

**BOARD OF EDUCATION OF HOWARD COUNTY
MEETING AGENDA ITEM**

TITLE: Patuxent Valley Middle School Design Development Report **DATE:** April 24, 2014

PRESENTER(S): Mr. Bruce Gist, Director of School Construction

Mr. Rod Frey, Senior Project Manager, Gilbert Architects

OVERVIEW:

The attached design development brochure describes the general scope of work for Patuxent Valley Middle School. The school has not had any significant renovations since it opened in 1989 and as a result, many of the building components are reaching the end of their useful life. This project will be a complete systemic renovation of the existing building including new electrical, mechanical, roofing, and technology systems, and will bring the building into standards dictated by the Howard County Public School System Guideline Manual for Renovations and Modernizations of Existing Schools. Reconfigured teaching stations and interior spaces, improved building circulation and accessibility, as well as new interior finishes will also be included. To support the renovation, additions will be built to house a new first floor administrative suite with a secure entrance vestibule, a COMAR compliant health suite and new electrical and mechanical rooms.

Some of the updates that have taken place since the schematic design report include; the intermediate distribution frame rooms have been incorporated into the administrative suite; an existing dust collection room has been converted into a recycling center; additional storage rooms have been created; and the size of the special education conference room has been increased.

RECOMMENDATION/FUTURE DIRECTION:

It is recommended that the schematic design report for Patuxent Valley Middle School be approved as submitted.

**Submitted
by:**

Bruce Gist
Director, School Construction

**Approval/
Concurrence:**

Renee A. Foose, Ed.D.
Superintendent

Susan C. Mascaro
Chief of Staff

Ken Roey
Chief Facilities Officer



Additions and Renovations to

Patuxent Valley Middle School

Howard County Public School System

Design Development Report

April 24, 2014



Design Development Report

Additions and Renovations to Patuxent Valley Middle School

FOR THE BOARD OF EDUCATION OF HOWARD COUNTY PUBLIC SCHOOL SYSTEM:

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Director, School Construction Bruce Gist



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Planning Advisory Committee

Howard County Public School System

Ken Roey	HCPSS, Chief Facilities Officer
Bruce Gist.....	HCPSS, Director, School Construction
Dan Keiser	HCPSS, Program Manager, School Construction
Scott Washington.....	HCPSS, Manager of Design & Preconstruction Services, School Construction
Wayne Crosby	HCPSS, Director, School Facilities
Ron Miller	HCPSS, Manager, Safety, Environment, & Risk Management
Betsy Zentz.....	HCPSS, Interagency Specialist, School Construction
Edmund Evans.....	HCPSS, Facility Renovation Liaison, School Facilities
Jeff Klenk	HCPSS, Environmental Specialist, Safety, Environment & Risk Management
Chad Porter.....	HCPSS, Construction Project Manager, School Construction
Robert Motley	Patuxent Valley Middle School, Principal
Debra Bellamy.....	Patuxent Valley Middle School, Special Education Teacher
Pamela Pruitt	Patuxent Valley Middle School, World Languages Teacher
Anne Gauthier	Patuxent Valley Middle School, Science Teacher
Ashley Harig	Patuxent Valley Middle School, Counselor
Michael McCroey.....	Patuxent Valley Middle School, Social Studies Teacher
Jessica Pistoius	Patuxent Valley Middle School, Media Specialist
Springer Goyne.....	Patuxent Valley Middle School, Parent
Lizzette Goyne	Patuxent Valley Middle School, Parent
Reggie Robinson	Patuxent Valley Middle School, Parent
Jennifer Ransaw Smith.....	Patuxent Valley Middle School, PTA/Parent
Gloria Mikolajczyk.....	MSDE School Facilities, Architect Supervisor

Architects

Thomas W. Gilbert, AIA.....	Gilbert Architects Inc., President
Danielle V. Hoffer, AIA	Gilbert Architects Inc., Vice President, Principal-in-Charge
Rod Frey, Jr., Assoc. AIA.....	Gilbert Architects Inc., Senior Project Manager
Stephen J. Hudson, PE, CPD	James Posey Associates, Inc., Chairman
James R. Graf, LEED AP, LC ...	James Posey Associates, Inc.

Construction Manager

Jan Sadowski	Dustin Construction, Inc., Vice President
Sarah Cummings	Dustin Construction, Inc., Project Executive

Design Development Phase Participants

Howard County Public School System

Scott Washington..... HCPSS, Manager of Design & Preconstruction Services, School Construction

Greg Connor HCPSS, Assistant Manager, Ground Services

Reny Toledo HCPSS, Assistant Manager, Network & Audio/Visual Services

Larry O’Neill..... HCPSS, Master Electrician, Electrical Shop, Building Services

Jim Kramer HCPSS, Leadman Electrical Shop, Building Services

Larry Phebus HCPSS, Master Electrician, Building Services

Chris Mayne HCPSS, HVAC Technician, Building Services

Mark Costley HCPSS, HVAC Control Specialist, Building Services

Galen Monti..... HCPSS, Boiler/Burner Specialist, Building Services

Richard Bilenki HCPSS, Master Plumber, Plumbing Department, Building Services

Olivia Claus..... HCPSS, Manager, Custodial, Building Services

Jonathan Naill..... HCPSS, Leadman Paint & Flooring, Building Services

Allen Mullinix HCPSS, Leadman General Services, Building Services

Todd McMahon HCPSS, Project Manager, Building Services

Design Team

Charles Crovo, Sr. P.E. Fisher, Collins and Carter, Inc., Civil Engineer

James R. Graf, LEED AP, LC... James A. Posey Associates, Inc., Electrical Engineer

Richard Hichew James A. Posey Associates, Inc., HVAC Designer

Brad Davis..... James A. Posey Associates, Inc., HVAC Designer

Jan Sadowski Dustin Construction Inc., Project Manager

Rod Frey, Jr., Assoc. AIA..... Gilbert Architects Inc., Senior Project Manager

Project Description

Patuxent Valley Middle School is a 97,445 square foot, two-story building that first opened in 1989. Six modular classrooms and a connecting corridor were added to the building sometime later, making the final gross square footage of the building 104,334 gsf. Based on the findings of the HCPSS 2012–2013 Middle School Capacity update, as approved by the Board of Education, the current capacity of the school is 760. This capacity does not include the additional capacity provided by the six modular classroom units. A complete renovation of the school is being planned with systemic upgrades in compliance with the Howard County Public School System's (HCPSS) "Guidelines Manual for Renovations and Modernizations of Existing Schools." Based on these guidelines, the existing cluster teaching stations will be reconfigured into self contained classrooms with the existing operable walls being removed and replaced with full height drywall partitions. The goal is to achieve at least 750 square feet for each classroom serving Grades 6–8.

Originally the project scope included three new additions.

- The first addition consists of 2,840 square feet to the north side of the building adjacent to the existing main entrance to accommodate the relocation of the building administration offices from the second floor to the first floor and the space needed to create a COMAR compliant health suite.
- The second addition is also to the north side of the building and will be for a new 275-square-foot electrical room.
- The third addition is the new 1,400-square-foot mechanical room at the south west corner of the existing locker room. This addition will house pumps and equipment for the new mechanical system.

After further review of the schematic design cost estimates, it was determined that it was more cost effective to construct an additional classroom at the north end of the building as well as an addition on the south side of the building than to renovate the existing modular construction classrooms. These additions will replace the six existing modular classroom units (sixth grade cluster).

- The first of these two additions consists of 860 square feet on the northeast corner of the existing building. This addition will be a continuation of the administration and health suite addition and includes one classroom and the extension of an existing corridor.
- The second addition is 3,700 square feet and includes three classrooms and two small group instruction rooms added to the south face of the building.

The renovation work at Patuxent Valley Middle School will include the removal and replacement of all ceiling systems, which will allow for the replacement of the existing sprinkler system; new lighting and electrical systems; and new mechanical systems. The existing plumbing system will also be upgraded and includes constructing ADA compliant toilet rooms throughout the building. New full height drywall partitions will be constructed in the existing open plan classroom pods. Upon completion of these renovations, the entire school will be in compliance with handicapped accessibility requirements.



It is the intent that the design and construction of the additions and renovations achieve a LEED (Leadership in Energy and Environmental Design) "Certified" designation. The 2009 Edition of "LEED for Schools" 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.)

Project Facts

	Schematic Design Phase	Design Development Phase
Existing Building Square Footage		
Existing First Floor	81,000 GSF	81,000 GSF
Existing Second Floor	16,445 GSF	16,445 GSF
Existing Modular Classroom Units and connecting Corridor	6,889 GSF	6,889 GSF
Total Existing Building Square Footage	104,334 GSF	104,334 GSF
Proposed Building Square Footage		
Existing Building Square Footage	104,334 GSF	104,334 GSF
Existing Modular Classroom Units and connecting Corridor	(6,889 GSF)	(6,889 GSF)
Area of First Floor Additions	9,075 GSF	9,542 GSF
New Total Building Area with Additions	106,520 GSF	106,987 GSF

Project Schedule

Planning Meetings – Completed	December 5, 2013
Schematic Design presented to Board for review and approval	January 23, 2014
Design Development presented to Board for review and approval	April 24, 2014
Construction Documents presented to Board for review and approval	August 2014
Project out for Bids (1 Month)	October 2014
Bids Received	November 2014
Construction Starts.....	January 2015
Construction Completed.....	August 2017

Planning Process

Schematic Design Phase

The design of the additions and renovations was developed through a series of meetings with school construction staff, three planning advisory committee meetings, and one consultant coordination meeting held during November and December 2013. These meetings were very well attended and the insight, experience, and diligence of the planning advisory committee and the school construction staff were vital to the planning process.

In the course of these planning meetings, the following agenda items were discussed:

- A description of the process for planning the HCPSS school renovation projects
- The project schedule, budget, and scope
- Review of the existing site plan and the constraints which dictate expansion locations
- Review of the existing floor plan and existing conditions requiring improvements
- A detailed description of the additions required to accommodate the increased spatial needs
- Review and detailed discussion of proposed floor plans
- A brief introduction of sustainable design and the LEED process of 'Green' design & construction

The design of the additions and renovations illustrated in this report is a product of a very thorough committee process that included much discussion and resulting consensus about various aspects of the layout. The proposed design concepts began with the establishment of basic relationships of the major parts of the school and continued through the development of specific adjacencies within all areas of the plan.

Throughout the entire process, the planning advisory committee never lost sight of the fact that every design decision had to be measured against the budget. The objective was to integrate the additions with the renovations to produce a proposed design which would be as economical as possible without sacrificing responsiveness to the project's objectives.

To assist with the cost aspect of the design, the construction manager participated in the planning process from the beginning as part of the project design team.

Design Development Phase

The intent of the design development report is to illustrate the aspects of the additions and renovations to the Patuxent Valley Middle School that have changed since the presentation of the schematic design report.

Notable changes since the schematic design phase approval include the following:


- The list of participants in the design development process, found on page 4.
- The Project Facts indicated on page 8 have been updated to include the latest building square footage.
- Design development refinements are highlighted on pages 12, 15 and 16. These refinements include chases for the new mechanical system; electrical and technology closets which are required for the new power and data systems; and layout for the health suite.
- The Space Analysis on pages 19 through 22 has been updated and includes square foot areas from the schematic design phase as well as square foot areas for the design development phase.
- The Cost Estimate on page 23 has been updated by the construction manager to reflect the changes in the project as part of the design development phase.
- Sketches of individual educational and administrative areas have been developed as part of the design development phase and can be found after page 24.

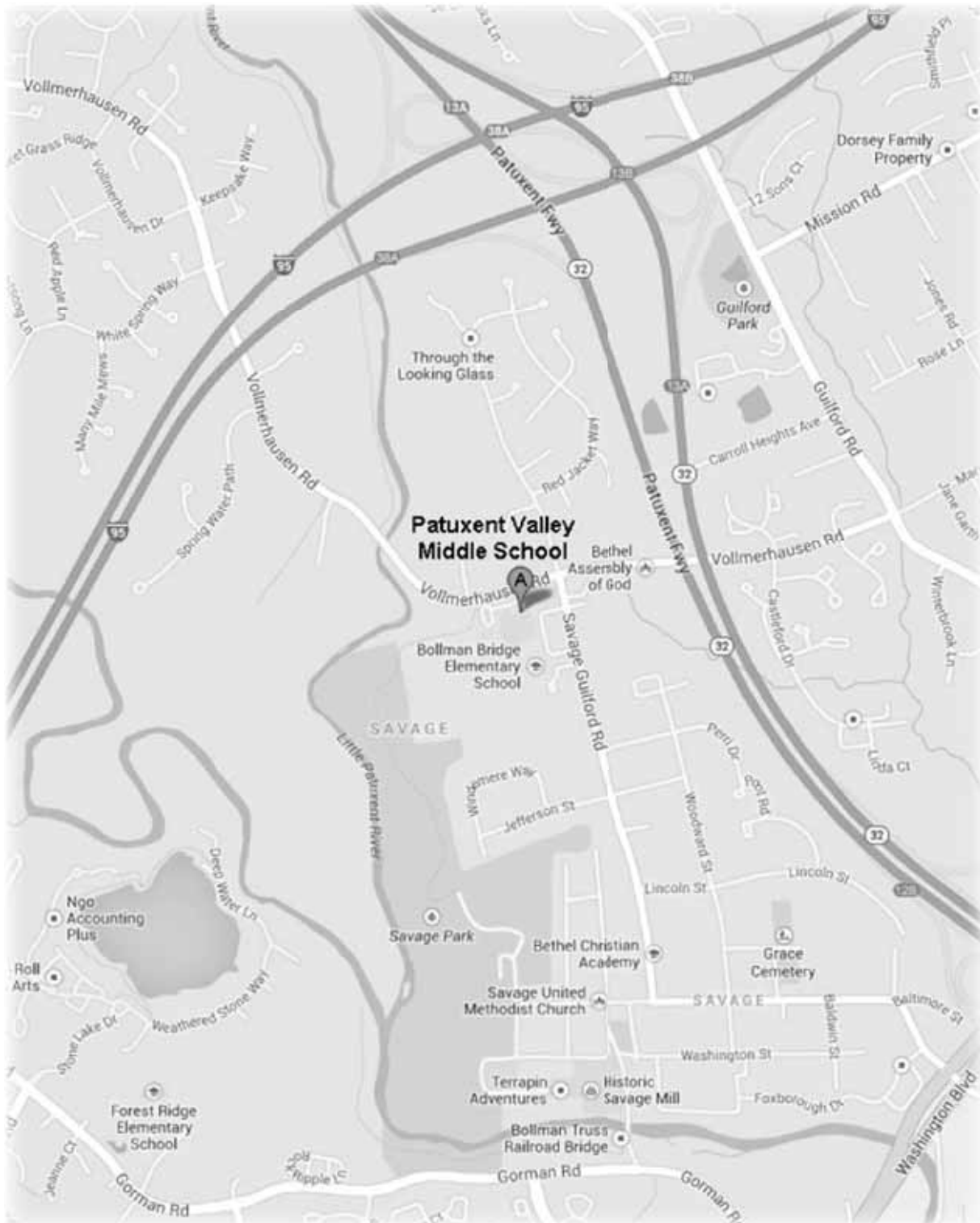
Sustainable 'Green' Design Goals

It is the intent that the design and construction of the additions and renovations for Patuxent Valley Middle School will achieve a LEED certification, making this 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, enhanced classroom acoustics, improved indoor air quality, thermal comfort, and opportunities to integrate green features into the school's curriculum.

In order to measure and compare how 'Green' a building is, USGBC, founded in 1993, has developed industry standards with design and construction rating systems and guidelines for many different building types. One such rating system is USGBC's 2009 Edition of "LEED for SCHOOLS" to which the design and construction at Patuxent Valley Middle School will closely adhere. Final LEED certification levels are based on the number of credit points obtained in the "LEED for SCHOOLS" rating system. The four levels of certification from lowest to highest are: Certified, Silver, Gold, and Platinum.

We have included an 'in progress' LEED score card which summarizes the credits most likely obtainable at this time. As the design is developed we will continue to pursue additional credits in the attempt to achieve LEED certification.

 LEED 2009 for Schools New Construction and Major Renovation		Patuxent Valley Middle School April 1, 2014	
Project Checklist			
8	11	2	Sustainable Sites Possible Points: 24
Y	N	?	
Y			Prereq 1 Construction Activity Pollution Prevention
Y			Prereq 1 Environmental Site Assessment
1			Credit 1 Site Selection 1
4			Credit 2 Development Density and Community Connectivity 4
1			Credit 3 Brownfield Redevelopment 1
1			Credit 4.1 Alternative Transportation—Public Transportation Access 4
1			Credit 4.2 Alternative Transportation—Bicycle Storage and Changing Rooms 1
2			Credit 4.3 Alternative Transportation—Low-Emitting and Fuel-Efficient Vehicles 2
2			Credit 4.4 Alternative Transportation—Parking Capacity 2
1			Credit 5.1 Site Development—Protect or Restore Habitat 1
1			Credit 5.2 Site Development—Maximize Open Space 1
1			Credit 6.1 Stormwater Design—Quantity Control 1
1			Credit 6.2 Stormwater Design—Quality Control 1
1			Credit 7.1 Heat Island Effect—Non-roof 1
1			Credit 7.2 Heat Island Effect—Roof 1
1			Credit 8 Light Pollution Reduction 1
1			Credit 9 Site Master Plan 1
1			Credit 10 Joint Use of Facilities 1
2	9		Water Efficiency Possible Points: 11
Y			Prereq 1 Water Use Reduction—20% Reduction
4			Credit 1 Water Efficient Landscaping 2 to 4
2			Credit 2 Innovative Wastewater Technologies 2
2			Credit 3 Water Use Reduction 2 to 4
1			Credit 3 Process Water Use Reduction 1
6	25	2	Energy and Atmosphere Possible Points: 33
Y			Prereq 1 Fundamental Commissioning of Building Energy Systems
Y			Prereq 2 Minimum Energy Performance
Y			Prereq 3 Fundamental Refrigerant Management
4	14	1	Credit 1 Optimize Energy Performance 1 to 19
7			Credit 2 On-Site Renewable Energy 1 to 7
2			Credit 3 Enhanced Commissioning 2
1			Credit 4 Enhanced Refrigerant Management 1
2			Credit 5 Measurement and Verification 2
2			Credit 6 Green Power 2
8	4	1	Materials and Resources Possible Points: 13
Y			Prereq 1 Storage and Collection of Recyclables
2			Credit 1.1 Building Reuse—Maintain Existing Walls, Floors, and Roof 1 to 2
1			Credit 1.2 Building Reuse—Maintain 50% of Interior Non-Structural Elements 1
2			Credit 2 Construction Waste Management 1 to 2
Y			Prereq 1 Minimum Indoor Air Quality Performance
Y			Prereq 2 Environmental Tobacco Smoke (ETS) Control
Y			Prereq 3 Minimum Acoustical Performance
1			Credit 1 Outdoor Air Delivery Monitoring 1
1			Credit 2 Increased Ventilation 1
1			Credit 3.1 Construction IAQ Management Plan—During Construction 1
1			Credit 3.2 Construction IAQ Management Plan—Before Occupancy 1
3	1		Credit 4 Low-Emitting Materials 1 to 4
1			Credit 5 Indoor Chemical and Pollutant Source Control 1
1			Credit 6.1 Controllability of Systems—Lighting 1
1			Credit 6.2 Controllability of Systems—Thermal Comfort 1
1			Credit 7.1 Thermal Comfort—Design 1
1			Credit 7.2 Thermal Comfort—Verification 1
3			Credit 8.1 Daylight and Views—Daylight 1 to 3
1			Credit 8.2 Daylight and Views—Views 1
1			Credit 9 Enhanced Acoustical Performance 1
1			Credit 10 Mold Prevention 1
1		4	Innovation and Design Process Possible Points: 6
1			Credit 1.1 Innovation in Design: Low Mercury Lamps 1
1			Credit 1.2 Innovation in Design: Pilot 22 - Interior Lighting Quality 1
1			Credit 1.3 Innovation in Design: Education 1
1			Credit 1.4 Innovation in Design: Specific Title 1
1			Credit 2 LEED Accredited Professional 1
1			Credit 3 The School as a Teaching Tool 1
1			Regional Priority Credits Possible Points: 4
1			Credit 1.1 Regional Priority: Specific Credit 1
1			Credit 1.2 Regional Priority: Specific Credit 1
1			Credit 1.3 Regional Priority: Specific Credit 1
1			Credit 1.4 Regional Priority: Specific Credit 1
34	57	12	Total Possible Points: 110
Certified 40 to 49 points Silver 50 to 59 points Gold 60 to 79 points Platinum 80 to 110			

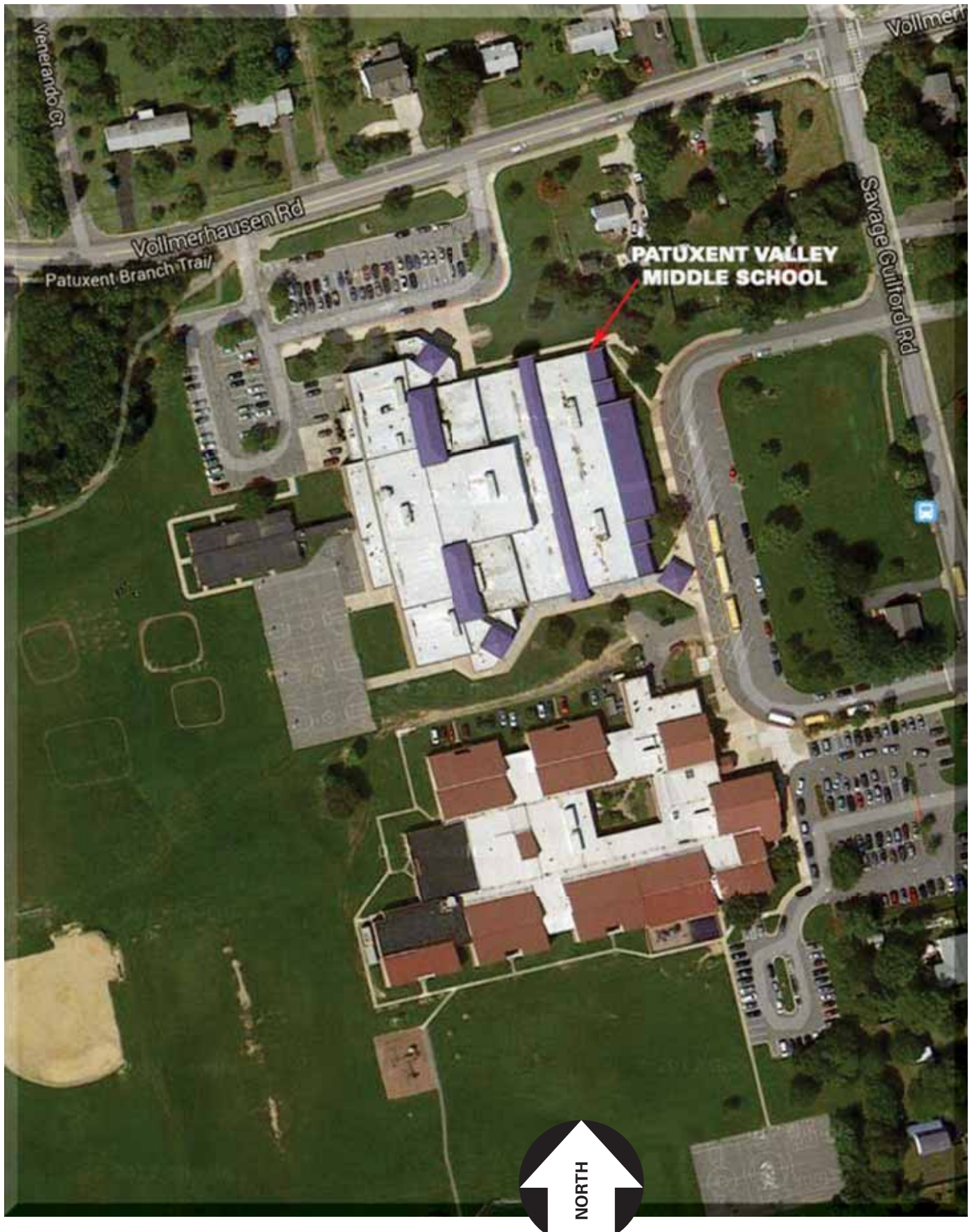


Vicinity Map

The existing Patuxent Valley Middle School is located on Vollmerhausen Road in Jessup, Maryland and is approximately three and a half miles from Washington Boulevard (Route US-1).

This site was originally developed for the school in 1988 and is 16.95 acres.

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



Aerial Site Image

Existing Site Plan

Key features of the existing site plan are listed below and identified by circled numbers on the adjacent plan.

1. Existing staff and visitor parking.
2. Existing bus drop-off.
3. Existing modular classrooms and corridor connecting them to the main building.
4. Existing geothermal field for Bollman Bridge Elementary School.
5. Existing paved play area.

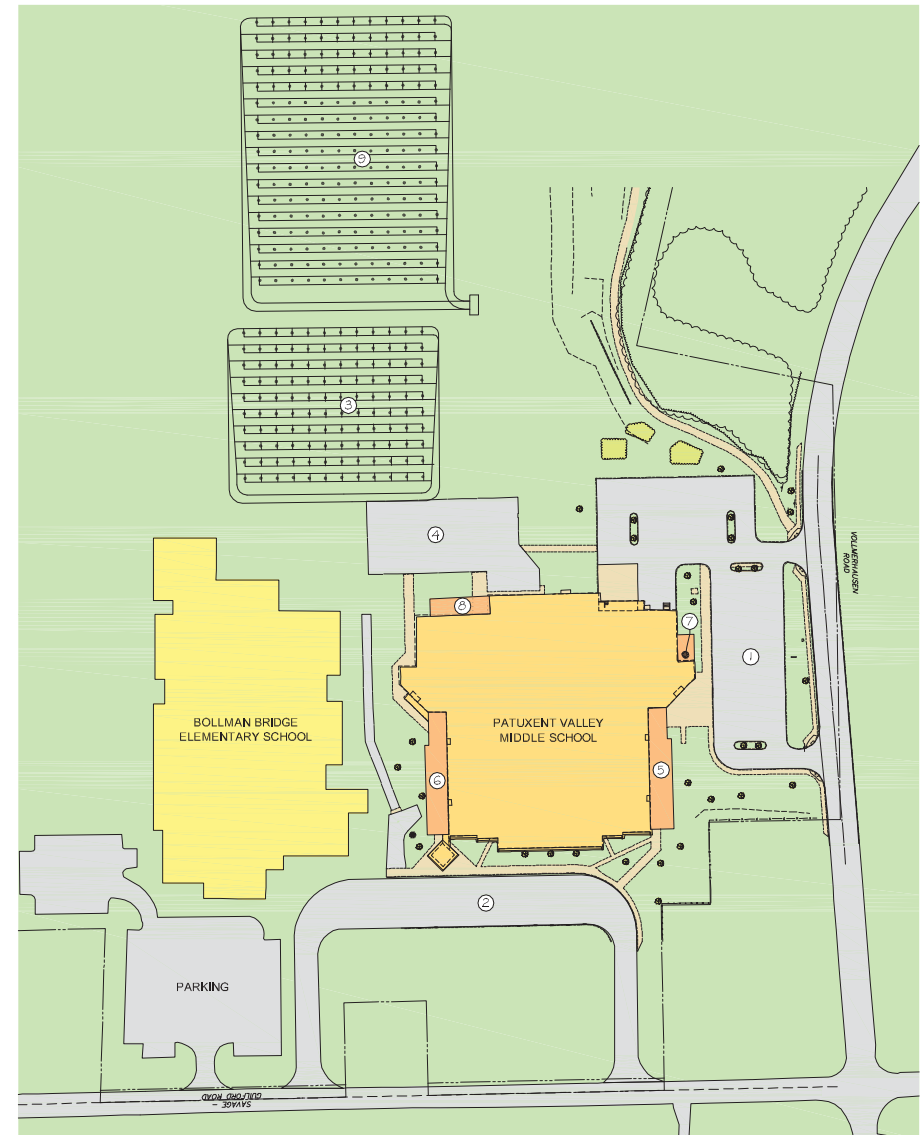


Existing Site Plan

Proposed Site Plan

Key features of the proposed site plan are listed below and identified by circled numbers on the adjacent plan.

1. Existing staff and visitor parking.
2. Existing bus drop-off.
3. Existing geothermal field for Bollman Bridge Elementary School mechanical system.
4. Existing paved play area.
5. An addition to allow for the relocation and reconfiguration of the administrative suite to the first floor of the building which will help to improve visual security and access control of the main entrance. This addition will also include a reconfigured and expanded health suite as needed for compliance with the current COMAR regulations.
6. An addition of three classrooms. This is needed due to the removal of the six existing modular classroom units (sixth grade pod).
7. A new electrical room will be constructed to provide the needed space for the replacement of electrical units that have reached the limit of their useable life expectancy.
8. A new mechanical room will be provided to house the pumps for the geothermal HVAC system.
9. New geothermal field for Patuxent Valley Middle School mechanical system.



Proposed Site Plan

Existing First Floor Plan

Key features of the existing floor plan are listed below and identified by circled numbers on the adjacent plan.

1. Almost all of the existing teaching stations are in clusters of three to four areas separated by operable partitions. This makes the containment of noise transfer difficult, which allows for disruption between the learning stations. While natural daylight is provided in most of the teaching stations, improper orientation of the clerestory windows in teaching stations without grade level windows minimizes the benefits of the natural daylight.
2. The health suite is undersized and does not comply with current COMAR regulations.
3. Most existing student toilet rooms are not handicapped accessible.
4. Staff workrooms and toilet facilities are not conveniently located to classroom areas.



Existing First Floor Plan

Existing Second Floor Plan

Key features of the existing floor plan are listed below and identified by circled numbers on the adjacent plan.

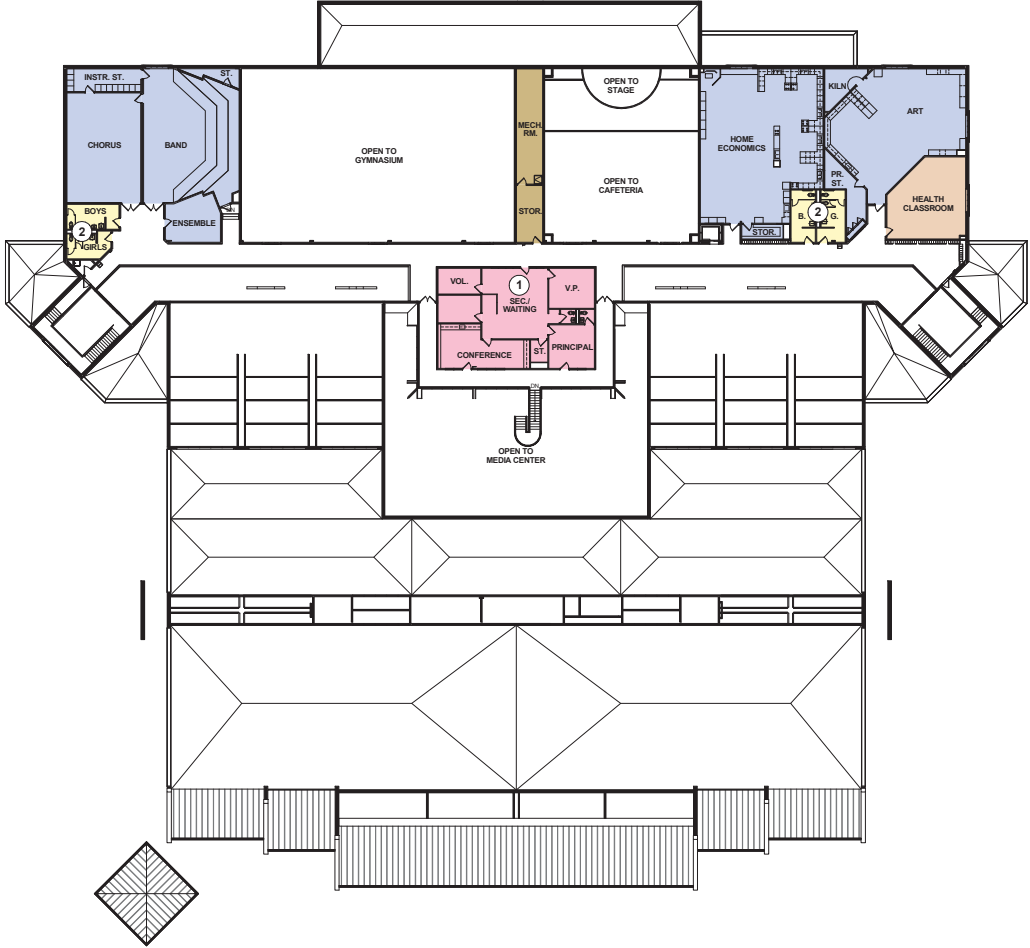
- 1. The existing administrative suite is of adequate size, but its current location on the second floor only allows for limited vision of the main entrance and bus loop.
- 2. Most existing student toilet rooms are not handicapped accessible

COLOR LEGEND

- ADMINISTRATIVE
- ARTS & TECHNOLOGY
- BUILDING SERVICES
- CENTRAL SUPPORT
- CLASSROOM (GRADES 6-8)

FLOOR AREAS

FIRST FLOOR -	81,000 S.F.
SECOND FLOOR -	16,445 S.F.
RELOCATABLE	
CLASSROOMS -	6,889 S.F.
TOTAL BUILDING -	104,334 S.F.



Existing Second Floor Plan

Proposed First Floor Plan

Key features of the proposed first floor plan from the schematic design phase are listed below and identified by circled numbers on the adjacent plan.

1. An addition to allow for the relocation and reconfiguration of the administrative suite to the first floor of the building which will help to improve visual security and access control of the main entrance. This addition will also include a reconfigured and expanded health suite as needed to comply with the current COMAR regulations.
2. A new mechanical room will be provided to house the pumps for the geothermal HVAC system. The geothermal HVAC system is a key factor in the building obtaining a LEED Certified status.
3. A new electrical room will be constructed to provide the needed space for the replacement of electrical units that have reached the limit of their useable life expectancy.
4. Remove existing operable partitions and construct permanent walls in their place.
5. Existing public toilet rooms will be reconstructed for ADA compliance.
6. The existing mechanical, electrical, and plumbing infrastructure will be renewed per the HCPSS renovation guidelines to achieve another 25-year life span for the major building systems.
7. The removal of the six existing modular classroom units (sixth grade pod) and the replacement with permanent construction which will accommodate the same usage.

Refinements to the first floor plan from the design development phase are listed below and identified by letters in hexagons on the adjacent plan.

- The proposed square footage listed under the schematic design phase has been revised to reflect the refinements to the program spaces.
- The new health suite has been laid out.
- IDF rooms have been incorporated into the layout for the administrative complex and the waiting area adjacent to the speech and psychologist offices.
- The size of the new electrical room was increased to accommodate the installation of the new electrical panels that need to be in place due to the phasing of the construction.
- The size of the emergency generator corral has been established.
- Return air chases have been provided where needed in teaching stations.
- The size of the new mechanical room was increased to accommodate the relocation of the main water and fire protection system lines.
- Converted the existing dust collection room into the recycling center for the building. A storage and collection area for recyclables is a prerequisite for LEED projects.
- Created book storage rooms in close proximity to the seventh and eighth grade classrooms.

COLOR LEGEND

- ADMINISTRATIVE
- ARTS & TECHNOLOGY
- BUILDING SERVICES
- CENTRAL SUPPORT
- CLASSROOM (GRADES 6-8)
- SCIENCE CLASSROOMS/ LABS
- SPECIAL EDUCATION

FLOOR AREAS
 FIRST FLOOR - 81,000 S.F.
 SECOND FLOOR - 16,445 S.F.
 ADDITIONS - 9,542 S.F.
 TOTAL BUILDING - 106,987 S.F.



Proposed First Floor Plan

Proposed Second Floor Plan

Key features of the proposed second floor plan from the schematic design phase are listed below and identified by circled numbers on the adjacent plan.

1. Reconfiguration of the former administrative suite into instructional and planning spaces for the special education curriculum.
2. Existing public toilet rooms will be reconstructed for ADA compliance
3. The existing mechanical, electrical, and plumbing infrastructure will be renewed per the HCPSS renovation guidelines to achieve another twenty-five year life span for the major building systems.

Refinements to the second floor plan from the design development phase are listed below and identified by letters in hexagons on the adjacent plan.

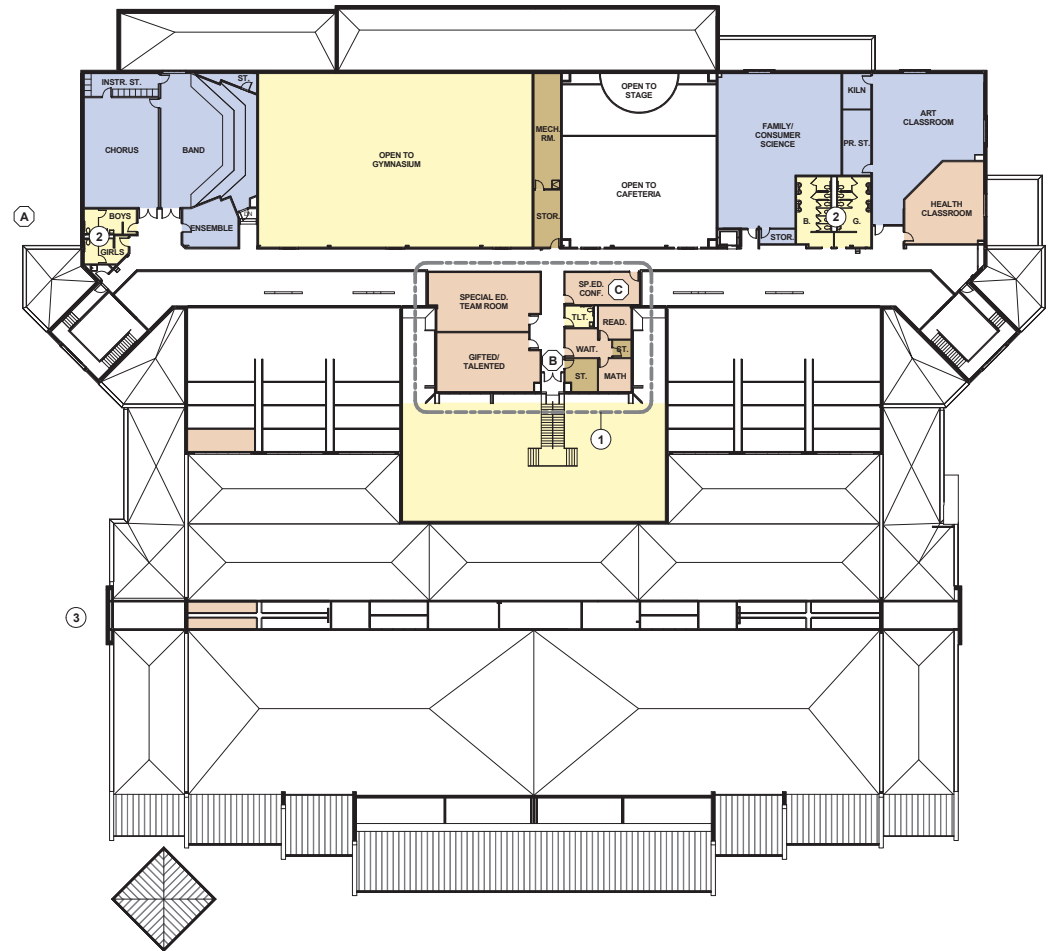
- The proposed square footage listed under the schematic design phase has been revised to reflect the refinements to the program spaces.
- Inserted doors in the corridor that leads from the special education support areas to the new stairs down to the library. These doors will complete the fire rated construction that is required to separate the second floor from the first floor.
- The size of the special education conference room was increased to be in accordance with the size noted in the renovation guidelines.

COLOR LEGEND

ARTS & TECHNOLOGY
BUILDING SERVICES
CENTRAL SUPPORT
CLASSROOM (GRADES 6-8)
SCIENCE CLASSROOMS/ LABS

FLOOR AREAS

FIRST FLOOR -	81,000 S.F.
SECOND FLOOR -	16,445 S.F.
ADDITIONS -	9,542 S.F.
TOTAL BUILDING -	106,987 S.F.



Proposed Second Floor Plan

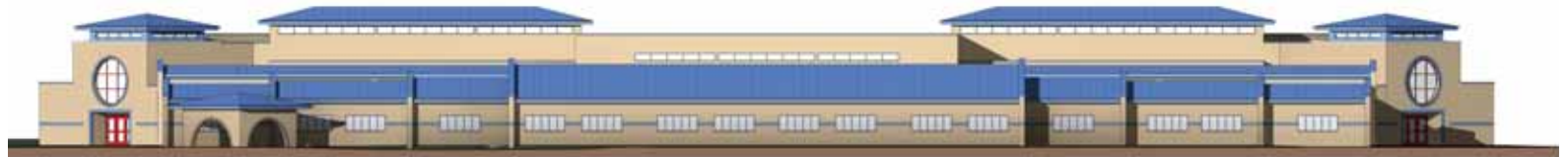
Exterior Elevations and Building Changes

With all of the changes that will be taking place within the Patuxent Valley Middle School, it is appropriate that the community see some changes on the outside that will reflect the beginning of a new age for a school that has been a very important part of the community for the last 25 years.

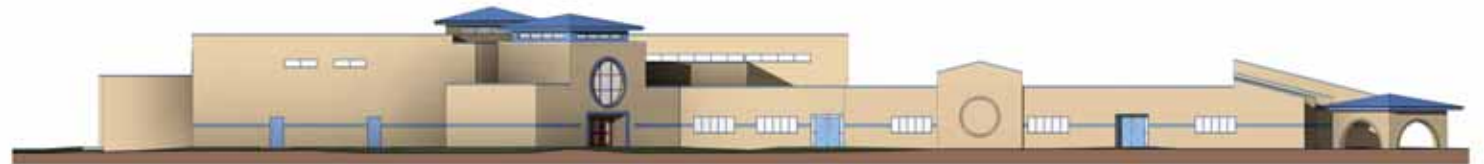
Indicated on the following page, the first floor additions for the building that include administration office and health suite, classrooms, and the new mechanical and electrical rooms, all of which are to be part of the base bid, are designed to transition seamlessly between the existing building construction and the new work.



NORTH ELEVATION



EAST ELEVATION



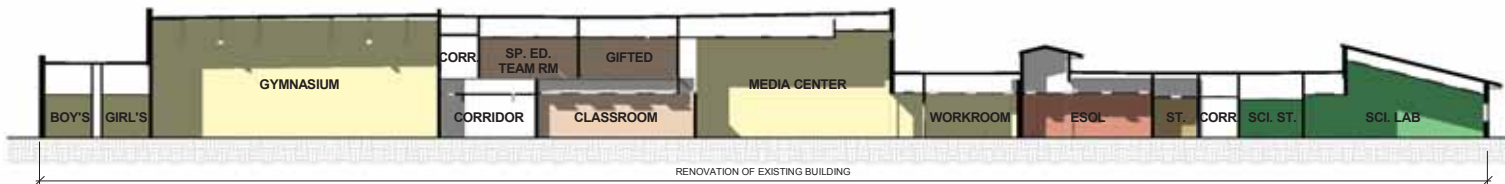
SOUTH ELEVATION



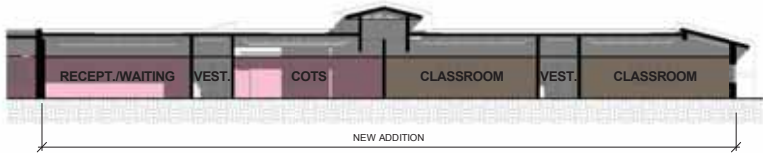
WEST ELEVATION

EXTERIOR ELEVATIONS

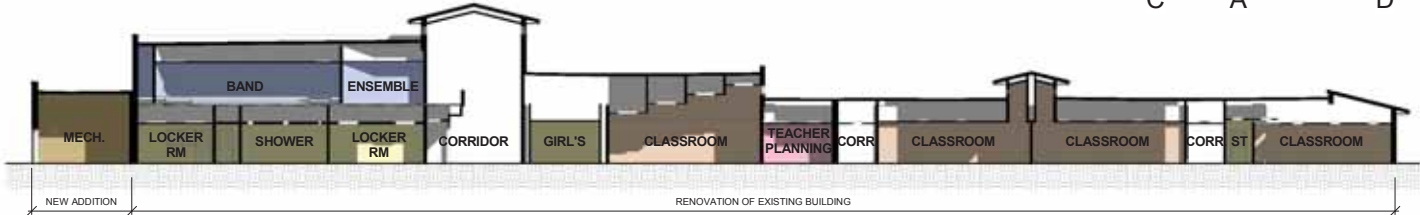
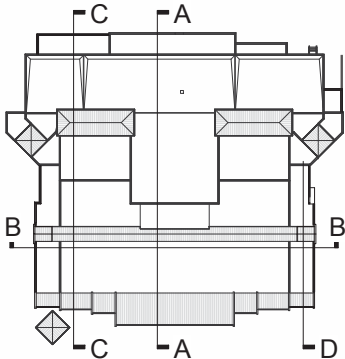
Building Sections



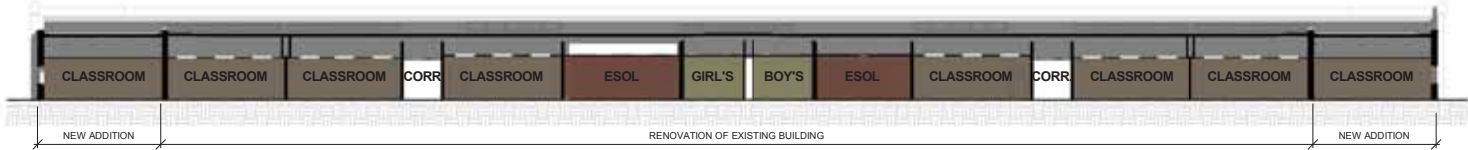
BUILDING SECTION A-A



BUILDING SECTION B-B



BUILDING SECTION C-C



BUILDING SECTION D-D

BUILDING SECTIONS

Patuxent Valley Middle School

Proposed Space Analysis

Net areas indicated in square feet.

ACTIVITY/PROGRAM	Middle School Prototype		Patuxent Valley Middle School SD Phase		DD Phase	
	AREAS	TOTAL NET	AREAS	TOTAL NET	AREAS	TOTAL NET
ADMINISTRATIVE COMPLEX						
Principal's Office (incl. toilet room)	1	253	1	320	1	321
Assistant Principal's Office	1	180	1	171	1	162
Conference Room	1	193	1	278	1	278
Workroom (incl. 2 storage rooms)	1	447	1	584	1	608
Reception Area (incl. coat closet)	1	295	1	250	1	212
Volunteer/Community Room	1	157	1	140	1	61
Secretarial	1	450	1	381	1	400
Principal's Secretary	0	0	0	----	0	----
School Store	1	62	0	----	0	----
		2,037		2,124		2,042
ART						
Art Studio (incl. kiln room and storage)	1	1,579	1	1,853	1	1,868
		1,579		1,853		1,868
CAFETERIA/FOOD SERVICE						
Cafeteria	1	3,517	1	3,152	1	3,136
Stage (incl. ramp)	1	1,213	1	872	1	872
Kitchen and related spaces	1	2,405	1	2,438	1	2,438
		7,135		6,462		6,446
COMPUTER RELATED INSTRUCTION						
Computer Lab	1	717	1	777	1	765
		717		777		765
CUSTODIAL AREAS						
Custodial Office (incl. toilet room)	1	189	1	550	1	482
Work Storage Area	1	60	0	----	0	----
General School Storage	1	187	2	353	2	361
Outside Equipment Storage	1	131	1	186	1	186
Decentralized Custodial Closets	4	77	4	260	4	207
		644		1,349		1,236
WORLD LANGUAGE						
World Language (incl. closets)	1	906	2	1,548	2	1,536
		906		1,548		1,536

ACTIVITY/PROGRAM	Middle School Prototype		Patuxent Valley Middle School SD Phase		DD Phase	
	AREAS	TOTAL NET	AREAS	TOTAL NET	AREAS	TOTAL NET
GENERAL ACADEMIC AREAS						
Classrooms	17	12,821	23	18,309	23	17,884
Storage	3	368	0	----	2	460
Planning Rooms	3	1,162	0	----	1	273
Seminar Rooms	3	1,416	0	----	0	----
Second Floor Workroom	1	304	0	----	0	----
		16,071		18,309		18,617
GIFTED & TALENTED						
Gifted & Talented Resource Room	1	741	1	728	1	718
Storage	1	79	0	----	0	----
		820		728		718
GUIDANCE						
Secretarial/Reception (incl. closets)	1	384	1	250	1	276
Counselor's Offices	2	273	2	230	2	240
Psychologist	0	----	0	----	1	155
Record Storage	1	219	1	170	1	170
Conference Room	1	250	1	152	1	152
Pupil Services Office	1	109	1	115	1	120
		1,235		917		1,113
HEALTH SUITE						
Lavatories	2	113	1	125	1	64
Waiting	1	300	1	100	1	100
Cot Rooms	2	180	2	250	2	266
Walk-in Closet	1	36	0	----	1	95
Treatment/Exam	0	----	1	206	1	147
Office	1	81	1	125	1	95
		710		806		767
HEALTH EDUCATION						
Health Education Classroom	1	791	1	708	1	705
		791		708		705
FAMILY AND CONSUMER SCIENCE						
Family and Consumer Science Classroom (incl. stor.)	1	1,667	1	2,091	1	2,103
		1,667		2,091		2,103

ACTIVITY/PROGRAM	Middle School Prototype		Patuxent Valley Middle School SD Phase		DD Phase	
	AREAS	TOTAL NET	AREAS	TOTAL NET	AREAS	TOTAL NET
MEDIA CENTER						
Main Reading Room	1	3,334	1	4,355	1	4,355
Technology Resource Room	1	401	0	----	0	----
Office/Work Room	1	130	1	811	1	811
Media Production	1	339	1	310	1	310
Storage Area (incl. distribution equip.)	1	543	1	281	1	281
		4,747		5,757		5,757
MUSIC						
Choral Room	1	979	1	1,001	1	1,001
Band Room	1	1,347	1	1,453	1	1,453
Ensemble Room	1	276	1	291	1	291
Instrument Storage	1	189	1	378	1	210
Materials Storage	1	79	1	74	1	74
Teacher Planning	1	133	0	----	0	----
Practice Rooms	3	141	0	----	0	----
		3,144		3,197		3,029
PHYSICAL EDUCATION						
Gymnasium	1	5,615	1	5,852	1	5,852
Shower Areas	2	276	2	764	2	764
Lockers	2	1,148	2	1,511	2	1,511
Laundry	1	115	1	112	1	112
Storage (Large Equipment)	1	320	1	388	1	388
Storage (Small Equipment)	1	88	1	100	1	100
Storage (Towels)	2	120	2	110	2	110
Office with shower/toilet	1	262	1	171	1	171
Activity Room	1	777	0	----	0	----
Platform Storage	1	86	1	103	1	103
		8,807		9,111		9,111
SCIENCE						
Science Laboratories	5	5,597	6	6,769	4	4,726
Science Classrooms	0	---	0	----	2	1,878
Preparation Room	3	407	3	700	3	681
Storage Room	2	165	1	348	1	338
Project (Seminar) Room	2	308	0	----	0	----
		6,477		7,817		7,623

ACTIVITY/PROGRAM	Middle School Prototype		Patuxent Valley Middle School SD Phase		DD Phase	
	AREAS	TOTAL NET	AREAS	TOTAL NET	AREAS	TOTAL NET
SPECIAL EDUCATION						
Classroom & Instructional Spaces	3	1,218	11	4,372	11	4,686
Related Services Therapy (incl. stor.)	1	621	1	642	1	642
Conference Room	1	230	1	156	1	296
Storage	3	366	2	189	2	162
Handicapped Accessible Toilet	1	85	1	69	1	76
		2,520		5,428		5,862
STAFF LOUNGE						
Staff Lounge (incl. 2 toilet rooms)	1	680	1	786	1	709
		680		786		709
TECHNOLOGY EDUCATION						
Technology Laboratory	1	1,356	1	1,470	1	1,470
Production Laboratory	1	855	1	732	1	732
Storage Rooms	2	259	2	502	2	502
Audio/Visual Production Laboratory	1	108	0	----	0	----
Dust Room	0	----	0	----	1	68
Resource Room	1	72	1	112	1	112
		2,650		2,816		2,884
TOTAL NET SQUARE FOOTAGE		63,337		72,584		72,891

SPACE ANALYSIS SUMMARY

TOTAL NET SQUARE FOOTAGE	63,337	72,584	72,891
GROSS AREA FACTOR			
(Walls, Circulation, Toilets, Stairs, Mech/Elect. Rooms)			
EFFICIENCY = NET/GROSS	29,270	33,936	34,096
EFFICIENCY =	68%	68.14%	68%
GROSS AREA OF BUILDING	92,607	106,520	106,987

Construction Cost Estimate

	Schematic Design Phase	Design Development Phase
Phasing and Temporary Facilities	\$600,000	\$0
Sitework	\$240,000	\$702,350
Additions	\$1,281,714	\$2,790,123
Renovations	\$19,574,689	\$18,707,409
Total for Project	\$21,696,403	\$22,199,882

Notes

- The construction cost was prepared by the construction manager, Dustin Construction, Inc., and assumes that bids will be received in November 2014.
- Estimate includes a design development phase cost estimate contingency of +10 percent.
- Estimate assumes non-wage rate pricing (add 9 percent for wage rate).
- Estimate does not include project contingency.

Design Development

Furniture and Equipment Plans

The layouts on the following pages are the result of meetings held between the design professionals and the HCPSS staff.

These layouts, which indicate furniture and equipment arrangements, will be used as the basis for the preparation of the construction documents as they indicate the proper locations of plumbing fixtures, casework, projection screens and projectors, as well as the instructional boards required in each room.

Sketch 1Administration Suite

Sketch 2Health Suite

Sketch 3Typical Classroom – Existing Construction

Sketch 4 Typical Classroom – New Construction

Sketch 5Gifted and Talented Classroom

Sketch 6ESOL Classroom

Sketch 7Art Room

Sketch 8Family and Consumer Science Classroom

Sketch 9Computer Classroom

Sketch 10Science Laboratory



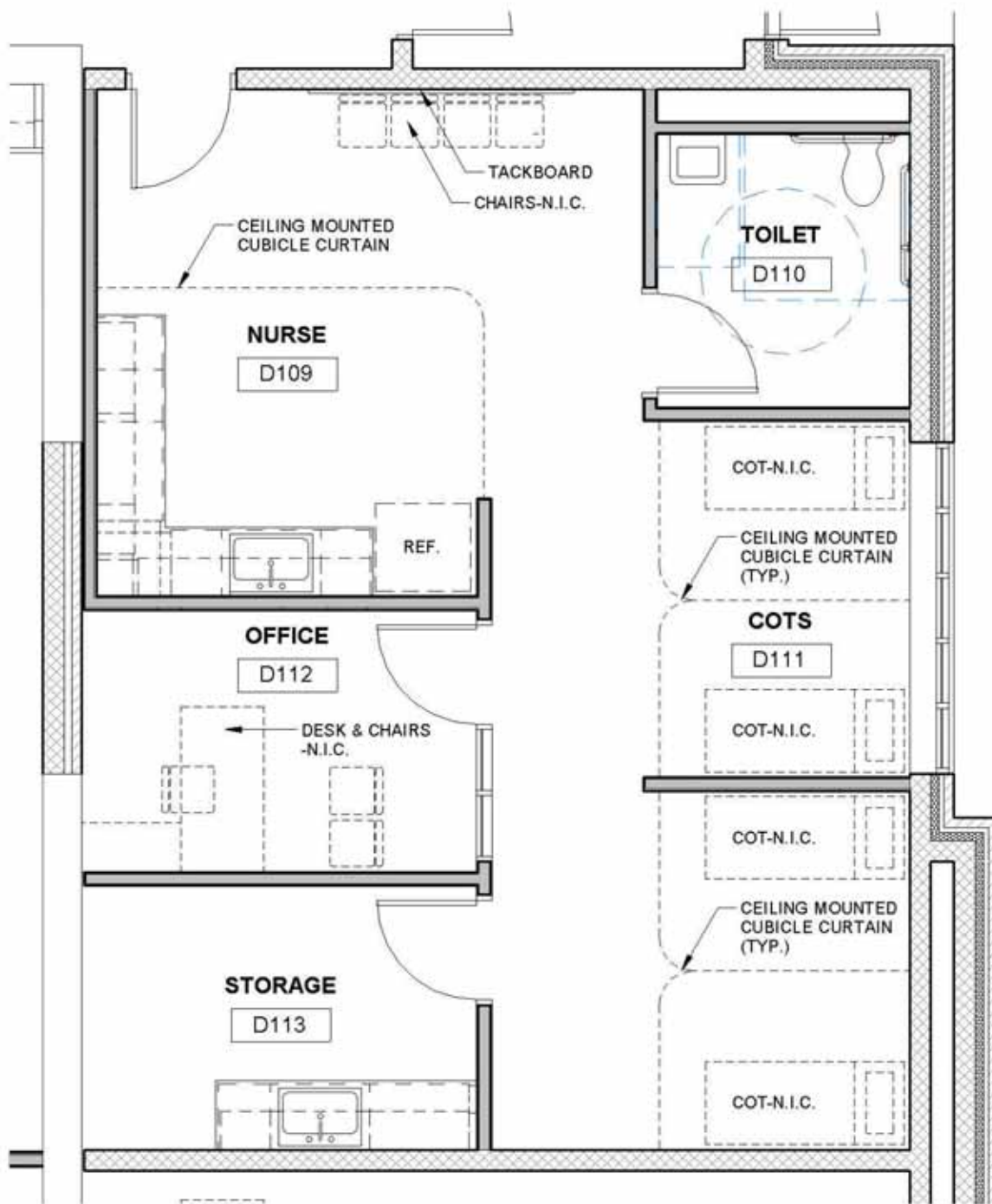
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PATUXENT VALLEY MIDDLE SCHOOL

ADMINISTRATION SUITE LAYOUT

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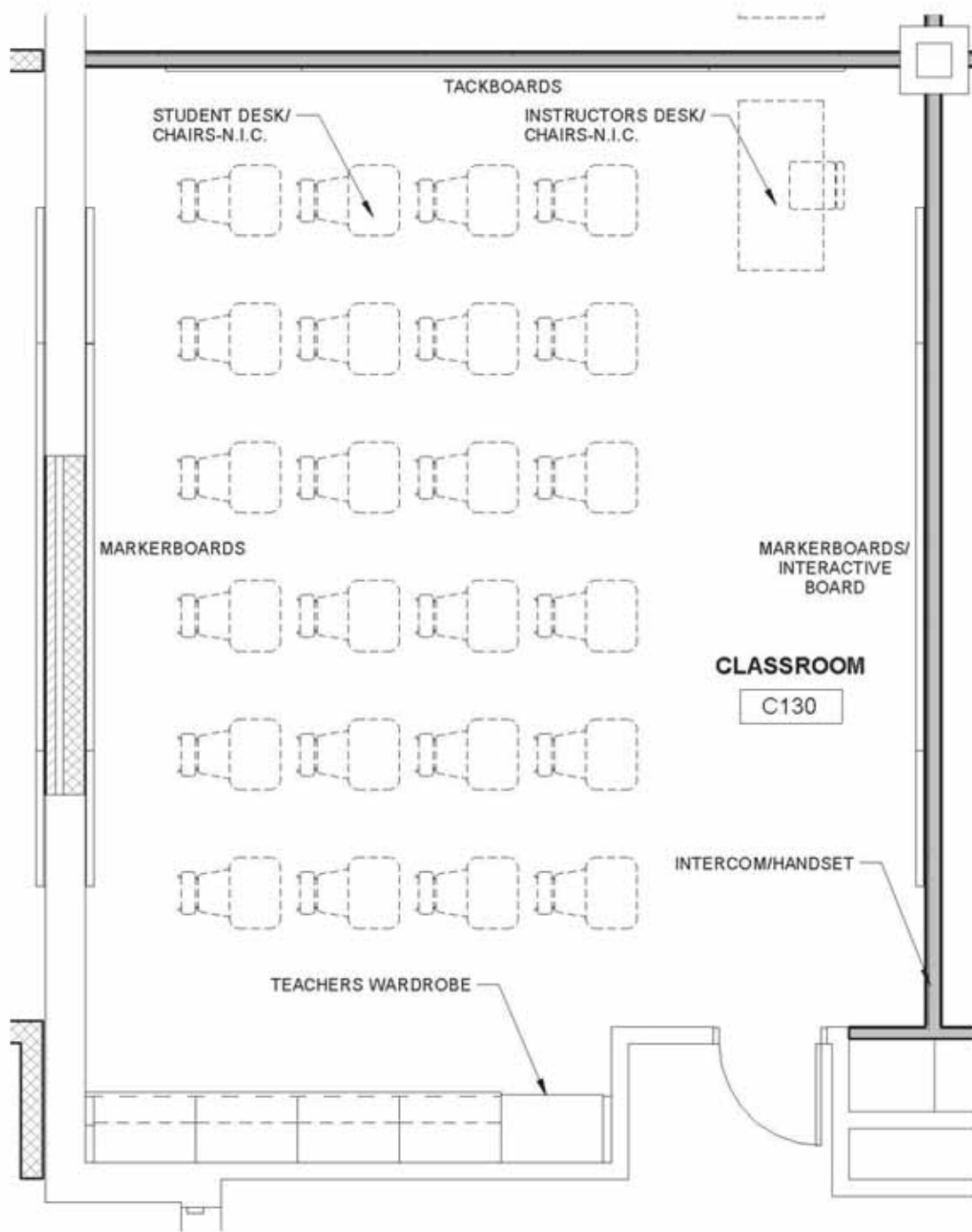
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HEALTH SUITE LAYOUT

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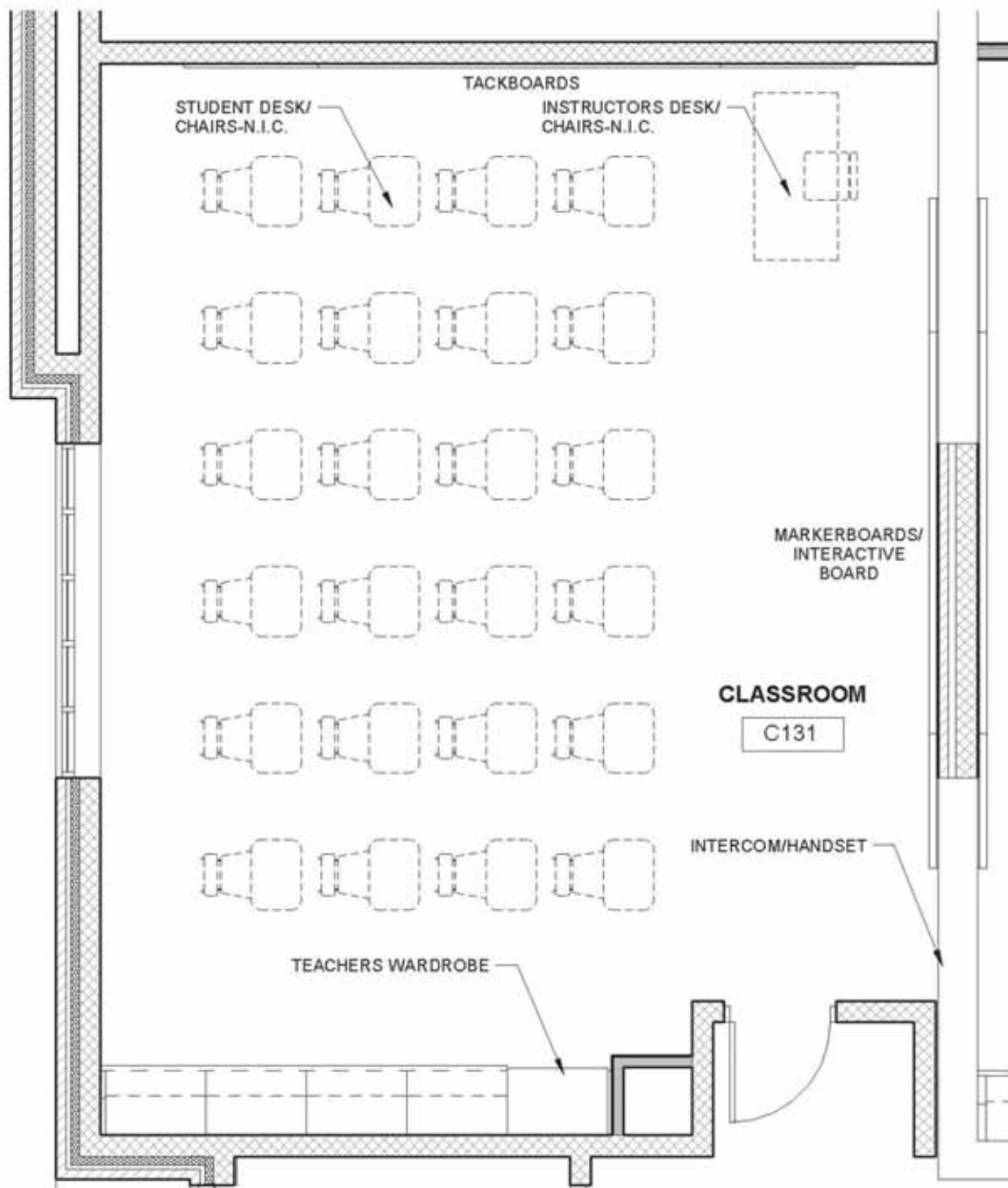
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TYPICAL CLASSROOM LAYOUT -
EXISTING CONSTRUCTION

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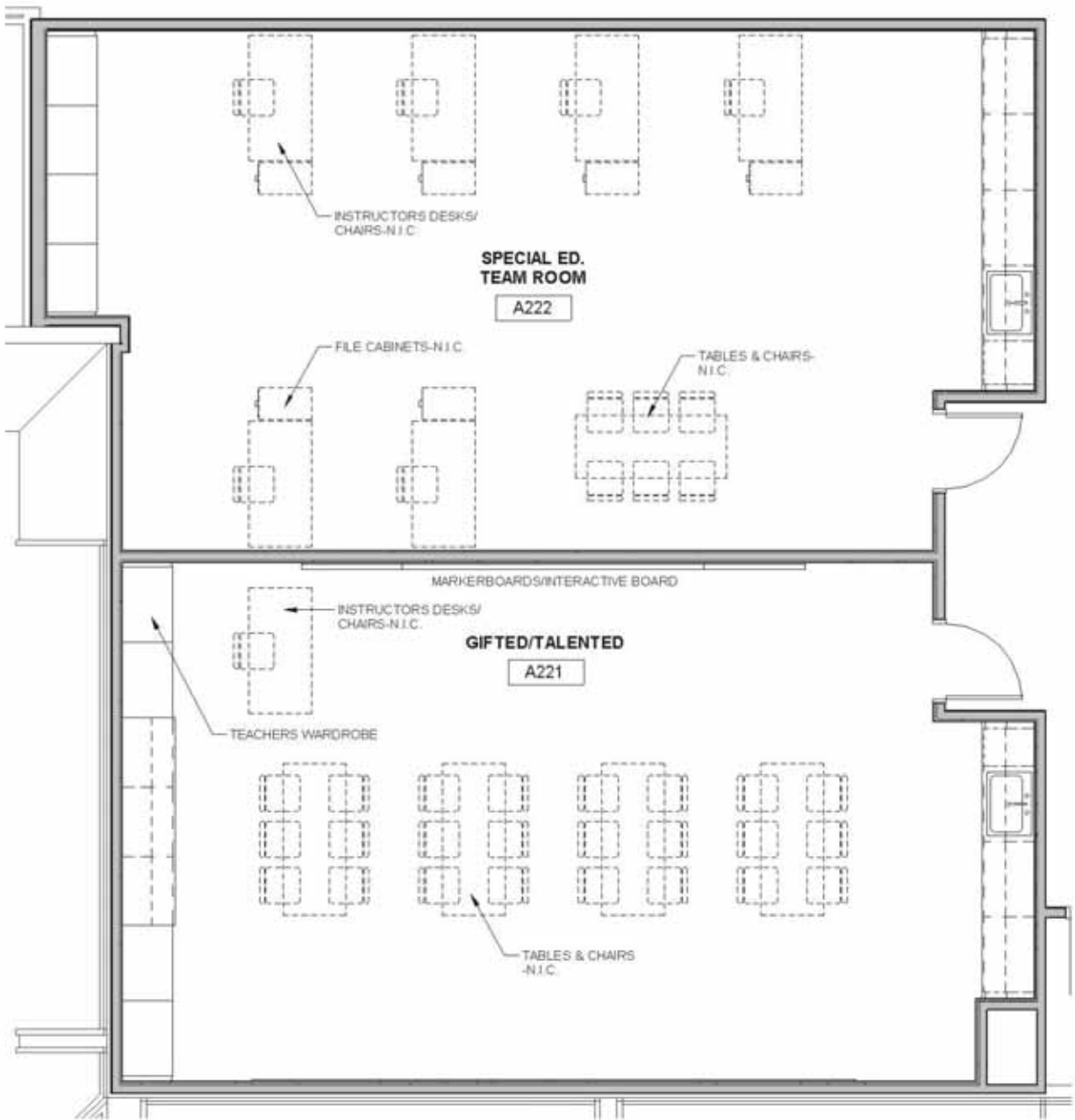
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TYPICAL CLASSROOM LAYOUT -
NEW CONSTRUCTION

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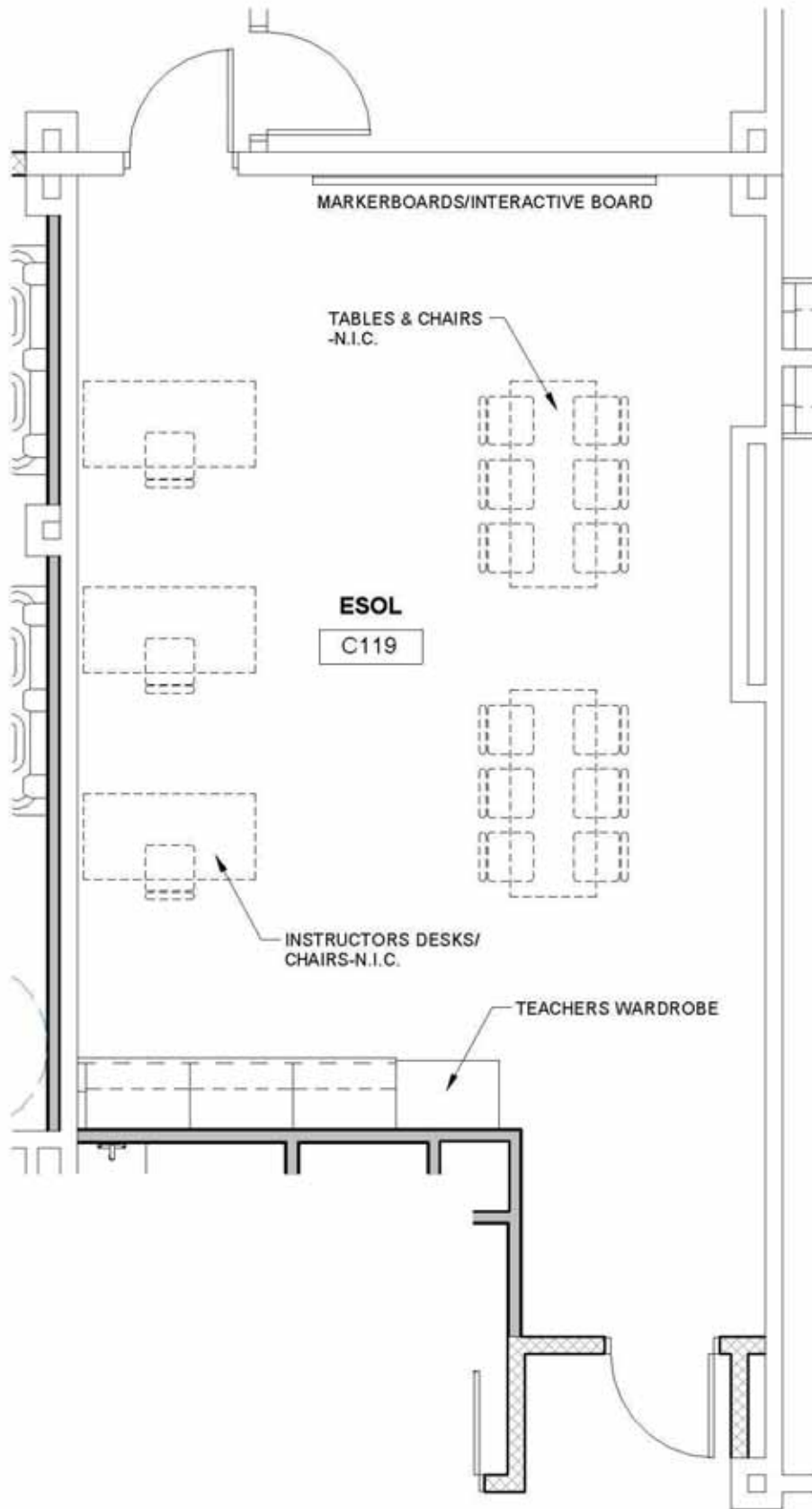
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GIFTED/TALENTED AND SPECIAL ED. TEAM ROOM LAYOUT

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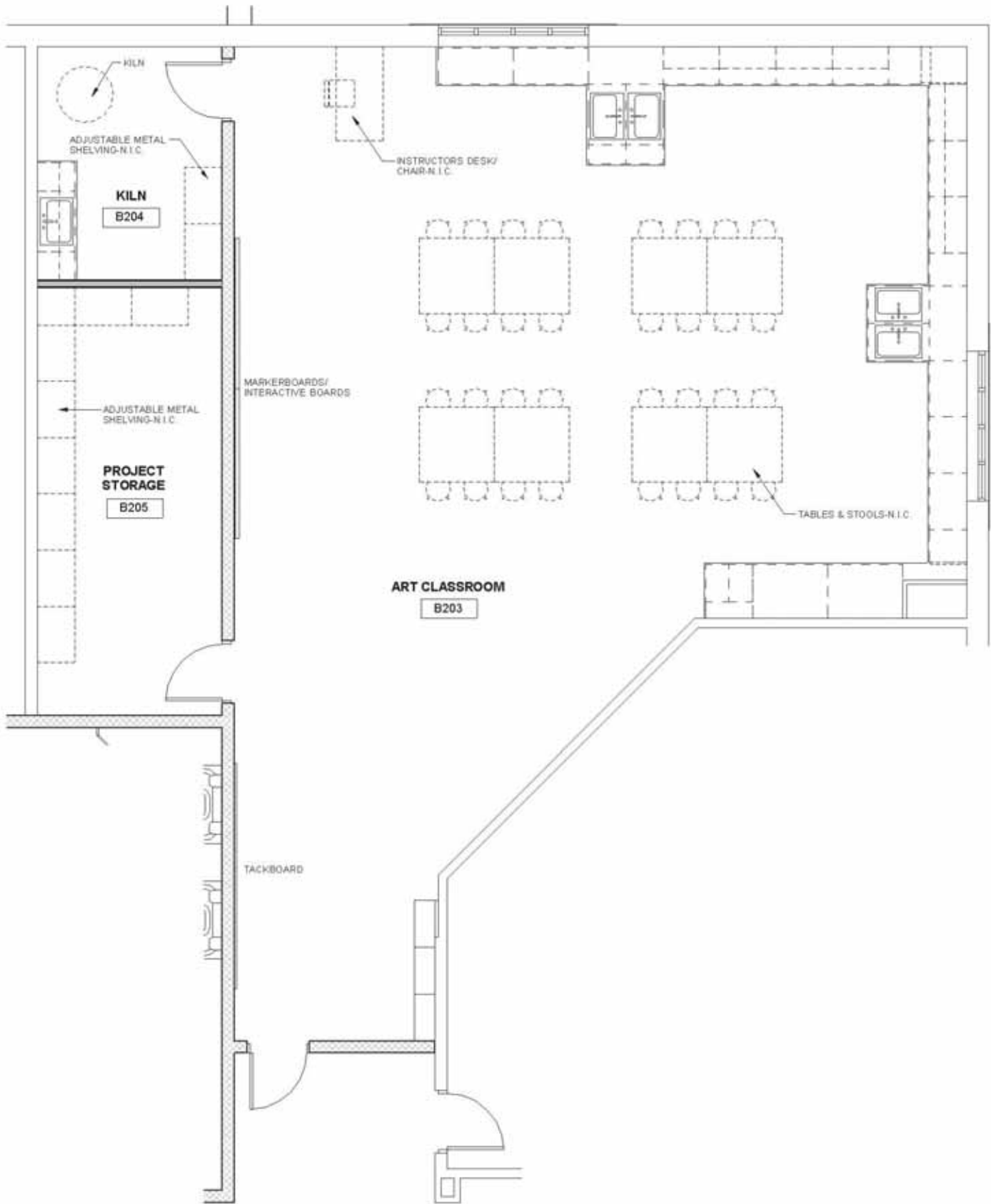
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ESOL CLASSROOM LAYOUT

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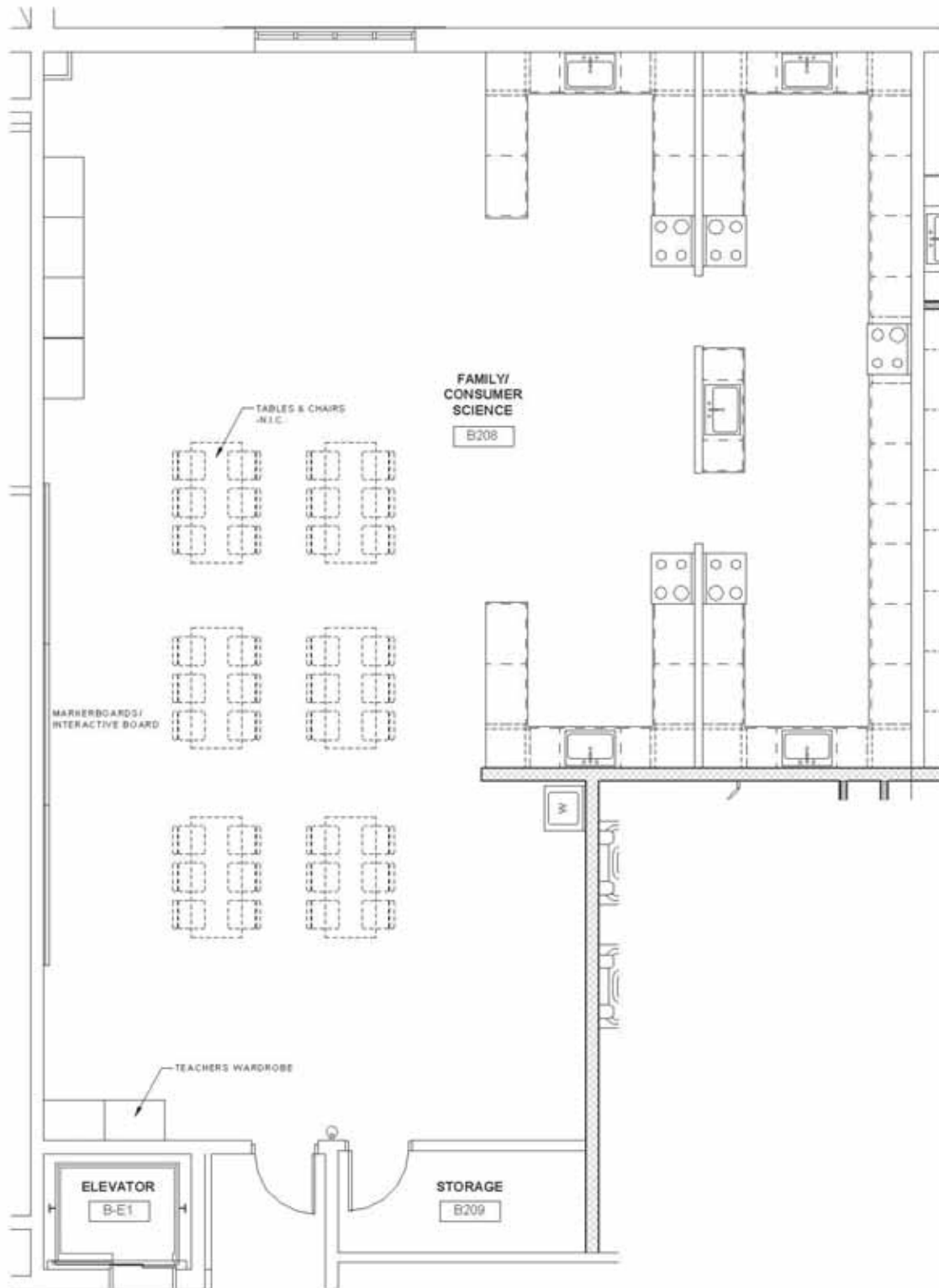
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ART CLASSROOM LAYOUT

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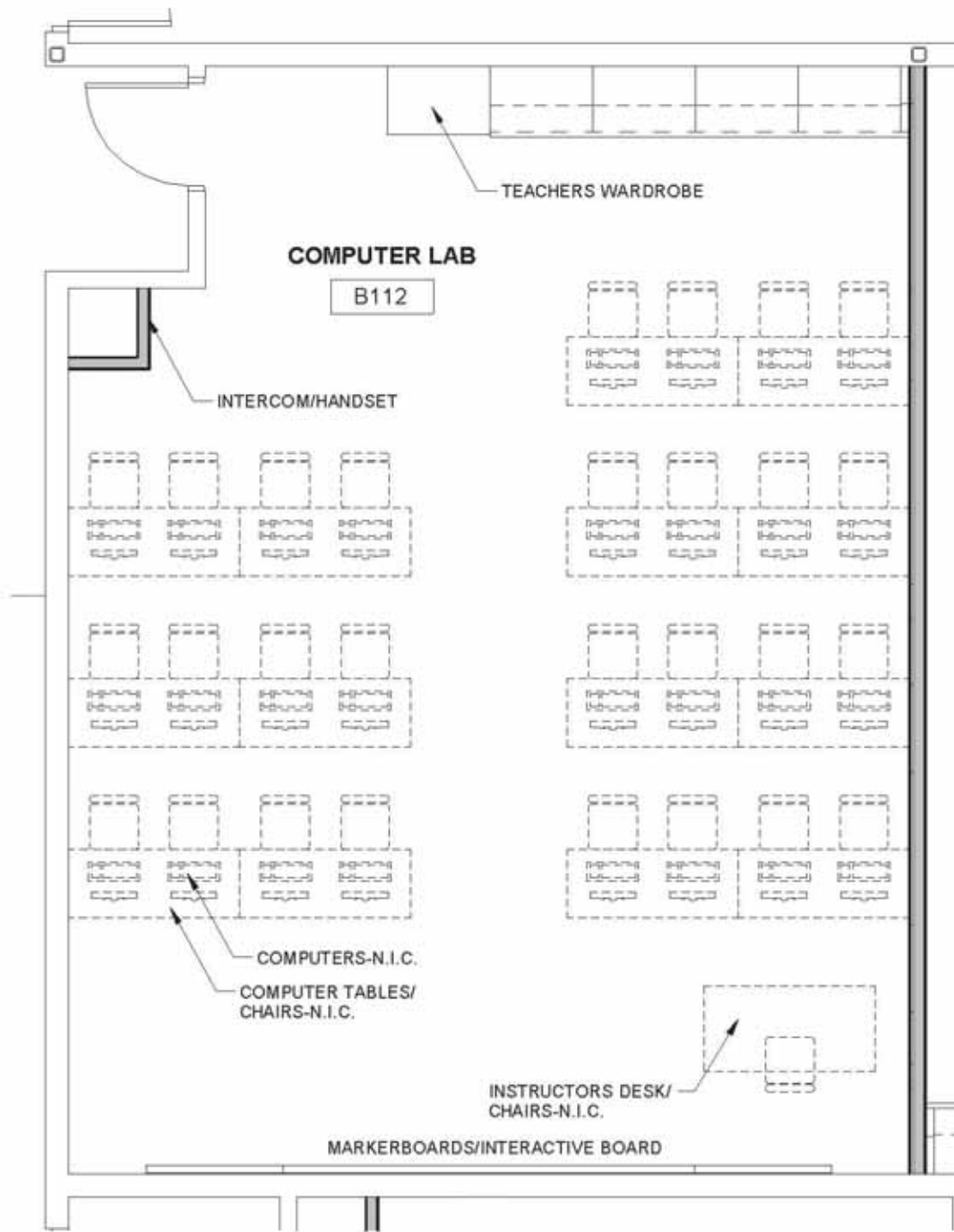
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FAMILY AND CONSUMER SCIENCE CLASSROOM LAYOUT

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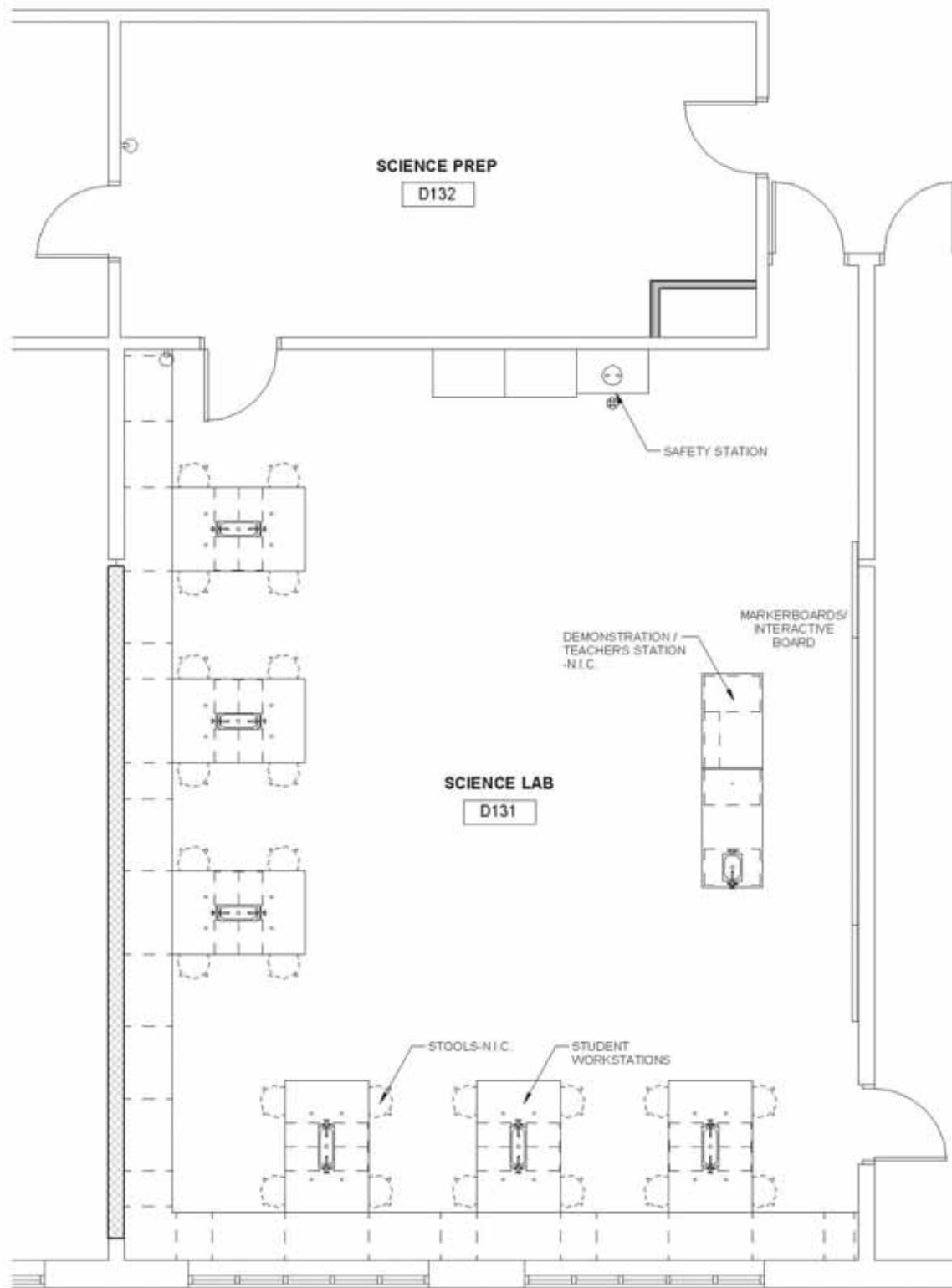
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COMPUTER CLASSROOM LAYOUT

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SCIENCE LABORATORY LAYOUT

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