



February 10, 2023

Jon Altshul, Township Manager
Westtown Township
1039 Wilmington Pike
West Chester, PA 19382

RE: Westtown School – Art School Center
Preliminary/Final Plan Review – RESUBMISSION REQUIRED
Westtown Township
0236-23-0061

Dear Mr. Altshul,

As requested, Cedarville Engineering Group, LLC (CEG) has completed a Preliminary/Final Subdivision and Land Development Review for the Westtown School – Art School Center project. The site (Parcel ID 67-02-00250-00-E) comprises of roughly 170.5 acres and is located on the northwest side of the intersection of Oak Lane and Walnut Hill Road in the Agricultural/Cluster Residential (A/C) Zoning District of Westtown Township. The project includes an addition to the existing Art School Center building and new walkways for a net impervious area increase of 2,343 SF with an additional 500 SF of future impervious. The applicant is proposing an underground BMP to manage the increase in stormwater runoff.

The following information was received by our office on January 31, 2023:

- A. Full size Plans titled “Westtown School – Art School Center” prepared by Apex Design + Engineering Group consisting of 10 sheets, Sheets 1-7 of 7, dated November 15, 2022.
- B. Landscape Architecture Plan Sheets L-101, L-102, L-401, and L-501, prepared by Wallace, Roberts, and Todd, LLC, dated October 28, 2022.
- C. Post Construction Stormwater Management Report prepared by APEX Design + Engineering Group, dated November 11, 2022 and last revised January 27, 2023.
- D. Preliminary estimate of probable costs prepared by Apex Design + Engineering Group dated January 27, 2023.
- E. Response Letter dated January 27, 2023 to Cedarville Review Letter dated January 11, 2023.

The referenced documents have been reviewed for compliance with Chapter 80 – Erosion, Sediment Control and Grading, Chapter 144 – Stormwater Management, Chapter 149 – Subdivision of Land, and Chapter 170 – Zoning of the Westtown Township Ordinance.

Cedarville Engineering Group, LLC

159 E High St., Suite 500, Pottstown, PA 19464 | P: (610) 705-4500 CedarvilleEng.com





The following comments are offered for your consideration:

EROSION AND SEDIMENT CONTROL COMMENTS (WESTTOWN TOWNSHIP CODE, CHAPTER 80, EROSION, SEDIMENT CONTROL AND GRADING):

1. *Section 80-5.B - A topographical survey of the site, at a suitable scale of no less than one inch equals 50 feet and contour interval of no more than two feet zero inches, prepared by a registered surveyor or registered engineer, including also a boundary line survey, the location and description of vegetative cover, soil types (available from Chester County Soil Conservation District) and any other pertinent existing natural or man-made features.*

Section 80-5.D - A written description of soil erosion and sediment and control measures (with appropriate plans and specifications), in accordance with standards and specifications of the USDA Soil Conservation Service, Chester County Conservation District and township ordinances, including, without limitation, retention basins or other control measures necessary to limit the rate of stormwater runoff to comply with the requirements of § 80-6C hereof.

January 11, 2023 Comment: The following shall be addressed:

- An additional rock construction entrance shall be provided to where equipment is to access the north section of the project area, adjacent to the landscaped walkway and building addition.
- The temporary rock construction as shown on the Erosion and Sedimentation Control Plan shall be increased to a minimum length of fifty (50) feet, in accordance with the Stabilized Construction Entrance Detail.
- Compost filter sock #4 shall be extended both directions to prevent sediment from exiting the site between it and sock #3 and #5.
- There are two compost filter socks labeled #1 and #2. These compost filter socks shall be relabeled consistently with the other compost filter socks on the Plan.

Current Comment: Compost filter sock #3 and #4 shall be revised to show their respective endpoints angled upslope at 45 degrees in accordance with DEP Standard Construction Detail #4-1 Compost Filter Sock.

STORMWATER MANAGEMENT COMMENTS (WESTTOWN TOWNSHIP CODE, CHAPTER 144, STORMWATER MANAGEMENT):

2. *Section 144-305.A - The post-construction total runoff volume shall not exceed the predevelopment total runoff volume for all storms equal to or less than the two-year, twenty-four-hour duration precipitation (design storm). The water quality and runoff volume to be managed shall consist of any runoff volume generated by the proposed regulated activity over and above the predevelopment total runoff volume and shall be captured and permanently retained or infiltrated on the site. Permanent retention options may include, but are not limited to, reuse, evaporation, transpiration, and infiltration.*





January 11, 2023 Comment: The following shall be addressed:

- The Stormwater Riser #1 detail shall be revised to include a top view showing the vertical risers, ladder, pipe connections, outlet pipe direction, and how it is secured.
- The location of Stormwater Riser #1 shall be clearly shown on the Stormwater Management System #1 detail.
- The disturbed area on the Plan (0.85 acres) and Volume Controls Worksheet in the Report (1.06 acres) shall be revised to be consistent with one another.
- The Runoff Calculations on Page 19/75 of the Report shall be revised to accurately sum total areas in both square feet and acres. The calculations show areas of 49,192 square feet and 1.060 acres for existing conditions and areas totaling 46,192 square feet and 1.049 acres for developed conditions.

Current Comment: The following shall be addressed:

- **The PCSM System Outlet Structure detail shall be revised to include specifications for anchoring the control riser and water tight connections (pipe joints and control riser bottom).**
- **The Collection Pipe Section shall be revised to show the location of the 8” perforated HDPE pipes that cross/connect to the system at elevation 331.50.**

3. This comment has been satisfactorily addressed.

4. This comment has been satisfactorily addressed.

5. This comment has been satisfactorily addressed.

6. *Section 144-402.B.(3) - A statement, signed by the applicant, acknowledging that any revision to the approved SWM site plan shall be submitted to and approved by the municipality, and that a revised erosion and sediment control plan shall be submitted to, and approved by, the Conservation District or municipality (as applicable) for a determination of adequacy prior to construction of the revised features.*

January 11, 2023 Comment: The statement shall be signed by the applicant prior to final Plan approval.

Current Comment: The above comment remains applicable.

7. This comment has been satisfactorily addressed.

8. *Section 144-402.C.(18).(c) - Easements, as per the requirements of Article VII.*

Section 144-402.C.(18).(c).[2] - Notes or other documentation, as needed, to grant the municipality the right of access to all BMPs and conveyances for the purposes of inspection



and enforcement of the requirements of this chapter, and any applicable O&M plans and O&M agreements.

January 11, 2023 Comment: An easement shall be granted to the municipality granting them the right, but not the obligation, to inspect and repair the BMP. If a blanket easement is to be offered, it shall be clearly noted on the Plan to be recorded with the Stormwater Management Operations & Maintenance Agreement.

Current Comment: The above comment remains applicable.

9. *Section 144-402.G – Inspections, operation, and maintenance requirements. The following documents shall be prepared and submitted to the Township for review and approval as part of the SWM site plan, in accordance with the requirements of Article VII, for each BMP and conveyance included in the SWM site plan (including any to be located on any property other than the property being developed by the applicant);*
- (1) An O&M Plan.*
 - (2) An O&M Agreement.*
 - (3) Any easement agreements that are needed to ensure access, inspection, maintenance, operation, repair and permanent protection of any permanent BMP(s) and conveyances associated with the regulated activity.*
 - (4) Any written deed, deed amendment or equivalent document (if needed) to be recorded against a subject property, as shown on the SWM site plan maps or plan sheets, or recorded plan sheets for the purpose of protecting and prohibiting disturbance to a BMP or conveyance; and*
 - (5) Written approval, easement agreements, or other documentation for discharges to adjacent or down-gradient properties when required to comply with § 144-301G and Article VII of this chapter.*

Section 144-701.D – General Requirements for protection, operation and maintenance of stormwater BMPs and conveyances – For any BMP or man-made conveyance (including any to be located on any property other than the property being developed by the applicant) to be owned by a person other than the Township:

- (1) An O&M agreement shall be submitted to the Township for review and approval; and*
- (2) The O&M plan shall be attached to, incorporated within, and recorded as a public record along with a fully executed O&M agreement, all of which shall be recorded as a restrictive covenant that runs with the land and shall be binding upon the landowner and any heirs, administrators, successors in interest or assigns of the landowner.*

January 11, 2023 Comment: A Stormwater Management Operation & Maintenance Agreement shall be executed and recorded for the proposed stormwater BMPs, to include all BMPs shown on the PCSM Plan. The O&M Agreement shall be provided by Westtown Township upon approval of the Plan and shall be recorded concurrently with the Land Development Plan.



Current Comment: This above comment remains applicable.

SUBDIVISION AND LAND DEVELOPMENT COMMENTS (WESTTOWN TOWNSHIP CODE, CHAPTER 149, SUBDIVISION OF LAND):

10. *Section 149-403.A – Before the final plan is signed by the Board of Supervisors, the applicant shall submit an agreement, subject to the approval of the Board of Supervisors, provided for, but not limited to, the following where applicable: In accordance with the approved final plan, the applicant will layout and construct all street and other improvements, including, but not limited to, grading, paving, curbs, gutter, sidewalks, streetlights, fire hydrants, water mains, street sings, shade trees, storm and sanitary sewers, stormwater management structures, landscaping, traffic control devices, open space areas, and erosion and sediment control measures.*

Section 144-403.C – The applicant shall sign a tri-party agreement with a financial institution and the Township guaranteeing and securing completion of the improvements listed in Subsection A, except as provide for in Subsection E, within one year of the date of the approved plan.

January 11, 2023 Comment: Financial security of an amount acceptable to the Township shall be provided prior to Plan recording. A Construction Cost Estimate shall be submitted for review and approval, with the required financial security incorporated into a Developer’s Agreement to be executed prior to Plan recording. The Applicant’s Engineer shall contact the Township Engineer regarding the improvements in which financial security is to be posted.

Current Comment: The provided Construction Cost Estimate shall be revised as follows to provide adequate funding in the event that the project needs to be publicly bid and constructed:

- a) The unit cost of item B1 PCSM System shall be increased to \$30,500.00 from \$24,000.00.**
- b) The unit cost of item B9 Trench Drain shall be increased to \$80.00 per linear foot from \$50.00 per linear foot.**
- c) The unit cost of item D.1 Shrubs (2-3’ ht) shall be increased to \$75.00 from \$40.00.**
- d) The Engineering Fees, Contingencies Cost and Engineering and Inspection Cost shall be increased based on the revised subtotal.**

The Total Construction Cost shall be revised to \$141,728.82 from \$130,102.32. The referenced amount shall be posted as financial security in a form acceptable to the Township Solicitor, for incorporation into a Developers Agreement. An Improvements Escrow Table for incorporation into the Agreement has been attached.

11. This comment has been satisfactorily addressed.

12. *If the preliminary plan and all supporting data comply in all respects with the requirements for final plans (see Article VII), the Township may, in the case of small subdivisions involving no new streets or limited development of land, proceed to final action at the first consideration of the*



plan if a written request for final approval is made by the applicant and agreed to by the Board of Supervisors.

Section 149-700.A – Within 60 days after approval of the preliminary plan, a final plan and all necessary supplementary data shall be officially submitted to the Township. However, an extension of time may be granted at the option of the Board of Supervisors upon written request of the applicant.

January 11, 2023 Comment: The referenced Ordinance section requires that a Preliminary Plan be submitted and reviewed prior to review of a Final Plan. CEG offers no objection to consideration of a waiver from this section of the Ordinance.

Current Comment: The applicant is requesting a waiver from the above referenced section of the Ordinance and stated that final action taken on the requested waiver will be included on the Plan prior to recording. CEG offers no objection to consideration of a waiver from this section of the Ordinance.

13. *Section 149-804.B.(3) – Complete description of both existing and proposed fire protection facilities within the tract, and where applicable within all abutting properties. Specifications shall comply with those found in §§ [149-917](#) and [149-918](#) of this chapter.*

January 11, 2023 Comment: The proposed fire protection methods for the proposed project are subject to the review and approval of the Township Fire Marshall.

Current Comment: The applicant has stated they will coordinate with the Fire Marshal for review and approval of the proposed fire protection methods. This comment shall be deemed satisfactorily complete upon approval by the Township Fire Marshall.

14. *Section 149-916.A – All materials entering into the construction of sidewalks and the method of construction and installation shall be in accordance with PennDOT Specifications Publication 408, except that the compacted thickness of the aggregate bed shall be four inches. Sidewalks across driveways and driveway aprons shall be constructed with six inches of concrete reinforced with six by six w1.4 by w1.4 welded wire fabric placed two inches from the finished surface. Sidewalks shall have a minimum width of four feet and be located four feet behind the curbline unless approved otherwise.*

Section 149-916.C – Details and specifications for the construction of bike paths and other paths shall be submitted with preliminary plans for review and approval by the Township Planning Commission and Township Engineer.

January 11, 2023 Comment: A detail with construction specifications for the proposed walkway in front and behind the building shall be added to the Plan.





Current Comment: The Bluestone Paving – Section detail and the legend label for the “Proposed Walkway” shall be revised to be consistent with one another.

15. *Section 149-924.A – Neither portions of tree masses nor specimen trees shall be cleared unless absolutely necessary. Applicants shall make all reasonable efforts to harmonize their plan in order to preserve these existing trees.*

Section 149-924.D.(12) – Compensatory Planting

Section 149-924.D.(12)(a) – In the event that preservation of existing trees within the tree protection zone is impossible, and/or relocation of improvement impractical, then compensatory planting shall be required for each viable tree protection zone and specimen tree anywhere else on the site.

Section 149-924.D.(12)(b)[2] – For viable specimen: one inch of new tree diameter for every one inch of existing tree diameter cut or removed. Where it has been determined by the Zoning Officer that a specimen tree has been or is proposed to be cut or removed, the person responsible shall be fined no more than \$1,000.

January 11, 2023 Comment: The purpose of the alignment of the proposed sidewalk to the west of the north entrance, where the 16” dbh tree must be removed, shall be clarified. The applicant shall determine the health of the tree and;

- In the event the tree is blighted, in poor condition, and/or a safety hazard a replacement tree shall be provided.
- In the event the tree is healthy or a specimen tree:
 - Investigate an alternative layout to the provided sidewalk, or
 - Relocate the tree.

Current Comment: All compensatory trees shall be clearly labeled on Sheet L-102 of the Landscape Architecture Plans Set in the Planting Schedule on the Landscape Plan as compensatory trees.

16. This comment has been satisfactorily addressed.

17. This comment has been satisfactorily addressed.

ZONING COMMENTS (WESTTOWN TOWNSHIP CODE, CHAPTER 170, ZONING):

18. This comment has been satisfactorily addressed.

19. *Section 170-1514.B.(1) – Outdoor lighting shall be required for safety and personal security for uses that operate during hours of darkness where there is public assembly and traverse,*



including but not limited to the following uses: all residential developments, commercial, industrial, public-recreational and institutional.

January 11, 2023 Comment: A Lighting Plan shall be provided to demonstrate compliance with the applicable provisions of the above Ordinance section.

Current Comment: The following shall be addressed:

- A. Section 170-1514.D.(1).(e) - Examples of illumination levels for typical outdoor applications, as extracted from the IESNA RP-33-99 and RP-8-00 Recommended Practices, are presented below.**

Classification	Maintained Average Illumination Level
Building Entrance	25/2.5 average minimum

The illumination levels for the Auditorium 207 Entry, Corridor 122 Entry, Vestibule 228 Entry, and Vestibule 230 Entry all fall below the minimum illumination levels for a building entrance. The applicant shall revise the proposed lighting in these areas accordingly to provide adequate lighting at each entrance.

- B. Section 170-1514.D.(2).(b) - For lighting horizontal tasks such as roadways, sidewalks, entrance drives and parking areas, luminaires shall meet IESNA full-cutoff criteria (no light output emitted above 90° at any lateral angle around the fixture).**

Section 170-1514.D.(3).(j) - Mounting height. Lighting fixtures shall be mounted at a maximum total height of 20 feet above the ground, except such height shall be reduced to 16 feet within residentially used properties or within 200 feet of a residentially used lot, except for authorized institutional use. This height limitation shall not apply to lights needed for air safety, that solely are intended to illuminate a steeple or similar architectural feature, or that illuminate outdoor public recreation facilities.

The type and fixture for lighting used at each entrance shall be clearly labeled on the Plan. Fixtures information shall include at a minimum, brand, product designation/key, BUG rating, initial lumens, color temperature, and mounting height.

GENERAL COMMENTS

- 20. This comment has been satisfactorily addressed.
- 21. This comment has been satisfactorily addressed.
- 22. This comment has been satisfactorily addressed.
- 23. This comment has been satisfactorily addressed.



Please do not hesitate to contact me with any questions.

Best Regards,
Cedarville Engineering Group, LLC

A handwritten signature in black ink, appearing to read "R. E. Flinchbaugh".

Robert E. Flinchbaugh, P.E.
Municipal Team Lead

Attachment: Escrow Table

cc: Katherine Archibald, Building Permits, On-Lot Sewage Management Coordinator –

Karchibald@westtown.org

Michael J. Bowker, P.E., Apex Design + Engineering Group – mbowker@apexdeg.com

Kate Donnelly, Westtown School – kate.donnelly@westtown.edu

Site Work

ITEM	DESCRIPTION	QUANTITY	UNITS	UNIT COST	UNIT TOTAL	TOTAL PAST RELEASES		CURRENT ESTIMATE		TOTAL RELEASED TO DATE		TOTAL REMAINING	
						QUANTITY	TOTAL	QUANTITY	TOTAL	QUANTITY	TOTAL	QUANTITY	TOTAL
A EROSION AND SEDIMENTATION CONTROL													
1	Rock Construction Entrance	1	EA	\$3,000.00	\$3,000.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	100%	\$3,000.00
2	12" Compost Filter Sock	650	LF	\$8.00	\$5,200.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	100%	\$5,200.00
3	24" Compost Filter Sock	95	LF	\$14.00	\$1,330.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	100%	\$1,330.00
4	32" Compost Filter Sock	55	LF	\$16.00	\$880.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	100%	\$880.00
5	Tree Protection Fencing	424	LF	\$5.50	\$2,332.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	100%	\$2,332.00
6	Inlet Protection	2	EA	\$300.00	\$600.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	100%	\$600.00
7	Temporary Slope Matting, NAG S75	415	SY	\$6.00	\$2,490.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	100%	\$2,490.00
8	Temporary Seed Stockpile	2	EA	\$800.00	\$1,600.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	100%	\$1,600.00
9	Erosion Control Maintenance & Removal	1	LS	\$1,500.00	\$1,500.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	100%	\$1,500.00
SUBTOTAL SECTION A					\$18,932.00		\$0.00		\$0.00		\$0.00		\$18,932.00
B STORM SEWER													
1	PCSM System - 87"x24"x5' stone bed with filter fabric, perforated pipe, control riser	1	LS	\$30,500.00	\$30,500.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	100%	\$30,500.00
2	Small Park Grate	1	EA	\$1,500.00	\$1,500.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	100%	\$1,500.00
3	2x2 inlet	1	EA	\$2,500.00	\$2,500.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	100%	\$2,500.00
4	2x2 sump box	1	EA	\$1,500.00	\$1,500.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	100%	\$1,500.00
5	6" HDPE	120	LF	\$35.00	\$4,200.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	100%	\$4,200.00
6	8" HDPE	318	LF	\$40.00	\$12,720.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	100%	\$12,720.00
7	10" HDPE	68	LF	\$44.00	\$2,992.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	100%	\$2,992.00
8	Level Spreader	1	EA	\$1,000.00	\$1,000.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	100%	\$1,000.00
9	Trench Drain	104	LF	\$80.00	\$8,320.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	100%	\$8,320.00
10	BMP Snout	2	EA	\$1,000.00	\$2,000.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	100%	\$2,000.00
SUBTOTAL SECTION B					\$67,232.00		\$0.00		\$0.00		\$0.00		\$67,232.00
C EARTHWORK													
1	Site Cut / Fill	150	CY	\$5.50	\$825.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	100%	\$825.00
2	Site Cut / Export	2750	CY	\$6.25	\$17,187.50	0%	\$0.00	0%	\$0.00	0%	\$0.00	100%	\$17,187.50
3	Rough Grade	14071	SF	\$0.05	\$703.55	0%	\$0.00	0%	\$0.00	0%	\$0.00	100%	\$703.55
4	Final Grade Building Pad	504	SY	\$0.85	\$428.40	0%	\$0.00	0%	\$0.00	0%	\$0.00	100%	\$428.40
5	Retaining Wall	240	SF	\$40.00	\$9,600.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	100%	\$9,600.00
SUBTOTAL SECTION C					\$28,744.45		\$0.00		\$0.00		\$0.00		\$28,744.45
D LANDSCAPING													
1	Shrubs (2-3' ht)	14	EA	\$75.00	\$1,050.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	100%	\$1,050.00
2	Trees (3-3.5" cal.)	5	EA	\$500.00	\$2,500.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	100%	\$2,500.00
3	Perennials	132	EA	\$15.00	\$1,980.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	100%	\$1,980.00
4	Ground Covers	210	EA	\$10.00	\$2,100.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	100%	\$2,100.00
5	Ornamental Grasses	44	EA	\$16.00	\$704.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	100%	\$704.00
SUBTOTAL SECTION D					\$8,334.00		\$0.00		\$0.00		\$0.00		\$8,334.00

SUBTOTAL ITEMS A. THRU F.	\$123,242.45	0%	\$0.00	0%	\$0.00	0%	\$0.00	100%	\$123,242.45
10% CONTINGENCY COST	\$12,324.25	0%	\$0.00	0%	\$0.00	0%	\$0.00	100%	\$12,324.25
5% ENGINEERING INSPECTION COST	\$6,162.12	0%	\$0.00	0%	\$0.00	0%	\$0.00	100%	\$6,162.12

TOTAL CONSTRUCTION COST	\$141,728.82		\$0.00		\$0.00		\$0.00		\$141,728.82
			\$0.00		\$0.00		\$0.00		\$141,728.82

BY: CEDARVILLE Engineering Group, LLC

COMPLETED TO DATE \$0.00
 PREVIOUS RELEASES \$0.00
 RELEASE \$0.00

RECOMMENDED FOR RELEASE: _____
 CEDARVILLE Engineering Group, LLC

DATE