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**Norfolk Public Schools**  
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## ***BOOKER T. WASHINGTON HIGH SCHOOL UPDATES***

June 26, 2024

School Board Business Meeting



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## Work To Date

Bi-Weekly  
STEAM  
Committee  
Meetings

BTWHS STEAM  
Team Retreat

Professional  
Development

Regular BTWHS  
STEAM Team  
Meetings

Feeder  
Middle  
School Visits

STEAM Fairs

STEAM School  
Visit

Community  
Surveys

# The Impact of STEAM at Booker T. Washington HS

- Re-tool the way approach education and instruction at Booker T. Washington HS
  - Problem-based Learning
  - Passion-based Learning
  - Project-based Learning
- Putting previous student career pathways discussions and lessons into action
- The STEAM Initiative will work alongside The Visual & Performing Arts Academy
  - BTWHS will be able to offer a **ROBUST** educational program
- Increased potential for upper level and advance placement classes earlier
  - Increasing the potential for students to graduate with Associates Degrees
- Authentic & meaningful industry and career connections & experiences



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# STEAM SCHOOL SITE VISIT BRADLEY COUNTY SCHOOL DISTRICT CLEVELAND, TN

WALKER VALLEY HIGH SCHOOL  
BRADLEY CENTRAL HIGH SCHOOL  
PARTNERS IN ENTERPRISE (PIE) CENTER

APRIL 2024

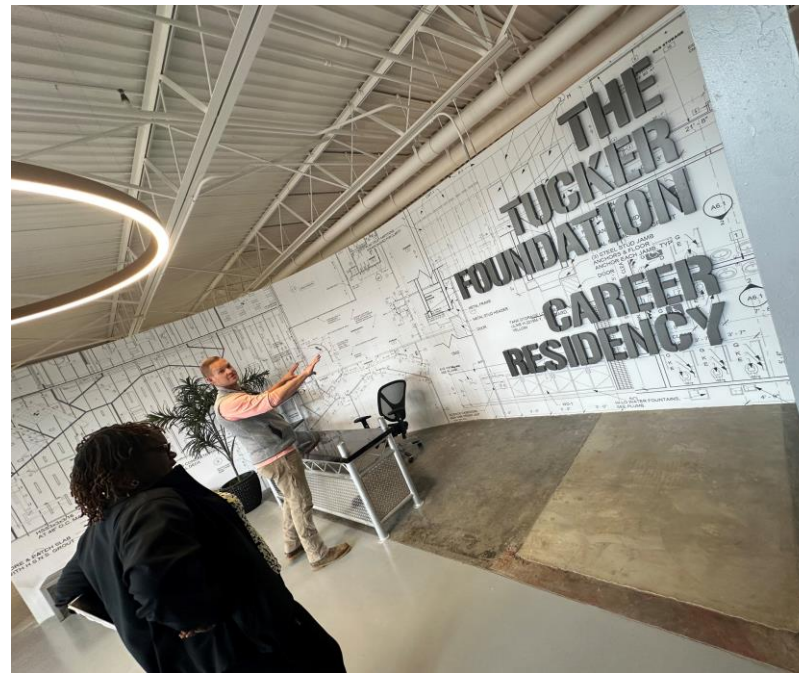


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- High Schools in Bradley County School District apply for state recognition as a STEAM implementation school.
- STEAM is a schoolwide integrated culture.
- Adoption of common language amongst STEAM colleagues and within the school.
  - 5 Es of Inquiry-based learning: Engage, Explore, Explain, Elaborate, Evaluate.
- Establish an entry-level "freshman experience" module.
- Every student has a tangible post-secondary direction after graduation.
- At BTWHS, students will enroll, enlist, or be employed following graduation!



# PARTNERS IN ENTERPRISE (PIE) CENTER







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## DO STEM Conference in Dayton, OH

### Airforce Museum

- Offered problem-based activities for all grade levels and student ability level.
- Demonstrated the alignment between national career clusters and course sequences over multiple ability levels.
- Student-created portfolios updated each year for replicated learning.
- Hands-on activities with ready-to-use activities across the curriculum appropriate for all students who receive.
- Realization of what is readily available in and around NPS; NPS is doing STEAM; it must be intentional around the organization of the work.



# DO STEM CONFERENCE

## NAT'L US AIR FORCE MUSEUM – DAYTON, OH





## BTW STEAM Retreat

- 2.5 Days of Focused STEAM Work
- Continued Vision Work
  - Understanding the What, Why and How!
  - Understanding the Alignment Between Concept & Practice
- Curriculum Development Training
- Infusing the STEAM mindset Into All Classes (Core and Elective)
- Identifying and Prioritizing Future Professional Development Needs
- Creation of the BOOKER PREP- Freshman Orientation course
  - Serves as transition from middle school to high school
  - Prepares students for the next three years of high school
  - Exposes students to career pathways and the STEAM connection
  - **SETS STUDENTS UP FOR SUCCESS**

BTWHS STEAM Professional Development and Planning Retreat  
June 12-14, 2024

Date	Activity	Presenter	Guests
June 12, 2024	Overview of Retreat	Mr. Garner	C&I, LS-SES, CTE, DEI
	Curriculum Development Workshop	Mr. Brady/C&I/CTE	
	Freshman Seminar Conceptual Design	BTWHS STEAM Team	
	Lunch		
June 13, 2024	Freshman Seminar	Mr. Garner	CTE, C&I, DEI
	Review of Day	BTWHS STEAM Team	
	Connection of Day	Mr. Garner	
	Review Freshman Seminar	BTWHS STEAM Team	
	Ideate on Pathways	BTWHS STEAM Team	
	Lunch		
	Pathway Formulation	CTE	
	STEAM Integration Activities	BTWHS STEAM Team	
	First Year Activities (Student-Focused)	BTWHS STEAM Team	
	Review of Day	Mr. Brady/C&I	
June 14, 2024	Connection of Day and Accomplishments so Far	Mr. Garner	PD, DEI
	Discussion Activity	BTWHS STEAM Team	
	Development of Professional Development Needs	Mr. Garner	
	PD Plan to prepare for SY25	BTWHS STEAM Team	
	Review of Retreat	Mrs. Masterson	
		Mrs. Masterson	
		Mr. Garner	



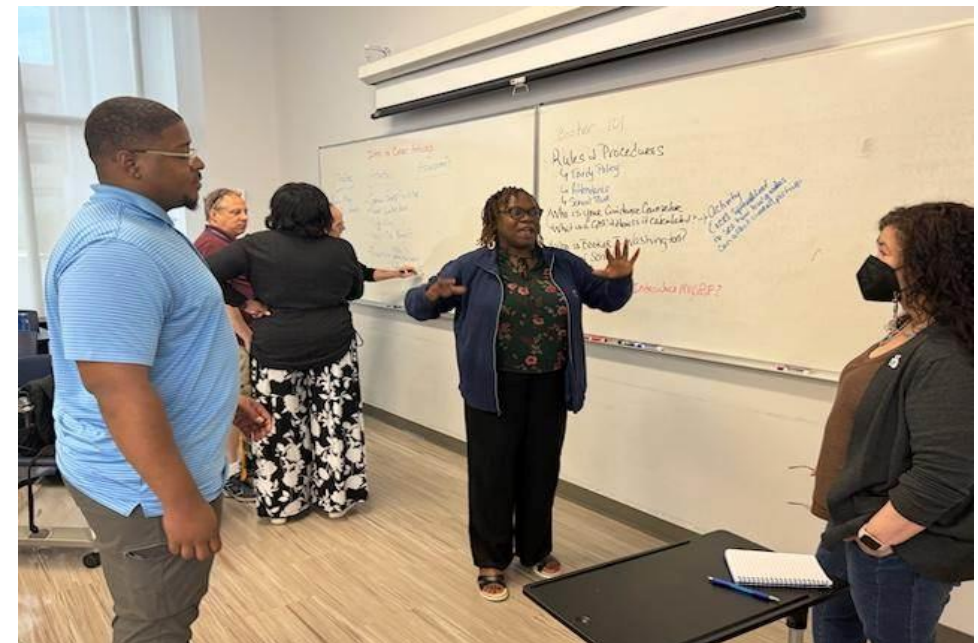
POINTS TO CONSIDER

- 2 - 3 Units per nine-weeks (in our case, per course w/in class)
  - Each Unit
    - Learning Topics
    - Instructional Activities
    - Minor Assessments (for each topic)
    - Guest Speakers
    - Extension Activities



Intro. to Career Pathways

Activities	Assessments
- Career Fairs/Fieldtrips	① Matching Pathways
- Guest Speakers/Panel	② To Career Portfolio
- Role-Play	- 1 pager R. (Research) Paper
- HANDS ON Projects	③ @ Career Field
- Resources - Media Ctr. Books/Web Sources Library Cards (NPS) Makerspace	- ARTIFACT - Project = Presentation (STEAM FAIR)
- Virtual Career Shadow	





# Professional Development Planning

- **STEAM School Visits** - Exemplar schools with established STEAM programs and proven strategies for success
- **STEAM/STEM Conferences** - Exposure to STEAM practices and innovations that link STEAM and instruction; Expansion of our professional network
- **Industry and Career Visits** - *On-site and first-hand experiences of industry practices that could be included in the BTWHS STEAM work*
- **Industry Experts** - Guest presenters will share their knowledge and expertise in the areas of STEAM and its successful implementation
- **Teacher Training & Support** - BTWHS Faculty will receive training on STEAM (overall concept) and its implementation at BTWHS\*

\*Training and professional development will be ongoing for the STEAM team and the BTWHS Faculty & Staff.



# Curriculum Development

- Creation of a "Freshman Orientation" module (aptly named BOOKER PREP)
- Career awareness, exposure, and exploration
- Shift in Academic Work
  - Meeting the students where they are
  - Focus on student interest and future outlook WITHIN the CAREER PATHWAY and STEAM models
  - Project-Based Assessments --> Critical Thinking & Life Applications
- Meeting Industry Standards
- Guest Speakers, Field Trips, Internships
- More Advance Placement & Dual Enrollment Offerings --> EARLY
- Students will graduate with a TANGIBLE Career Pathway credential, college credit, and/or work experience

## Current Career Pathways

Based off of student interest, the BTW STEAM Team has selected 6 Career Pathways for rising 9<sup>th</sup> graders.

- Cybersecurity
- Environmental Technology
- Hospitality & Tourism
- Human Services
- Maritime & Aerospace Technology
- Multimedia Arts for Commercial Design

All Pathways are connected to one or more of the 17 National Career Clusters—yielding access to:

- Funding
- Opportunities
- Certifications
- National recognition



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# Measuring Success

	Pre-Implementation (Planning)	Developing/Emerging	Full Implementation
<b>STEAM Vision, Mission, and Culture</b>	BTW STEAM is designed to prepare our students for present and future careers, ensuring every graduate is college or career ready. Vision, mission, and goal statements to be developed fostering STEAM culture	Many students and families are knowledgeable regarding the school's goals for innovation, collaboration, and academics. The concept and culture of STEAM are embraced by most students, faculty, and staff.	Mission, vision, and goals are clearly defined and understood by all stakeholders. STEAM culture is embraced schoolwide by all stakeholders.
<b>STEAM Curriculum</b> <ul style="list-style-type: none"> <li>Pathways</li> <li>Core Content</li> </ul>	Look at existing course offerings and STEAM framework to determine curricular groupings and pathway coursework. Initial focus on 9 <sup>th</sup> Grade Coursework and Pathway development.	An integrated STEAM curriculum is being developed with alignment to in-demand career pathways	Pathways are clear and sustainable with coursework that provides aligned opportunity for exploration. Curriculum is developed for all coursework and supports collaborative, project-based, problem-based, and passion-based approaches.
<b>STEAM Instruction</b> <ul style="list-style-type: none"> <li>Project/Problem Based Learning</li> <li>Integration (Teacher Collaboration)</li> </ul>		STEAM Project: Semesterly - Elements below appear in specific content areas: Students engage in the design thinking process, Students engage in problem-based and/or project-based learning, Students connect learning to real-world issues, situations and problems.	STEAM projects: Quarterly - There is evidence of implementation in classroom instruction. Long-term projects/problems are implemented throughout the school year that are standards-based, interdisciplinary, and engage students with real-world problems in their community. 100% of STEAM students complete an internship and/or capstone project.
<b>Student Rigor &amp; Relevance/ Instructional Quality</b> <ul style="list-style-type: none"> <li>Student Outcomes (CCCR)</li> <li>Assessments</li> </ul>	Identify Service-Learning Projects for every department to allow for CCCRI. This will allow for increased chances for this index to grow.	Local, district, and state assessments guide instructional practices. Projects provide evidence that students apply the 5 Cs to solve complex and perplexing problems.	Instruction is adapted to meet ALL students' needs. Classroom instruction is predominantly student centered, and students must think in complex ways and apply knowledge and skills they have acquired.
<b>Professional Learning</b> <ul style="list-style-type: none"> <li>Teacher Knowledge</li> <li>Leadership</li> <li>Practices</li> </ul>	BEST practices will be defined for STEAM instruction and academic rigor for each pathway. Determine foundational STEAM principles and approaches to focus on with staff.	Teacher professional development is focused upon STEAM instructional practices. Teachers and school leadership create personalized professional development opportunities based on individual needs to support STEAM practices.	A continual cycle to gather developmental needs and reexamine best practices from staff inform professional development. A sustainable structure for daily, weekly, and yearly planning and professional development meets the needs of all staff members. A variety of opportunities for PD/planning are provided to meet a variety of needs.
<b>Business, Community, Postsecondary Partnerships</b>	Effective (active) business, industry, and/or educational partnerships are not in existence. List current community partnerships and coordinate with Communications Department for additional opportunities.	Promote incorporation in collaborative projects by developing information to share with partners. (What is BTW STEAM doing, looking for, and need?)	Multiple business, community, and post-secondary partnerships are on-going and are involved by directly connecting to in-class instruction, project/problem-based learning, and exposing students to STEAM careers. Arts partnerships are in place.

# FACILITIES

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## Previous Projects

2018

- Repaired Gym Sound System - \$2,055

2019

- Replaced Pipe Insulation - \$79,279
- Replaced Gym Bleachers - \$489,684
- Installed Baseball Field Fence - \$44,300
- Replaced Baseball Backstop - \$30,000
- Installed new Scoreboards - \$25,000

2020

- Installed Additional Lighting on Baseball Field - \$4,531

2021

- Installed Baseball Field Lighting - \$4,532
- Installed Softball Dugouts - \$7,500
- Installed Softball Outfield Fencing - \$4,500

2022

- Created Student Parking Lot and Restripe Lots - \$6,568
- Installed Sod for Football Field - \$4,500
- Installed Signage for Athletic Fields - \$5,000

2023

- Refinished Gym Floor - \$6,275
- Replaced Main Office Carpeting - \$12,804
- Upgraded Gym Sound System - \$10,347

**Total Funds Spent**

**\$736,875**

## Program Upgrades for Fine and Performing Arts

Created a dance studio. (Unknown total cost)

Added equipment to support graphic arts and theater production.

**Funding Plan**

**\$36,000**

## School Safety

Creating a vestibule at the front doors to create an added layer of security at the entry point. (Costs are included with the windows and door replacements.)

Installing a building access system which will eliminate a traditional key entry and transition to a key fob and entry code to gain access.

**Funding Plan**

**\$16,000**

## Athletics

Six new tennis courts have been added.\*

A new turf football field will be added.

Gymnasium floor resurfaced.

\*City of Norfolk is Covering the Cost

**Funding Plan**

**\$2,845,000**



## Roof Replacement

Many of the existing roofs are not insulated at Booker T. Washington High School. The roof replacement effort will address:

- on-going water infiltration issues;
- improve air quality within the building; and
- provide for a sloped/tapered insulation system that will improve drainage and will significantly increase the thermal resistance value to an R-30 rating (resulting in energy savings).



**Funding Plan**

**\$7,300,000**

## Exterior Window and Door Replacement

Older schools were constructed with less energy efficient materials than what is available today. The window replacement project will provide for a direct result of energy savings using insulated glass and Low-E coatings for glazing. This project also includes adding entry vestibules, power washing and painting the building exterior.



**Funding Plan**

**\$5,800,000**

## HVAC Improvements



The HVAC system at Booker T. Washington High School did not supply fresh air due to the original design and aged units that are not performing efficiently. The tasks for this project include Architectural & Engineering, replacing all HVAC equipment, electrical & gas line upgrades, ductwork, demolition, new ceiling grids, ceiling tiles, and new LED lighting.

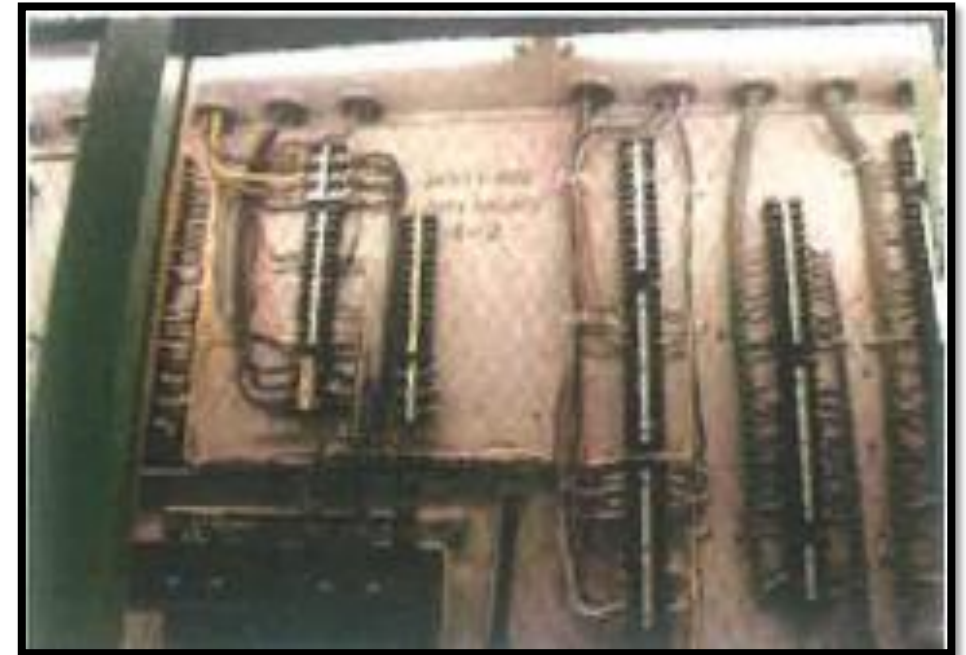
**Funding Plan**

**\$14,973,000**



## Electrical Systems Upgrades

As existing school facilities continue to age, the need to replace and upgrade life safety systems, including fire alarm systems and communication systems is necessary to maintain adequate safe learning environments. Additionally, integrating power and technology systems into older buildings is necessary to support the instructional environment.



**Funding Plan**

**\$8,472,000**



## Refresh Restrooms

This project renovates all restrooms at Booker T. Washington High School, to include replacing all fixtures, partitions, tiling, and plumbing.



**Funding Plan**

**\$4,553,000**

# FACILITIES

**Total Spent on Major Facilities Projects SY19-SY24**

**\$8,072,875**

**Anticipated Spending on Major Facilities Projects SY24-SY25**

**\$43,959,000**

**Total Spent/Planned to be Spent**

**\$36,659,000**



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## ***BOOKER T. WASHINGTON HIGH SCHOOL UPDATES***

Questions and Discussion