ACTION

BOARD OF EDUCATION OF HOWARD COUNTY
MEETING AGENDA ITEM

TITLE: High School #13 Construction Document Report **DATE:** September 19, 2019

PRESENTER(S): Daniel Lubeley, Acting Director, Capital Planning and Construction
Robyn Toth, Principal, TCA Architects

Strategic Call To Action Alignment:

- Organizational culture and climate are supportive and nurturing and provide a safe and healthy environment for all students and staff.
- Operations and practices are responsive, transparent, fiscally responsible and accountable, with students at the heart of all decisions.
- Each and every student receives a high-quality education through access to individualized instruction, challenges, supports, and opportunities.

OVERVIEW:

High School #13, which will be located on the Mission Road school site, will be an adaptation of the current prototype high school design. This iteration of the prototype high school plan, which was originally based on the *General Educational Specifications for High Schools*, dated October 1999, is designed to accommodate a population of 1,650 students in Grades 9 – 12 and will be the fourth iteration of this model. The design team has worked collaboratively with the planning committee and the Howard County Public School System staff to ensure an appropriately updated building that captures both programmatic and systemic changes that will serve the current needs of the staff and students.

The following are some of the updates that have taken place since the design development brochure: reconfiguration of the Physical Education locker room area; reconfiguration of the kitchen to promote a more efficient circulation for both students and staff; increase in certain corridor widths; and inclusion of additional display areas to assist with wayfinding at corridor intersections.

A continuing emphasis on energy efficient systems and sustainability is incorporated into the design. It is the intent that the design and construction of the building achieve LEED (Leadership in Energy and Environmental Design) 'Silver' designation.

RECOMMENDATION/FUTURE DIRECTION:

It is recommended that the construction document report for High School #13 be approved as submitted.

SUBMITTED BY:

Daniel Lubeley
Acting Director, Capital
Planning and Construction

APPROVAL/CONCURRENCE:

Michael J. Martirano, Ed.D.
Superintendent

Karalee Turner-Little
Deputy Superintendent

Scott W. Washington
Acting Chief Operating Officer

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Specializing in the design of educational facilities

High School #13

Construction Document Report

Howard County Public School System

Board of Education

19 September 2019

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Construction Document Report

for

High School #13

FOR THE BOARD OF EDUCATION OF HOWARD COUNTY:

Chair	Mavis Ellis
Vice Chair	Kirsten A. Coombs
Members	Vicky Cutroneo Christina Delmont-Small Jennifer Swickard Mallo Sabina Taj Chao Wu, Ph. D. Allison Alston (Student)
Superintendent of Schools	Michael J. Martirano, Ed. D.
Acting Chief Operating Officer	Scott W. Washington
Acting Director Capital Planning and Construction	Daniel Lubeley

LEED
LEADERSHIP IN ENERGY & ENVIRONMENTAL DESIGN

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19 September 2019

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Planning Advisory Committee

HOWARD COUNTY PUBLIC SCHOOL SYSTEM

Elizabeth Banyas	Student Representative
Eric Bishop	Coordinator of Health and Physical Education
Kevin Burnett	Coordinator of Security
CeCe Clement	Manager of Purchasing
Bob Cole	Coordinator of Digital Education
Greg Connor	Assistant Manager of Ground Services
Melissa Daggett	Coordinator of Library Media
John Davis	Coordinator of Athletics
Steve Dolney	Manager of IT Partnership
Bruce Gist	Executive Director of Operations
Dan Hagan	Construction Project Manager
Laura Johnson	Parent Representative
Laurel Johnson	Area Field Representative of Food and Nutrition Services
Dan Keiser	Program Manager of School Construction
Sharon Kramer	Coordinator of Career and Technology Education
Dan Lubeley	Manager of Design and Pre-construction Services
Jason McCoy	Officer of Performance Equity and Community Response
Thomas McNeal	Director of Security, Emergency Preparedness & Response
Gino Molfino	Coordinator of Fine Arts
Nick Novak	Principal of Howard High School
Larry Phillips	Manager of Custodial Services
Doug Pindell	Director of Purchasing
Keith Richardson	Manager of Ground Services
Herb Savje	Director of School Facilities
Bill Stolis	Area Manager of Transportation
Scott W. Washington	Director of Capital Planning and Construction
Mary Weller	Curriculum Coordinator of Secondary Science
Julie Wray	Coordinator of Instructional Technology
Janice Yetter	Director of Special Education
Betsy Zentz	Interagency Specialist

MARYLAND STATE DEPARTMENT OF EDUCATION

Jillian Storms	MSDE, Architect of School Facilities

HOWARD COUNTY GOVERNMENT

Nicola Morgal	Superintendent of Recreational Child Care & Community Service
Laura Wetherald	Bureau Chief of Howard County Recreation and Parks

DESIGN TEAM

Matt Lurz	Construction Manager, Oak Contracting
Stephanie Tuite	Civil Engineer, Fisher, Collins & Carter
Robyn Toth	Project Architect, TCA Architects
Tasheria Shorts	Associate, TCA Architects

Design Team

ARCHITECT	TCA Architects	Crownsville, MD
CIVIL ENGINEER	Fisher, Collins & Carter	Ellicott City, MD
STRUCTURAL ENGINEER	Morabito Consultants	Sparks Glencoe, MD
M/E/P ENGINEER	James Posey Associates	Baltimore, MD
IT CONSULTANT	Educational Systems Planning	Annapolis, MD
DAYLIGHTING ENGINEER	EMO Energy Solutions	Falls Church, VA
ROOFING CONSULTANT	Restoration Engineering	Fairfax, VA
ACOUSTICAL ENGINEER	Acoustical Design Collaborative	Reston, VA
FOOD SERVICE DESIGN	Nyikos Associates	Gaithersburg, MD
CONSTRUCTION MANAGER	Oak Contracting	Towson, MD

Design Development Phase Participants

HOWARD COUNTY PUBLIC SCHOOL SYSTEM

Maha Abdelkader	Coordinator of ESOL
William Barnes	Chief Academic Officer - Division of Academics
Eric Bishop	Coordinator of Physical Education and Health
Debbie Blum	Coordinator of Gifted and Talented
CeCe Clement	Manager of Purchasing
Greg Connor	Assistant Manager of Ground Services
Melissa Daggett	Coordinator of Library Media
John Davis	Coordinator of Athletics
Lisa Davis	Director of Program Innovation and Student Well-Being
Dr. John DiPaula	Principal, Hammond High School
Terry Eberhardt	Coordinator of Music
Dan Hagan	Construction Project Manager
Tim Heinrich	HVAC Project Manager
Laurel Johnson	Area Field Representative of Food and Nutrition Services
Sharon Kramer	Coordinator of Career and Technology Education
Ebony Langford-Brown	Executive Director of Curriculum, Instruction and Assessment
Dan Lubeley	Manager of Design and Pre-construction Services
Gino Molfino	Coordinator of Fine Arts
Jessica Mulher	Resource Teacher for Secondary Science
Jennifer Novak	Director of Curriculum, Instruction and Assessment
Larry Phillips	Manager of Custodial Services
Brian Ralph	Director of Food and Nutrition Services
David Ramsay	Director of Transportation
Kelly Ruby	Coordinator of School Counseling
Kerrie Wagaman	Coordinator of Health Services
Caroline Walker Ph.D.	Executive Director of Program Innovation and Student Well-Being
Scott W. Washington	Director of Capital Planning and Construction
Mary Weller	Curriculum Coordinator of Secondary Science
JaniceYetter	Director of Special Education

HOWARD COUNTY GOVERNMENT

Raul Delerme	Chief of Capital Projects, Park Planning and Construction
Kerri Dinsmore	Project Manager for Department of Public Works
Joan Johnson	Early Childhood Specialist for Office of Children's Services

CONSULTANTS

Barrett Burgoyne	Structural Engineer, Morabito Consultants
Mike Collins	Roofing Engineer, Restoration Engineering
Chuck Crovo	Civil Engineer, Fisher, Collins & Carter
Tim Ervin	Furniture Consultant, Douron
Jim Fowler	Cost Estimator, Oak Contracting
Jay Garcia	Food Services Consultant, Nyikos Associates
Andrew Hathaway	Acoustical Consultant, Acoustical Design Collaborative
Bryan Jones	IT Consultant, Educational Systems Planning
Steve Krell	Cost Estimator, Oak Contracting
Philip Lipscomb	Acoustical Consultant, Acoustical Design Collaborative
Ed Lurz	Construction Manager, Oak Contracting
Matt Lurz	Construction Manager, Oak Contracting
Dale Madiery	Civil Engineer, Fisher, Collins & Carter
Brian Romie	Mechanical Engineer, James Posey Associates
Victor Popien	Electrical Engineer, James Posey Associates
Tony Rosas	Acoustical Consultant, Acoustical Design Collaborative
Joe Tiberi	Cost Estimator, Oak Contracting
Stephanie Tuite	Landscape Architect, Fisher, Collins & Carter

Construction Document Phase Participants

HOWARD COUNTY PUBLIC SCHOOL SYSTEM

Larsen Angel	Mechanical Engineering Manager
Kris Baylor	Acting Assistant Manager of Custodial Services
Tony Bonomo	Acting Manager of Building Maintenance
Chris Brun	Assistant Manager of Networking Systems Operations
Greg Connor	Assistant Manager of Ground Services
Stephen Dolney	Manager, IT Partnerships
Rob Geelhaar	HVAC Leadman
Dan Hagan	Construction Project Manager
Tim Heinrich	HVAC Project Manager
Kevin Hill	Assistant Manager of Telecommunications
Laurel Johnson	Area Field Representative for Food and Nutrition Services
Dan Lubeley	Acting Director of Capital Planning and Construction
Thomas McNeal	Director of Security, Emergency Preparedness and Response
Alan Moss	Manager of Safety and Security Planning
Larry Phillips	Manager of Custodial Services
Melodee Phillips	Acting Manager of Custodial Services
Debbie Poe	Area Field Representative for Custodial Services
Brian Ralph	Director of Food and Nutrition Services
David Ramsay	Director of Transportation
Herb Savje	Director of School Facilities
Renato Toledo	Assistant Manager of Network and AV Services
Scott W. Washington	Acting Chief Operating Officer

CONSTRUCTION MANAGEMENT

Jim Fowler	Cost Estimator, Oak Contracting
Steve Krell	Cost Estimator, Oak Contracting
Ed Lurz	Construction Manager, Oak Contracting
Matt Lurz	Construction Manager, Oak Contracting
Wayne Temple	Superintendent, Oak Contracting
Joe Tiberi	Cost Estimator, Oak Contracting

COMMISSIONING AGENT

Gary Hagan	CMTA

HOWARD COUNTY GOVERNMENT

Raul Delerme	Chief of Capital Projects, Park Planning and Construction
Kerri Dinsmore	Project Manager for Department of Public Works
Elford Jackson	Civil Engineer, RK&K
Dave Morsberger	Civil Engineer, RK&K

NEIGHBORING PROPERTY OWNERS FOR CONSTRUCTION ACCESS

Caleb Gould	Gould Property Company
Spurgeon Eismeier	Savage and Stone LLC
Collin Sumpter	Resource Manager, Savage and Stone LLC
Owen Stewart	Vice President of Operations, Savage and Stone LLC

BGE

Eric Cox, Jr.	Sales, Baltimore Gas and Electric
Alexi Mauricci	Design, Baltimore Gas and Electric

CONSULTANTS

Scott Boyd	IT Consultant, Educational Systems Planning
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Robyn Toth	Principal, TCA Architects
Stephanie Tuite	Landscape Architect, Fisher, Collins & Carter

Project Description

The High School #13 design is an adaptation of the Howard County Public School System's (HCPSS) high school prototype design. High School #13 will be the fourth iteration of the prototype design. The three previous versions of the prototype design are Marriotts Ridge High School which opened in 2005, Reservoir High School which opened in 2002 and Long Reach High School which opened in 1996. Modifications to the prototype have been as a result of input from the Planning Advisory Committee, latest HCPSS standards for all building systems (i.e. heating, cooling, telecommunications, electrical, etc.), current codes, acoustical standards, security concerns and modern sustainable requirements resulting in another high performance school for the HCPSS.

The 'Space Analysis' section of this report on page 22 contains a complete listing, program size, and actual size of every space included in this new high school.

It is the intent that the design and construction of this new high school achieve a Leadership in Energy and Environmental Design (LEED)'Silver' designation making this facility yet another 'Green' school for the HCPSS. The 'LEED for Schools version 4.0' released by the U.S. Green Building Council (USGBC) will provide the necessary goals and requirements to obtain LEED Certification. See page 9 for Sustainable 'Green' Design Goals for this project.

Project Facts

Total size of HCPSS site:	77 acres	
Note: Site accommodates High School #13, new public road and future elementary school		
Zoning:	R-12 and R-SC-MXD-3	
Car parking spaces provided:	578 cars	
Bus parking spaces provided:	34 buses	
Building Square Footage:	287,804 gsf	(Base Bid)
	289,161 gsf	(w/ Child Development Center (CDC))
Local Student Design Capacity:	1,650 Students	

Project Schedule

Site for HS#13 was approved by the Board of Education	8 March 2018
Planning Advisory Committee meetings were completed	17 July 2018
Schematic Design was approved by Board of Education	20 September 2018
Design Development drawings were approved by Board of Education	14 March 2019
Construction Documents presentation to Board of Education for Review and Approval	19 September 2019
Project will go out for bid	November 2019
Bids will be received	December 2019
Construction will start	May 2020
Construction will be completed	April 2023
School will open	September 2023

Continuation of the School Design Process

This Construction Document Report is intended to explain and illustrate those aspects of the High School #13 design which have changed since the Design Development Report. Included are updates on all aspects of the project which have been developed since the design development phase presentation to the Board of Education.

The planning process for the High School #13 was described in detail in the Schematic Design Report submitted to the Board and approved on September 20, 2018. Following approval of the design development presentation, a formal design development phase submittal was sent to the Maryland State Department of Education (MSDE).

Noteworthy items that have changed since the design development phase approval are noted below:

- A listing of all construction document phase participants can be found on page 6.
- Updated site plan that reflects department of transportation needs, Maryland State Department of Education (MSDE) review comments and the new stormwater management requirements can be found on page 13.
- A description of refinements to the floor plans are identified on pages 16, 18 and 20.
- Updated 'Space Analysis' including schematic, design development and construction document phase square footages is on pages 22-26.
- Revised exterior building elevations are on page 27.
- Renderings of interior spaces are on page 28.
- Current 'Cost Estimate' provided by the construction manager is on page 29.

Noteworthy project development and coordination efforts:

Since the design development presentation, a number of coordination meetings have taken place. Individuals involved during these meetings include but are not limited to:

- The Design Team to coordinate building systems and the development of proposed mechanical, electrical, and IT systems and methods of reducing energy consumption and compliance with newly adopted LEED requirements. This includes but is not limited to performing a Life Cycle Cost Analysis for the photopholtaic panels system that was proposed on the roof.
- The construction manager to discuss costs, schedule and constructibility.
- HCPSS staff to discuss all aspects of the design.
- Adjacent property owners to coordinate construction access.
- Baltimore Gas and Electric to discuss temporary and permanent utilities and Smart Energy Savers Program incentives.
- Maryland Emergency Management Agency to discuss design requirements for emergencies.
- Howard County Government Departments:

  Planning and Zoning, Licenses and Permits for code compliance and to discuss the changes in the newly adopted building codes.

  Fire and Rescue Services to coordinate access for emergency vehicles to the building.

  Bureau of Engineering to coordinate construction of their portion of the public road construction .

Sustainable 'Green' Design Goals

The school's design and construction is intended to achieve a LEED Silver certification, making the facility a 'Green' school.

Simply stated, a 'Green' school is a building designed to conserve energy, water, and materials, thus reducing negative impacts on human health and the environment. A 'Green' learning environment provides natural daylight, improved indoor air quality, thermal comfort, and opportunities to integrate green features into the school's curriculum.

This project is required to use the new LEED 4.0 rating system for schools. An 'in progress' LEED scorecard is shown below which summarizes the credits and the amount of associated points that are most likely achievable at this time. As the project evolved, some credits have been found unobtainable due to budget constraints or the stricter requirements of the new rating system. The project is currently tracking to achieve 54 points (with an additional '12 possible points' that will be determined once final calculations are complete). This status allows the project to lose a few points and still reach the goal of a LEED 'Silver' Building.

LEED for SCHOOLS (v4) Aug 2019

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LEED Scorecard
High School #13
Howard County Public School System

Credit Integrative Process

LT Location & Transportation Possible Points: 15

		Credit LEED for Neighborhood Development Location (15 credits)
		Credit Sensitive Land Protection
		Credit High Priority Site (2 credits)
		Credit Surrounding Density and Diverse Uses (5 credits)
		Credit Access to Quality Transit (4 credits)
		Credit Bicycle Facilites
		Credit Reduced Parking Footprint
	1	Credit Green Vehicles
0	1	Total Location & Transportation Credits

SS Sustainable Sites Possible Points: 12

R		Prereq Construction Activity Pollution Prevention
R		Prereq Environmental Site Assessment
1		Credit Site Assessment
		Credit Site Development - Protect or Restore Habitat (2 credits)
		Credit Open Space
3		Credit Rainwater Management (3 credits)
		Credit Heat Island Reduction (2 credits)
1		Credit Light Pollution Reduction
		Credit Site Master Plan
1		Credit Joint use of Facilities
6	0	Total Sustainable Sites Credits

WE Water Efficiency Possible Points: 12

R		Prereq Outdoor Water Use Reduction
R		Prereq Indoor Water Use Reduction
R		Prereq Building-level Water Metering
2		Credit Outdoor Water Use Reduction (2 credits)
2	1	Credit Indoor Water Use Reduction (7 credits)
2		Credit Cooling Tower Water Use (2 credits)
1		Credit Water Metering
7	1	Total Water Efficiency Credits

EA Energy and Atmosphere Possible Points: 31

R		Prereq Fundamental Commissioning and Verification
R		Prereq Minimum Energy Performance
R		Prereq Building-Level Energy Metering
R		Prereq Fundamental Refrigerant Management
6		Credit Enhanced Commisioning (6 credits)
8	6	Credit Optimize Energy Performance (16 credits)
1		Credit Advanced Energy Metering
		Credit Demand Response (2 credits)
		Credit Renewable Energy Production (3 credits)
1		Credit Enhanced Refrigerant Management
		Credit Green Power and Carbon Offsets (2 credits)
16	6	Total Energy and Atmosphere Credits

MR Materials and Resources Possible Points: 13

R		Prereq Storage & Collection of Recyclables
R		Prereq Construction and Demolition Waste Management Planning
	3	Credit Building Life-Cycle Impact Reduction (5 credits)
1		Credit Building Product - Environmental Declarations (2 credits)
1		Credit Building Product - Raw Materials (2 credits)
1		Credit Building Product - Material Ingredients (2 credits)
2		Credit Construction and DemolitionWaste Management (2 credits)
5	3	Total Materials and Resources Credits

EQ Indoor Environment Quality Possible Points: 16

R		Prereq Minimum IAQ Performance
R		Prereq Environmental Tobacco Smoke (ETS) Control
R		Prereq Minimum Acoustical Performance
2		Credit Enhanced IAQ Strategies (2 credits)
3		Credit Low-Emitting Materials (3 credits)
1		Credit Construction IAQ Management Plan
2		Credit IAQ Assessment (2 credits)
1		Credit Thermal Comfort
2		Credit Interior Lighting (2 credits)
2	1	Credit Daylight (3 credits)
		Credit Quality Views
		Credit Acoustic Performance
13	1	Total Indoor Environment Quality Credits

IN Innovation Possible Points: 6

1		Credit Innovation: Purchasing - Lamps
1		Credit Innovation: Occupant Comfort Survey
		Credit Innovation: Green Building Education
1		Credit Innovation: Design for Active Occupants
	1	Credit Innovation: LEED O+M Starter Kit
1		Credit LEED Accredited Professional
4	1	Total Innovation Credits

RP Regional Priority Possible Points: 4

		Credit Regional Priority: Sensitive Land Protection
1		Credit Regional Priority: Rainwater Management
		Credit Regional Priority: Indoor Water Use Reduction (45% reduction)
1		Credit Regional Priority: Enhanced Refrigerant Management
2	0	Total Regional Priority Credits

54 Total Credits (12 'Maybe' Credits) Possible Points: 110

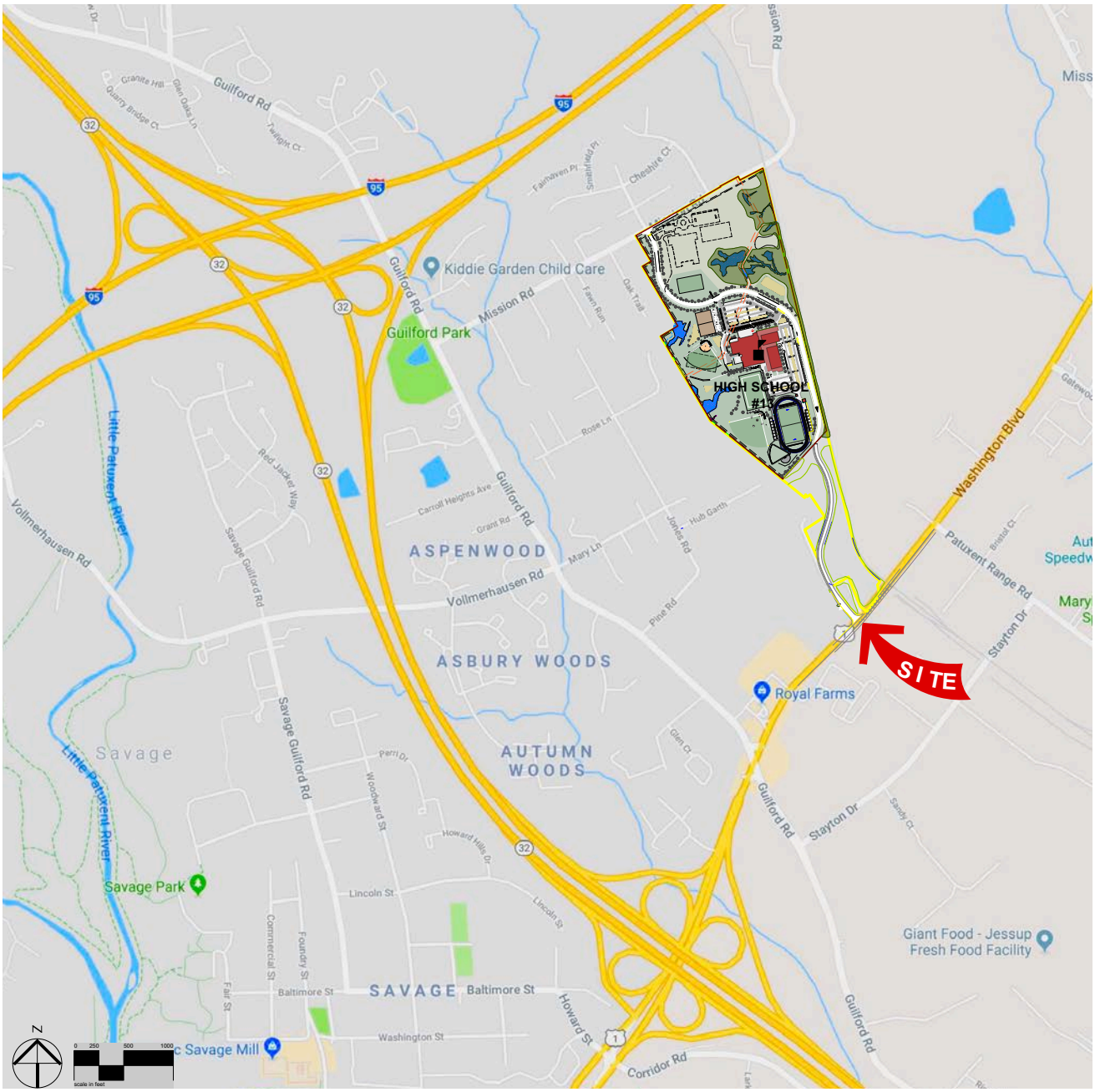
Key to Possibility of Earning Credit: R = Required # = Yes # = Maybe X = No

Project Credit Totals: Certified 40–49 **Silver 50–59** Gold 60–79 Platinum 80+

Vicinity Map

High School #13 will be located between Route 1 and Mission Road in Jessup, Maryland, 20794. Main access to the site will be from Route 1, approximately 0.8 miles north of the Route 1 and Route 32 intersection.

Public water, sewer and natural gas will serve the site.



Map data: Google

Rendering of Site

The image below is an aerial view of the proposed site from Mission Road, facing the main entrance of the building. Dashed lines in the foreground represent possible site elements for the future elementary school. Beyond the stadium the new public road is shown continuing south towards Route 1.

Site Plan Notes

Key features of the site plan are listed below and identified by letters in circles on the site plan shown on the following page.

A. A new public road will be constructed to connect Route 1 and Mission Road. A center turning lane will be provided along the high school site's property line. An application for a new traffic light will be submitted to the State Highway Administration for the intersection of the new road and Route 1.

B. Howard County Department of Public Works will own the portion of the new road to the south of the high school site.

C. There will be 220 parking spaces near the main entrance for visitors, staff and students.

D. Parking for 34 school buses will be provided as requested by the HCPSS Department of Transportation. The bus drop-off and pick-up area will be separate from car traffic and parking to reduce vehicular congestion on site and to avoid the possibility of accidents caused by cars backing into the bus circulation area.

E. Service area will be next to the custodial area and the kitchen. There will be 34 parking spaces for staff along the service drive. A paved path will be provided to connect the exterior storage room to the paved parking lots and paved sidewalks, for easier upkeep during inclement weather as requested by the custodial staff.

F. Outdoor education will be accommodated in multiple areas around the site: concrete amphitheater steps will be on the north side of the building, masonry benches will surround paved areas outside each of the three art classrooms and tiered seating will be built along the field hockey field, which will also help address the grade transitions needed for this site. There will be planting areas near the art patio which will be designated for a future garden to be established by the school.

G. There will be 324 parking spaces in a large parking lot along the east and south sides of the school for staff, and students. This parking lot will have direct access to the auditorium, gymnasium and stadium for after-hours events.

H. Student drop-off and pick-up lane will be located adjacent to the entrance between the gymnasium and auditorium. This entrance leads directly to the looped circulation route at the core of the building. A separate lane will be provided for drop-off and pick-up to allow for queuing space to minimize interference with the traffic along the public road.

I. A ten foot wide paved path for both bicyclists and pedestrians will be constructed along the public road connecting Route 1 to Mission Road along with paved paths to connect the high school to the adjacent neighborhood to accommodate students walking or biking to the school.

J. Accessible pathways will be provided from the school to all of the athletic fields.

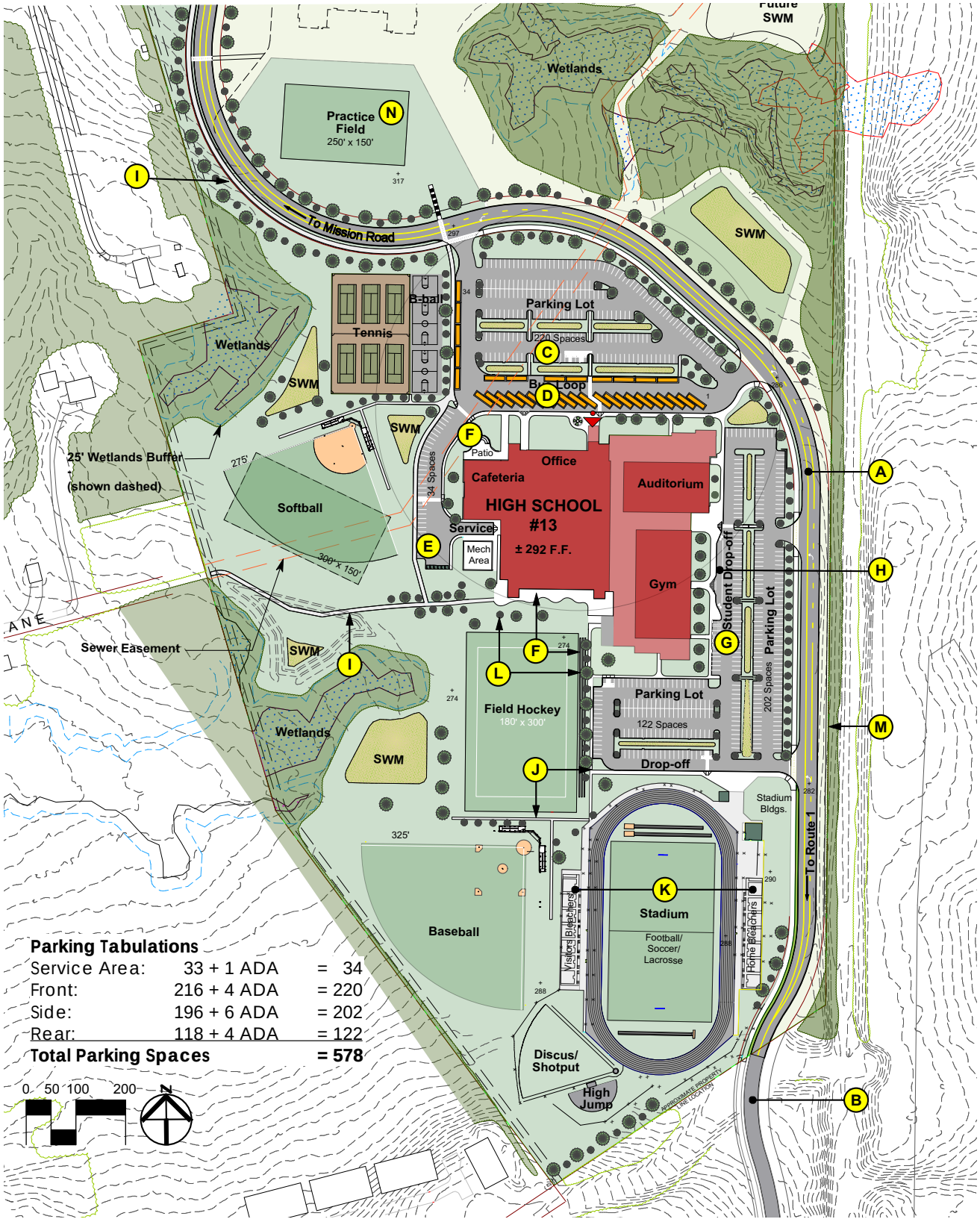
K. Home and visitor bleachers at the stadium will be equal in size for community use.

L. Trees will be provided around the site to provide shade for the students during outdoor education and socializing.

M. A six foot high fence will be built on the school property line to deter student access to the adjacent quarry property.

N. Practice field adjacent to the future elementary school will be developed as part of this project.

Site Plan


Future SWM
Wetlands
Practice Field
250' x 150'
N
I
To Mission Road
SWM
B-ball
Tennis
Parking Lot
220 Spaces
C
Bus Loop
D
Wetlands
SWM
SWM
F
Patio
Office
Cafeteria
Auditorium
HIGH SCHOOL #13
± 292 F.F.
Service
Mech Area
E
Gym
Student Drop-off
Parking Lot
202 Spaces
G
A
H
25' Wetlands Buffer
(shown dashed)
Softball
300' x 150'
Sewer Easement
SWM
I
F
L
Field Hockey
180' x 300'
Parking Lot
122 Spaces
Drop-off
M
Wetlands
SWM
J
Stadium Bldgs.
To Route 1
325'
K
Stadium
Football/ Soccer/ Lacrosse
Visitors Bleachers
Home Bleachers
Baseball
Discus/ Shotput
High Jump
B
Parking Tabulations
Service Area: 33 + 1 ADA = 34
Front: 216 + 4 ADA = 220
Side: 196 + 6 ADA = 202
Rear: 118 + 4 ADA = 122
Total Parking Spaces = 578
0 50 100 200
N

Floor Plan Features

Administrative Spaces - The administrative suite is located adjacent to the main entrance with a view of the bus loop and front parking lot. Assistant principal offices are dispersed on all three floors for more adequate coverage during the day. Conference rooms are also located on each floor.

Staff Support Spaces - Staff lounges, toilet rooms, storage rooms and planning spaces are distributed throughout the school and on all three floors to make them conveniently accessible to all staff.

Student Services - The majority of the student services are located in a central location on the first floor so they are easy to access from the main entrance corridor and the commons area. The health suite is also near an elevator. The career and research development room is located on the second floor adjacent to both a seminar room and the gifted and talented classroom. The BSAP and Hispanic Liaison offices are located near the stairwell, for easy access from other floors.

ESOL - The ESOL classrooms are located on both the first floor and third floor with the world language department. ESOL rooms are designed similar to the special education classrooms to allow for flexibility in room assignments once building is occupied.

Gifted & Talented - The gifted and talented classroom is located on the second floor near the media center and in close proximity to career connections room.

General Instruction - General instruction classrooms are located on the second floor and third floor. Seminar rooms are located at the corners of the floors adjacent to both the planning space for the department and the associated classrooms. In lieu of multiple computer labs, a large space will be created on the third floor which will serve multiple purposes including functioning as a mini-auditorium for guest speakers and a testing room.

Physical Education - The physical education spaces are located on the first floor close to the stadium. Doors are placed to restrict access to the rest of the building from physical education spaces during after-hours use.

Student Toilet Rooms - Student toilet rooms are conveniently located throughout all three floors typically in a cluster near the intersection of corridors and consisting of one men's room, one women's room, and one unisex room. Stacking these spaces provides an economical plumbing system.

Media Center - The media center is located on the second floor and is fully enclosed. The clerestory windows allow the media center interior to be viewed from some of the third floor classrooms and corridors. A large skylight provides natural daylight to brighten this two-story space and the surrounding rooms on both floors which, otherwise, would be windowless interior spaces. The media center is surrounded by its support spaces which can be fully secured from the media center with lockable doors during after-hours use.

Floor Plan Features continued...

Science - Classrooms and support spaces are located on the second and third floors on the west side of the building in a science wing. Stacking these spaces provides economy in plumbing and ventilation systems.

Technology Education - The technology education labs are located on the first floor in between the commons and the art suite. This location allows for easy access of supplies from the service area.

Career Academy & Computer Science - The career academy and computer science suite are located on the second floor. These rooms are larger than a typical classroom so they are located above the larger art studios on the first floor.

Special Education - Special education spaces are located only on the first floor and second floor for easier access from the building entrances and exits. In addition, these spaces are located close to the elevators. Accessible toilet rooms with floor space for a hydraulic cot will be placed on all three floors.

Family and Consumer Sciences - The child development center / pre-school is located on the first floor close to the south parking lot and with direct access to the exterior for drop-off and pick-up of pre-school students before and after regular school hours. The family and consumer science space is also on the first floor.

Cafeteria - The student dining is located on the first floor directly adjacent to the kitchen and the central hub of the school, the commons area. An outdoor patio area is provided for student use.

Auditorium - The high volume of the auditorium is on the first floor and away from the three-story educational spaces. The auditorium is easily accessible from the music, drama and dance spaces during performances. Doors are placed to restrict access to the rest of the building from the fine arts spaces during after-hours use.

Music - The music suite is separated from the quieter spaces found in the three-story portion of the building which houses instructional spaces and offices. Music rooms are near the auditorium for easy transition of instruments during performances on the school's stage.

Art - The visual arts suite is located on the first floor along an exterior wall to provide natural daylight, proper ventilation and access to its outdoor patio.

Custodial Area - The custodial office is situated near the service area, near the center core of the building and the three-story open commons area. Custodial closets and storage rooms are distributed throughout the school and near restrooms for economy in plumbing design.

Building Service Areas - The main mechanical and electrical rooms are near the service area and the outdoor equipment area. Telecommunications rooms and electrical rooms are dispersed on all three floors of the school as required by code.

Food Services - The kitchen and its supporting spaces are located on the first floor and are accessed from both the cafeteria for students and the service area for receiving supplies and for the removal of trash.

Construction Document Phase Refinements
First Floor

Specific revisions as a result of coordination during the Construction Document Phase are listed below and are identified by the roman numerals in diamonds on the proposed first floor plan on page 17.

i. The stairs in the back of the building were rotated 90° for a more efficient circulation pattern and to provide better views.

ii. Vision panels adjacent to instructional area doors were increased in size to improve supervision. The doors in these locations will be solid.

iii. The design of the Child Development Center were refined so that this area of the building can now be bid as an Alternate to the project.

iv. Telecommunications room was added in the southeast corner of the building. The spaces around the PE locker rooms have been reconfigured to accommodate this room.

v. This corridor was increased in width to provide more capacity for emergency egress out of this portion of the building when the three story portion of the building is closed off from the public during after-hours use. This change has caused the gross square footage of the building to increase.

vi. This corridor was increased in width to provide more capacity for emergency egress out of this portion of the building when the gymnasium and auditorium is closed off from the public during after-hours use. This change has caused the gross square footage of the building to increase.

vii. The kitchen design was reconfigured to provide more efficient circulation for the students in the serving lines and for the workers in the prep area.

LEGEND

- ADMINISTRATIVE SPACES
- ESOL
- PHYSICAL EDUCATION
- SCIENCE
- SPECIAL EDUCATION
- AUDITORIUM SPACES
- CUSTODIAL AREAS
- STAFF SUPPORT SPACES
- GIFTED & TALENTED
- STUDENT TOILET ROOMS
- CTE - TECHNOLOGY EDUCATION
- CTE - FAMILY AND CONSUMER SCIENCES
- MUSIC SUITE
- BUILDING SERVICE AREAS
- STUDENT SERVICES
- GENERAL INSTRUCTION
- MEDIA CENTER
- CTE - CAREER ACADEMY AND COMPUTER SCIENCE
- CAFETERIA
- ART SUITE
- FOOD SERVICES

First Floor Plan

First Floor	= 151,991 gsf
Second Floor	= 73,149 gsf
Third Floor	= 62,664 gsf
Total School	= 287,804 gsf
CDC Alternate	= 1,357 gsf

See page 16 for legend.

See page 18 for list of abbreviations.

Construction Document Phase Refinements
Second Floor

Specific revisions as a result of coordination during the Construction Document Phase are listed below and are identified by the roman numerals in diamonds on the proposed second floor plan on page 19.

i. The stairs in the back of the building were rotated 90° for a more efficient circulation pattern and to provide better views.

ii. Vision panels adjacent to instructional area doors were increased in size to improve supervision. The doors in these locations will be solid.

iii. Display areas have been added at the end of these corridors to help students in wayfinding.

iv. The telecommunication room in this area has been repurposed and will now be used as a storage room, since it has been determined that only a small amount of equipment is needed in this location to support the telecommunications system.

ABBREVIATIONS

AD	= ATHLETIC DIRECTOR
AEP	= ALTERNATIVE EDUCATION PROGRAM
BSM	= BUILDING SERVICE MANAGER
C	= COACH
CC	= CUSTODIAL CLOSET
CON	= CONTROL ROOM
CONF	= CONFERANCE
CR	= CLASSROOM
CTE	= CAREER & TECHNOLOGY EDUCATION
E	= ELECTRICAL ROOM
ENG	= ENGLISH
ER	= EQUIPMENT ROOM
FIN	= FINISH
KIT	= KITCHEN
L	= LOCKERS
LAUN	= LAUNDRY
M	= MEN'S TOILET ROOM
MAT	= MATERIAL
P	= PRACTICE ROOM
R	= ROOF
RAP	= READING ACCELERATION PROGRAM
REC	= RECORDS ROOM
REP	= REPAIR
S	= STORAGE ROOM
SE	= SPECIAL EDUCATION
SRO	= SECURITY RESOURCE OFFICER
SS	= SOCIAL STUDIES
T	= TOILET
TR	= TELECOMMUNICATIONS ROOM
W	= WOMEN'S TOILET ROOM
WL	= WORLD LANGUAGE
WKRM	= WORKROOM
WKSHP	=WORKSHOP

Second Floor Plan

First Floor	= 151,991 gsf
Second Floor	= 73,149 gsf
Third Floor	= 62,664 gsf
Total School	= 287,804 gsf
CDC Alternate	= 1,357 gsf

See page 16 for legend.

See page 18 for list of abbreviations.

Construction Document Phase Refinements
Third Floor

Specific revisions as a result of coordination during the Construction Document Phase are listed below and are identified by the roman numerals in diamonds on the proposed third floor plan on page 21.

i. The stairs in the back of the building were rotated 90° for a more efficient circulation pattern and to provide better views.

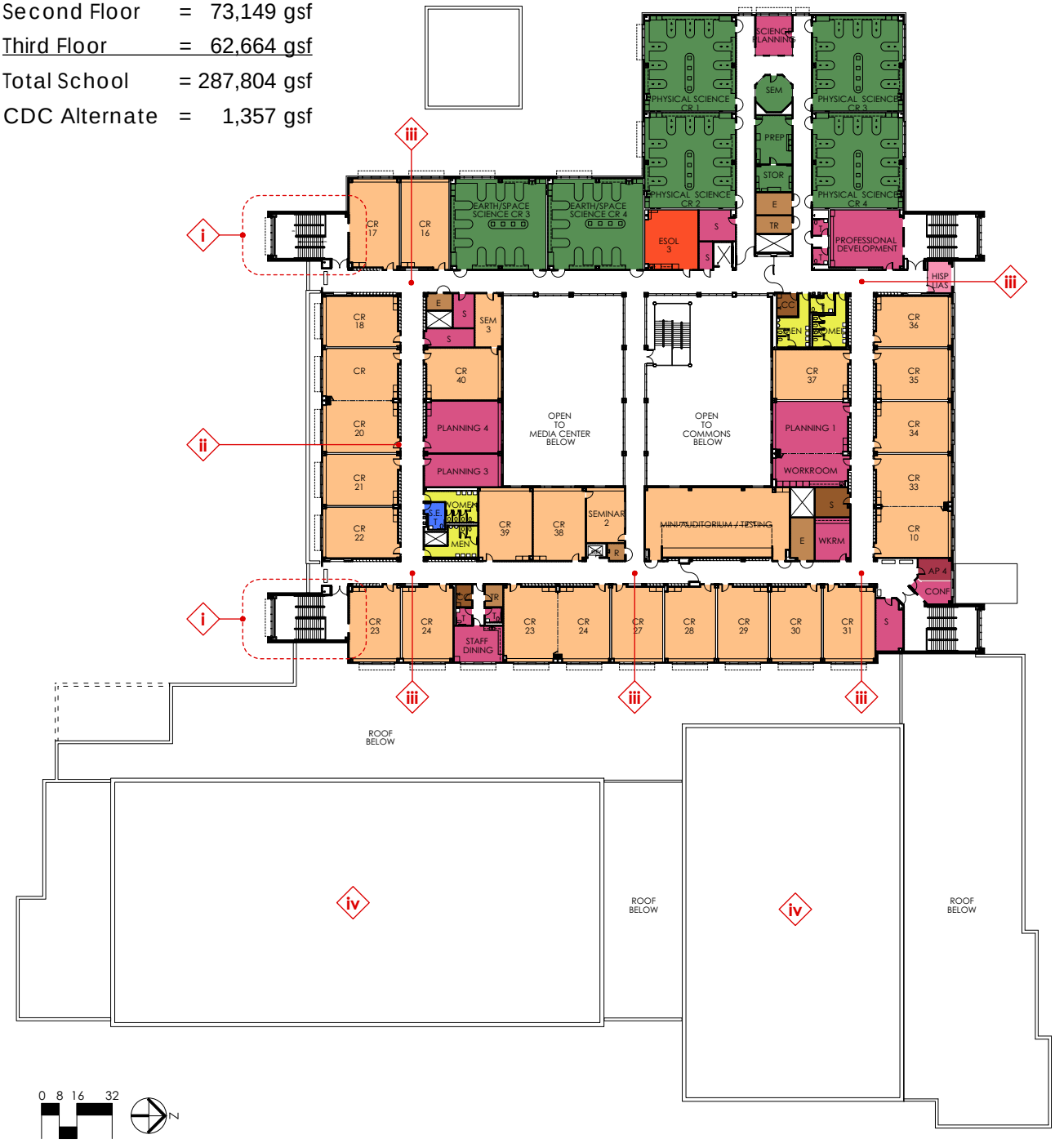
ii. Vision panels adjacent to instructional area doors were increased in size to improve supervision. The doors in these locations will be solid.

iii. Display areas have been added at the end of these corridors to help students in wayfinding.

iv. The solar panel arrays have been removed from the project after reviewing the life cycle analysis and the current cost estimate.

Third Floor Plan

First Floor	= 151,991 gsf
Second Floor	= 73,149 gsf
Third Floor	= 62,664 gsf
Total School	= 287,804 gsf
CDC Alternate	= 1,357 gsf



See page 16 for legend.

See page 18 for list of abbreviations.

Space Analysis

Net areas indicated in square feet.

	HS Prototype Design (Marriotts Ridge)			HS #13 Schematic Design			HS#13 Design Development			HS#13 Construction Document		
	#	S.F.	Total	#	S.F.	Total	#	S.F.	Total	#	S.F.	Total
Administrative Suite			**2,445**			**3,805**			**3,810**			**3,762**
Reception Area	1	691	**691**	1	705	**705**	1	876	**876**	1	867	**867**
Attendance Office	1	130	**130**	1	125	**125**	1	95	**95**	1	104	**104**
Finance Office/Business Manager	1	129	**129**	1	135	**135**	1	124	**124**	1	131	**131**
Conference Room	1	223	**223**	1	285	**285**	1	330	**330**	1	338	**338**
Mailroom / Workroom	1	103	**103**	1	520	**520**	1	474	**474**	1	460	**460**
Parent / Committee Volunteer Room	1	130	**130**	1	140	**140**	1	140	**140**	1	145	**145**
Principal's Office (incl. Closet)	1	256	**256**	1	270	**270**	1	293	**293**	1	294	**294**
Principal's Secretary's Office	1	97	**97**	1	150	**150**	1	140	**140**	1	140	**140**
Secure Room / Student Records	1	75	**75**	1	120	**120**	1	140	**140**	1	145	**145**
Storage Room	1	73	**73**	3	75	**225**	3	77	**230**	3	83	**248**
Assistant Principals' Offices	4	101	**403**	4	208	**830**	4	168	**673**	4	151	**604**
Security Office (SRO) / Police Liaison	1	135	**135**	2	150	**300**	2	148	**295**	2	143	**286**
Staff Support			**6,731**			**6,520**			**6,613**			**6,532**
Storage Room	12	190	**2,275**	8	256	**2,045**	9	189	**1,698**	10	171	**1,709**
General Instruction Teacher Planning	3	1,306	**3,919**	4	936	**3,745**	4	725	**2,899**	4	728	**2,910**
Teacher Workroom	2	269	**537**	0	0	**0**	4	400	**1,598**	4	401	**1,602**
Conference Room	0	0	**0**	2	365	**730**	2	209	**418**	2	156	**311**
Staff Lounge			**1,421**			**1,115**			**1,666**			**1,571**
Dining - First Floor	1	686	**686**	1	690	**690**	1	948	**948**	1	853	**853**
Dining - Second & Third Floors	1	735	**735**	1	425	**425**	2	359	**718**	2	359	**718**
Professional Development			**842**			**815**			**892**			**866**
Office	1	143	**143**	1	110	**110**	0	0	**0**	0	0	**0**
Seminar Room	1	699	**699**	1	705	**705**	1	892	**892**	1	866	**866**
Guidance			**3,649**			**3,780**			**3,899**			**3,930**
Offices	7	129	**905**	7	119	**835**	9	124	**1,119**	9	127	**1,142**
Records / Registrar's Office	1	304	**304**	1	350	**350**	1	357	**357**	1	347	**347**
Workroom (incl. storage)	1	246	**246**	1	230	**230**	1	245	**245**	1	246	**246**
Conference Room	1	263	**263**	1	300	**300**	1	298	**298**	1	303	**303**
Career Center	1	1,768	**1,768**	1	1,895	**1,895**	1	1,742	**1,742**	1	1,749	**1,749**
Data Clerk	1	163	**163**	1	170	**170**	1	138	**138**	1	143	**143**
Career and Research Development			**630**			**570**			**771**			**777**
CR & D (incl. storage)	1	630	**630**	1	480	**480**	1	680	**680**	1	686	**686**
Office	0	0	**0**	1	90	**90**	1	91	**91**	1	91	**91**
Health Suite			**1,002**			**1,325**			**1,531**			**1,534**
Waiting / Treatment	1	288	**288**	1	480	**480**	1	519	**519**	1	520	**520**
Office / Conference	1	116	**116**	1	100	**100**	1	120	**120**	1	122	**122**
Cot Rooms	2	152	**303**	2	150	**300**	1	321	**321**	1	321	**321**
Storage	1	86	**86**	1	45	**45**	1	87	**87**	1	86	**86**
Toilets (including shower)	2	66	**131**	2	90	**180**	2	106	**212**	2	107	**213**
Cluster Nurse Office	1	78	**78**	1	100	**100**	1	122	**122**	1	122	**122**
Exam	0	0	**0**	1	120	**120**	1	150	**150**	1	150	**150**
Student Organizations			**490**			**585**			**466**			**566**
Student Organization Room (incl. storage)	1	312	**312**	1	365	**365**	1	263	**263**	1	363	**363**
School Store (incl. storage)	1	178	**178**	1	220	**220**	1	203	**203**	1	203	**203**

Space Analysis

Net areas indicated in square feet.

	HS Prototype Design (Marriotts Ridge)			HS #13 Schematic Design			HS#13 Design Development			HS#13 Construction Document		
	#	S.F.	Total	#	S.F.	Total	#	S.F.	Total	#	S.F.	Total
Student Support Center			1,133			1,230			1,071			1,070
BSAP Academic Mentor Office	1	256	256	1	255	255	1	138	138	1	150	150
Hispanic Liaison	0	0	0	0	0	0	1	138	138	1	150	150
AEP (Alt. Education Program)	1	274	274	1	145	145	1	188	188	1	188	188
Contract Room (Alt. Education Program)	1	343	343	1	535	535	1	452	452	1	427	427
Support Room	1	135	135	1	175	175	1	155	155	1	155	155
Maryland Tomorrow Office	1	125	125	1	120	120	0	0	0	0	0	0
ESOL			321			555			1,923			1,903
ESOL	1	321	321	1	555	555	3	641	1,923	3	634	1,903
Gifted & Talented			922			780			846			861
Gifted & Talented Classroom (w/storage.)	1	922	922	1	780	780	1	755	755	1	770	770
Gifted & Talented Office	0	0	0	0	0	0	1	91	91	1	91	91
General Instruction			32,584			29,770			35,780			35,883
Classrooms (Eng., WL, SS)	22	771	16,953	24	764	18,335	40	796	31,831	40	795	31,803
Classrooms (Math)	10	899	8,987	10	762	7,620	0	0	0	0	0	0
Seminar Room	2	295	589	3	380	1,140	3	372	1,115	3	375	1,126
Technology Resource	3	893	2,680	0	0	0	0	0	0	0	0	0
Computer Lab	2	975	1,949	0	0	0	0	0	0	0	0	0
Mini Auditorium / Testing	0	0	0	1	1,915	1,915	1	2,046	2,046	1	2,050	2,050
Journalism / Yearbook Room	1	732	732	1	760	760	1	788	788	1	904	904
Journalism / Yearbook Workroom	1	694	694	0	0	0	0	0	0	0	0	0
Health Education			861			1,560			1,726			1,679
Health Education Classroom (w/storage.)	1	861	861	2	780	1,560	2	863	1,726	2	840	1,679
Physical Education			27,266			27,880			27,729			27,384
Main Gym	1	9,701	9,701	1	10,440	10,440	1	10,711	10,711	1	10,775	10,775
Auxiliary Gym	1	4,684	4,684	1	4,830	4,830	1	5,338	5,338	1	5,177	5,177
Wrestling Room (incl. storage.)	1	2,288	2,288	1	2,380	2,380	1	2,384	2,384	1	2,210	2,210
Weight Training Room (incl. storage.)	1	3,013	3,013	1	3,025	3,025	1	2,845	2,845	1	2,747	2,747
Locker Rooms	2	1,391	2,781	2	1,378	2,755	2	1,007	2,014	2	1,026	2,052
Shower Rooms	2	198	395	2	225	450	2	118	236	2	111	222
Team Rooms	4	260	1,041	6	262	1,570	4	308	1,232	4	296	1,183
Athletic Director's Office (incl. storage.)	1	224	224	1	200	200	1	167	167	1	198	198
Trainer Room (incl. storage.)	1	495	495	1	370	370	1	426	426	1	547	547
Laundry Room	1	206	206	1	115	115	1	158	158	1	169	169
P.E. Storage Area (incl. ext. storage.)	2	279	557	2	235	470	2	292	584	2	401	801
Team Room Storage	2	162	324	2	120	240	2	161	321	2	216	431
Coach Planning	2	252	504	2	210	420	3	199	596	3	179	538
P.E. Planning	1	362	362	2	108	215	2	186	371	2	0	
Tickets (incl. storage.)	1	500	500	1	210	210	1	158	158	1	149	149
Concessions	1	191	191	1	190	190	1	188	188	1	185	185

Space Analysis

Net areas indicated in square feet.

	HS Prototype Design (Marriotts Ridge)			HS #13 Schematic Design			HS#13 Design Development			HS#13 Construction Document		
	#	S.F.	Total	#	S.F.	Total	#	S.F.	Total	#	S.F.	Total
Media			**8,412**			**8,510**			**8,611**			**8,583**
Main Reading Room	1	5,627	**5,627**	1	5,490	**5,490**	1	5,623	**5,623**	1	5,591	**5,591**
Technology Resource Room	1	639	**639**	0	0	**0**	0	0	**0**	0	0	**0**
Innovation Lab	0	0	**0**	1	730	**730**	1	722	**722**	1	726	**726**
Office & Work Space	1	214	**214**	1	360	**360**	1	207	**207**	1	207	**207**
Media Production	1	654	**654**	0	0	**0**	0	0	**0**	0	0	**0**
Small Group Areas	0	0	**0**	3	203	**610**	3	223	**668**	3	223	**668**
Storage (books & A/V equipment)	3	99	**296**	1	385	**385**	1	480	**480**	1	480	**480**
TV Studio w/ control room	1	982	**982**	1	935	**935**	2	456	**911**	2	456	**911**
Science			**15,475**			**23,970**			**23,172**			**23,285**
Earth/Space (Earth Science)	4	1,125	**4,501**	4	1,785	**7,140**	4	1,766	**7,065**	4	1,765	**7,060**
Life Science (Biology)	3	1,321	**3,963**	4	1,846	**7,385**	4	1,764	**7,054**	4	1,764	**7,057**
Physical Science (Physics / Chemistry)	4	1,318	**5,273**	4	1,846	**7,385**	4	1,764	**7,054**	4	1,764	**7,056**
Prep. for Life & Earth/Space Science	1	277	**277**	1	310	**310**	1	330	**330**	1	341	**341**
Prep. for Physical Science	1	405	**405**	1	310	**310**	1	330	**330**	1	341	**341**
Seminar Area	2	320	**640**	2	210	**420**	2	184	**368**	2	227	**453**
Storage Area	2	208	**416**	2	185	**370**	2	202	**403**	2	196	**392**
Teacher Planning	0	0	**0**	2	325	**650**	2	284	**568**	2	293	**585**
Technology Education			**4,340**			**6,685**			**6,568**			**6,574**
Large Engineering / Technology	1	2,042	**2,042**	1	2,445	**2,445**	0	0	**0**	0	0	**0**
Material Storage	1	250	**250**	1	250	**250**	1	383	**383**	1	383	**383**
Project Storage & Finishing	2	160	**319**	1	205	**205**	0	0	**0**	0	0	**0**
Small Engineering / Technology	1	1,553	**1,553**	2	1,700	**3,400**	3	1,508	**4,524**	3	1,510	**4,530**
Storage	1	176	**176**	2	100	**200**	6	119	**716**	6	119	**716**
Teacher Planning	0	0	**0**	1	185	**185**	1	162	**162**	1	162	**162**
Production Lab	0	0	**0**	0	0	**0**	1	783	**783**	1	783	**783**
Career Academy (BCMS)			**4,263**			**4,790**			**4,638**			**4,633**
Computer Labs	4	1,016	**4,065**	4	985	**3,940**	4	963	**3,852**	4	961	**3,845**
Storage	1	198	**198**	2	123	**245**	2	106	**212**	2	105	**210**
Seminar	0	0	**0**	2	180	**360**	2	168	**336**	2	169	**338**
Teacher Planning	0	0	**0**	2	123	**245**	2	119	**238**	2	120	**240**
Special Education			**5,197**			**5,520**			**6,075**			**6,294**
OT / PT Area	1	379	**379**	1	520	**520**	1	759	**759**	1	756	**756**
OT Storage	1	158	**158**	1	170	**170**	1	96	**96**	1	72	**72**
Speech Language Therapy	1	221	**221**	1	240	**240**	1	225	**225**	1	227	**227**
Conference Room	1	266	**266**	1	250	**250**	1	388	**388**	1	396	**396**
Storage	2	57	**113**	3	67	**200**	2	97	**193**	2	98	**196**
S.E. Resource Rooms	6	624	**3,743**	6	632	**3,790**	6	664	**3,985**	6	703	**4,218**
Teacher Planning	1	317	**317**	1	350	**350**	1	429	**429**	1	429	**429**
Food and Consumer Science			**2,417**			**1,630**			**2,143**			**1,804**
FACS Lab (Food & Nutrition)-incl. storage.	1	1,151	**1,151**	1	1,310	**1,310**	1	1,795	**1,795**	1	1,804	**1,804**
Classroom	1	944	**944**	0	0	**0**	0	0	**0**	0	0	**0**
Teacher Planning	0	0	**0**	1	80	**80**	0	0	**0**	0	0	**0**
CDC- Preschool (Child Development)*	1	161	**161**	1	120	**120**	1	174	**174**	0	0	**0**
CDC- Outdoor Storage*	1	161	**161**	1	120	**120**	1	174	**174**	0	0	**0**

*See Child Development Center (CDC) alternate at the end of this space analysis for square footages.

Space Analysis

Net areas indicated in square feet.

	HS Prototype Design (Marriotts Ridge)			HS #13 Schematic Design			HS#13 Design Development			HS#13 Construction Document		
	#	S.F.	Total	#	S.F.	Total	#	S.F.	Total	#	S.F.	Total
Cafeteria			**7,491**			**7,405**			**7,605**			**7,628**
Student Dining	1	7,491	**7,491**	1	7,405	**7,405**	1	7,605	**7,605**	1	7,628	**7,628**
Auditorium			**16,081**			**17,840**			**18,308**			**18,388**
Auditorium	1	7,954	**7,954**	1	7,890	**7,890**	1	8,219	**8,219**	1	8,388	**8,388**
Control Area	1	433	**433**	2	265	**530**	1	684	**684**	1	617	**617**
Drama / Changing Room	2	587	**1,174**	2	1,080	**2,160**	3	593	**1,779**	3	570	**1,709**
Workshop (incl. duster)	1	1,030	**1,030**	1	1,050	**1,050**	1	762	**762**	1	828	**828**
Storage Rooms	2	331	**662**	3	300	**900**	7	253	**1,773**	8	221	**1,769**
Stage / Wings	1	2,982	**2,982**	1	3,030	**3,030**	1	2,975	**2,975**	1	2,980	**2,980**
Ticket Booth	1	112	**112**	1	120	**120**	1	62	**62**	1	69	**69**
Dance Studio	1	1,618	**1,618**	1	1,510	**1,510**	1	1,596	**1,596**	1	1,583	**1,583**
Dance Storage	2	58	**116**	1	435	**435**	2	132	**264**	2	131	**262**
Offices	0	0	**0**	2	108	**215**	2	97	**194**	2	92	**183**
Music			**6,866**			**6,965**			**7,595**			**7,532**
Instrumental Rehearsal Room / Band	1	2,613	**2,613**	1	2,795	**2,795**	1	2,345	**2,345**	1	2,273	**2,273**
Instrumental Equipment Storage	1	328	**328**	1	465	**465**	1	549	**549**	1	568	**568**
Instrumental Repair Space	1	80	**80**	1	130	**130**	1	129	**129**	1	108	**108**
Uniform / Robe Storage	1	193	**193**	1	215	**215**	1	257	**257**	1	304	**304**
Choral Rehearsal Room	1	1,652	**1,652**	1	1,645	**1,645**	1	1,630	**1,630**	1	1,603	**1,603**
Choral Storage/ Workroom	1	205	**205**	1	225	**225**	0	0	**0**	0	0	**0**
Practice Rooms	4	78	**312**	4	91	**365**	4	82	**328**	4	81	**324**
Electronics Laboratory	1	588	**588**	1	665	**665**	1	722	**722**	1	714	**714**
Ensemble Room (incl. storage.)	1	577	**577**	1	460	**460**	1	1,311	**1,311**	1	1,318	**1,318**
General Storage	1	78	**78**	0	0	**0**	0	0	**0**	0	0	**0**
Music Storage	1	240	**240**	0	0	**0**	1	131	**131**	1	130	**130**
Office	0	0	**0**	0	0	**0**	1	193	**193**	1	190	**190**
Art			**4,506**			**4,750**			**4,664**			**4,672**
General / Visual Art Studio / Kiln	2	1,250	**2,499**	2	1,005	**2,010**	2	992	**1,983**	2	997	**1,993**
Central Storage	1	517	**517**	2	290	**580**	2	311	**622**	2	311	**622**
Photo Studio	1	378	**378**	1	995	**995**	1	992	**992**	1	997	**997**
Digital Lab / Darkroom	1	328	**328**	1	440	**440**	1	411	**411**	1	408	**408**
Sculpture	1	784	**784**	1	505	**505**	1	441	**441**	1	437	**437**
Teacher Planning	0	0	**0**	1	220	**220**	1	215	**215**	1	215	**215**
Custodial Area			**2,435**			**2,180**			**2,738**			**2,657**
Building Service Manager's Office	1	194	**194**	1	120	**120**	1	207	**207**	1	204	**204**
Shop & Storage	1	514	**514**	1	410	**410**	1	275	**275**	1	275	**275**
Custodial Closets	6	47	**284**	9	58	**520**	8	85	**678**	8	85	**677**
General School Storage	8	129	**1,032**	4	140	**560**	7	171	**1,194**	7	157	**1,099**
Outside Storage (Mower Room)	1	224	**224**	1	390	**390**	1	219	**219**	1	219	**219**
Locker Room / Shower / Toilet	3	62	**187**	3	60	**180**	3	55	**165**	3	61	**183**

Space Analysis

Net areas indicated in square feet.

	HS Prototype Design (Marriotts Ridge)			HS #13 Schematic Design			HS#13 Design Development			HS#13 Construction Document		
	#	S.F.	Total	#	S.F.	Total	#	S.F.	Total	#	S.F.	Total
Food Services			**3,529**			**3,285**			**3,502**			**3,453**
Can Wash	1	64	**64**	1	90	**90**	1	73	**73**	1	73	**73**
Dry Storage Room	1	317	**317**	1	290	**290**	1	365	**365**	1	319	**319**
Custodial Closet / Laundry	1	80	**80**	1	70	**70**	1	63	**63**	1	54	**54**
Refrigerator / Freezer	2	189	**378**	2	233	**465**	2	228	**456**	2	227	**453**
Office	1	128	**128**	1	115	**115**	1	84	**84**	1	77	**77**
Locker Room / Toilet	1	119	**119**	2	108	**215**	2	64	**127**	2	65	**129**
Dishwashing Area	1	265	**265**	1	225	**225**	1	182	**182**	1	191	**191**
Kitchen & Serving (incl. A la Carte)	1	2,178	**2,178**	1	1,815	**1,815**	1	2,152	**2,152**	1	2,157	**2,157**
Academic Life Skills Program			**611**			**0**			**0**			**0**
JROTC			**2,433**			**0**			**0**			**0**

Base Bid - Space Analysis Summary

	HS Prototype Design (Marriotts Ridge)	HS #13 Schematic Design	HS#13 Design Development	HS#13 Construction Document
Total Programmed Net Square Footage	**164,353**	**173,820**	**184,342**	**183,784**
Gross Area Factor (Walls, Circulation, Toilets, Mech./ Elec. Room, Data Closets, etc.) Efficiency = Net / Gross	92,942 **64%**	93,920 **65%**	102,663 **64%**	104,020 **64%**
Gross Area Total - Base Bid	**257,295**	**267,740**	**287,005**	**287,804**

Child Development Center - Alternate	**Alternate**				**1,357**
CDC - Preschool (Child Development)	See Page 24 for Square Footages	See Page 24 for Square Footages	See Page 24 for Square Footages	1 1,357	**1,357**
Gross Area Total	**257,295**	**267,740**	**287,005**		**289,161**

Architectural Character

High School #13 will be located within the community of Jessup, Maryland.

The new school is a three-story building design with masonry load-bearing walls and structural steel frame. Two roof mounted insulated light transmitting panel systems will bring daylighting to the core interior spaces.

The building elevations will be a combination of masonry veneer and insulated architectural metal wall panels.

Front North-Facing Elevation

Side West-Facing Elevation

Rear South-Facing Elevation

Side East-Facing Elevation

Interior Views

Views of a typical Classroom

Views of a typical Corridor

Views into the Cafeteria

Views into Gymnasium

Construction Document Phase
Construction Cost Estimate

New Construction - High School #13

School Site Work	$	17,935,160
School Building	$	86,050,281
School Construction Cost Total	**$**	**103,985,441**
New Public Road to connect to County Project	$	2,854,600
Temporary Access Road to avoid County Project Construction	$	450,000
Reforestation required by County Land Agreement	$	642,000
Total Construction Costs incurred by County Land Agreement	**$**	**3,946,600**
Total Cost of High School #13 Project	**$**	**107,932,041**

Notes:

- Construction cost was prepared by the construction manager, Oak Contracting and assumes that bids will be received in December 2019.
- Estimate does not include a project contingency.
- Estimate assumes wage-rate pricing.
- Construction cost includes cost of food service equipment.
- Estimate includes a cost contingency for constructing a USGBC 'Silver' certified design per version 4.0 LEED for Schools.
- The following list of alternates being proposed for the school:

Construction of Child Development Center	$	430,467
Construction of main entrance canopy	$	168,950
Ceramic Tile on wet walls in bathrooms in lieu of painted block	$	169,290
Quartz Tile on classroom floors in lieu of vinyl composition tile (VCT)	$	180,300
Terrazzo flooring in corridors and cafeteria in lieu of VCT	$	2,131,600
Pre-finished aluminum storefront frames in commons area in lieu of painted hollow metal	$	786,175
Pre-finished wood grain metal doors in lieu of painted hollow metal	$	287,500
Sod in lieu of seeding	$	61,190
Total Cost of All Alternates	**$**	**4,215,472**