

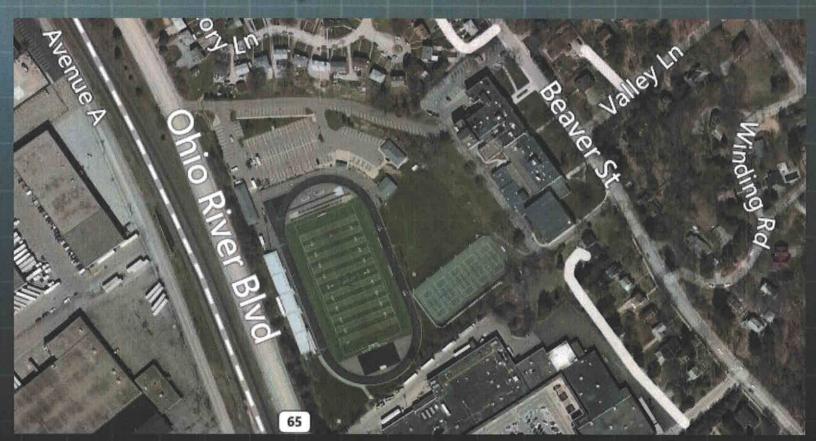
QVHS Facility Update

September 20, 2016

Dr. Heidi Ondek, Superintendent

Executive Summary

Long Term Development at Existing High School Site Beaver Street, Leetsdale Borough, Allegheny County, PA September 20, 2016



Quaker Valley HS Site

Long Term Development of the Existing High School Site to support future High School Facility Planning...

- In Western PA it is fairly common to have various site constraints however numerous issues converge on this site making development impractical and costly.
- While it may not be impossible to overcome, the site conditions are undesirable and will result in compromises.
 The building and site design will be challenged with compromises to the Educational Program driven by the site constraints.
- Long-Term investment in the existing High School site for the 'High School of the Future' is not Recommended

Preliminary Exploration:

Civil Engineering Considerations

- Floodplain Mapping
- Site Topography
- Site Utilization

Geotechnical Considerations

- Character of Soils / Location of Coal Seam
- Subsurface Water
- Foundations
- Earthmoving Fill & Retaining Walls

Architectural Considerations

- Educational Goals/High School of the Future
- Building Area/Organization
- Site Circulation
- Construction Logistics



Geoff Phillips, PE

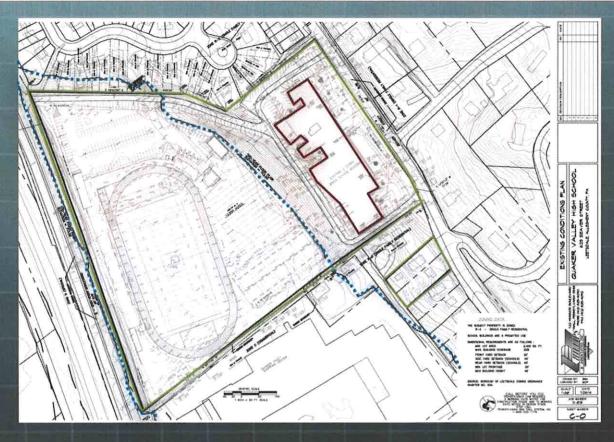


Doug Beitko, PE



Cassi Renninger, RA (formerly w/ Eckles)

Existing Quaker Valley High School Site



- Area of Campus Property
- Two Parcels along Beaver Street
- Total High School Building Area
- Footprint Area of Existing High School Building
- Elevation Difference Across Campus

13.984 Acres

0.40 Acres

126,500 S.F.

(All Floors Included)

53,500 S.F.

53 feet

(Low Elevation 706, High Elevation 759)

100 year Floodplain Elevation

713.00 feet

Floodplain Mapping (Existing HS Site):



The map is for one in electromining the National Florid Inscience Fragues. It does not reviewed, whichly all entire soluted to flooding perceively than mod discount extensive and extensive map represently which see that the common of the co

To does near adjust offerender in series when Dave Freed Devertises of Bold and the Receipter have been decreased used as a Receipt to series of Bold and the Receipter to be the American series as the amount of the Pool American Constant of the Series and Ser

County Seas Flyed Streetings show or the rear actify any because of all faints American vision States on the decided St. Upon of the first annual to act of the county of the states of

decordance of the Problems were componed at trans sections and interpolate between cross sections. The foreign area based on hydraulic communities with regard to implements of the Matures front insurance Program. Floories section and they appropriate foreign and consist of the Control of the National State of the Problems of the Pro

Corten areas not in Special Prival Institute Prival from the proposed by flow control effectures. Native to Sealine 2.4 Three Projection Shakarest of the Prival Insulance Shafe water for internative on food control executes for the

The projection used in the greatment of this map was been flowed from the contraction with some SPREEMED SPREEMED SPREEMED and SPREEMED SP

Final Standards of the play are offermind to the Shall Annearon vertice Daniel (SSE Trans Both Benedition must be because it states and grain of SSE Trans Both Benedition must be because of grains and grain acceptance detections of the same veeting debate. For interviews, regional controlled the select this play and protection for the same selection (Saleston 1923) and protection (Saleston 1923) and protection (Saleston 1924). Annearon Vertical Collection (Saleston 1924) and protection (Saleston 1924) and protection (Saleston 1924) and protection (Saleston 1924).

AGS Internation Services NGAA, NINSS12 Teacher Geomoti Survey

1316 East West Highway Select Staling Manyand Jopes Stali 1501; 713 Shid:

To other carried electric description under science offension by the markly street or the real please conduct the leftermation flowers a Street of the Telecon Conductor Survey of (271) 713-2242 or use to valuable flowers that measure.

Base may internative grows on the fifth was provided in digital forms by the Allegherry County Geographic internation Spatials Group. This internation was produption with the complete of a make of 1.2.400 from sense produpting state.

This may inflore the market and up to this strippes channel and gradies have frome where the pression of PMID to the product of Congletion of handward had seen the pression of their trap outquiet field may have been explored handward had seen the second of their trap outquiet field may have been explored production and their production of t

Corporate fields shown on that may are beand on the Leek date accepting in form of publishers. Moreover changes like it ammendants or de-presentings no fleet stourned offer the may are publisher they may should contact appropria safety-only officials in verify pursued corporal feet incasions.

Present clark to the sequence or common than to be a course only of inclustry schooling the second of one parest a community may exceed a services and a Listing of Communities below containing National Places Vacuumus Progrations for main promotively as self as a finding of the parest, on which was commonly a bushed.

For intermediate on explaints products associated with this R-78M value that Major Salamon (Mich.) with the last particular products in product in the product products as executed from the Colombia. In Prince I transparent Indian, Report according to intermediate the Indian Major Salamon (Indian Indian). The Indian I Prince products can be between a chapter of principles can be between the contract from PASSES, addison.

Parties describe describe and the major time to make producing to the future of the theoretic frequence or governor present out the FEMA high treamplot extract photol or ASPI FEMA help (1467-306-2607) or visit the FEMA sensitive this (normalization).

QUAKER VALLEY SCHOOL PROPERTY Borough of Sewickley 420070

and well deligned hand, we cover on the least field of the flow through an extension of the least of the leas

CORR AREAL

State of the control of

CONTAL AMERIC RESOLUCIS EYSTEM (CIRCO MEAS STREETING PROTECTES MAAR (CIRCO MICHAEL PROTECTES MAAR (CIRCO MICHAEL PROTECTES MAAR (CIRCO MICHAEL PROTECTES MICHAEL PROTECTES MICHAEL PROTECTES MICHAEL PROTECTES MICHAEL PROT

THE THE SECOND PROPERTY OF THE PROPERTY OF THE

Mrt 6
 Marrier Manager (1997)
 Anter Y (1997)</li

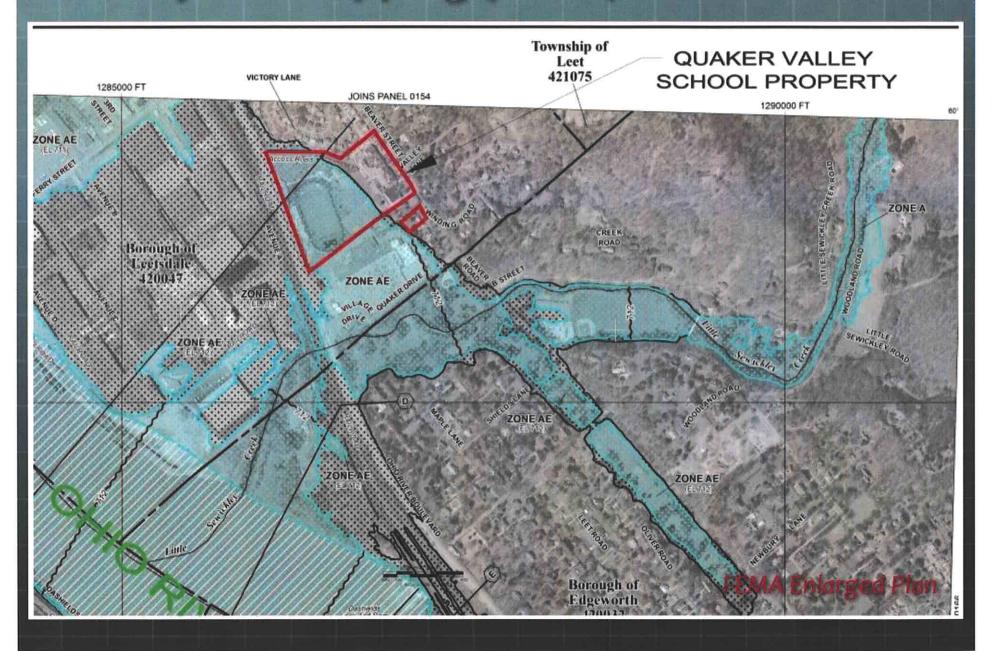
The provisional map random leaders prior to continuous requesting with its des Community, their return states and in the filled provincing State regard for the provision.



FIRM PLOOD INSURANCE RATE MAP ALLEGHENY COUNTY, PENNSYLVANIA (ML. REPORT THINK) PANEL 182 OF 558 DISH MAN PROCESS FOR PRINT PANEL, LAYOUT) SEEDINGS SEEDINGS

FEMA Map

Floodplain Mapping (Cont.):



Floodplain Area (Existing HS Site):

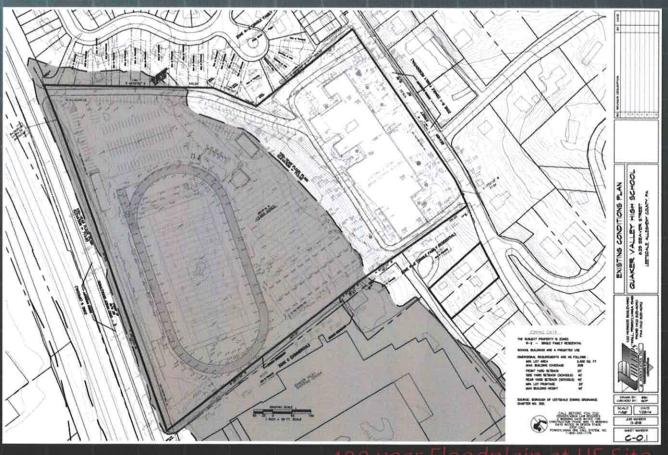
Area of Campus Property

- Campus Area Covered by 100 year Floodplain
- Development Area Not in Floodplain

13.984 Acres

9.6 Acres (70% of Site)

4.38 Acres (30% of Site)



100 year Floodplain at HS Site

Floodplain Permitting

- Borough of Leetsdale Flood Requirements –
 18" above Base Flood Elevation
- Floodplain Permits Required for Possible Development in Floodplain Area
- Permit Work Required
- Permit Timeline Could take 3-4 years
- May only receive approval for limited fill placement or may not receive approval at all
- Additional Costs to Prepare Floodplain Permits and all pertinent surveying and engineering work

Diagrammatic Site Section (Existing HS Site): Previous placed fill & sand soils underlying site **Upper Freeport Coal Seam** Ground water migration through sand Deep foundations (existing & future development) Significant site retaining walls & fill needed High School **Basement** Sand Route Stands Sand Stone Sand per Freeport Coal Seam Deep Foundations

Conceptual Educational Planning:

- 21st Century Educational Facility
 - Educational Program Driven Design
 - Flexible Learning Environments
 - Project Based & Real World Exploratory Studios
 - Arts & Athletics Venues to Support Programs and Community Use
 - Community Utilization with Safe/Secure Access
 - Adequate Building & Site Support Spaces
- Total Building Area (Single Story)

222,000 S.F.

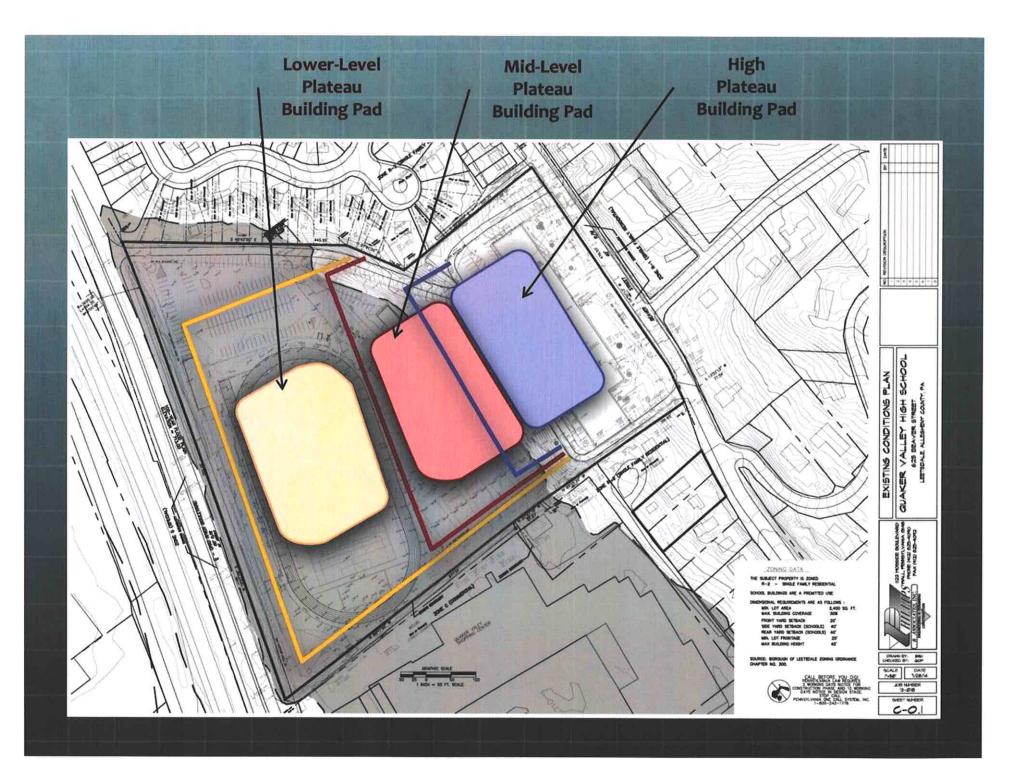
- Based on 2014 preliminary programming (areas intentionally somewhat conservatively large)
- Future High School Building Area 210,000 S.F.
- Future Administration Area 12,000 S.F.

Conceptual Site Planning:

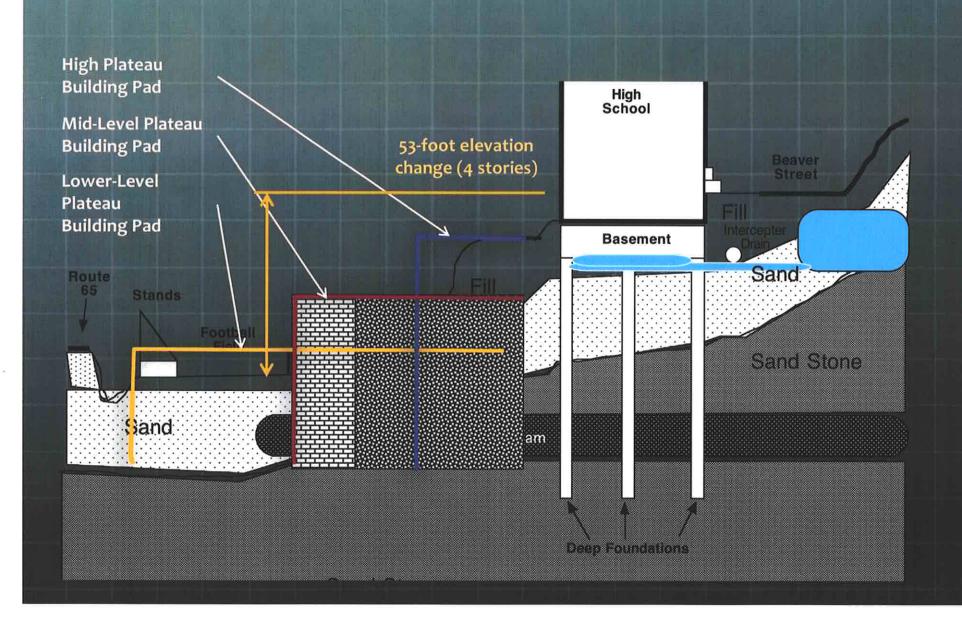
- Site Circulation & Parking Approx. 550,000 to 650,000 S.F.
 - Minimum Required Parking Lots, Campus Drives, Sidewalks, Bus Drop-Off, Student Drop-Off, Stormwater Management, etc.
- Total Building Area (Single Story)
 Approx. 222,000 S.F.
- Minimum Required Site Area
 Approx. 17.5 to 20 Acres
 - For just the Building, Parking, etc.
 - Additional property area will be needed if property grade difference is greater than 5 to 10 feet)
 - Does not include Stadium or Bus/Maintenance
- Pennsylvania Department of Education (PDE) Acreage Recommendation – Approx. 42 Acres (35 acres for HS +1/100 students).
 - Current site is 14 acres and not all of it is usable. Based on Floodplain alone, current site is only 4.3 usable.

Grading Considerations (Existing HS Site):

 Due to the significant elevation difference (53 feet) between Beaver Street and the stadium, development of this site will require numerous retaining walls for transition of access driveways around the new school. In addition, the significant elevation difference reduces the buildable/usable area of the site.



Diagrammatic Site Section (Existing HS Site):

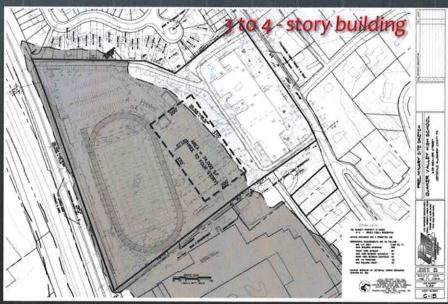


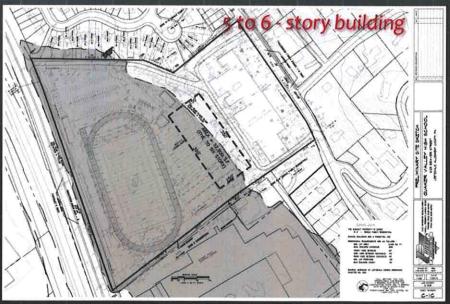
Diagrammatic Building Footprint:

Theoretical Building Footprint

- 1 Story
- 3-4 Story
- 5-6 Story







Site Planning with all Facilities:

Minimum	Usable Acrea	ge for Theor	etical HS Campus
---------	---------------------	--------------	------------------

Future High School Building Area (210,000 S.F One Story)	4.82 Acres
Future District Administration Area	0.30 Acres
 School and Admin. Supporting Infrastructure (Min. Parking, Drives, etc.) 	15 Acres
Practice Fields/Physical Education	3.8 Acres
Campus Maintenance Facility	0.5 Acres
Subtotal	24.42 Acres
Stadium (Home & Visitors Bleachers, Fieldhouse, Track & Field)	6.5 Acres
Ballfields (Baseball and Softball)	8.5 Acres
Tennis Courts	1.1 Acres
Sports Parking Lots	3.8 Acres
 Transportation Garage/School Bus Parking Area 	3.0 Acres
Subtotal	22.9 Acres

TOTAL (Minimum Useable Acreage)

47.32 Acres

Note: Pennsylvania Department of Education (PDE) Acreage Recommendation – Approx. 42 Acres (35 acres for HS +1/100 students). Current site is 14 acres and not all of it is usable.

Construction Logistics (Existing HS Site):

- Temporary Facilities should be seriously considered for Students during Construction
- Multiple Phases/Additional Coordination
- Increased Permitting, Design, & Construction Timelines
- Increased Permitting, Design & Construction Costs

Executive Summary:

- Developing this site as a redesigned High School campus will be extremely challenging, floodplain permitting will be difficult and may not be possible.
- Existing site is not large enough to accommodate desired building and site programs. Maximizing utilization of the site will require significant site development prior to any building construction including significant cut & fill, deep foundation systems, and large retaining walls.
- Maintaining students on campus during construction would be unadvisable and may not be feasible.
- The increased costs associated with addressing the extraordinary site issues may result in reduced program. To satisfy the educational program, costs will need to increase significantly.

It is not recommended to continue with Long-Term investment in the existing High School site for the purpose of creating the 'High School of the Future'.