ORANGE COUNTY PUBLIC SCHOOLS

Taylor Education Administration Complex
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Career and Technical Education Facility Feasibility Study

October 17, 2023

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1.0 EXECUTIVE SUMMARY

1 ORANGE COUNTY NEEDS TO GROW ITS **SKILLED WORKFORCE** ACROSS MULTIPLE INDUSTRIES TO MEET CURRENT AND FUTURE DEMAND. ORANGE COUNTY PUBLIC SCHOOLS' (OCPS) CAREER AND TECHNICAL EDUCATION PROGRAM (CTE) HAS THE POTENTIAL TO MEET THIS DEMAND.

The Orange County community recognizes the need and supports developing its skilled workforce through the OCPS CTE program. In response, OCPS has developed technical skills course offerings to provide skills and credentials. However, current programs are operating in facilities with limited physical settings which prohibit the expansion of CTE course offerings to meet the stated community demand.

2 THE GOAL OF THIS STUDY IS TO PROVIDE AN OBJECTIVE ANALYSIS OF VIABLE **NEAR- AND LONG-TERM OPTIONS** FOR EXPANDING OCPS CTE PROGRAMS, AS WELL AS PROVIDE TRADITIONAL CLASSROOM SPACE FOR THE OVER-CAPACITY HIGH SCHOOL.

An important question is "Where and how should these programs be accommodated?" Past studies have offered various options and locations. With community support approaching critical mass, OCPS engaged the authors of this study to investigate options to accommodate OCPS's current and planned CTE program. This document reports on the following:

- *Review of OCPS current and future CTE programming and CTE spaces.*
- *Expanding Orange County High School (OCHS) for current and future CTE offerings*
- *Locating CTE offerings at the Taylor Education Administrative Complex (TEAC)*
- *Building a new stand-alone CTE facility on current OCHS property*
- *Acquiring adjacent Waugh Boulevard property for current and future CTE offerings*
- *Schedule and cost opinions for offered solutions*

3 STUDY FINDINGS FOR **SEVEN IDENTIFIED OPTIONS**

On the following page are highlights of seven identified options. Two notes about these descriptions: 1) The options vary and are not intended to be "apples-to-apples" comparisons. 2) Both cost and schedule opinions are conservative to match the broad scope of this study. In-depth programming and design is required to further refine scope and cost of each option.

4 **CONCLUSION**

Comparing these options for the balance of cost, location, timeline, minimal impact on existing operations and contribution to future of OCHS, **OPTION F – ACQUIRE & RENOVATE WAUGH BOULEVARD PROPERTY & BUILD CLASSROOM ADDITION TO ORANGE COUNTY HIGH SCHOOL** stands out for having the highest present-value for expanding CTE and having the highest future-value for the growth of OCHS overall.

OPTIONS

OPTION A – ORANGE COUNTY HIGH SCHOOL RENOVATIONS / ADDITIONS

Advantages: Adds core curriculum and CTE space in HS. Reduces off-site transport.
Challenges: Site constraints. CTE use ~5 years out.
Estimated Total Project Cost: $39,000,000 (2023 dollars)

OPTION B1 - LOCATE CTE PROGRAMS AT TEAC (HEAD START SIDE)

Advantages: Increase utilization of ~8,000 sf of current space.
Challenges: Major Reno. Site Constraints. Busing. Only works for Dual-Block CTE. Displaces Head Start, VPI, Boys & Girls Clubs, OCPS Maintenance, OCPS IT. Impacts PHMS football and baseball fields. CTE use ~3 years out.
Estimated Total Project Cost: $44,000,000 (2023 dollars).

OPTION B2 - LOCATE CTE PROGRAMS AT TEAC (ADMIN SIDE)

Advantages: Increase utilization of ~20,000 sf of current space.
Challenges: Major Reno. Site Constraints. Busing. Only works for Dual-Block CTE Displaces TEAC Admin. CTE use ~3 years out.
Estimated Total Project Cost: $29,000,000 (2023 dollars).

OPTION C – NEW CTE FACILITY ON CURRENT OCHS PROPERTY

Advantages: Frees up classroom space in HS for core curriculum. Eliminate off-site transport. Centralize CTE programming
Challenges: Relocate bus / main shops. Long walk from HS. High cost option. CTE use ~5 years out.
Estimated Total Project Cost: $77,000,000 (2023 dollars)

OPTION D – ACQUIRE & RENOVATE WAUGH BLVD PROPERTY

Advantages: Reduce off-site transport. Frees up two classrooms in HS. Significant contribution to OCHS campus use possibilities and long term value. CTE use ~2.5 years out.
Challenges: Only select programs fit in existing spaces. Update to current building code.
Estimated Total Project Cost: $17,000,000 (2023 dollars)

OPTION E - ACQUIRE & BUILD NEW ON ADJACENT WAUGH BLVD PROPERTY

Advantages: Frees up classroom space in HS for core curriculum. Reduce or eliminate off-site transport. Centralize CTE programming. Significant contribution to OCHS campus use possibilities and long term value.
Challenges: High cost option. CTE use ~5 years out.
Estimated Total Project Cost: $68,000,000 (2023 dollars)

OPTION F – CLASSROOM ADDITION TO OCHS & RENOVATE WAUGH BLVD PROPERTY

Advantages: Adds core curriculum and CTE space in HS. Reduces off-site transport. Significant contribution to OCHS campus use possibilities and long term value.
Challenges: Site constraints. Only select programs fit in existing Waugh Property spaces. Update to current building code. CTE use ~2.5 years out.
Estimated Total Project Cost: $33,000,000 (2023 dollars)

2.0 INTRODUCTION

For many years, the Orange County community has recognized the need to develop its skilled workforce. In response, Orange County Public Schools (OCPS) has continuously developed its technical skills course offerings. OCPS Career and Technical Education (CTE) curriculum provides relevant trade skills, trade credentials, talent to regional businesses, and engage students' curiosity, creativity and critical thinking skills.

However, current programs are operating in limited physical settings and current facilities prohibit the expansion of CTE course offerings to meet the stated community demand.

NEED FOR SKILLED WORKFORCE IN ORANGE COUNTY

With an employment rate of 97%, Orange County and regional businesses and institutions track with Virginia with respect to deficit of skilled workers to fill current openings across all employment sectors. These employment sectors include construction trades, automotive, industrial technology, computer technology, medical, services, first responders and agriculture (www.thinkorangeva.com/why-orange/labor-profile). OCHS students with CTE course work skills and credentials could directly fill or have the necessary foundations to fill these positions.

Labor Profile for Orange County, Virginia

Virginia's Career and Workforce Labor Market Information - November 2022

Total Civilian Employed Population (16 Years and Over)	**16,973**	**100%**
Educational services, and health care and social assistance	3,394	20.00%
Construction	2,051	12.10%
Retail trade	2,055	12.10%
Professional, scientific, management, administrative, waste management	1,741	10.30%
Arts, entertainment, and recreation, and accommodation and food services	1,670	9.80%
Manufacturing	1,434	8.40%
Public administration	1,217	7.20%
Transportation and warehousing, and utilities	815	4.80%
Finance and insurance, and real estate and rental and leasing	793	4.70%
Other services, except public administration	651	3.80%
Information	449	2.60%
Agriculture, forestry, fishing and hunting, and mining	414	2.40%
Wholesale trade	289	1.70%

3.0 OCPS CTE PROGRAMMING

CURRENT PROGRAMMING

As of the 2022-23 school year, OCPS offers over 70 different CTE courses in approximately 28,600 SF.

AGRICULTURE
Foundations of Ag, Food & Natural Resources
Introduction to Animal Systems
Veterinary Science I, II
Equine Science
Small Animal Science Care
Introduction to Power Structure & Tech Systems
Introduction to Plant Systems
Horticulture Sciences
Livestock Production Management
Agricultural Power Systems
Advanced Equine Science
Agricultural Fabrication & Emerging Technology
Advanced Greenhouse Plant Production & Management
Landscaping I, II
Small Engine Repair

BUSINESS & INFORMATION TECHNOLOGY
Economics & Personal Finance
Principles of Business & Marketing
Accounting
Computer Information Systems
Digital Applications
Design, Multimedia, & Web Tech, & Advanced
Entrepreneurship Education
Opportunities in Hospitality & Tourism

COMMUNICATIONS
Communication Systems
Graphic Communications
Video & Media Technology

FAMILY AND CONSUMER SCIENCES
Independent Living
Child Development & Parenting
Community Service Learning
DE Introduction to Teaching EDU 200
DE Human Growth & Development EDU 207
Nutrition and Wellness

HEALTH & MEDICAL SCIENCES
Introduction to Health & Medical Sciences
Nursing Aide I, II
Sports Medicine / Athletic Training I, II
Emergency Medical Technician I

HUMAN SERVICES
Cosmetology I, II

LAW, PUBLIC SAFETY & SECURITY
Firefighting I

MARKETING
Marketing
Strategic Marketing to Include:
Sports, Entertainment, & Recreation Marketing
Fashion Marketing
Digital & Social Media Marketing

MILITARY SCIENCE
JROTC Leadership Education and Training 1-4
JROTC Teams
Leadership & Citizenship
LEAD 134 - Military History Staff Ride

TECHNOLOGY EDUCATION
Technical Drawing & Design
Engineering Drawing & Design
Architectural Drawing & Design
Advanced Drawing & Design
Technology Foundations
Technology Transfer
Advanced Graphic Design
Technology of Robotic Design
Mechatronics I, II

TRADE AND INDUSTRIAL EDUCATION
Advertising Design I
Dual Enrollment Automotive Technology
Dual Enrollment Automotive Diagnostician
Information Technology Fundamentals
Computer Science Programming
Advanced Cybersecurity Fundamentals
Cybersecurity Technology
Advanced Cyber Security Network Systems
Game Design & Development
Introduction to Computer Science - Python
AP Computer Science Principles
AP Computer Science A

FUTURE PROGRAMMING

OCPS's CTE Long Range Plan includes expanding existing course offerings to prepare students for current and future workforce needs and to respond where students and families have shown interest. In addition to current course offerings, OCPS plans to add the below listed courses:

AGRICULTURE
Turf Management
Outdoor Recreation, Parks, & Tourism
Forestry Management

ARCHITECTURE & CONSTRUCTION
Construction Technology
Building Trades
HVAC
Masonry
Plumbing
Electricity
Utility/Heavy Construction

TECH & COMMUNICATIONS
Telecommunications
Interior Design
Television & Media

BUSINESS MANAGEMENT & ADMINISTRATION
Business Management
Medical Administration
Legal Administration

HEALTH & MEDICAL
Medication Aide
Pharmacy Technician
Radiologic Technology

HOSPITALITY & TOURISM
Culinary Arts
Hospitality, Tourism & Recreation
Travel & Tourism Marketing

INFORMATION TECHNOLOGY
Geospatial Technology Programming

LAW, PUBLIC SAFETY
Corrections & Security
Criminal Justice
Public Safety

MANUFACTURING
Precision Machining Technology
Industrial Robotics Technology
Computerized Integrated Mfg. Welding

MARKETING
Opportunities in Global Trade
Real Estate

TRANSPORTATION, DISTRIBUTION & LOGISTICS
Small Engine Technology
Diesel Equipment Technology

ENERGY PATHWAY
Energy & Power
Renewable Energy

CTE PROGRAMMING SPACE NEEDS

CURRENT CTE SPACE - OCHS CTE programs operate in approximately 28,600 sf of OCPS-owned space. This area total is distributed between Orange County High School, out-buildings on the high school site, and in the Taylor Education Administration Complex (TEAC) building. Many of the Tech Ed, IT & Security, Marketing, and Nursing courses are housed within the high school. Agriculture courses are taught in a standalone building on the high school site, as well as the JROTC program in a separate standalone building. The Cosmetology program is taught off site at the TEAC building and students are bused from the high school to that site.

Off-site CTE programming operates in space not accounted for in this study.

FUTURE CTE SPACE - From meetings with CTE staff, consulting Virginia DOE “CTE Competencies” descriptions, Virginia DOE recommended minimum space guidance, and experience with past CTE projects, the study team has assembled a recommended space allocation program (or space program) as a starting point, with options for OCPS to evaluate. This space program accommodates current and planned CTE space needs, and describes a CTE facility of approximately 112,000 sf. However, once approved, the space program must be part of an overall OCHS space utilization exercise in order to correlate and integrate spaces indicated here with other OCHS courses for optimum efficiency (i.e. sharing spaces where possible). If accomplished in one building, and considering scheduling efficiencies, this space program could be accommodated in a purpose-built facility of 85,000 to 105,000 square feet in size.

OCHS CTE Program Chart

Orange County Public Schools

Summer 2023

SPACE DESCRIPTION	NO. OF ROOMS	AREA PER ROOM	TOTAL AREA	STUDENTS / SPACE	STUDENT CAPACITY	STAFF
Career & Technical Education Spaces						
Agriculture						
Agriculture Classrooms	3	700	2,100	20	60	3
Ag Lab - Virtual / Clean	1	1,600	1,600	0	0	0
Ag Lab - Welding / Metal Work	1	1,600	1,600	0	0	0
Ag Shop	1	2,800	2,800	20	20	1
Ag Lab Storage - Inside	2	300	600	0	0	0
Barn	1	2,500	2,500	0	0	0
Turf Management Equipment Storage	1	2,500	2,500	0	0	0
Greenhouse (External)	1	2,400	0	0	0	0
Ag Lab Storage - Outside	1	2,400	0	0	0	0
Communications						
Communications Classroom	1	1,200	1,200	30	30	1
Audio / Video Broadcast / Recording Studio	1	700	700	0	0	0
Storage	1	200	200	0	0	0
Marketing						
Marketing Classroom	1	1,200	1,200	30	30	1
Presentation Space (share with Communications)	1	2,000	2,000	0	0	0
Lab Store / School Store	1	200	200	0	0	0
Storage	1	300	300	0	0	0
Business and Information Technology						
Business and Information Technology	1	1,400	1,400	30	30	1
Business and Information Technology Classroom	1	1,200	1,200	25	25	1
Culinary Arts						
Culinary Arts Classroom	1	700	700	20	20	1
Culinary Arts Lab	1	2,800	2,800	0	0	0
Family and Consumer Sciences						
Family and Consumer Sciences Lab	1	1,600	1,600	30	30	1
Family and Consumer Sciences Classroom	1	700	700	0	0	0
Fashion and Interior Design						
Fashion Interior Design	1	1,800	1,800	20	20	1
Nursing						
Nursing Classroom	2	700	1,400	20	40	2
Nursing Lab	2	2,000	4,000	0	0	0
Restrooms / Showers	2	80	160	0	0	0
Office	1	150	150	0	0	0
Sports Medicine / Athletic Training						
Sports Medicine / Athletic Training Classroom	1	700	700	20	20	1
EMT / Firefighting						
EMT Classroom	1	700	700	20	20	1
EMT Lab	1	1,600	1,600	0	0	0
Human Services						
Cosmetology Classroom	1	700	700	20	20	1
Cosmetology Lab	1	2,400	2,400	0	0	0
Storage / Dispensary	1	600	600	0	0	0
Reception / Waiting Area	1	200	200	0	0	0

Information Technology						
IT Classroom	2	700	1,400	0	0	0
IT Lab	1	1,200	1,200	25	25	1
Cyber Security Lab	1	1,200	1,200	20	20	1
Computer Science Lab	1	1,200	1,200	20	20	1
JROTC						
JROTC Classroom	2	700	1,400	30	60	2
JROTC Armory	1	400	400	0	0	0
JROTC Firing Range	1	540	540	0	0	0
JROTC Drill Area	1	4,000	0	0	0	1
JROTC Office	1	150	150	0	0	0
JROTC Storage	1	1,300	1,300	0	0	0
Technology Education						
Technology Education Classroom	4	700	2,800	0	0	0
Fabrications Lab / Manufacturing Lab	1	1,600	1,600	20	20	1
Robotics Lab / Mechatronics Lab	1	1,600	1,600	20	20	1
Tech Ed Shop	1	2,000	2,000	20	20	1
Video and Media Lab	1	1,400	1,400	30	30	1
Trades and Industrial Education						
Trade and Industrial Education Classroom	3	700	2,100	0	0	0
Trade Lab - Automotive	1	3,600	3,600	20	20	1
Trade Lab - Electrical	1	2,700	2,700	20	20	1
Trade Lab - HVAC	1	2,700	2,700	20	20	1
Trade Lab - Plumbing	1	2,700	2,700	20	20	1
Trade Lab - Carpentry	1	2,400	2,400	20	20	1
Subtotal CTE Spaces			**79,300**		**700**	32
Administrative Facilities						
Reception / Waiting / Admin	1	400	400			1
Work Room / Copy Room / Mail	1	265	265			
Conference Room	1	400	400			
Bookkeeping / Finance Office	1	150	150			1
Principal	1	220	220			1
Assistant Principal	1	150	150			1
Admin Storage / Supply	1	100	100			
Staff Restrooms	3	70	210			
Clinic	1	500	500			1
Subtotal Main Admin Office			**2,395**			5
Other Spaces						
Custodial Closets	3	50	150			
Custodial Storage / Office	1	100	100			2
Main Electrical Room	1	400	400			
Electrical Closets	1	160	160			
MDF (Distribution/Head End/IT)	1	170	170			
IDF	1	160	160			
Main Mechanical	1	800	800			
Sprinkler Room	1	150	150			
Group Female Toilets	2	350	700			
Group Male Toilets	2	350	700			
Changing/Locker Rooms	2	350	700			
Individual Toilet Rooms	4	64	256			
Staff Only Toilets & Family Toilets	4	64	256			
Subtotal Other Spaces			**4,702**			
Subtotal All Programmed Spaces			**86,397**			
Corridors, Structure, Support (Grossing Factor)		30.0%	25,919			
Grand Totals			**112,316**		**700**	**44**

4.0 EXISTING CTE PROGRAM LOCATIONS AND FACILITY EVALUATIONS

Currently OCPS CTE courses are taught at OCHS, TEAC, and at several off-site locations.

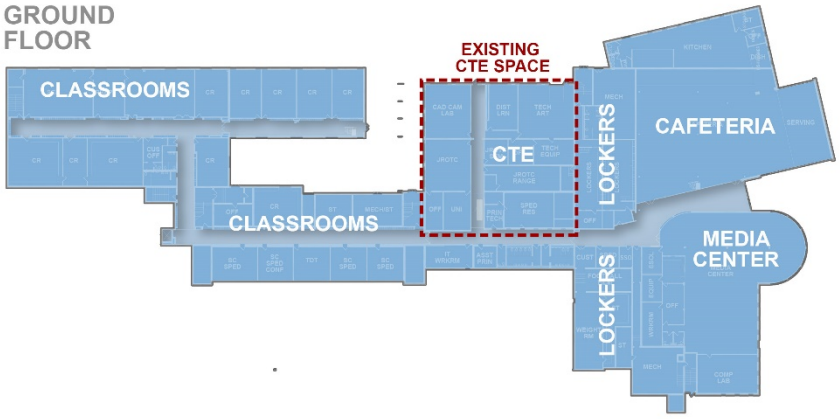
OCHS: Courses taught at OCHS utilize approximately 15,000 sf in the main school building, 1,000 sf in the sports center, 6,600 sf in a dedicated agriculture building and 3,400 sf in a small wood-framed building close to Waugh Blvd (JROTC). Tech Ed and Trade/Industrial Ed spaces are undersized for courses taught, lack proper amenities and too few to accommodate desired course offerings. Nursing and Sports Medicine courses are taught in generic classrooms and need features to accommodate curriculum. Agriculture lab and classroom spaces in the dedicated agriculture building are in poor condition, undersized and too few to accommodate course offerings and in need of plumbing, electrical and HVAC upgrades. The JROTC building is of poor structural and finish quality, does not meet accessibility requirements, and square footage is not arranged for ideal curriculum delivery and student monitoring. In summary, OCPS's "hands-on" CTE courses are currently being taught in spaces that are below Virginia DOE recommended minimum areas and space requirements and are inadequate for desired student outcomes.

OCHS AERIAL VIEW

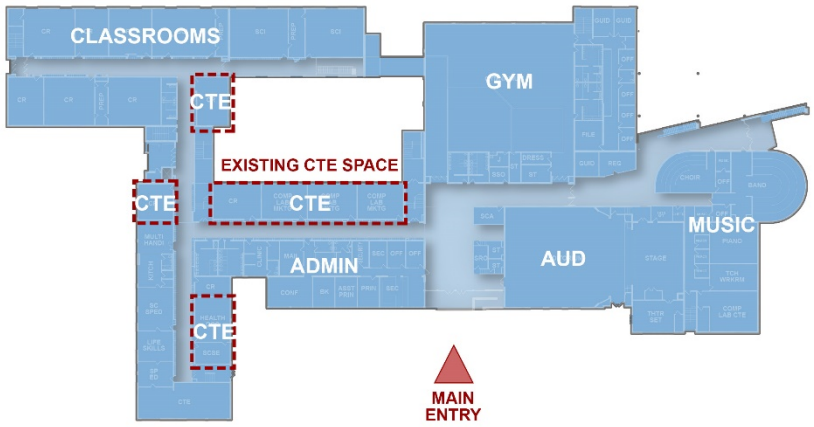


OCHS EXISTING FLOOR PLANS

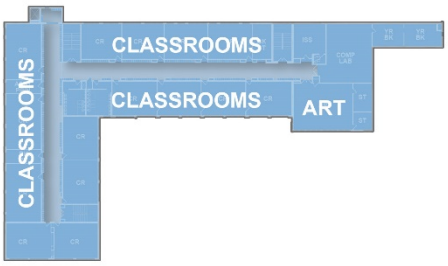
GROUND FLOOR



1ST FLOOR



2ND FLOOR



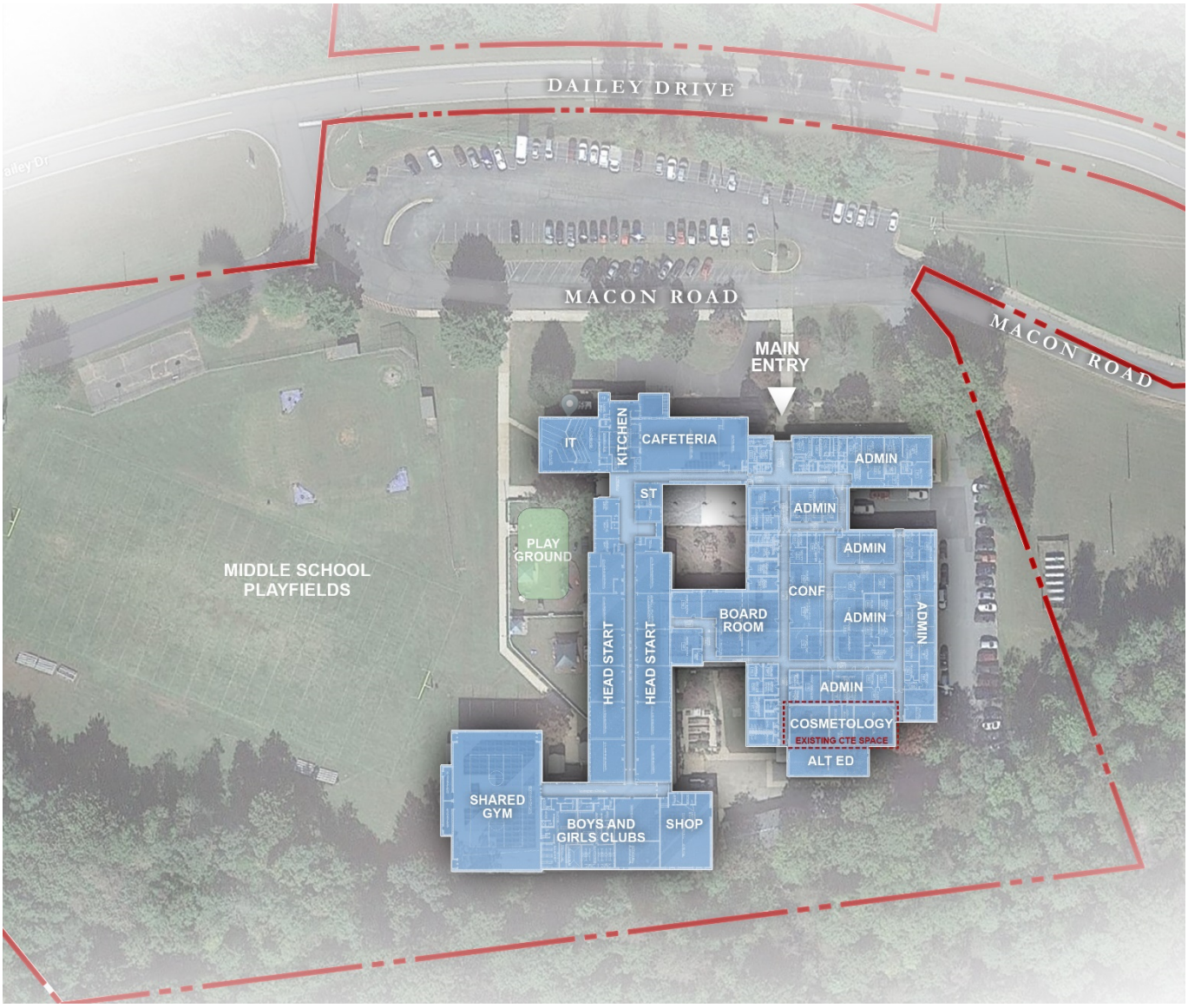
Taylor Education Administration Complex (TEAC):

Cosmetology courses are the only CTE offerings currently taught at TEAC. They utilize 2,800 sf at the rear of the building. These spaces are of serviceable quality and fair arrangement for the courses taught. Updated layout and features are recommended to provide intended curriculum delivery. Remote location within the building limits practicum experience (customers). Transportation to TEAC location takes curriculum time away from students.

Virginia Pre-School Initiative (VPI) and Head Start are OCPS curriculum programs that occupy approximately 12,000 square feet of classroom space on the west side of the building, kitchen and cafeteria space in the front of the building and share the gymnasium space with the Boys and Girls Clubs program. Currently, VPI occupies one classroom space with about 20 students. Head Start occupies another 3-4 classrooms, along with 2 classrooms of early Head Start (ages infant to 3-year-old). The programs also have one self-contained special education classroom, along with admin offices, conference, and meeting rooms. The program also has direct access to outdoor playground space in the adjacent area to the west of the building.

The Boys and Girls Clubs program is an important community asset which occupies about 6,000 square feet in the rear of the building, along with sharing the gymnasium space with the Head Start program. This space includes one classroom in the adjacent wing for a “Teen Lounge.”

TEAC AERIAL VIEW



TEAC FLOOR PLAN



OTHER OFF-SITE CTE LOCATIONS: Current CTE offerings such as Automotive, EMT and Fire Fighting require class and lab space that OCPS does not currently have. These courses are taught off-site under various agreements and transportation arrangements. Teaching CTE courses at OCPS facilities makes CTE offerings more accessible to more students and preserves school time for active learning (vs. traveling).

5.0 OPPORTUNITIES

Multiple options to accommodate existing and planned CTE programming and providing traditional classroom space for the high school are described here. Options described vary in scope. Options focus on current OCHS site, current TEAC site and potential new property adjacent to OCHS. Options include elements of space renovation, building additions, and new buildings. Some options require finding a new "home" for displaced activity. Option narratives presented also take a high level look at the effect on general classroom space at OCHS.

OPTION A: Orange County High School Renovations and Additions

OPTION B1: Locate CTE Programs at TEAC (Head Start Side)

OPTION B2: Locate CTE Programs at TEAC (Admin Side)

OPTION C: New CTE Facility on Current OCHS Property

OPTION D: Acquire and Renovate Waugh Blvd Property

OPTION E: Acquire and Build New on Adjacent Waugh Blvd Property

OPTION F: Classroom Addition to OCHS and Renovate Waugh Blvd Property

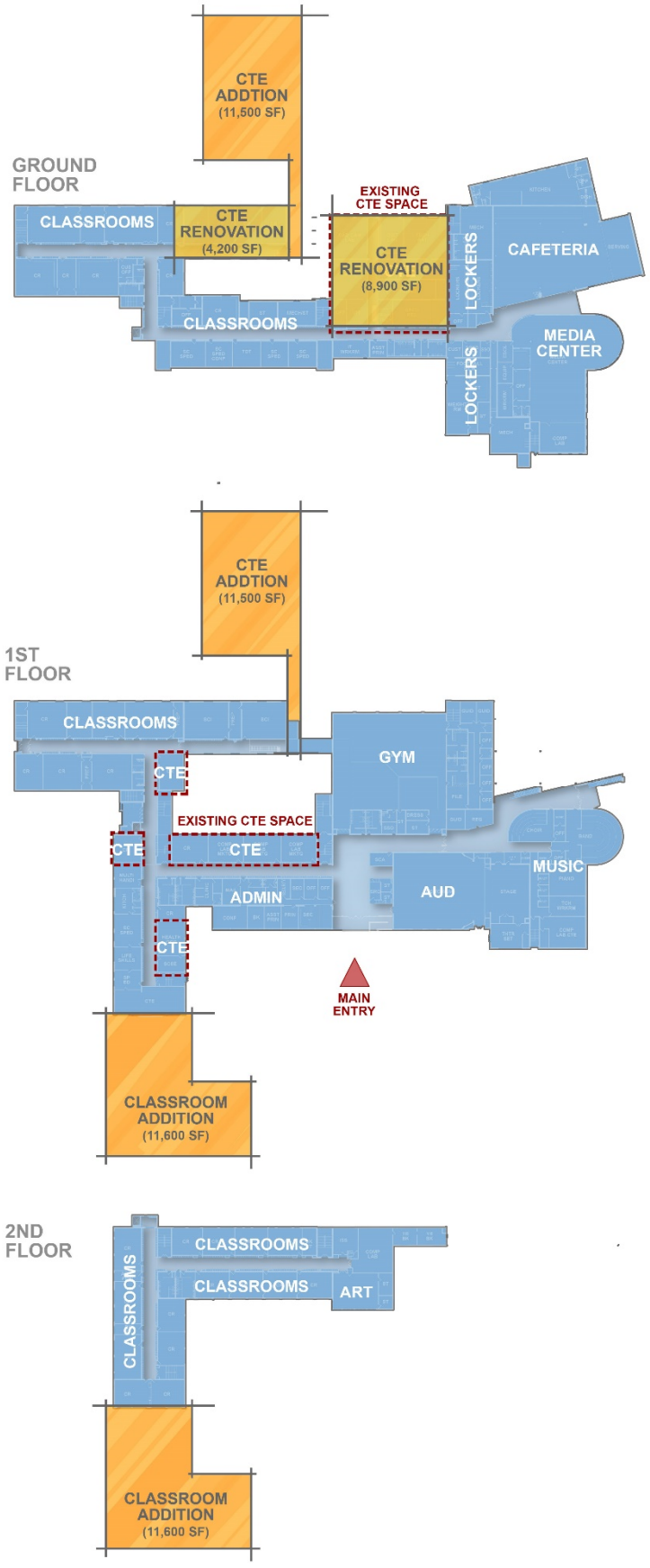
OPTION A. - HIGH SCHOOL RENOVATIONS / ADDITIONS

The 2013 OCHS Masterplan Study remains a relevant option as a road map to accommodate CTE growth as well as resolving other OCHS space constraints within the existing OCHS property lines. Please refer to excerpt of 2013 Masterplan at end of this document. Elements of the 2013 Masterplan included in this option include: Relocate tennis. Expand parking. 24,000 sf classroom addition to front of school. 22,000 sf CTE addition to back of school. This option also includes renovating 13,000 sf of interior space in and around the current CTE area.

AERIAL VIEW OF CLASSROOM AND CTE ADDITION LOCATIONS



OCHS FLOOR PLANS



OPTION "A" SCENARIO

- Build a new 2-story, 22,000 sf CTE addition on OCHS rear parking area to accommodate programs such as building, automotive, agricultural and tech ed trades.
- Relocate and consolidate tennis courts to north of stadium making way for replacement parking in former tennis court area.
- Renovate existing Tech Ed CTE space.
- Build a new 2-story, 24,000 sf classroom addition to the front of the school.
- Relocate five classrooms from existing modular building in front of school to newly available spaces within school. Demolish modular classrooms.
- Relocate JROTC spaces from old house to newly available spaces within school. Demolish old wood-framed structure.
- Renovate and upgrade existing agriculture building facility to modern standards, and possibly add one classroom to building.
- Select other current or planned CTE programs to locate in new CTE and classroom spaces.
- Include related sitework and infrastructure to high school complex, including site roadways, sidewalks, roundabout, staff and student parking, etc.

ADVANTAGES

- No land purchase involved. On-site locations for sizable additions.
- Brings classrooms from modular building into main building.
- Brings most CTE programs on site and in one building.
- Could involve betterment of current site circulation and pedestrian access around site.
- Relieves overcrowding in high school and give space back to existing school. Provides necessary additional classroom space in high school.
- Eliminates most CTE transportation concerns of lost curriculum time and bus/driver costs

CHALLENGES

- Proposed construction may leave some CTE programs out in short-term.
- Relative higher cost solution than some other options.
- Major construction project. Completion would likely be in 2028 or 2029.

End – Option A

OPTION B. - TEAC RENOVATIONS

The Taylor Education Administrative Complex is an approximately 83,000 sf, one-story former middle school. Multiple user groups call TEAC "home": OCPS Administration, OCPS School Board, OCPS Maintenance Shop, Alternative Education and Cosmetology classes, OCPS's Head Start Preschool and the Orange Club of Boys and Girls Club of Central Virginia. Of the 83,000 sf, the study team observed approximately 5,000 sf seemed to be under-utilized (1/2 cafeteria, 3 classrooms on front hall, "Teen Lounge" at back of Head Start wing. This would be an opportunity to locate 1 or 2 new CTE offerings.

Using these pre-school spaces for CTE would disrupt the current layout and organization of the Head Start and VPI programs. As part of the program requirements, all students are fed meals daily in the cafeteria which are cooked in the on-site kitchen. This requirement would need to be taken into consideration if these programs were to move locations, or the kitchen and cafeteria were to be re-purposed.

Repurposing TEAC for CTE will have heavy electrical, mechanical and renovations costs. Repurposing TEAC for CTE will need to factor in costs for relocating the Pre-School programs, the Boys and Girls Clubs program, and the OCPS maintenance shop.

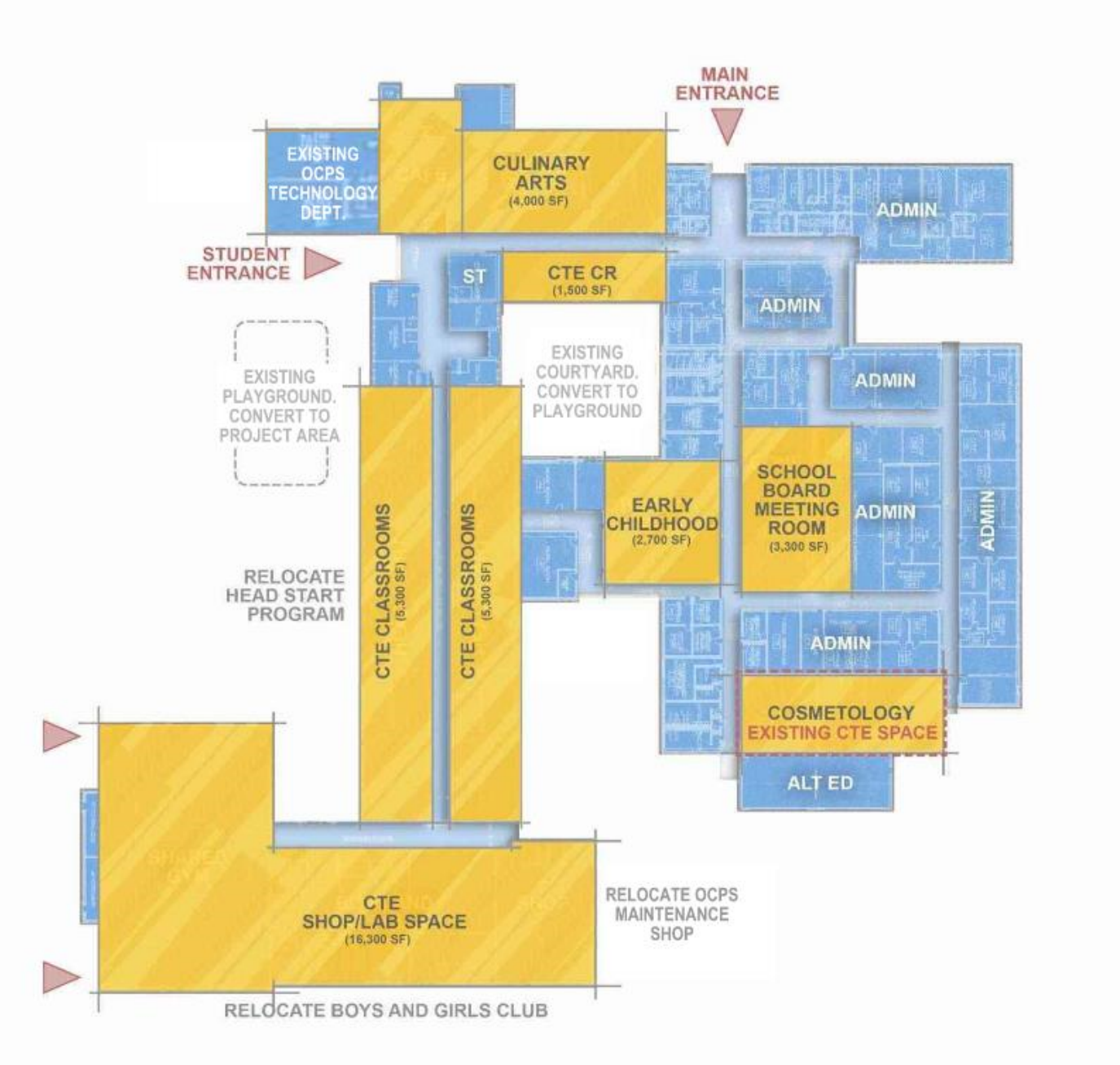
If CTE classes were relocated to the Admin portion of the building, costs for relocating the OCPS Administration, Staff, Board Room, Conference and Training Rooms would need to be considered. The Study Team is not currently aware of a site for these functions. Costs to relocate will depend on whether an existing building would be used, or a new facility would need to be constructed.

If OCPS decided Head Start and Boys & Girls Club spaces, maintenance shop, OCPS IT center and central administrative conferencing facilities are accommodated elsewhere, then, with heavy renovations and taking over a portion of the Prospect Heights football field, approximately 45,000 sf could be converted to CTE space.

AERIAL VIEW OF TEAC SITE WITH SITE IMPROVEMENTS FOR CTE



B1 - DIAGRAM OF TEAC BUILDING WITH RENOVATIONS FOR CTE



OPTION "B1" SCENARIO

- Renovations to accommodate CTE in mostly the Head Start and Boys & Girls Clubs area would be extensive and intensive in nature. Focus would be given to electrical, HVAC, and plumbing infrastructure upgrades and structural modifications turning the gym into high bay trades spaces with sectional roll up doors. Sitework modifications would allow for bus drop off / pick up locations as well as new driveway and pad for access to future trades lab in current gym.
- School administration and School Board would be consolidated into eastern portion of building. OCPS IT department behind school kitchen would be relocated.
- Renovations would occur to house CTE programs within the existing TEAC building footprint. Additionally, related sitework for lab/shop access, deliveries, drive aisle, parking, etc.
- Upgrade old, existing HVAC system, electrical system, lighting, etc. Would essentially need all new infrastructure for all CTE spaces due to limitations on current HVAC and electrical system.
- Consolidate the current offices and administrative staff into a smaller footprint within the existing building.
- Following users would need to be relocated in this scenario:
    a) Head Start (Pre-K) & VPI
    b) The Boys and Girls Clubs
    c) OCPS IT Department
    d) OCPS Maintenance Shop

ADVANTAGES

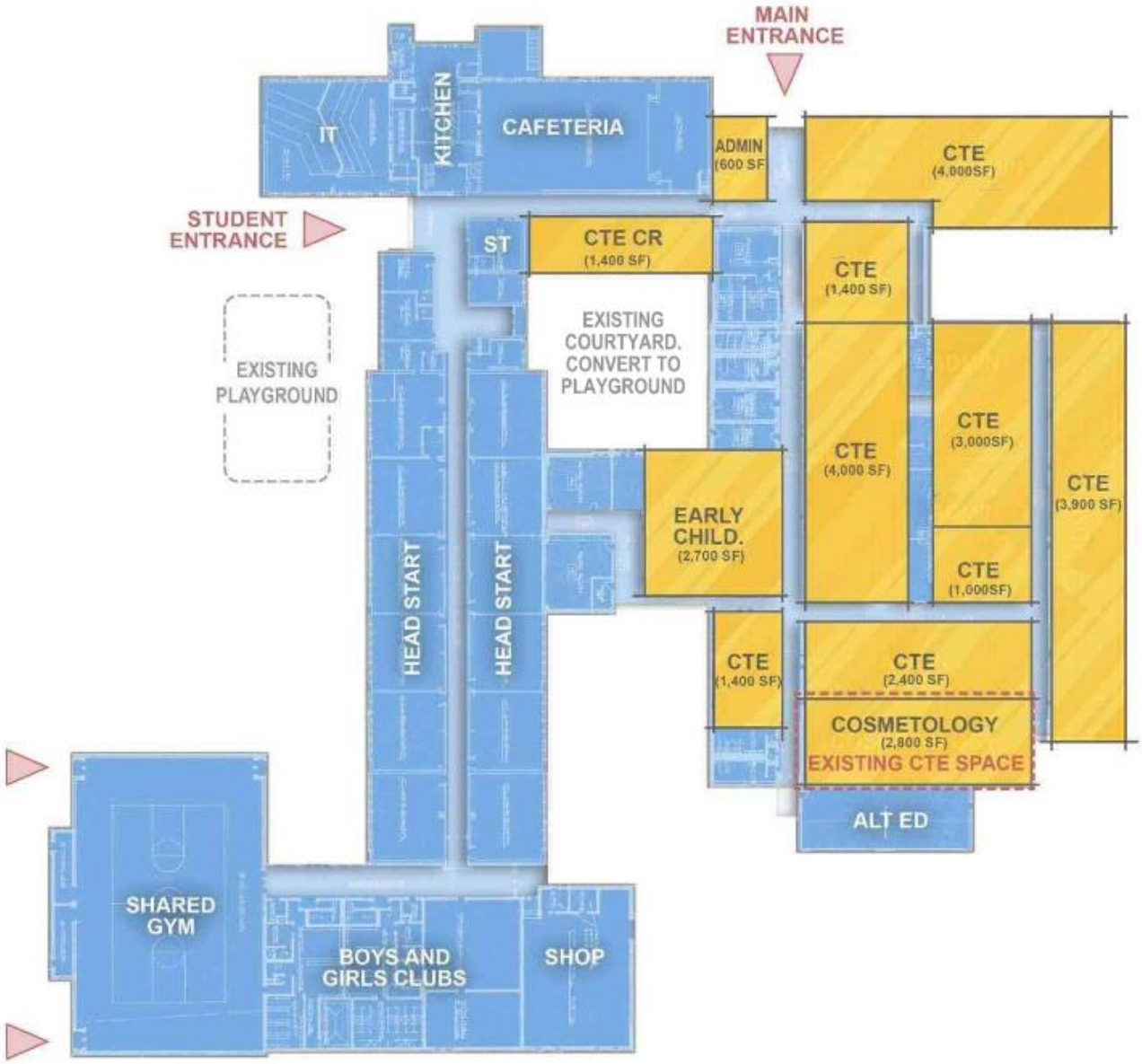
- Optimize approximately 5000 sf of under-utilized space
- OCPS owns land and building; no land or other property purchase involved.

CHALLENGES

- Existing building systems are very old and have no spare capacity. The entire electrical and mechanical service would need to be upgraded. Full HVAC and electrical updates throughout building with additional capacity for CTE programs.
- Need to relocate Head Start, and Boys & Girls Clubs, OCPS Maintenance Shop, and OCPS IT department.
- Transportation between OCHS and TEAC = lost instruction time and transportation costs. Only double-blocked courses could be located here due to transportation time constraints.
- Site constraints: Site access to high bay gym space will impact Middle School's football and baseball fields. Minimal room for additional staff parking.
- Does not provide necessary additional classroom space for high school.
- Displaces Conference and Training Rooms, which OCPS will require elsewhere.
- High renovation cost for term of solution. Costs do not include relocation of identified programs.

End – Option B1

B2 - DIAGRAM OF TEAC BUILDING WITH RENOVATIONS FOR CTE



OPTION "B2" SCENARIO

- Renovations to accommodate CTE in the Administration area would be extensive and intensive in nature. Focus would be given to electrical, HVAC, and plumbing infrastructure upgrades. Sitework modifications would allow for bus drop off / pick up locations.
- School administration and School Board would be relocated off site to a location that has not yet been determined. OCPS IT department, OCPS Maintenance Shop, and existing kitchen and cafeteria would remain to serve the Head Start programs.
- Renovations would occur to house CTE programs within the existing TEAC building footprint. Additionally, related sitework for lab/shop access, deliveries, drive aisle, parking, etc.
- Upgrade old, existing HVAC system, electrical system, lighting, etc. Would essentially need all new infrastructure for all CTE spaces due to limitations on current HVAC and electrical system.
- Following users would need to be relocated in this scenario:
    a) OCPS Administration, Conference & Training Rooms
    b) OCPS Board Room

ADVANTAGES

- Optimize approximately 5000 sf of under-utilized space.
- OCPS owns land and building for renovation portion.
- Head Start (and Cafeteria and Kitchen) and Boys and Girls Clubs remain at TEAC.
- OCPS IT Dept and Maintenance Shop remain at TEAC.

CHALLENGES

- Existing building systems are very old and have no spare capacity. The entire electrical and mechanical service would need to be upgraded. Full HVAC and electrical updates throughout building with additional capacity for CTE programs.
- Does not provide any high-bay space necessary for multiple CTE programs.
- Need to lease space in order to relocate OCPS Administration, Board Room, Conference and Training Rooms.
- Transportation between OCHS and TEAC = lost instruction time and transportation costs. Only double-blocked courses could be located here due to transportation time constraints.
- Site constraints: Minimal room for additional staff parking.
- Does not provide necessary additional classroom space for high school.
- Displaces OCPS Administrative Offices, training facilities, and School Board Meeting Room.
- High renovation cost for term of solution. Costs do not include relocation of identified programs.

End – Option B2

OPTION C. - NEW CTE FACILITY ON HIGH SCHOOL PROPERTY

OCPS commissioned a 2011 CTE Site Study which remains a relevant option as a road map to accommodate CTE on the OCHS site. This study reviewed multiple sites for a new stand-alone CTE facility and scored the Maintenance and Bus Shop site on OCHS's east end highest. While the size and programs accommodated would need to be updated, the concept remains valid. While this option should be tailored to meet OCPS goals, the option described here is a stand-alone, two-story, 90,000 sf CTE school accommodate current and planned programs. The project could also be built in phases, if desired. Note that the 2013 OCHS Masterplan Study identified this area as a multi-sport athletic field.

AERIAL VIEW OF OCHS WITH POTENTIAL CTE SITE



OPTION "C" SCENARIO

- Relocate OCPS Facility Maintenance and Bus Maintenance Operations to a new location, yet-to-be determined.
- Demolish all existing structures and construct new CTE building on OCHS site.
- Incorporate site circulation between high school and new CTE building for safe student access across campus.

ADVANTAGES

- Locates all CTE in one place
- Eliminates transportation concerns with off-site CTE programs
- Reduces learning time lost during transportation to off-site programs
- Could include general classroom space

CHALLENGES

- Finding, acquiring new location for Facility Maintenance and Bus Maintenance Operations
- Schedule for design and construction pushes this project out at least 3 years.
- Building would be located about 750 ft from main school building – less "monitorable" than closer options.
- Higher cost option.

End – Option C

OPTION D. - WAUGH BOULEVARD PROPERTY – ACQUIRE & RENOVATE

The Waugh Boulevard property consists of 4 acres on the northeast corner of Selma Road and Waugh Boulevard / Constitution Highway (**note end of this section) It is bound by OCHS on north and east property lines, and bound on the south by approximately 3.5 acres between Waugh Blvd and Constitution Highway owned by the Town of Orange.

The property has five buildings that could house selected current and future CTE programs. Possible CTE programs include: Building Trades, Automotive Trades, Agricultural Trades, Nursing, Cosmetology, Culinary Arts, and JROTC. An existing residence has been identified as a possible location for Life Skills and/or Home Health Aid curriculum. Acquiring this property would "complete" the OCHS property and open the door for OCPS to acquire Waugh Boulevard. This move would create opportunities for a new OCHS entrance and long-term growth.

OCHS could use this property for new buildings, parking, sports practice and game fields or other.

This option "completes" the OCHS property, allowing growth far into the future and better control and site safety. While not within the Study Team's scope, it is worth noting that acquiring the Waugh Boulevard property would increase the property desirability and value to a potential future developer wanting a contiguous block of land. Should OCPS decide to relocate OCHS to another site, there seems to be a good long-term financial case for Options D, E and F.

DIAGRAM OF WAUGH BLVD PROPERTY AS-IS



OPTION "D" SCENARIO

- Purchase Waugh Boulevard property.
- For near- to medium-term use: Design renovations to the existing structures and site to accommodate CTE or other programs.
- Remove site fencing and make pedestrian and vehicular connections to OCHS.
- Acquire Waugh Boulevard from Town of Orange and design new OCHS site entrance.
- For medium- to long-term, Include property in OCHS growth plans as HS expansion, new CTE facility, new parking or other OCHS need.

ADVANTAGES

- Lower cost solution to expand CTE programming.
- "Completes" the OCHS property, allowing long-term growth opportunities.
- Waugh Boulevard property is available for purchase.
- Reduces transportation of students off-site. Avoids lost learning time. Avoids transportation costs and liabilities.
- Opportunity to eliminate or reconfigure Waugh Boulevard to modify traffic patterns and increase efficiency, safety and control around school site.
- Depending on programs located here, may reduce over-crowding pressure on OCHS.
- Allows opportunity for "storefront" or controlled public interface with certain CTE programs such as Cosmetology and Automotive.

CHALLENGES

- Purchase and renovation costs (see opinion of probable costs in next section)
- Property includes approximately 20,000 sf of existing space. Without new construction, this property will not provide all of the needed CTE space.
- Existing building code use is "Business." New use will be "Education." It has been confirmed with Orange County Building Official that a change of use will require bringing building up to current "code." Impacts may include accessibility, fire protection and restroom upgrades, all included in cost mentioned above.

** Parcels at corner of Waugh Boulevard and Selma Road (389-401 Waugh Boulevard). Current use of 389 Waugh Blvd is a motorcycle sales and service business. 401 Waugh Blvd is a stand-alone, single family residence. Both parcels are currently zoned C1 – Light Commercial.

End – Option D

OPTION E. - WAUGH BOULEVARD PROPERTY – ACQUIRE & BUILD NEW FACILITY

The Waugh Boulevard property consists of 4 acres on the northeast corner of Selma Road and Waugh Boulevard / Constitution Highway. It is bound by OCHS on north and east property lines, and bound on the south by approximately 3.5 acres between Waugh Blvd and Constitution Highway owned by the Town of Orange.

While this option should be tailored to meet OCPS goals, the option described here is a stand-alone, two-story, 90,000 sf CTE school accommodate current and planned programs, as well as traditional classroom space. Connectors between the high school, sports building, and new CTE building would provide security for students traveling between buildings on site.

DIAGRAM OF WAUGH BLVD PROPERTY WITH NEW CTE BUILDING



OPTION "E" SCENARIO

- Purchase Waugh Boulevard property.
- Obtain Waugh Boulevard and property between Waugh Blvd and Constitution Highway.
- Design and construct a new, 90,000 sf (+/-) CTE and classroom building on site.
- Incorporate connectors between high school, sports center, and new building for safe student access between classes.

ADVANTAGES

- "Completes" the OCHS property, allowing long-term growth opportunities.
- Waugh Boulevard property is available for purchase.
- Reduces transportation of students off-site. Avoids lost learning time. Avoids transportation costs and liabilities.
- Opportunity to eliminate or reconfigure Waugh Boulevard to modify traffic patterns and increase efficiency, safety and control around school site.
- Construct 100% of CTE programmed space required in one location in one building.
- Opens up classroom space within OCHS to accommodate future growth and allow removal of modular classrooms.
- Increases student security on campus with connectors between buildings.

CHALLENGES

- Purchase and new construction costs (see opinion of probable costs in next section) on the higher end of studied options.
- Schedule for funding, design and construction would likely have this project opening in Fall of 2028 at the soonest.

End – Option E

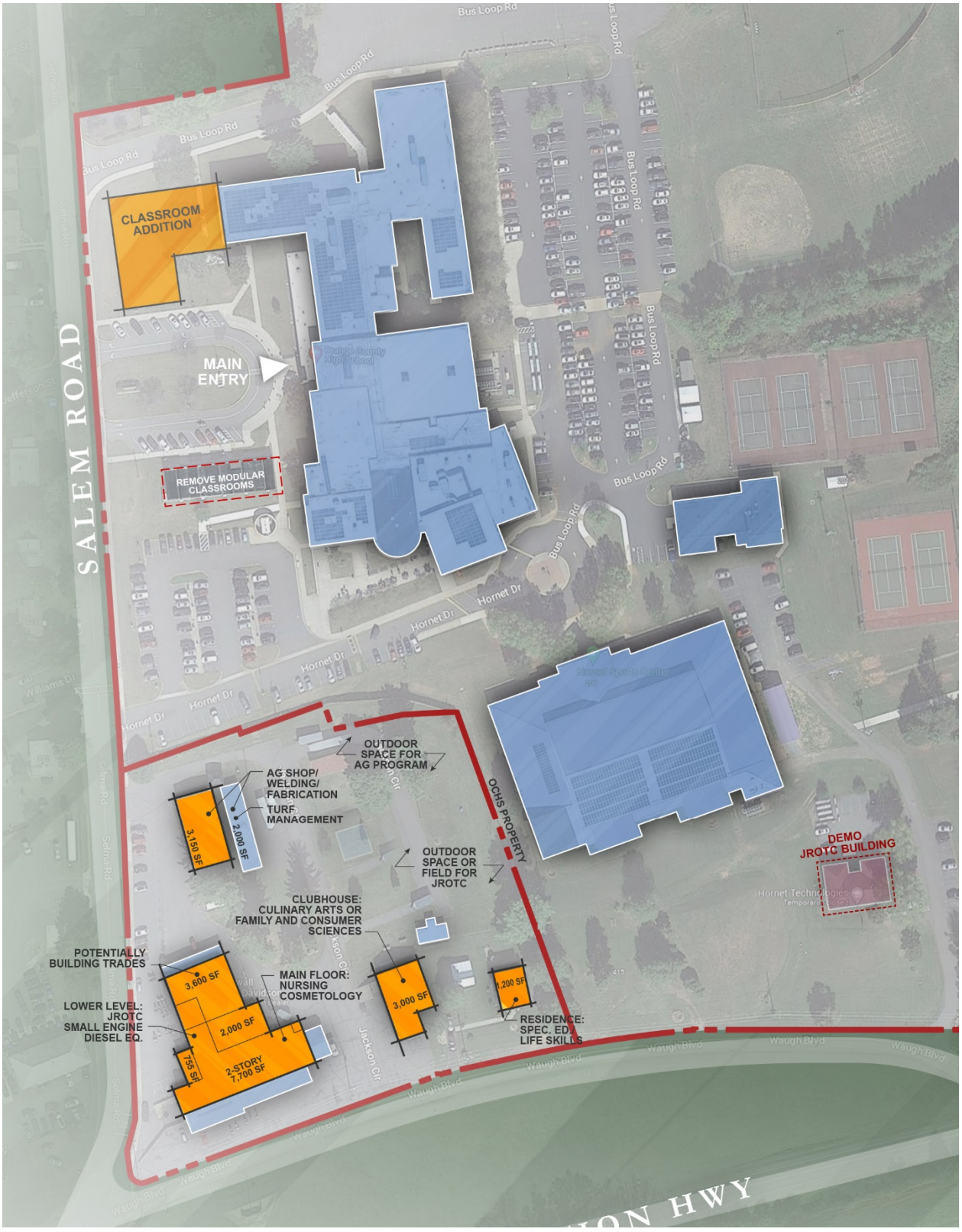
OPTION F. – HIGH SCHOOL CLASSROOM ADDITION AND WAUGH BOULEVARD PROPERTY RENOVATIONS

The 2013 OCHS Masterplan Study remains a relevant option as a road map to accommodate CTE growth as well as resolving other OCHS space constraints within the existing OCHS property lines. Please refer to excerpt of 2013 Masterplan at end of this document. This Option F incorporates the 24,000 sf Classroom Addition from Option A.

The Waugh Boulevard property consists of 4 acres on the northeast corner of Selma Road and Waugh Boulevard / Constitution Highway (**note end of this section) It is bound by OCHS on north and east property lines, and bound on the south by approximately 3.5 acres between Waugh Blvd and Constitution Highway owned by the Town of Orange.

The property has five buildings that could house selected current and future CTE programs. Possible CTE programs include: Building Trades, Automotive Trades, Agricultural Trades, Nursing, Cosmetology, Culinary Arts, and JROTC. An existing residence has been identified as a possible location for Life Skills and/or Home Health Aid curriculum. Acquiring this property would “complete” the OCHS property and open the door for OCPS to acquire Waugh Boulevard. This move would create opportunities for a new OCHS entrance and long-term growth.

DIAGRAM OF WAUGH BLVD PROPERTY AS-IS AND HIGH SCHOOL ADDITION



OPTION "F" SCENARIO

- Renovate existing Tech Ed CTE space.
- Build a new 2-story, 24,000 sf classroom addition to the front of the school.
- Relocate five classrooms from existing modular building in front of school to newly available spaces within school. Demolish modular classrooms.
- Relocate JROTC spaces from old house to newly available spaces within school. Demolish old house.
- Renovate and upgrade existing agriculture building facility to modern standards.
- Include related sitework and infrastructure to high school complex, including site roadways, sidewalks, roundabout, staff and student parking, etc.
- Purchase Waugh Boulevard property.
- For near- to medium-term use: Design renovations to the existing structures and site to accommodate CTE or other programs.
- Remove site fencing and make pedestrian and vehicular connections to OCHS.
- For medium- to long-term, Include property in OCHS growth plans as HS expansion, new CTE facility, new parking or other OCHS need.

ADVANTAGES

- On-site location for sizable classroom addition.
- Brings classrooms from modular building into main building.
- Could involve betterment of current site circulation and pedestrian access around site.
- Relieve overcrowding in high school and give space back to existing school. Provides necessary additional classroom space in high school.
- Eliminates most CTE transportation concerns of lost curriculum time and bus/driver costs
- Lower cost solution to expand CTE programming.
- "Completes" the OCHS property, allowing long-term growth opportunities.
- Waugh Boulevard property is available for purchase.
- Reduces transportation of students off-site. Avoids lost learning time. Avoids transportation costs and liabilities.
- Opportunity to eliminate or reconfigure Waugh Boulevard to modify traffic patterns and increase efficiency, safety and control around school site.
- Will reduce OCHS over-crowding
- Allows opportunity for "storefront" or controlled public interface with certain CTE programs such as Cosmetology and Automotive.

CHALLENGES

- Proposed construction may leave some planned CTE programs out in short-term.
- Higher cost solution than some other options.
- Classroom addition is a major construction project. Completion would likely be in 2028 or 2029.

- Purchase and renovation costs for Waugh Property (see opinion of probable costs in next section)
- Property includes approximately 20,000 sf of existing space. Without new construction, the Waugh Property will not provide all of the needed CTE space.
- Existing building code use is “Business.” New use will be “Education.” It has been confirmed with Orange County Building Official that a change of use will require bringing building up to current “code.” Impacts may include accessibility, fire protection and restroom upgrades, all included in cost mentioned above.

** Parcels at corner of Waugh Boulevard and Selma Road (389-401 Waugh Boulevard). Current use of 389 Waugh Blvd is a motorcycle sales and service business. 401 Waugh Blvd is a stand-alone, single family residence. Both parcels are currently zoned C1 – Light Commercial.

End – Option F

6.0 COST CONSIDERATIONS

This section reviews probable project costs. Please note the following:

- The seven options vary in scope and are not intended to be like-comparisons.
- No building or site design work or geotechnical investigation has been done for this study.
- Estimates are “order of magnitude” costs based on proposed scope with its specific factors (building area, new vs renovation, site conditions and special elements, etc.) multiplied by a current market unit cost (cost per square foot, lump sum, percentage, etc.).
- While based on current market conditions, the figures here reflect a conservative approach (leaning high). The study team believes efficiencies can be found once an option is chosen and the programming / design process is complete.

OPTION A. - HIGH SCHOOL RENOVATIONS / ADDITIONS

STATEMENT OF PROBABLE TOTAL PROJECT COSTS

	Size	$ per SF Cost Range		Cost Range
Classroom Addition to High School	24,000 SF at	$ 375.00 to $ 425.00		$ 9,000,000 to $ 10,200,000
CTE Addition to High School	22,000 SF at	$ 375.00 to $ 425.00		$ 8,250,000 to $ 9,350,000
Renovations to High School	13,000 SF at	$ 200.00 to $ 250.00		$ 2,600,000 to $ 3,250,000
Renovations to Ag Building	6,000 SF at	$ 200.00 to $ 250.00		$ 1,200,000 to $ 1,500,000
Addition / Renovation Subtotal				**$ 21,050,000 to $ 24,300,000**
Sitework for Building Additions (assumes on-site county water and sewer)			20%	$ 3,450,000 to $ 3,910,000
Expand Parking				$ 800,000 $ 1,000,000
Relocate Tennis Courts				$ 400,000 to $ 600,000
Demolish JROTC wood-framed building				$ 50,000 to $ 60,000
TOTAL PROBABLE ADD / RENO CONSTRUCTION COSTS				**$ 25,750,000 to $ 29,870,000**
Non-Construction Costs: Design Fees, Testing, Surveys, Inspections, etc.			10%	$ 2,575,000 to $ 2,987,000
PROBABLE TOTAL PROJECT COSTS				**$ 28,325,000 to $ 32,857,000**
Project Contingency			20%	$ 5,150,000 to $ 5,974,000
TOTAL PROBABLE PROJECT COSTS & CONTINGENCY				**$ 33,475,000 to $ 38,831,000**
COST ESCALATION TO YEAR 2028 (15% = 3% / year for 5 years)				**$ 5,021,250 $ 5,824,650**
TOTAL PROBABLE PROJECT COSTS & CONTINGENCY				**$ 38,496,250 to $ 44,655,650**

NOTE: This Cost Estimate does NOT include costs for: Land, Legal Fees, Furniture, Computers, Books, Educational Equipment and Educational Supplies

OPTION B1. - TEAC RENOVATIONS (HEAD START SIDE)

STATEMENT OF PROBABLE TOTAL PROJECT COSTS

	Size	$ per SF Cost Range		Cost Range
Heavy Renovations	44,000 SF at	$ 300.00 to $ 350.00		$ 13,200,000 to $ 15,400,000
Light to Medium Renovations	13,000 SF at	$ 150.00 to $ 200.00		$ 1,950,000 to $ 2,600,000
Renovation Subtotal				**$ 15,150,000 to $ 18,000,000**
Sitework for CTE Use Adapt			20%	$ 3,030,000 to $ 3,600,000
Upgrade Electrical Service to Building				$ 1,000,000 $ 1,200,000
Upgrade HVAC (Replace 2-Pipe System)				$ 4,000,000 $ 5,000,000
TOTAL PROBABLE ADD / RENO CONSTRUCTION COSTS				**$ 23,180,000 to $ 27,800,000**
Leased space for Head Start & VPI (see note below)				$ 8,250,000 $ 8,250,000
Non-Construction Costs: Design Fees, Testing, Surveys, Inspections, etc.			10%	$ 2,318,000 to $ 2,780,000
PROBABLE TOTAL PROJECT COSTS				**$ 33,748,000 to $ 38,830,000**
Project Contingency			20%	$ 4,636,000 to $ 5,560,000
TOTAL PROBABLE PROJECT COSTS & CONTINGENCY				**$ 38,384,000 to $ 44,390,000**
COST ESCALATION TO YEAR 2028 (15% = 3% / year for 5 years)				**$ 5,757,600 $ 6,658,500**
TOTAL PROBABLE PROJECT COSTS & CONTINGENCY				**$ 44,141,600 to $ 51,048,500**

NOTE: This Cost Estimate does NOT include costs for: Land, Legal Fees, Furniture, Computers, Books, Educational Equipment and Educational Supplies

Note: Leased space for Head Start and VPI $1.65m (~22,000 sf x $75/sf space outfit) + $6.6m ($330,000 rent/yr x 20 yr term).

OPTION B2. - TEAC RENOVATIONS (ADMIN SIDE)

STATEMENT OF PROBABLE TOTAL PROJECT COSTS

	Size	$ per SF Cost Range		Cost Range
Heavy Renovations	26,000 SF at	$ 300.00 to $ 350.00		$ 7,800,000 to $ 9,100,000
Renovation Subtotal				**$ 7,800,000 to $ 9,100,000**
Sitework for CTE Use Adapt			15%	$ 1,170,000 to $ 1,365,000
Upgrade Electrical Service to Building				$ 1,000,000 $ 1,200,000
Upgrade HVAC (Replace 2-Pipe System)				$ 4,000,000 $ 5,000,000
TOTAL PROBABLE ADD / RENO CONSTRUCTION COSTS				**$ 13,970,000 to $ 16,665,000**
Leased space for OCPS Administrative Offices (see note below)				$ 7,500,000 $ 7,500,000
Non-Construction Costs: Design Fees, Testing, Surveys, Inspections, etc.			10%	$ 1,397,000 to $ 1,666,500
PROBABLE TOTAL PROJECT COSTS				**$ 22,867,000 to $ 25,831,500**
Project Contingency			20%	$ 2,794,000 to $ 3,333,000
TOTAL PROBABLE PROJECT COSTS & CONTINGENCY				**$ 25,661,000 to $ 29,164,500**
COST ESCALATION TO YEAR 2028 (15% = 3% / year for 5 years)				**$ 3,849,150 $ 4,374,675**
TOTAL PROBABLE PROJECT COSTS & CONTINGENCY				**$ 29,510,150 to $ 33,539,175**

NOTE: This Cost Estimate does NOT include costs for: Land, Legal Fees, Furniture, Computers, Books, Educational Equipment and Educational Supplies

Note: Leased space for OCPS Administrative Offices $1.50m (~20,000 sf x $75/sf space outfit) + $6.0m ($300,000 rent/yr x 20 yr term).

OPTION C. - NEW CTE FACILITY ON HIGH SCHOOL PROPERTY

STATEMENT OF PROBABLE TOTAL PROJECT COSTS

	Size	$ per SF Cost Range		Cost Range
New Building Construction	90,000 SF at	$ 400.00 to $ 450.00		$ 36,000,000 to $ 40,500,000
Sitework for Building (assumes on-site county water and sewer)			20%	$ 7,200,000 to $ 8,100,000
New Construction Subtotal				**$ 43,200,000 to $ 48,600,000**
Demolition of Existing Buildings				$ 300,000 $ 400,000
Site Demolition				$ 250,000 $ 300,000
Relocation of Transportation Center & Maintenance Shop **				$ 8,000,000 $ 10,000,000
TOTAL PROBABLE CONSTRUCTION COSTS				**$ 51,750,000 to $ 59,300,000**
Non-Construction Costs: Design Fees, Testing, Surveys, Inspections, etc.			10%	$ 5,175,000 to $ 5,930,000
PROBABLE TOTAL PROJECT COSTS				**$ 56,925,000 to $ 65,230,000**
Project Contingency			20%	$ 10,350,000 to $ 11,860,000
TOTAL PROBABLE PROJECT COSTS & CONTINGENCY				**$ 67,275,000 to $ 77,090,000**
COST ESCALATION TO YEAR 2028 (15% = 3% / year for 5 years)				**$ 10,091,250 $ 11,563,500**
TOTAL PROBABLE PROJECT COSTS & CONTINGENCY				**$ 77,366,250 to $ 88,653,500**

NOTE: This Cost Estimate does NOT include costs for: Land, Legal Fees, Furniture, Computers, Books, Educational Equipment and Educational Supplies

** Relocation costs: Land @ $2-3 million; Maintenance & Transportation Facilities @ $6-7 million

OPTION D. - WAUGH BOULEVARD PROPERTY – ACQUIRE & RENOVATE

STATEMENT OF PROBABLE TOTAL PROJECT COSTS

	Size	$ per SF Cost Range		Cost Range
Renovations to Existing Structures	35,000 SF at	$ 200.00 to $ 250.00		$ 7,000,000 to $ 8,750,000
Renovation Subtotal				**$ 7,000,000 to $ 8,750,000**
Sitework for Building Renovations			15%	$ 1,050,000 to $ 1,312,500
Land Purchase				$ 2,800,000 $ 2,800,000
TOTAL PROBABLE RENOVATION CONSTRUCTION COSTS				**$ 10,850,000 to $ 12,862,500**
Non-Construction Costs: Design Fees, Testing, Surveys, Inspections, etc.			10%	$ 1,085,000 to $ 1,286,250
PROBABLE TOTAL PROJECT COSTS				**$ 11,935,000 to $ 14,148,750**
Project Contingency			20%	$ 2,170,000 to $ 2,572,500
TOTAL PROBABLE PROJECT COSTS & CONTINGENCY				**$ 14,105,000 to $ 16,721,250**
COST ESCALATION TO YEAR 2028 (15% = 3% / year for 5 years)				**$ 2,115,750 $ 2,508,188**
TOTAL PROBABLE PROJECT COSTS & CONTINGENCY				**$ 16,220,750 to $ 19,229,438**

NOTE: This Cost Estimate does NOT include costs for: Legal Fees, Furniture, Computers, Books, Educational Equipment and Educational Supplies

OPTION E. - WAUGH BOULEVARD PROPERTY – ACQUIRE & BUILD NEW FACILITY

STATEMENT OF PROBABLE TOTAL PROJECT COSTS

	Size	$ per SF Cost Range		Cost Range
New Building Construction	90,000 SF at	$ 400.00 to $ 450.00		$ 36,000,000 to $ 40,500,000
Sitework for Building (assumes on-site county sewer and water)			20%	$ 7,200,000 to $ 8,100,000
New Construction Subtotal				**$ 43,200,000 to $ 48,600,000**
Land Purchase				$ 2,800,000 $ 2,800,000
Demolition of Existing Buildings				$ 400,000 $ 500,000
Site Demolition				$ 300,000 $ 350,000
TOTAL PROBABLE CONSTRUCTION COSTS				**$ 46,700,000 to $ 52,250,000**
Non-Construction Costs: Design Fees, Testing, Surveys, Inspections, etc.			10%	$ 4,670,000 to $ 5,225,000
PROBABLE TOTAL PROJECT COSTS				**$ 51,370,000 to $ 57,475,000**
Project Contingency			20%	$ 9,340,000 to $ 10,450,000
TOTAL PROBABLE PROJECT COSTS & CONTINGENCY				**$ 60,710,000 to $ 67,925,000**
COST ESCALATION TO YEAR 2028 (15% = 3% / year for 5 years)				**$ 9,106,500 $ 10,188,750**
TOTAL PROBABLE PROJECT COSTS & CONTINGENCY				**$ 69,816,500 to $ 78,113,750**

NOTE: This Cost Estimate does NOT include costs for: Legal Fees, Furniture, Computers, Books, Educational Equipment and Educational Supplies

OPTION F. – HIGH SCHOOL ADDITION & WAUGH PROPERTY RENOVATIONS

STATEMENT OF PROBABLE TOTAL PROJECT COSTS

	Size	$ per SF Cost Range		Cost Range		
Classroom Addition to High School	24,000 SF at	$ 375.00 to $ 425.00		$ 9,000,000	to	$ 10,200,000
Addition Subtotal				**$ 9,000,000**	to	**$ 10,200,000**
Sitework for Building Additions (assumes on-site county water and sewer)			20%	$ 1,800,000	to	$ 2,040,000
TOTAL PROBABLE ADDITION CONSTRUCTION COSTS				**$ 10,800,000**	to	**$ 12,240,000**
Renovations to Existing Structures	35,000 SF at	$ 200.00 to $ 250.00		$ 7,000,000	to	$ 8,750,000
Renovation Subtotal				**$ 7,000,000**	to	**$ 8,750,000**
Sitework for Building Renovations			15%	$ 1,050,000	to	$ 1,312,500
Land Purchase				$ 2,800,000		$ 2,800,000
TOTAL PROBABLE RENOVATION CONSTRUCTION COSTS				**$ 10,850,000**	to	**$ 12,862,500**
TOTAL PROBABLE ADD / RENO CONSTRUCTION COSTS				**$ 21,650,000**	to	**$ 25,102,500**
Non-Construction Costs: Design Fees, Testing, Surveys, Inspections, etc.			10%	$ 2,165,000	to	$ 2,510,250
PROBABLE TOTAL PROJECT COSTS				**$ 23,815,000**	to	**$ 27,612,750**
Project Contingency			20%	$ 4,330,000	to	$ 5,020,500
TOTAL PROBABLE PROJECT COSTS & CONTINGENCY				**$ 28,145,000**	to	**$ 32,633,250**
COST ESCALATION TO YEAR 2028 (15% = 3% / year for 5 years)				**$ 4,221,750**		**$ 4,894,988**
TOTAL PROBABLE PROJECT COSTS & CONTINGENCY				**$ 32,366,750**	to	**$ 37,528,238**

NOTE: This Cost Estimate does NOT include costs for: Legal Fees, Furniture, Computers, Books, Educational Equipment and Educational Supplies

7.0 TIMELINES FOR THE OPTIONS

Approximative timeframes for beneficial use and occupancy of new and/or renovated spaces for each option are shown in this section. Depending on the amount of work involved and whether new construction occurs, the timeframes vary based on a number of factors, including but not limited to the following:

- Testing services and enabling phases (site surveys, geotechnical investigation, etc.)
- Procurement of design services
- County approvals; site plan approvals
- Procurement of construction services
- Renovation of an existing space or construction of new building?
- Size (square footage) of renovation or new construction

OPTION A: Orange County High School Renovations and Additions: **4 Years**

OPTION B1: Locate CTE Programs at TEAC (Head Start Side): **3 Years**

OPTION B2: Locate CTE Programs at TEAC (Admin Side): **3 Years**

OPTION C: New CTE Facility on Current OCHS Property: **5 Years**

OPTION D: Acquire and Renovate Waugh Blvd Property: **2 Years**

OPTION E: Acquire and Build New on Adjacent Waugh Blvd Property: **5 Years**

OPTION F: Acquire & Renovate Waugh Blvd Property &
Classroom Addition To OCHS: **2 & 4 years**
(**Renovations 2 Years; Classroom Addition 4 Years)

8.0 CONCLUSIONS

Absolute conclusions require a specific goal for precise evaluation. In the case of this study, the goal is to evaluate different possibilities, therefore, conclusions will be more subjective. This study will illuminate more likely scenarios such that **next steps can be taken** with those scenarios.

For the purpose of the matrix below, here are the options reviewed:

A. Additions and renovations to Orange County High School
B. Renovations to the Taylor Education Administration Complex
C. Build a new CTE facility on the existing Orange County High School property
D. Acquire the Waugh Boulevard property and renovate existing buildings
E. Acquire the Waugh Boulevard property & build a new CTE facility
F. Acquire and Renovate Waugh Boulevard Property and Classroom addition to OCHS

OPTION	ESTIMATED ORDER OF MAGNITUDE COST (2023 DOLLARS)	HIGH SCHOOL LOCATION (Y / N)	YEARS PRIOR TO CTE USE	IMPEDANCE TO EXISTING OPERATIONS / LEARNING 1=LOWEST 5=HIGHEST	CONTRIBUTION TO OCHS LONG-TERM** 1=LOWEST 5=HIGHEST	NOTES
A	$39m	Y	4	4	4	
B1	$44m	N	3	5	2	
B2	$29m	N	3	5	1	
C	$77m	Y	5	1	4	
D	$17m	Y	2	1	4	
E	$68m	Y	5	1	5	
F	$33m	Y	2 & 4	2	4	

** Level to which each option answers current and future needs for classroom and CTE programming.

Comparing above options for the balance of cost, location, timeline, minimal impact on existing operations and contribution to future of OCHS, **OPTION F – ACQUIRE & RENOVATE WAUGH BOULEVARD PROPERTY & CLASSROOM ADDITION TO ORANGE COUNTY HIGH SCHOOL** stands out for having the highest present-value for expanding CTE and having the highest future-value for the growth of OCHS overall.

9.0 STUDY LIMITATIONS

The authors have prepared this report based on review of available existing drawings, interviews with administration and instructional staff, visual field observations, and professional experience in similar work. Study assumptions included the execution of OCPS "CTE Long Range Plan," the continued demand for skilled workforce, and the soundness of facilities reviewed, except where noted. Exhaustive investigation of site, facilities and regulations (including, but not limited to structural, geotechnical, utilities, property lines, topography, easements, covenants, stormwater, permitting requirements, zoning ordinance) was not performed.

This report is a statement of opinion and is not a guarantee or warranty of any kind.

Please feel free to contact us if you have any questions.

Very truly yours,

Robert S. Berz, Jr, Architect
Principal | Architect | Co-Director K-12 Studio
RRMM ARCHITECTS

Dan Weigand
Principal | Architect
RRMM ARCHITECTS

10.0 ADDITIONAL INFORMATION

CTE RESOURCES

Career and Technical Education (CTE) | Virginia Department of Education

Career Clusters | CTE Resource

Orange Workforce Center in Orange County Virginia (thinkorangeva.com)

Top Paying Jobs in Virginia 2020

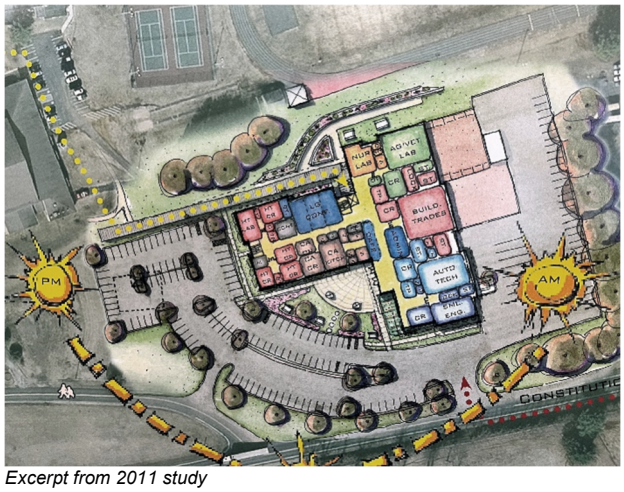
Top Postsecondary Educational Programs in Virginia

Major Employers and Industries in Orange County, Virginia (thinkorangeva.com)

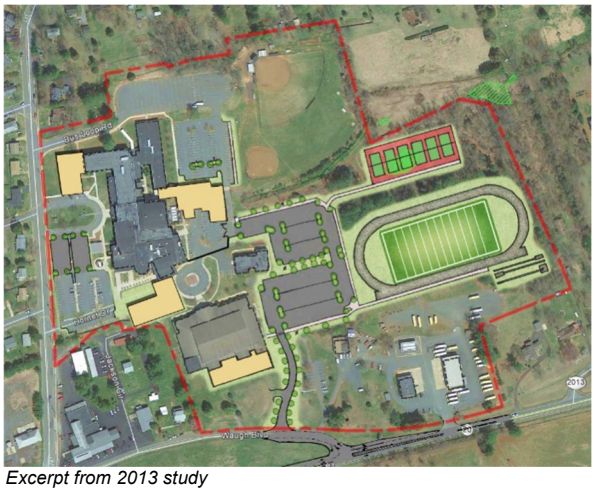
Labor Profile of Orange County, Virginia (thinkorangeva.com)

PAST STUDIES

Since 2009, Orange County Public Schools has prepared multiple studies considering solutions to accommodate expanding CTE programming:



Excerpt from 2011 study

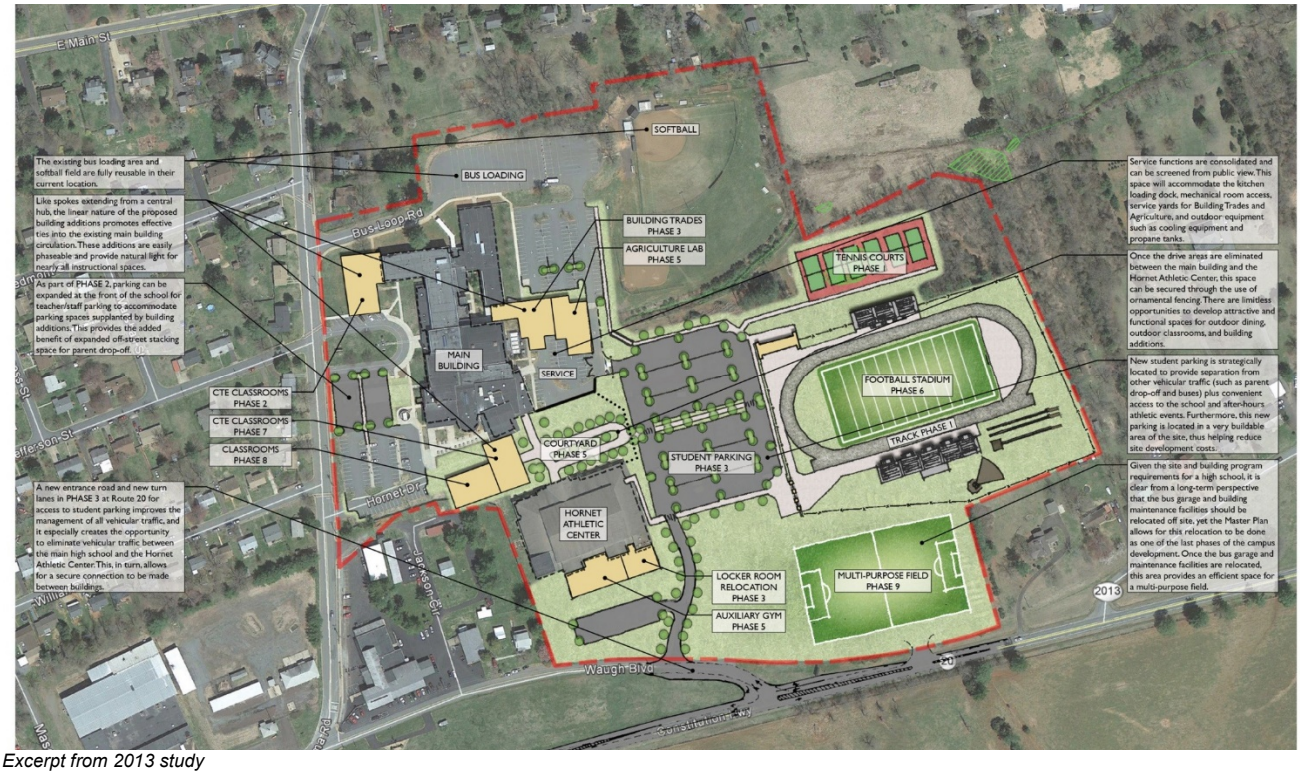

Excerpt from 2013 study

- *2009 – OCPS CTE Task Force Report*
- *2011 – G&P Study of 4 possible sites for CTE programs, scoring the OCPS Maintenance and Transportation Services site highest for construction of a new CTE facility.*
- *2012 – BJU Study concludes that OCHS cannot accommodate new CTE classes.*
- *2013 – RRMM Masterplan provides multi-phase approach to solving multiple needs including new CTE instructional space.*
- *2018 – Quinn Evans studies Blue Bell site for CTE space, concluding not cost effective.*
- *2022 – OCPS report "Career & Technical Education Long--Range Plan" identifying CTE programs and space needs.*

EXCERPT FROM 2013 MASTERPLAN STUDY

The 2013 OCHS Masterplan Study remains a relevant option as a road map to accommodate CTE growth as well as resolving other OCHS space constraints within the existing OCHS property lines. The following phases of the 2013 Master Plan directly relate to accommodating CTE:

Phase	Order of Magnitude Cost Updated for 2023 (x1.7)
Phase 2 CTE Classroom Addition along Selma Road	$9,350,000
Phase 3 Building Trades Addition off building east (back) side	$7,140,000
Phase 4 Cafeteria Renovations for Culinary Arts	$7,820,000
Phase 5 Agriculture Lab Addition	$3,570,000
Phase 7 Drafting and Tech Labs	$7,990,000
Order of Magnitude Cost Estimate Total	$35,870,000



Excerpt from 2013 study

END OF STUDY