possible administration center. The Project Evaluation Area is predominantly wooded with road frontage along Camp Meeting Road (County Road). Three vacated residential structures currently occupy the property. They include two 2-story structures along Camp Meeting Road and one stone house/structure located at the approximate center of the TRT Property. Gravel and asphalt access

roads/driveways lead to the structures from Camp Meeting Road. The current property owner recently relocated the stone house to its current position from its previous site at the southeastern portion of the property. The former driveway to the stone house is located south of Wood Spur Road (Private Road). QVSD retained the Evaluation Team to complete a DDE on the Project Evaluation Area so that the QVSD Board could arrive at an educated decision regarding the potential purchase of the Properties and proceed to the next phase for the new high school project. Following is a brief summary of the research data, field data, prepared plans, laboratory testing, and analyses contained within the various DDE reports prepared for the QVSD.

## **PROPERTY SURVEYING**

The Evaluation Team field surveyed the Project Evaluation Area in accordance with Pennsylvania Department of Education (PDE) PLANCON information requirements. The property boundaries for each tax parcel were verified through deed research, recorded subdivision review and field location of physical boundary monuments. Utilities, right-of-way easements and other easements identified by the title commitment (by QVSD legal team), and/or observed on the property, were located. TRT owns seven of the parcels, totaling approximately 133.8 acres. The Murrer Family members own seven of the parcels, equating to approximately 11.4 acres. The remaining two tax parcels owned by Joseph Dohar (only a portion of one Tax Parcel) will total approximately 13.4 acres. The total combined area of the 15 parcels plus the portion of the one parcel will be 158.62 acres. The location of the proposed property line on the portion of the Dohar Property (Tax Parcel 704-L-66) to be acquired is shown on the S-1.0 Dohar Property Survey Plan, which is included in this DDE package. Some minor property encroachments onto the Project Evaluation Area were observed in the field (i.e., fences, an edge of patio, landscape retaining walls, driveways, etc.). Overall, the Team uncovered no major boundary issues, such as gaps, deficiencies, or other significantly adverse title matters. All field surveying information has been compiled and shown on the C-0 Existing Conditions Plan.

## **PHASE I & II ENVIRONMENTAL SITE ASSESSMENT**

Historically, the Project Evaluation Area has been used for residential purposes with the homes, such as the stone house, constructed during the early 1900s, and during the 1950s-1960s, including the homes fronting Camp Meeting Road.

Based on the information obtained during the Phase I Environmental Site Assessment (ESA) process, the assessment revealed no evidence of recognized environmental conditions (RECs) in connection with the Project Evaluation Area, except for the following:

- A localized, approximately 30-sq-ft, area of dead vegetation and ground staining was observed. It appears to be the result of releases of fuel oil to the environment at the former contractor's fuel oil drum storage and dispensing location along the interior roadway on top of the hill between the former job site and Camp Meeting Road. The drums should be removed from the site to eliminate the potential for further releases. Any stained soil shall also be removed. TRT has reportedly completed this task. QVSD hired AGX, Inc. to follow-up and perform soil testing in this area to evaluate the extent of fuel oil impact, if any. AGX, Inc. soil testing results verified that all the affected soil was removed from the site.
- The environmental professional observed a pile of demolition debris near the new location of the stone house that, according to interview information, likely contains asbestos-containing materials that may have impacted the property environment. This issue has reportedly been addressed by TRT (removal of the demolition debris). QVSD hired AGX, Inc. to follow-up and perform soil testing in this area to evaluate whether hazardous substances associated with the former building materials affected soil at this location. AGX, Inc. soil testing results verified that all of the demolition debris was removed from the site and the soils remaining are not affected.
- Damaged and significantly peeled green paint and damaged shingles were observed on the block pump house on the property, located below the old driveway leading up from Wood Spur Road. Based upon the age of the pump house and the observed condition, hazardous substances associated with the paint (e.g., lead) and the shingles (e.g., asbestos) may have been released to the environment at this location. QVSD should have these items tested and/or abated. QVSD hired AGX, Inc. to follow-up and perform testing of the paint and shingles on the pump house. The testing results of the shingles and roofing paper samples indicated 0% asbestos. The testing results of the bulk paint sampling indicate that all four samples of representative painted components on the pump house contained detectable amounts of lead paint. Three of the samples exceeded the EPA and HUD limits of 5,000 PPM. If surfaces with measurable concentrations of lead are disturbed then the requirements of the OSHA lead construction standard (29 CFR 1926.62) apply. See the AGX, Inc. reports regarding handling of lead paint in construction activities.

- As part of the Phase I specific to the entire Dohar property, AGI observed evidence of on-site disposal of solid waste near a dilapidated wood garage. The approximate 9 by 15-foot area was observed to contain concrete block, wood, glass bottles, and old toilet or sink, metal. Trees and leaves precluded views of the entire area. This area is located on the portion of Dohar Property which QVSD has under the Agreement of Sale. AGI was hired to perform a follow-up Phase II ESA of the dump site to evaluate whether releases of hazardous substances or petroleum products affected the soil at this location. Based upon the results of the Phase II ESA, additional investigation does not appear to be warranted at this time to further evaluate the environmental condition of soil at the former residential dumping area identified on the property.

### Other Considerations

- According to a property owner representative, an old gas well is located on parcel 704-H-66-1 (Dohar Property). Neither reviewed environmental and historical records identified or reported a gas well. During the site visit of the property, the environmental professional did not observe any evidence of a well on the property, however, it may have been covered over with soil and leaves. Based upon our experience at similar sites, it is considered unlikely that releases of petroleum products or hazardous substances from the former well resulted in additional environmental impacts. Therefore, this is not considered to be a REC. However, if the former well was not properly sealed (abandoned), the possibility exists that it could be a source of stray methane gas that should continue to be monitored. The future design team and construction team should be made aware of this potential and be prepared to address the issue properly if an improperly abandoned well is encountered during future phases of the project.

## **WETLAND AND SURFACE WATER INVESTIGATION**

The Environmental Professional performed detailed field investigations within the Project Evaluation Area to determine the presence/absence of regulated wetland and stream resources.

The Project Evaluation Area is situated along a wooded hilltop flanked by forested side slopes. Several private residential properties are located along the western and southern boundary of the Project Evaluation Area. Mature forest with sparse to moderate shrub understory dominates the habitat matrix. The northern and east/southeast portions of the site drain to Little Sewickley Creek. The western and southwestern portion of the Project Evaluation Area drains to the Ohio River.

Six palustrine wetlands and thirteen individual stream reach segments, identified as unnamed tributaries, were inventoried and assessed within the Project Evaluation Area. Identified wetlands are shown on the C-0 Existing Conditions Plan, which is included in this DDE package.

As described above, aquatic resources features located within Project Evaluation Area are few, relatively small in size, and exhibit limited habitat quality or functionality. Based upon the limited number of wetland and stream features and the locations of these resources (side slopes) with respect to preliminary site layout plans, it would appear that state/federal water obstruction and encroachment permitting does not present a critical issue or a fatal flaw relative to sale and future land development at this time. That said, the following information should be considered by QVSD should the sale of the properties and the project development planning move forward.

- The PA Department of Environmental Protection (PADEP) and US Army Corps of Engineers (USACOE) require that construction activities must avoid and/or minimize encroachments into regulated wetland and surface waters resources (including encroachment within floodway/floodplain) to the best practical extent.
- Should impacts to regulated resources be incurred, a state and/or federal permit would be required. Additionally, and depending upon the severity (acres/linear feet) of the impact, resource mitigation could also be required. The method of mitigation will be determined by the regulatory agencies with input from the applicant. Should on-site replacement or restoration/enhancements be determined as not practical or viable, mitigation could potentially be satisfied through monetary purchase of an appropriate number of credits through an established resource banking instrument. Other more costly options, namely permittee responsible mitigation (resource creation/enhancement/ restoration), at an off-site location is also plausible. Under this scenario, the permittee/applicant would be responsible for property acquisition, design, construction and multiple years of monitoring (minimum 5 years).
- Wetland impact  $\leq 0.05$  acres are considered “*deminimus*” by the PADEP and therefore do not present a significant impact individually or cumulatively to wetland resources within the Commonwealth. As a result, they are not required to be replaced.
- If a water encroachment permit is required, it is the responsibility of the applicant to provide an alternate analysis documenting feasible wetland/stream avoidance and minimization project design alternatives and/or a sound rationale that identifies and justifies why resource

avoidance and minimization is not feasible or practicable. The alternatives analysis is a critical component of water encroachment permits.

- Additional aquatic resources evaluation/assessment (e.g. PADEP Condition Assessment) may be required if impacts cannot be avoided and/or are deemed significant enough to warrant further evaluation by the PADEP or the USACOE.
- No instream work will be permitted in the mainstream of the Little Sewickley Creek or its tributaries (i.e. UNT01-LSC) from October 1<sup>st</sup> through December 31<sup>st</sup> (brook and brown trout reproductive period) of any given year.

In addition to aquatic resources, it is important to consider the presence/absence of state and/or federal species of special concern as well as supporting habitats within the Project Evaluation Area. A cursory review of potential conflicts with state/federal species of special concern through the Pennsylvania Department of Conservation and Natural Resource PA Conservation Explorer was conducted. A potential conflict with state and federally listed threatened and endangered bats was recorded given the forested nature of the project site and concern for the removal of potential roost habitat (trees) through land development activities. Further coordination with both the Pennsylvania Game Commission and the United States Fish and Wildlife Service may be required and additional surveys (e.g. roost tree analysis, mist netting, hibernacula investigation, etc.) as well as preparation of a Habitat Conservation Plan (including mitigation measures) could be required. Typically concerns can be eliminated so long as timber harvesting can be conducted from November 15<sup>th</sup> – March 31<sup>st</sup> of any given year as to avoid direct “take” of any species.

## **GEOTECHNICAL APPROACH AND STATUS**

### **Initial Due Diligence Phase**

Early on in the due diligence phase, and prior to being contracted to complete this DDE, QVSD requested that GBBE perform a preliminary geotechnical engineering evaluation of the site relative to its potential use as a high school campus. GBBE proceeded with that evaluation based both on information generated by others for a gentleman’s farm project that had been recently abandoned, and published references. At that time, GBBE reviewed 30 test boring logs prepared by The Gateway Engineers, Inc. (Gateway), for the abandoned farm project. The Gateway test borings were drilled at the eastern-most portion of the site, primarily in the Edgeworth Borough area of the TRT properties. The Gateway test borings and research indicated 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. Based on that data, it appeared that the landslide deposits in the explored area were generally less than ten feet thick. Given the limited geotechnical scope needed for the abandon project, the Gateway test borings did not provide sufficient subsurface information to determine the approximate base elevation of the sandstone cap, nor the top of the Redbed formation. Further, the Gateway test borings did not extend deep enough, or low enough in elevation, to determine the approximate basal elevation of the landslide-prone Redbed formation. We have included the Gateway information in this package for informational purposes.

Based on the aforementioned information, GBBE collaborated with PAI, and provided preliminary geotechnical-related design guidance during the development of over 20+ conceptual grading plans based on extrapolation of the Gateway data, published information, and their experience with similar soil and rock strata/materials. The iterations progressed to formulate three reasonable plans. These three options yielded variable acreages of relatively flat, developable pads, entailing different amounts of earthwork, as well as anticipated costs to complete. Specifics of those initial options are discussed in more detail later in this document.

Given the informational gaps in the Gateway test boring data, GBBE recommended drilling additional test borings, spread across the likely development area, to fill in the informational gaps and determine whether or not the project still appeared feasible from a geotechnical/grading/cost perspective in light of any newly-discovered subsurface information.

### **DDE Level Preliminary Geotechnical Exploration and Evaluation**

To better evaluate the geotechnical engineering aspects of the project, the GBBE study initially entailed drilling 37 additional widely spaced (on an approximate 300-ft- to 500-foot grid) test borings within the Project Evaluation Area in June 2017. Access to the Dohar parcels was somewhat limited at that time. Since that time, Dohar and QVSD negotiated a sales agreement that allowed additional access and seven additional test borings were drilled in late May/early June 2019. The Test Boring Records are included in this DDE package. GBBE selected representative samples from the first phase of drilling for laboratory testing to assist with confirming their preliminary assessment of shear strength parameters for both intact redbed bedrock, and reworked landslide deposits. The laboratory test results are included in this DDE package, and are, in some cases, reflected directly on the aforementioned Test Boring Records. The following bullet items summarize the findings of the additional subsurface explorations and evaluations:



- As indicated earlier herein, the ridge is capped with a hard sandstone layer. The Gateway borings did not identify the basal elevation of the sandstone layer (the sandstone layer base coincides with the top of potentially landslide-prone bedrock units). The additional subsurface exploration indicates that the sandstone bedrock base: is at approximate elevation 1043 FT at the western end of the ridge, near Camp Meeting Road; was penetrated near elevation 1033 FT near the middle of the ridge; and was intercepted near elevation 1022 FT at the eastern end of the site generally within the Edgeworth Borough area. Hence, bedrock strata appears to dip to the east.
- The Gateway borings did not delineate the base elevation of the landslide-prone, generally Redbed or Redbed-like, bedrock units. Similarly, the additional subsurface exploration revealed that the bottom of the redbed layer dips also from west to east. The Redbed layer base was penetrated near elevation 955 FT at the western end of the site, at approximate elevation 955 FT near the middle of the site, and in proximity to elevation 938 FT at the eastern end of the site (Edgeworth area). This data, a positive finding with respect to potential site development, indicates that major embankments in the southeastern portion of the site will likely be founded on competent bedrock below the Redbed formation, ultimately resulting in enhancements to site slope stability via necessary earthwork operations to develop it.
- The isolated Gateway information was inadequate to determine whether or not blasting will be required across the entire ridge. The initial evaluation by GBBE assumed that blasting would be required. The additional subsurface exploration confirmed that the sandstone ridge will require blasting to facilitate the substantial ridgetop cut needed for the project.
- The isolated Gateway information was insufficient to determine the colluvium (metastable landslide deposits) footprint-thickness within the probable mass grading area. Based on experience with this geologic setting, GBBE assumed significantly greater colluvium thicknesses, on the order of about 20 to 30 feet, as opposed to the ten feet of colluvium found at the eastern end via the Gateway borings. The additional test borings revealed that the thickness of the colluvium approached 40 feet at some areas along Camp Meeting Road. This will ultimately result in additional undercutting and replacement prior to construction of new embankments. Temporary excavation protection may be required to protect Camp Meeting Road during earthwork operations. Some portions of the planned embankment may need to be steepened (via geosynthetic reinforcement) to reduce flat area loss due to shifting

the slope toe. Additional drilling is recommended prior to final design to better determine the location and amount of likely undercut and replacement of the colluvial soils.

- The Gateway information did not include the laboratory testing useful for selecting soil/rock strength/compressibility characteristics, as typically required to determine allowable cut and fill slope grades. As such, GBBE initially assumed parameters based on their experience in this geologic setting. The laboratory testing performed as part of the DDE indicates the shear strength parameters GBBE assumed for the initial evaluation appear reasonable.

Based on the June 2017 information, and restrictions (protection of maple sugaring operation on property and preliminary comments provided by the Borough of Edgeworth) that became evident over time, GBBE collaborated with PAI to revise and update the conceptual grading plans and most-probable earthwork cost estimates. Since that time the maple sugaring/syrup operation has been discontinued and the lease is no longer valid according to QVSD. The revised plans (considering maple restrictions to be in place) are discussed in further detail in subsequent sections of this document. However, while the newly-acquired information indicated costs would be slightly higher due to deeper colluvium and possible excavation protection systems, the costs appear to be of the same order of magnitude with those initially projected, and reported in a presentation, during the initial phase of work. Further, QVSD expressed concerns relative to the landslide-prone soils indigenous to the site, and their effect on downslope neighbors over the long term. While it is impossible to accurately predict mass landslide movement, it is well known that this area is currently meta-stable or borderline stable due to weathering, gravity, and surface and groundwater issues, over geologic history. The grading planned, drainage planned, and associated remedial activity at this site theoretically increases the factor of safety relative to slope stability, effectively reducing the risk of future landside activity.

As indicated previously, eight additional test borings were drilled in the Dohar property area once QVSD and Dohar had an agreement of sale in place. The test borings reveal conditions similar to those found on the adjacent TRT and Murrer properties. Thus, our opinion relative to the future construction remains unchanged based on the new acquired Dohar information. However, the additional exploration did reveal the Dohar residence(s) are constructed upon and supported by colluvial deposits. As such, it is likely that these residential structures have experienced some undefined amount of settlement and associated distresses (cracking, differential movement of slabs, etc.) over their respective lifetimes. This is important because it is very likely that evidence of such movement has probably gone unnoticed by the property owner/tenants. This issue will likely come into play during blasting and mass grading as homeowners/tenants hear the noise and

feel blasting or construction induced vibrations. It is very common for the homeowners/tenants to then notice old indications of distress that have actually existed for many years, and attributing those newly noticed distresses to the new construction. This issue is typically handled by implementing a Vibration Risk Management Program (VRMP).

As indicated above, the DDE included 45 test borings, completed in two phases, spaced on an approximate 300-ft- to 500-ft-grid in the most likely development area. If QVSD elects to proceed, additional test borings will be needed to ultimately determine the most cost-effective combination of rock cutting, filling, colluvium removal/replacement, and both unreinforced and reinforced slopes. The additional exploratory borings will likely result in an approximate 125-ft- to 175-ft-grid spacing across the developable areas of the site. This updated coverage should be sufficient for final design of grading. This spacing, when combined with monitoring during and after mass-grading, should also provide adequate information for building foundation design, road support, and artificial athletic field support.

## **SITE EVALUATION – RELATED TO SITE/CIVIL ISSUES**

### **Zoning**

The Project Evaluation Area is located across three municipalities: Leet Township, Edgeworth Borough, and the Borough of Leetsdale. PAI personnel reviewed the zoning Regulations for each of these municipalities with respect to property zoning, zoning use, building setbacks, and other property development requirements and offer the following:

- The portion of the Project Evaluation Area (approximately 108 Acres) located in Leet Township is within Zoning District: AAA Residence. Zoning District: AAA Residence permits a School via special exception use.
- The portion of the Project Evaluation Area (approximately 39 Acres) located in Edgeworth Borough is within Zoning District: Low Density R-1 Residential District and also Conservation Overlay CO District. Zoning District Low Density R-1 Residential District and Conservation Overlay CO District does not permit a School. A preliminary meeting between QVSD and Edgeworth Borough would need to be held to determine whether the property needs rezoned and/or the type of use (possibly practice fields and associated structures, parking areas, district maintenance facilities, etc.) they would permit on this portion of the Project Evaluation Area.

- The portion of the Project Evaluation Area (11 Acres) located in the Borough of Leetsdale is within Zoning District: R-1 Single Family Residential. Zoning District R-1 Single Family Residential does not permit a School. A preliminary meeting between QVSD and Borough of Leetsdale would need to be held to determine whether the property needs rezoned and/or the type of use (possibly campus access driveway with cut and fill slopes, etc.) they would permit on this portion of the Project Evaluation Area.

All municipal and zoning district boundaries for each of municipalities the project evaluation area crosses are shown on the C-0.1 Zoning Plan.

### **Road Access**

Camp Meeting Road, which is an Allegheny County Road, borders the western limit of the Project Evaluation Area and can provide, with some improvements, two access driveways into the site. QVSD hired David E. Wooster and Associates, Inc. (Wooster) to perform Preliminary Traffic Engineering Review for driveway access onto Camp Meeting Road. Wooster provided a preliminary review letter indicating that barring any unforeseen circumstances, access to the site can be successfully gained via a full access driveway to Camp Meeting Road within the general location of the existing access to the site. Wooster feels that with modification of the roadway geometry within the environs of that access, that an intersection can be created that will provide sufficient sight distances and auxiliary turn lanes for safe and efficient access to the site. A review for the second driveway entrance onto Camp Meeting Road (at this time the second access driveway is only conceptual for purchase of the property) was not performed since its location will need to be finalized after the purchase of all properties and through the master planning of the entire campus site. Wooster also feels that a second full access driveway would be possible but would likely result in modification of the roadway geometry within the environs of that access location and that an intersection can be created that will provide sufficient sight distances and auxiliary turn lanes for safe and efficient access to the site.

We have included a copy of the Wooster Preliminary Traffic Engineering Review Letter and Preliminary Access Layout Plans in this DDE package.

### **Public Utilities**

Public utilities either cross through the Project Evaluation Area or are located along adjacent Camp Meeting Road. Public water, gas, and sanitary utilities intercept the Project Evaluation Area. Public

electric, cable/data and telephone are located within the Camp Meeting Road right-of-way. Each of the utility companies, during preliminary discussions, have indicated their facilities have sufficient capacity to provide services for a project of this size. Existing utilities that were field located are shown on the C-0 Existing Conditions Plan.

## **PRELIMINARY SITE GRADING PLANS**

Prior to DDE, several Conceptual Grading Plans were prepared utilizing previous TRT property information (i.e., Limited Geotechnical Report, Wetlands Report, Surveys, Topographic Mapping, etc.) that the District was able to obtain. The Evaluation Team, after generating numerous mass grading iterations, decided on the three Preliminary Grading Options, designated A, B, and C, that appeared to have promise. The Team then met with two local major earthwork contractors to obtain localized mass earthwork engineering opinion of cost estimates for the three options. At the time, the Team assumed that site bulk grading would likely require blasting of rock and the need for landslide deposit removal and replacement. While both contractors broke down their cost estimates slightly differently, they both were relatively close on the total approximate cost of the overall earthwork for each option. These Options were outlined in a presentation to the Board on May 8, 2017.

**Option ‘A’** included approximately 1,776,143 cubic yards (CY) of bedrock cutting and 1,460,558 CY of fill (surface to surface) to yield approximately 52 developable acres. The anticipated mass grading engineering opinion of cost for Option ‘A’ ranged from about \$16 to \$19 million. A copy of this Plan is included in the DDE Package.

**Option ‘B’** included approximately 1,700,499 CY of bedrock cutting and 2,220,000 CY of fill (surface to surface) to yield approximately 52 developable acres. The anticipated mass grading engineering opinion of cost for Option ‘B’ ranged from about \$17 to \$20 million. A copy of this Plan is included in the DDE Package.

**Option ‘C’** included approximately 1,197,519 CY of bedrock cutting and 1,917,502 CY of fill (surface to surface) to yield approximately 40 developable acres. The anticipated mass grading engineering opinion of cost for Option ‘C’ ranged from about \$16 to \$19 million. A copy of this Plan is included in the DDE Package.

At that point in time, QVSD began to negotiate a sales agreement with TRT Properties. During the negotiations, TRT placed restrictions on the future use by protecting the majority of the

northern slope face due to the Maple Sugaring/Syrup operation. Since that time the Maple Sugaring/Syrup operation has been discontinued and the Lease is no longer valid. This restriction, along other restrictions inferred by local municipalities forced a change to the original conceptual options irrespective of the DDE findings.

After the DDE Preliminary Geotechnical Evaluation was complete, GBBE collaborated with PAI to provide preliminary geotechnical-related design guidance with respect to mass grading of the site and proposed fill slopes considerations. During the GBBE review, it was determined that previous Option 'C' needed some proposed slope revisions and a New Option 'D' was created, adding the portion of property located in Edgeworth Borough. These Options were outlined in a presentation to the Board on September 1, 2017.

**Revised Option 'C'** includes approximately 1,211,553 CY of bedrock cutting and 1,648,399 CY of fill (surface to surface) to yield approximately 36.7 developable acres. The anticipated mass grading engineering opinion of cost for Revised Option C ranged from about \$17 to \$20 million. A copy of the plan is included in the DDE Package.

**New Option 'D'** includes approximately 1,736,705 CY of bedrock cutting and 1,648,390 CY of fill (surface to surface) to yield approximately 46.5 developable acres. The anticipated mass grading engineering opinion of cost for New Option D ranged from about \$18 to \$21 million. A copy of the plan is included in the DDE Package.

The aforementioned conceptual grading plans were intended to determine whether or not the project still appeared feasible, within the preliminary budgets (in 2017 dollars) estimated at the onset of the preliminary work (pre-DDE), and based on the widely spaced test borings. The conceptual plans were based on target sizes of developable areas and straight-line interpolation between test borings, and straight-line extrapolation beyond explored areas. The conceptual plans are also based on sales agreement restrictions that may or not be in place over the long term. The conceptual plans are not intended to be final and will likely require some adjustment once the additionally recommended drilling is completed for the final design phase.

## **TEAM CONCLUSION**

With respect to survey issues, the Team did not uncover any major boundary issues, such as gaps, deficiencies, or other significantly adverse title matters. The environmental professionals did identify a few environmental conditions on the site. These environmental conditions were resolved

with further testing of each of the identified areas. The review by the wetland/natural resources professional indicates the aquatic resources features located within Project Evaluation Area are few, relatively small in size, and exhibit limited habitat quality or functionality such that state/federal water obstruction and encroachment permitting does not appear to present a critical issue relative to future land development. The geotechnical/site-civil grading review indicates the site can be graded to meet the needs of the high school campus for a cost initially deemed acceptable by QVSD. A review of the current zoning indicates that zoning does not appear to be a major impediment relative to the site's development into a high school campus. The traffic engineer has indicated that Camp Meeting Road can be improved sufficiently to meet the demands of the new high school campus. Each of the utility companies, during preliminary discussions, have indicated their facilities have sufficient capacity to provide services for a project of this size. Based on the information obtained and generated during the initial DDE and during the Dohar-specific DDE, it appears the combined properties are sufficient to support the new high school campus.