

Office of the Superintendent of Schools
MONTGOMERY COUNTY PUBLIC SCHOOLS
Rockville, Maryland

September 11, 2012

MEMORANDUM

To: Members of the Board of Education

From: Joshua P. Starr, Superintendent of Schools

Subject: Preliminary Plans—Modernization of Wheaton High School and Thomas Edison High School of Technology

Background

Wheaton High School, one of five comprehensive high schools in the Downcounty Consortium, and Thomas Edison High School of Technology, a technical career high school, currently are located along Dalewood Avenue in Silver Spring. These schools have approved funding in the Fiscal Year 2013–2018 Capital Improvements Program for replacement facilities in the current replacement/modernization project.

The objective of the project is to replace the current facility with two separate facilities on the existing site. The design will provide both schools with modern, up-to-date facilities that will meet the current educational specifications while ensuring maximum flexibility to meet 21st century program needs. The flexible building design at both schools will accommodate current and future educational delivery models and programs as they evolve to provide students the academic foundation for success in college and/or a career. Multipurpose and flexible spaces will be designed that may be used by both staff and students for instruction and collaboration. Wireless technology and access will be available throughout the entire facility for staff and student use. The modernized Wheaton High School facility is scheduled to open in August 2015 and the modernized Thomas Edison High School of Technology is scheduled to open in 2017.

Programmatic changes also will take place to enhance the instructional programs at both Wheaton High School and Thomas Edison High School of Technology. Based on input from students representing all of our high schools, a homeland security program will be established at Thomas Edison High School of Technology in addition to current programs. In addition, preliminary discussions are under way with Junior Achievement to offer a financial literacy program at Thomas Edison High School of Technology for all Grade 8 students in Montgomery County Public Schools (MCPS). Students not only will benefit from the lifelong knowledge and

skills, they also will have the opportunity to tour Thomas Edison High School of Technology to learn about the exciting programs available to them in high school. Additional staff and community input is needed and will be sought prior to a final decision on the implementation of the Junior Achievement financial literacy program.

To develop an instructional program at Wheaton High School that enhances and expands the curriculum and instruction currently offered at the high school level in MCPS, a committee comprising local business, government, education leaders and Wheaton High School staff and parents will be assembled to contribute ideas for this new instructional approach. I expect that this committee will complete its work of developing program plan recommendations by early spring.

The heart of the programmatic redesign of Wheaton High School will be moving instruction to project-based learning with the support and assistance of business and educational institution partners. The project-based learning process will more closely resemble the adult work setting rather than the standard academic presentation format, bringing abstract concepts of the curriculum to life through engaging and academically challenging projects. Several high schools across the United States have made this change successfully, and it will be important to study their best practices and models before finalizing a vision and plan. Opportunities for community input will be provided during the visioning process. Central services and Wheaton High School staff will be charged with operationalizing the vision to align with the opening of the new building in August 2015.

Therefore, I recommend that the Board of Education approve of the following resolution.

WHEREAS, The architect for the proposed Wheaton High School and Thomas Edison High School of Technology modernization project, Grimm + Parker Architects, has prepared a schematic design in accordance with the educational specifications; and

WHEREAS, The Wheaton High School and Thomas Edison High School of Technology Facility Advisory Committee has provided input for the proposed schematic design; now therefore be it

Resolved, That the Board of Education approves the preliminary plans report for the Wheaton High School and Thomas Edison High School of Technology modernization project developed by Grimm + Parker Architects.

JPS:LAB:JS:mas

Attachment

Preliminary Plans Presentation

Wheaton High School Thomas Edison High School of Technology Modernization

**Prepared for
Montgomery County Board of Education**

September 2012

Grimm + Parker Architects

Preliminary Plans Presentation

Wheaton High School + Thomas Edison High School of Technology Modernization

Wheaton High School
12601 Dalewood Drive
Silver Spring Maryland, 20906

Thomas Edison High School of Technology
12501 Dalewood Drive
Silver Spring Maryland, 20906

Montgomery County Board of Education

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Dr. Joshua P. Starr	Superintendent of Schools
Mr. James C. Song	Director, Department of Facilities Management
Mr. R. Craig Shuman	Director, Division of Construction
Mr. Michael P. Shpur	Architect, Division of Construction
Mr. Dennis F. Cross	Project Manager, Division of Construction
Ms. Deborah S. Szyfer	Senior Planner, Division of Long-range Planning

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Facility Advisory Process Involvement

Involvement

The preliminary plans for the Wheaton High School and the Thomas Edison High School of Technology School modernization project were developed based on the educational specifications prepared by the Montgomery County Public Schools (MCPS). Through a series of public meetings, several design alternatives were developed and evaluated. The proposed plans presented herein were reviewed and subsequently modified in accordance with recommendations and suggestions received during the schematic design meetings.

Participants in Facility Advisory Process

Mr. Carlos Hamlin	Principal	Thomas Edison High School of Technology
Mr. Kevin Lowndes	Principal	Wheaton High School
Mr. Claude Allen	Staff	Wheaton High School
Ms. Rose Alvarez	Staff	Wheaton High School
Mr. Steven Boden	Staff	Foundations Office, MCPS
Mr. John Brewer	Staff	Foundations Office, MCPS
Mrs. Patty Broda	Staff	Wheaton High School
Mr. Bart Brooks	Staff	Wheaton High School
Ms. Laura Brown	Staff	Wheaton High School
Dr. Lynn Brown	Staff	Thomas Edison High School of Technology
Mrs. Julie Broyles	Staff	Thomas Edison High School of Technology
Ms. Heather Carias	Staff	Wheaton High School
Mr. Jack Chizik	Staff	Thomas Edison High School of Technology
Mr. Dennis F. Cross	Project Manager	Division of Construction, MCPS
Ms. Kristen Dean	Neighbor	Community
Ms. Theresa Defino	Parent	Thomas Edison High School of Technology Community Member
Mr. Bob Durbin	Staff	Wheaton High School
Mr. Donald Farb	Staff	Wheaton High School
Mrs. Denise Fennell	Staff	Thomas Edison High School of Technology
Ms. Judith Flaherty	Staff	Thomas Edison High School of Technology
Mr. George Gadbois	Parent	Wheaton High School/Thomas Edison High School of Technology
Mr. John Gallagher	Staff	Wheaton High School
Mr. Rick Gangloff	Staff	Foundations Office, MCPS

Facility Advisory Process Involvement (Continued)

Participants in Facility Advisory Process (Continued)

Ms. Elisia George	Neighbor	Community
Ms. Jean Gries	Staff	Department of Transportation, Montgomery County
Mrs. Juli Griffin Gross	Staff	Thomas Edison High School of Technology
Ms. Colleen Haardt	Staff	Wheaton High School
Ms. DeAngela Hill	Staff	Wheaton High School
Mr. Stan Holcomb	Staff	Thomas Edison High School of Technology
Mr. John Hydro	Neighbor	Community
Mr. Robert Ivey	Staff	Thomas Edison High School of Technology
Mrs. Amy Johnson	Staff	Thomas Edison High School of Technology
Ms. Joan Locastro	Staff	Wheaton High School
Ms. Jesse McGee	Staff	Thomas Edison High School of Technology
Ms. Judith McMillan	Staff	Department of Health and Human Services, Montgomery County
Mr. William Merson	Staff	Thomas Edison High School of Technology
Mr. Stan Metta	Staff	Thomas Edison High School of Technology
Ms. Kerri Mullins	Staff	Wheaton High School
Ms. Katherine Murphy	Staff	Department of Curriculum & Instruction, MCPS
Ms. Lara Oerter	Staff	Thomas Edison High School of Technology
Mr. Matt Page	Staff	Thomas Edison High School of Technology
Mr. Rick Penix	Staff	Department of Curriculum & Instruction, MCPS
Mr. John Petro	Staff	Thomas Edison High School of Technology
Mrs. Kimberly Polischek	Staff	Wheaton High School
Mr. Joe Pospisil	Staff	Department of Transportation, Montgomery County
Mr. Jason Potyk	Staff	Thomas Edison High School of Technology
Mr. Scott Price	Staff	Thomas Edison High School of Technology
Ms. Tonga Quan	Staff	Thomas Edison High School of Technology
Ms. Maureen Reges	Staff	Department of Health and Human Services, Montgomery County
Ms. Andrea Robertson	Staff	Wheaton High School
Dr. Maura Ryan	Staff	Wheaton High School
Ms. Paola Scazzoli	Staff	Wheaton High School
Mr. Leo Schwartz	Representative	Foundations Office, MCPS
Mr. Dave Shaffner	Staff	Wheaton High School
Ms. Talia Shnider	Staff	Wheaton High School

Facility Advisory Process Involvement (Continued)

Participants in Facility Advisory Process (Continued)

Mr. Michael Shpur	Staff	Division of Construction, MCPS
Ms. Teresa Smith	Staff	Thomas Edison High School of Technology
Ms. Nicole Sosik	Staff	Wheaton High School
Mrs. Sandy Spuill	Staff	Wheaton High School
Ms. Jillian Storms	Architect	Maryland State Department of Education
Mrs. Elizabeth Stuart	Staff	Department of Curriculum and Instruction, MCPS
Mrs. Sandra Sundlof	Staff	Wheaton High School
Ms. Debbie Szyfer	Staff	Division of Long-range Planning, MCPS
Ms. Kimberly Townsend	Staff	Department of Health and Human Services, Montgomery County
Mrs. Stephanie Valentine	Staff	Wheaton High School
Ms. Lauren Vorisek	Staff	Wheaton High School
Ms. Kimberly Weaver	Staff	Wheaton High School
Mr. Eric Zeigler	Staff	Thomas Edison High School of Technology

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Project Information

Background / History

Location: Wheaton High School
 12601 Dalewood Drive, Silver Spring, Maryland, 20906
 Thomas Edison High School of Technology
 12501 Dalewood Drive, Silver Spring, Maryland, 20906

Cluster: Downcounty Consortium

History and Square Footage of Existing Building:

1954 Original Building	206,890	square feet
1962 Classroom Addition	47,780	square feet
1965 Auxiliary Gym Addition	11,030	square feet
1972 Auditorium Addition	26,600	square feet
1982 Addition	26,680	square feet
2003 Classroom Addition	42,300	square feet
Total:	361,280	square feet

Site Size: 28.23 acres

WHEATON H.S.	Actual	Projections					
	2011-12	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
Program Capacity	1,258	1,258	1,258	1,258	1,618	1,618	1,618
Enrollment	1,240	1,255	1,316	1,322	1,327	1,333	1,388
Available Space	18	3	(58)	(64)	291	285	230

THOMAS EDISON H.S. OF TECHNOLOGY

No enrollment is reported for Thomas HS of Technology because the students are enrolled at their home school and attend Thomas Edison High School of Technology for a portion of the day. The capacity of the facility will be 946.

Number of Re-locatable Classrooms: 2 units to accommodate student enrollment at Wheaton High School

Current Parking Spaces: 343 spaces total

Project Information (continued)

Educational Program Objectives

Wheaton High School is one of five comprehensive high schools in the Downcounty Consortium that serve students in Grades 9–12. Wheaton High School offers a broad curriculum that includes four signature academies. Two are Project Lead the Way (PLTW) academies—Engineering, and Bioscience and Health Professions. The Institute for Global and Cultural Studies (IGCS) is a unique early college program that provides the academic foundation needed to be successful in a college, university, and/or career. The three IGCS pathway options—digital art, digital music, and global studies—provide hands on opportunities to learn about our global society and include early college courses at Wheaton High School through partnerships with local universities. The Academy of Information Technology, sponsored by the National Academy Foundation, offers opportunities in computer programming and web design. All the academies prepare students for post-secondary education and career choices and extend the classroom to the community through job shadowing, speakers, internships, and credit bearing college courses. Wheaton High School also offers a wide range of student activities and athletics and encourages students to be involved in the school community.

Thomas Edison High School of Technology is the career and technology education center for Montgomery County Public Schools and includes the following programs: Architecture, Construction Trades, Cosmetology, Auto Body/Auto Technology, the Academy of Hospitality and Tourism, Restaurant Management, Print and Digital Graphics, Network Operations, and Medical Careers. The programs provide students with the academic, technology, and interpersonal skills needed to achieve excellence in their chosen careers and to serve as the foundation for their continuing education pathways. Students attend Thomas Edison High School of Technology for a half of the school day and their home high school for the half of the school day; therefore there is no reported enrollment for the school.

The objective of the project is to replace the original facility with two separate facilities on the existing site, and to provide both schools with modern and up-to-date facilities to meet the current educational specification requirements for Wheaton High School and Thomas Edison High School of Technology while ensuring maximum flexibility to meet 21st Century program needs. The flexible building design at both schools will accommodate current and future educational delivery models and programs. As the instructional program at Wheaton High School moves to a project-based learning focus, the architectural design team will continue to work closely with the instructional team to ensure that the new building will support this new model. Multipurpose and flexible spaces will be designed that can be used by both staff and students to collaborate on projects. Wireless technology and access will be available throughout the entire facility for staff and student use. Furniture that is easily reconfigurable will be explored to maximize the flexibility in the school.

Project Information (continued)

Educational Program Objectives (Continued)

In order to accommodate the projected enrollment and current programs, the initial building capacity for the Wheaton High School replacement facility will be approximately 1,618 students, with the core spaces designed for approximately 2,000 students. Additional teaching spaces are master-planned for future expansion to meet the core capacity. The proposed replacement building for Thomas Edison High School of Technology will be designed to meet the programmatic needs of the career technology program. The capacity of the facility will be 946, allowing up to that many students to attend in the morning and afternoon sessions. The building design includes a master-plan of additional space for future career technology programs.

Through the planning process, the participants expressed a vision for Wheaton High School and Thomas Edison High School of Technology for student-centered facilities that celebrate learning while providing sustainable and contemporary learning environments with future flexibility. Additionally, the participants expressed a desire that the campus offer state-of-the-art facilities and provide students, educators, and community stakeholders with cutting edge programs and technology, in inspiring facilities that will be a source of community and school pride for many years to come.

The feasibility study and the life-cycle cost analysis conducted in November 2011 revealed that, due to the conditions of the existing facilities and the cost to bring them into compliance with the existing building and site code requirements, as well as the current educational specification requirements for each school, the most cost-effective modernization option is to demolish the existing building and construct separate replacement buildings on the existing property.

Project Information (continued)

Teaching Stations and Spaces Provided When Complete (Wheaton High School):

(Number of teaching stations used to calculate capacity is indicated within parentheses)

Summary of Classrooms:

Standard Classroom	31	(31)
Seminar Room	6	

English:

Drama Classroom	1	(1)
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Special and Alternative Education:

Learning for Independence Classroom	2	(2)
School Community Based Program Classroom	3	(3)
Life Skills Resource Room	1	
Adaptive Program Center	1	
Resource Room	1	
Speech & Language	2	
Occupational Therapy/Physical Therapy Room	1	

ESOL:

ESOL Classroom	7	(7)
ESOL Laboratory	1	

Science:

Science Laboratories	10	(10)
Preparation/Project Room	5	
Greenhouse	1	

PLTW Biomedical Program:

PLTW Biomedical Laboratory	3	(3)
Preparation/Project Room	2	

Art Suite

Art Room	3	(3)
Digital Art Room	1	(1)

Music Suite

Instrumental Music Room	1	(1)
Choral Room	1	(1)
Multimedia Laboratory	1	(1)
Ensemble/Keyboard Laboratory	1	(1)

Technology Education:

Foundations of Technology Laboratory	1	(1)
PLTW Fabrication Laboratory	3	(3)
PLTW Computer Laboratory	1	(1)

Career Technology Education:

Multipurpose Laboratory	1	(1)
Career Child Development Laboratory	1	(1)
Observation Room/Classroom	1	
Classroom	1	(1)

Project Information (continued)

Teaching Stations and Spaces Provided When Complete (Wheaton High School) (Continued):

(Number of teaching stations used to calculate capacity is indicated within parentheses)

Physical Education/Athletics:

Main Gymnasium	1	(2)
Second Gymnasium	1	(1)
Dance Room	1	(1)
Weight Room	1	(1)
Wrestling Room	1	(1)
Health Classroom	1	(1)
Locker Rooms	2	
Training Room	1	
Team Rooms	7	

Instructional Media Center:

Study, Instructional, and Research Area	1	
Workroom/Media Production	1	
Online Information Retrieval Area	1	
Television Studio	1	
Editing Room	4	

Core Facilities:

Student Dining	1	
Administrative Suite	1	
Counseling Suite	1	
Student Activities	1	
Security Suite	1	
Auditorium	1	
Staff Room	2	
Wellness Center	1	

Total teaching stations provided (80)

Project Information (continued)

Teaching Stations and Spaces Provided When Complete (Thomas Edison High School of Technology):

(Number of teaching stations used to calculate capacity is indicated within parentheses)

Career Technology Education:

Architecture Laboratory	1	(1)
Cosmetology Laboratory / Classroom	2	(2)
Academy of Hospitality and Tourism	1	(1)
Medical Careers Laboratory / Classroom	1	(1)
Network Operations Computer Laboratory	1	(1)
Print and Graphics Laboratory / Classroom	1	(1)
Professional Restaurant Management Laboratory / Classroom	1	(1)

Automotive Foundation

Auto Technology Laboratory / Classroom	1	(1)
Auto Body Laboratory / Classroom	1	(1)
Automotive Services Laboratory / Classroom	1	(1)

Special and Alternative Education:

Resource Room	1	
Testing Room	1	

ESOL:

Resource Room	1	
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Construction Trades Program

Carpentry Laboratory / Classroom	1	(1)
Masonry Laboratory / Classroom	1	(1)
Construction Electricity Laboratory / Classroom	1	(1)
HVAC Laboratory / Classroom	1	(1)
Interior Design Laboratory	1	(1)
Plumbing Laboratory / Classroom	1	(1)
Building Construction Trades Laboratory	1	(1)
Construction Management Classroom	1	(1)

Core Facilities:

Administrative Suite	1	
Counseling Suite	1	
Security Suite	1	
Health Suite	1	
Staff Room	1	

Total teaching stations provided (19)

Project Information (continued)

Site Design

Site Features:

Wheaton High School is located at 12601 Dalewood Drive in Silver Spring, Maryland. Thomas Edison High School of Technology is located at 12501 Dalewood Drive in Silver Spring, Maryland. While the two schools have separate addresses for identification purposes, the two schools currently share one building on the site. The school property is comprised of two parcels that total approximately 28.23 acres. The site is bounded by Dalewood Drive to the west, Randolph Road to the south, and Denley Park, owned and operated by Maryland-National Capital Park and Planning Commission (M-NCPPC) to the east. The western half of the site slopes down from the north end of the site to the south and the eastern half slopes to the east toward an existing stream on M-NCPPC property. The site does not lie in any mapped floodplain and does not have any significantly forested areas within the limits of development. Wheaton High School utilizes a softball field located within Denley Park.

The proposed site plan situates Wheaton High School to the southwest portion of the site and Thomas Edison High School of Technology to the northeast corner of the site. The parking and student drop-off for Wheaton High School is located to the west of the building directly off Dalewood Drive. The parking for Thomas Edison High School of Technology is located to the east and west of the building, and is also accessed from Dalewood Drive. A shared bus loop around the perimeter of the baseball field connects the two buildings and accesses Dalewood Drive at both ends. On-site traffic circulation is designed to provide safe access to the school for pedestrians and maximize on-site parking to minimize the overflow traffic onto Dalewood Drive. The on-site parking areas will accommodate approximately 339 spaces. In addition, a separate car storage area has been provided for the Thomas Edison High School of Technology Automotive Trades Foundation program.

Stormwater Management

A new stormwater management system will be provided for both quantity and quality control measures on site. Micro-scale water quality practices will be provided to comply with the environmental site design regulations. The proposed storm water management will include use of a vegetated roof and environmental site design elements as required by the State of Maryland and Montgomery County.

Utilities

All existing utilities, including water, sewer, gas, and electric services will be upgraded to support the needs of the replacement buildings.

Exterior Lighting:

The exterior lighting will be designed to shield adjacent residences from intrusive glare while maintaining light levels for safety and security purposes, with no night sky light pollution.

Project Information (continued)

Building Design

Wheaton High School - General Description:

The proposed three-story replacement building for Wheaton High School is rectangular in shape, enclosing an outdoor courtyard. The main entrance to the building is oriented towards Dalewood Drive. A secondary entrance is located to serve as the bus loading entrance and serves the auditorium, the gymnasium, and the cafeteria along a shared bus loop with Thomas Edison High School of Technology. The replacement building is zoned to allow activity spaces to function during non-school hours without compromising the security of academic areas of the building. The courtyard provides natural light to interior teaching spaces while also serving as an outdoor learning, social, and/or activity space. The administration suite is located adjacent to both entrances with the guidance suite located near administration and adjacent to and accessed from the main lobby. The gymnasias, cafeteria, and auditorium will comprise the eastern side of the building. The instructional media center will be located on the first floor adjacent to the main lobby. The science laboratories are located on the third floor with classrooms around the perimeter. Additional classrooms are master-planned for future expansion to the ultimate capacity of 2,000 students.

Thomas Edison High School of Technology - General Description:

The proposed three-story replacement building for Thomas Edison High School of Technology is generally an L-shape, utilizing grade level changes on site to enclose the car storage area for the Automotive Trades Foundation program. The main entrance to the building is directly off the shared bus loop near Dalewood Drive, at the main level of the building, which is the second floor. The administration, guidance, and foundations offices are located near the main entrance. The Automotive Trades Foundation program is located on the lowest level, easily accessible from the car storage area. The Construction Trades program is located on the second level of the building with truck access removal of construction projects. Restaurant Management and Cosmetology are located on the main level to facilitate public access for clientele. The remaining career technology programs are located on the upper level. Additional future growth areas are master-planned for future expansion on the upper level.

Aesthetically, the building elevation designs create a theme of technology embraced by both schools. The proposed brick and metal panels reflect the architecture of the higher education buildings.

Classroom Technology:

The classrooms will be designed to support interactive educational technology that includes controlled wireless computer access and interactive whiteboard systems. Individual classrooms are designed to provide a student seating arrangement that can be organized into small groups for project oriented teaching or students can face the teacher in a traditional method.

Project Information (continued)

Building Design, (continued)

Code Compliance/Accessibility:

All areas will be designed to meet national and local building codes, including fire, life-safety, and health standards. The proposed building will be in full compliance with the 2010 Americans with Disabilities Act (ADA).

Sustainable Design Intent (LEED):

The project will be registered and certified for a Silver or higher rating in conformance with Leadership in Energy and Environmental Design (LEED) certification through the United States Green Building Council. Some of the sustainable aspects of the project include the following:

- Encouraging alternative transportation to the school by providing conveniently located bike racks and preferred parking for low-emitting/fuel-efficient vehicles and carpools
- Preserving a high percentage of vegetated open space to protect the surrounding ecosystem
- Managing stormwater to both reduce runoff quantity and improve quality
- Using highly-reflective roof surfaces combined with vegetated roof portions to reduce heat-island effect and heat gain to the building
- Installing water-conserving, low-flow plumbing fixtures
- Optimizing the energy performance of the building by providing highly energy-efficient building envelopes, lighting systems, heating, ventilation, air-conditioning systems, utilizing geo-exchange systems
- Optimizing equipment selection, installation, and operation of HVAC equipment through enhanced commissioning of the building energy systems
- Diverting construction “waste” from landfills to be salvaged for reuse or recycled
- Adhering to construction indoor air quality management plans and using low-emitting building materials to safeguard occupant health
- Providing a high level of occupant control over individual lighting and thermal comfort to promote enhanced indoor environment
- Promoting user education to increase awareness of the building’s green features and to utilize the school as a teaching tool for environmental and sustainability topics
- Using construction materials that are recycled and regionally manufactured
- Implementing a Green Housekeeping Plan
- Maximizing daylight in classrooms
- Minimizing background noise level from HVAC systems in classrooms and other core learning spaces and control reverberation time with sufficient sound-absorptive materials

Project Information (continued)

Building Design, (continued)

Mechanical Systems:

Heating Ventilation and Air-Conditioning (HVAC) System:

The proposed new buildings will be heated and cooled by a four-pipe central heating and cooling system. The central heating and cooling plant will consist of multiple high-efficiency condensing boilers and multiple high-efficiency water cooled chillers. Spaces will be served by both constant and variable air volume air distribution systems. Heat recovery will be incorporated into air handling systems. Variable speed drives shall be utilized for hydronic and air distribution systems. Gymnasias will be heated and ventilated only.

Plumbing Systems:

Plumbing fixtures will comply with the Americans with Disabilities Act (ADA) requirements. The plumbing systems including sanitary sewer, storm water, domestic water systems and natural gas will be designed in accordance with the latest Washington Suburban Sanitary Commission (WSSC) Plumbing Code and Gasfitting Regulations. Water-saving plumbing fixtures will be used throughout the facility. A compressed air system will be designed to serve shop areas.

Fire Protection System:

The buildings will be equipped throughout with an approved, wet-piped automatic sprinkler system. The system will be designed and zoned in accordance with the National Fire Protection Association Code.

Energy Management Statement:

The building addition will be designed to exceed ASHRAE 90.1-2010 energy requirements and IEC-2012 as well as Montgomery County energy conservation codes and standards. The building envelope, as well as the mechanical and electrical system alternatives, will be modeled and analyzed to optimize the energy performance of the facility. The automatic temperature control system will use direct digital controls with electric/electronic actuation. An energy management system will be utilized to monitor and control the HVAC system performance while maximizing the building coefficient of performance.

Project Information (continued)

Building Design, (continued)

Electrical Systems:

Power Distribution:

Both buildings will be provided with 480/277V, 3 phase, 4 wire electrical service. A packaged natural gas engine generator set will be provided and sized to serve all life-safety loads, as well as all optional standby loads directed by the owner. The lighting system design will be designed to exceed ASHRAE 90.1-2007 energy requirements by 10% as a prerequisite for LEED certification, as well as Montgomery County energy conservation codes. Lighting will be energy efficient 2'x4' fluorescent fixtures in common areas, with direct and pendant type lighting in the classrooms.

Public Address System:

The public address system will be installed to serve the buildings and meet current educational specifications. Each classroom will have a call back switch and speakers. The corridors and restrooms will have speakers only.

Fire Alarm System:

A new addressable type fire alarm system will be installed to serve the each school building independently.

Security System:

The new buildings will have a motion sensor alarm with contact sensors at all exterior doors monitored by the MCPS security office. Security camera surveillance systems will be provided for monitoring the interior corridors and places of assembly, as well as exterior areas, including parking lots, main entrances, and entrances around the perimeter of building. Interior cameras will be provided in all major corridors and commons areas.

Cable Television and Streaming Video Systems

A video distribution will be provided to allow for incoming cable feed as well as provisions for streaming video over the data network. Provisions for rooftop satellite dishes with southwest line of site to sky and conduit to MDF room will be included. The streaming video system equipment will be located at the central office. The streaming video system will contain video recording/playback equipment in a central off-site location. This central equipment rack will be wired such that video equipment may be accessed via the computer network system from the instructional areas. Provisions for video projectors will be made in each classroom and instructional area.

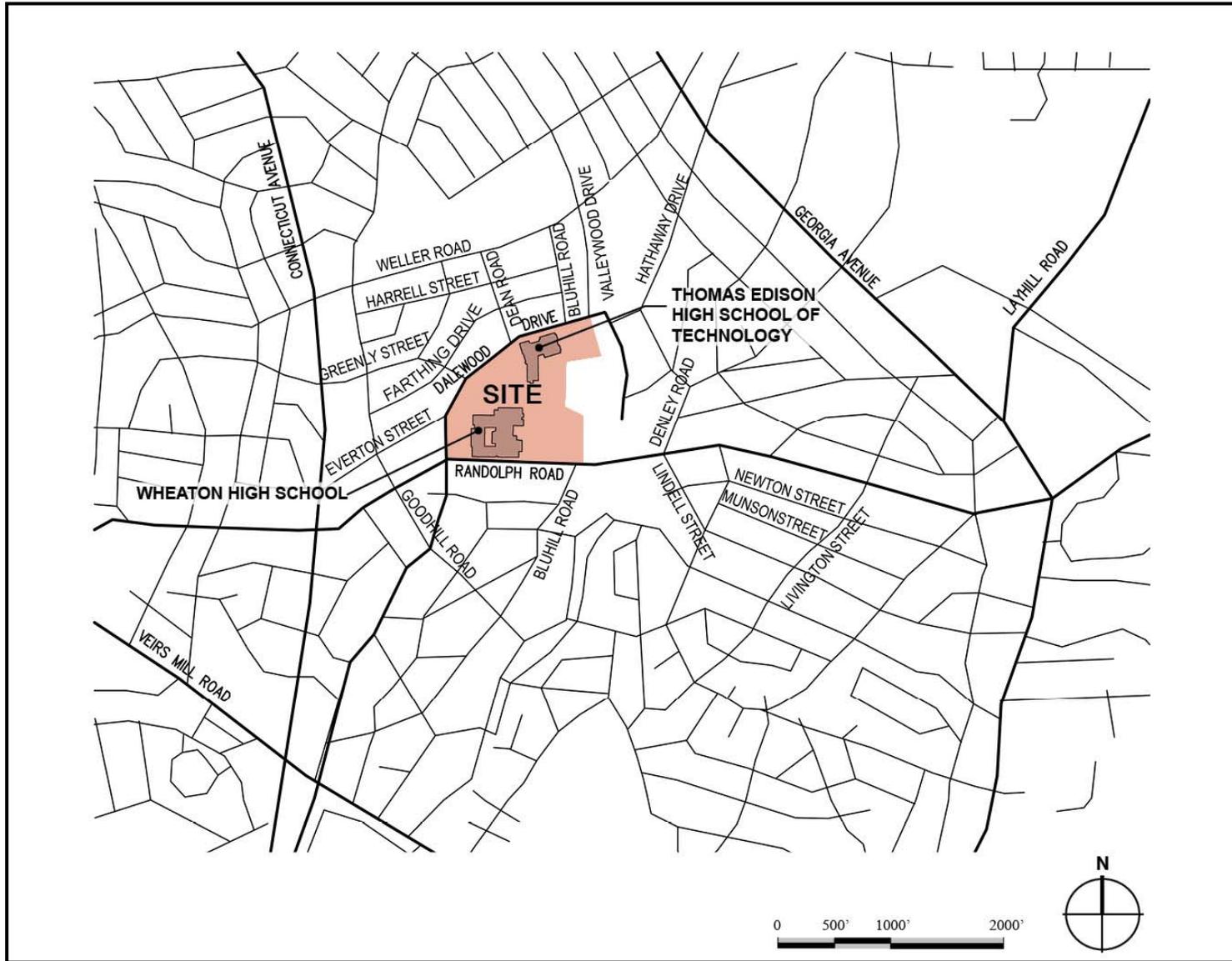
Project Information (continued)

Building Design, (continued)

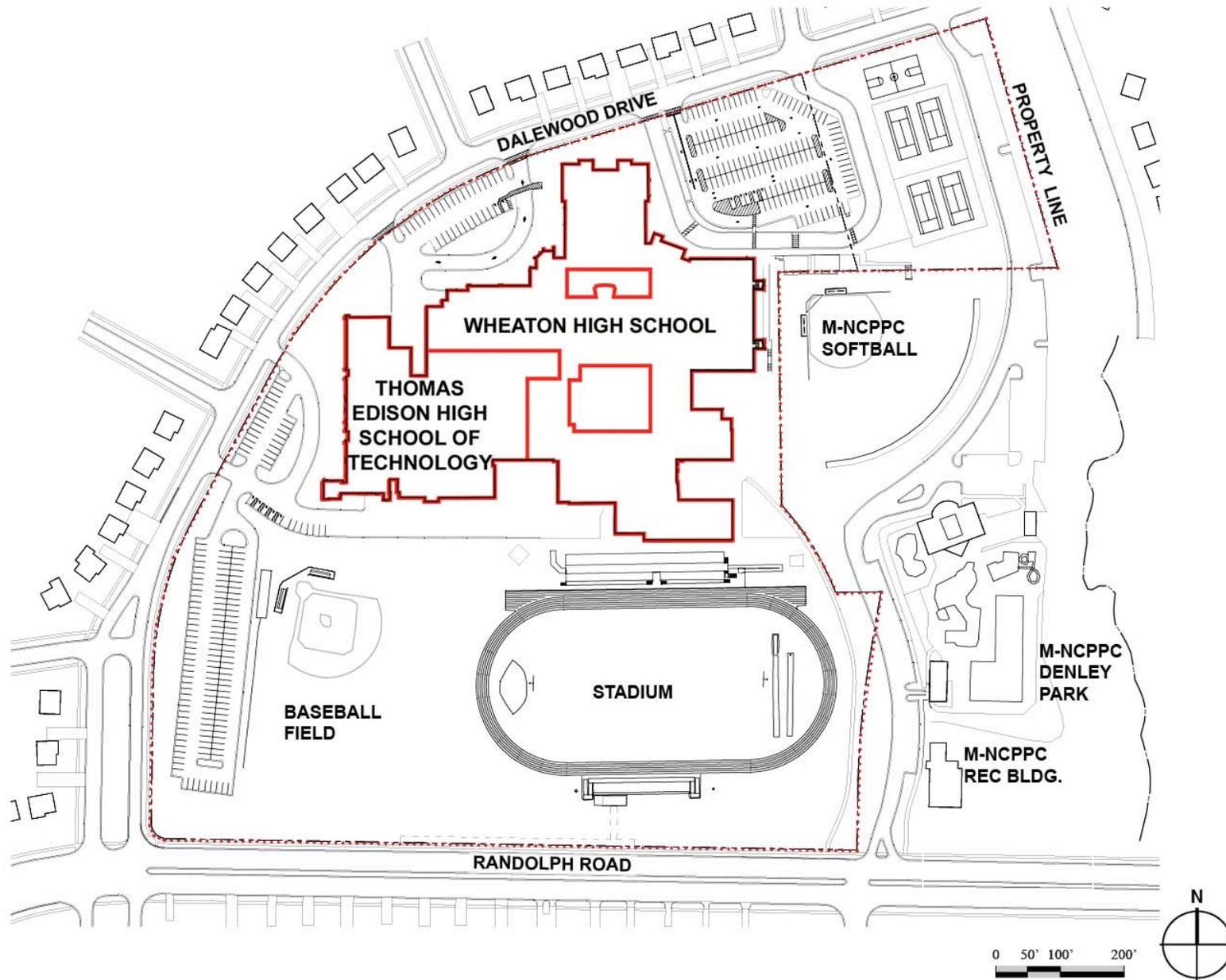
Technology Infrastructure:

The new building will be equipped with state-of-the art data/voice/video network systems. The network system designs will include outlet boxes, conduits, surface raceways, conduit sleeves, and properly sized wire closets for the installation of the data/voice/video network systems. The 1 Gigabyte per second Data Network will be star-wired 1000 Base-T and consist of Category 6 non-plenum cabling. The System will provide all components for a complete operable LAN. This will provide access to the System Wide Area Network (WAN), and internet access through a county server site. Wireless access points will be provided throughout the building for seamless connectivity. The wireless network design will be based on the latest IEEE 802.11n standard.

Vicinity Map



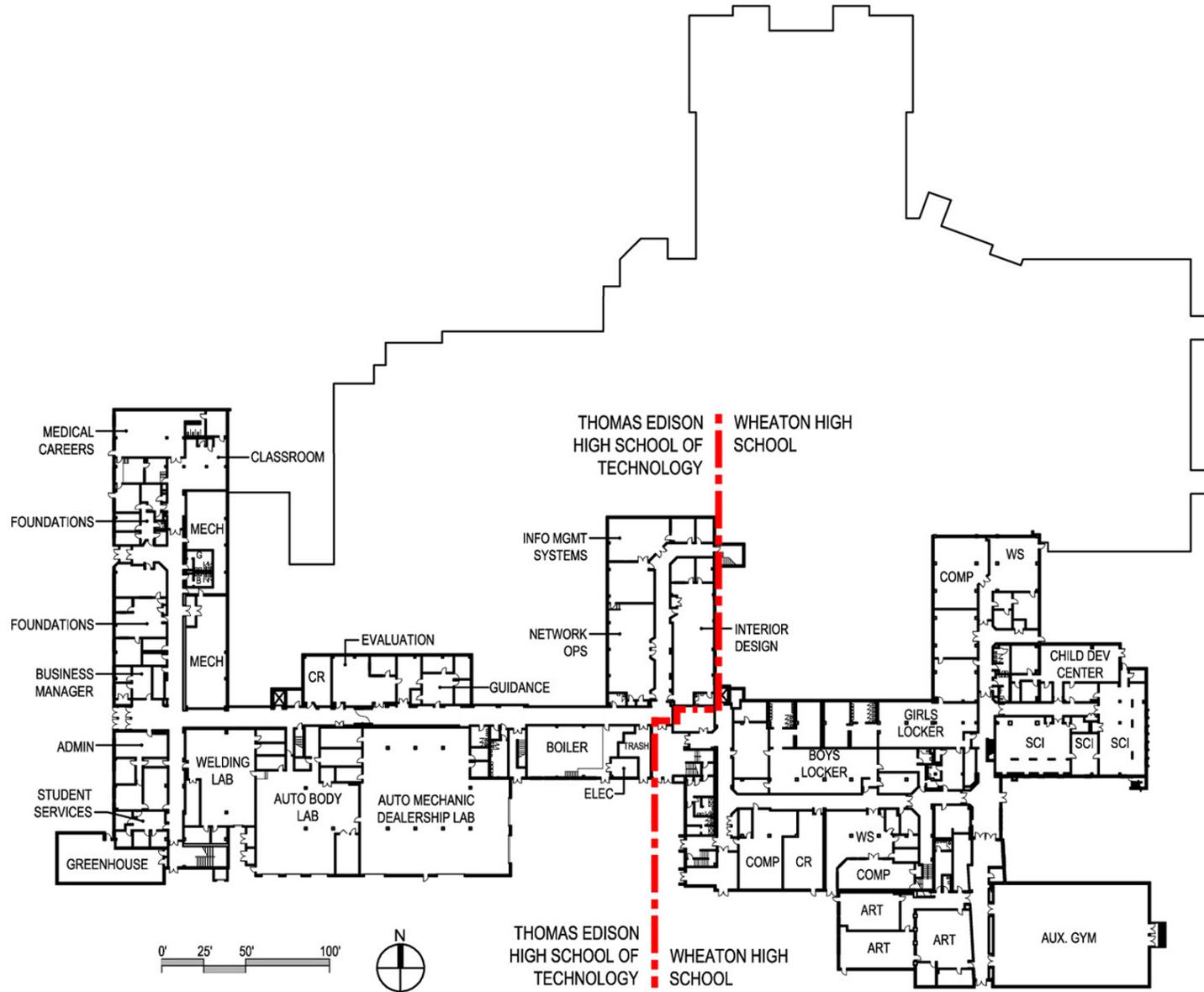
Existing Site Plan



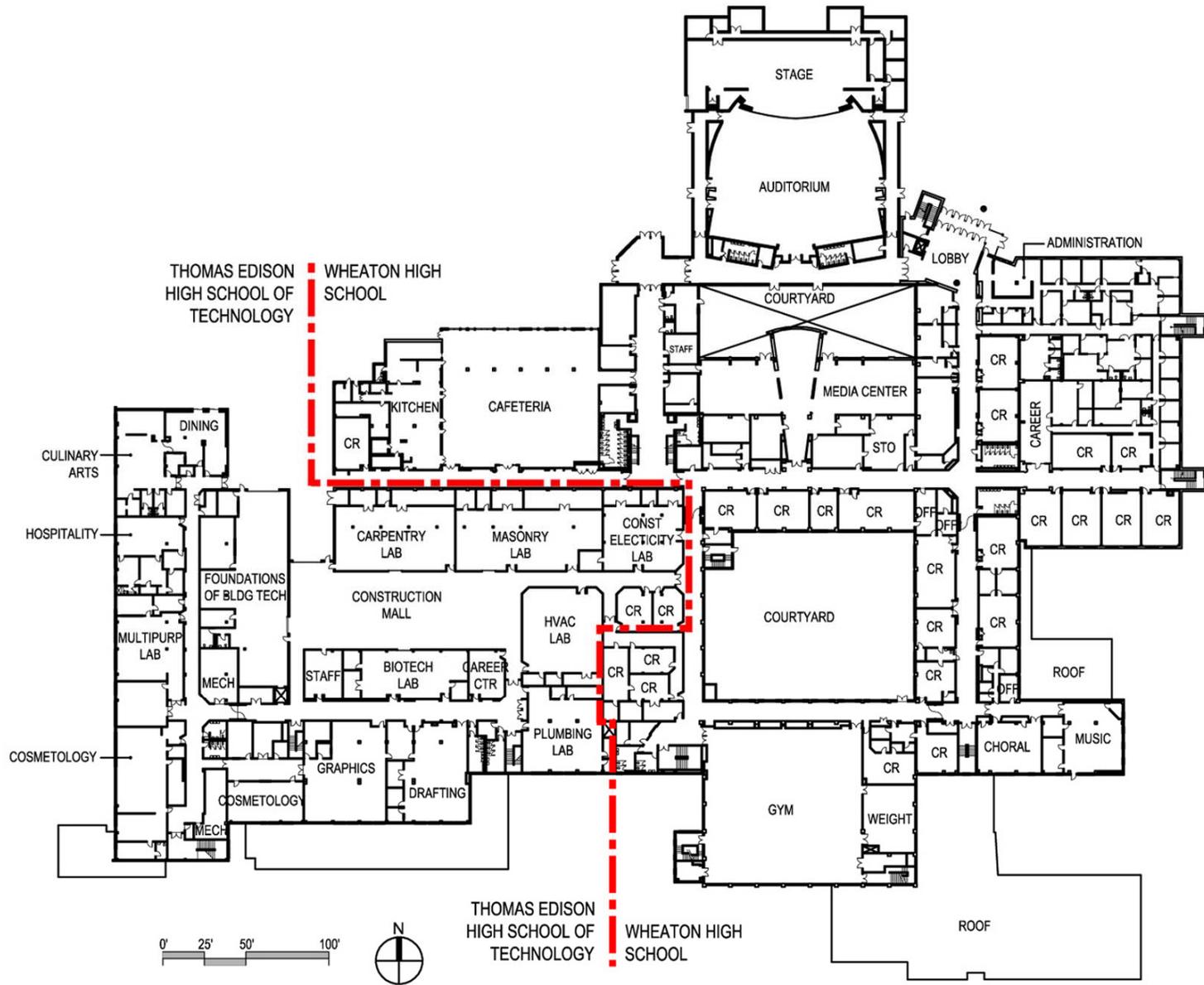
Proposed Site Plan



Existing Lower Level Floor Plan



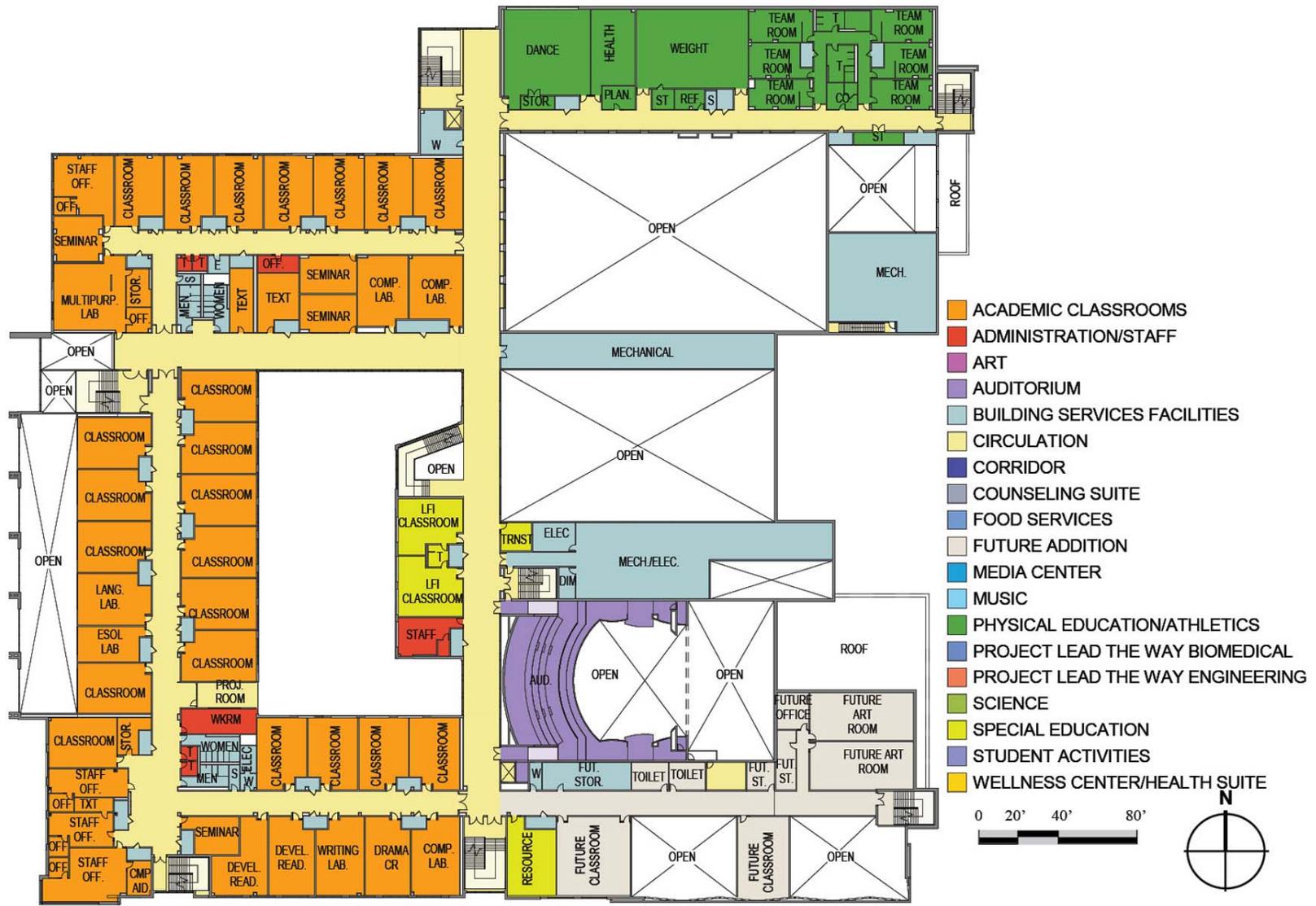
Existing Main Level Floor Plan



Proposed First Floor Plan – Wheaton High School



Proposed Second Floor Plan – Wheaton High School



Proposed Third Floor Plan – Wheaton High School



Proposed Elevations – Wheaton High School



WHEATON HIGH SCHOOL - SOUTH ELEVATION



WHEATON HIGH SCHOOL - WEST ELEVATION



Proposed Elevations – Wheaton High School (continued)



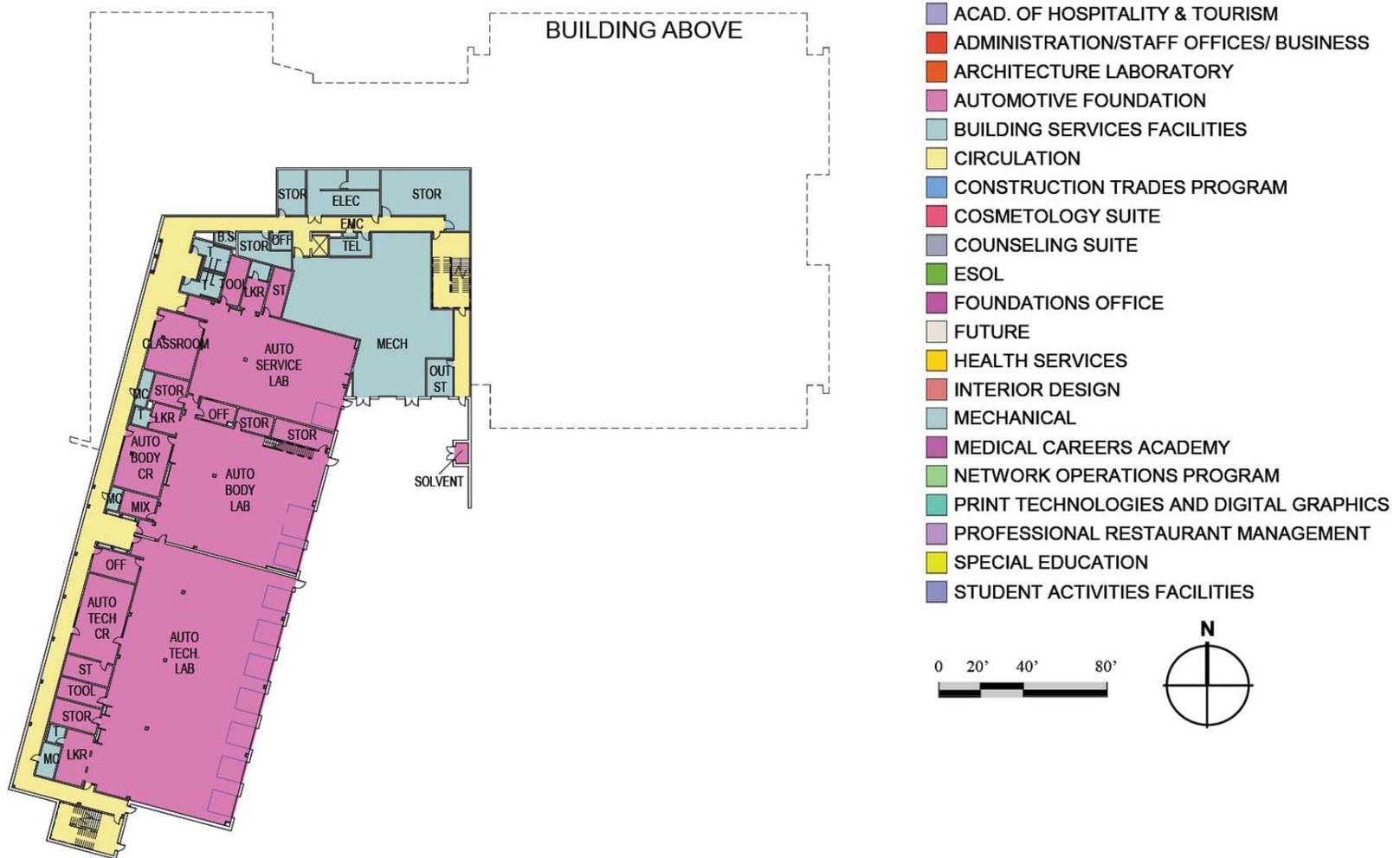
WHEATON HIGH SCHOOL - NORTH ELEVATION



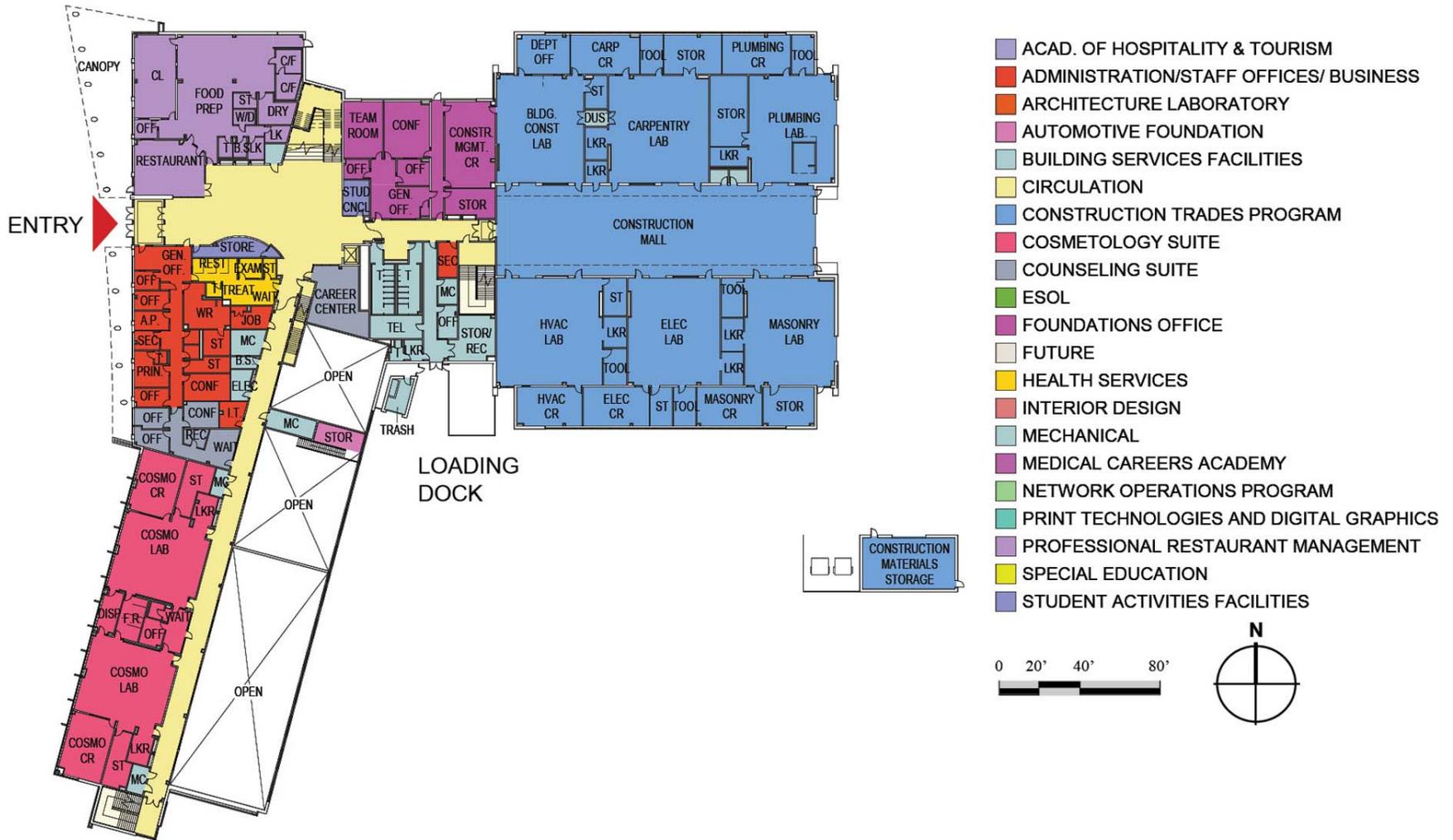
WHEATON HIGH SCHOOL - EAST ELEVATION



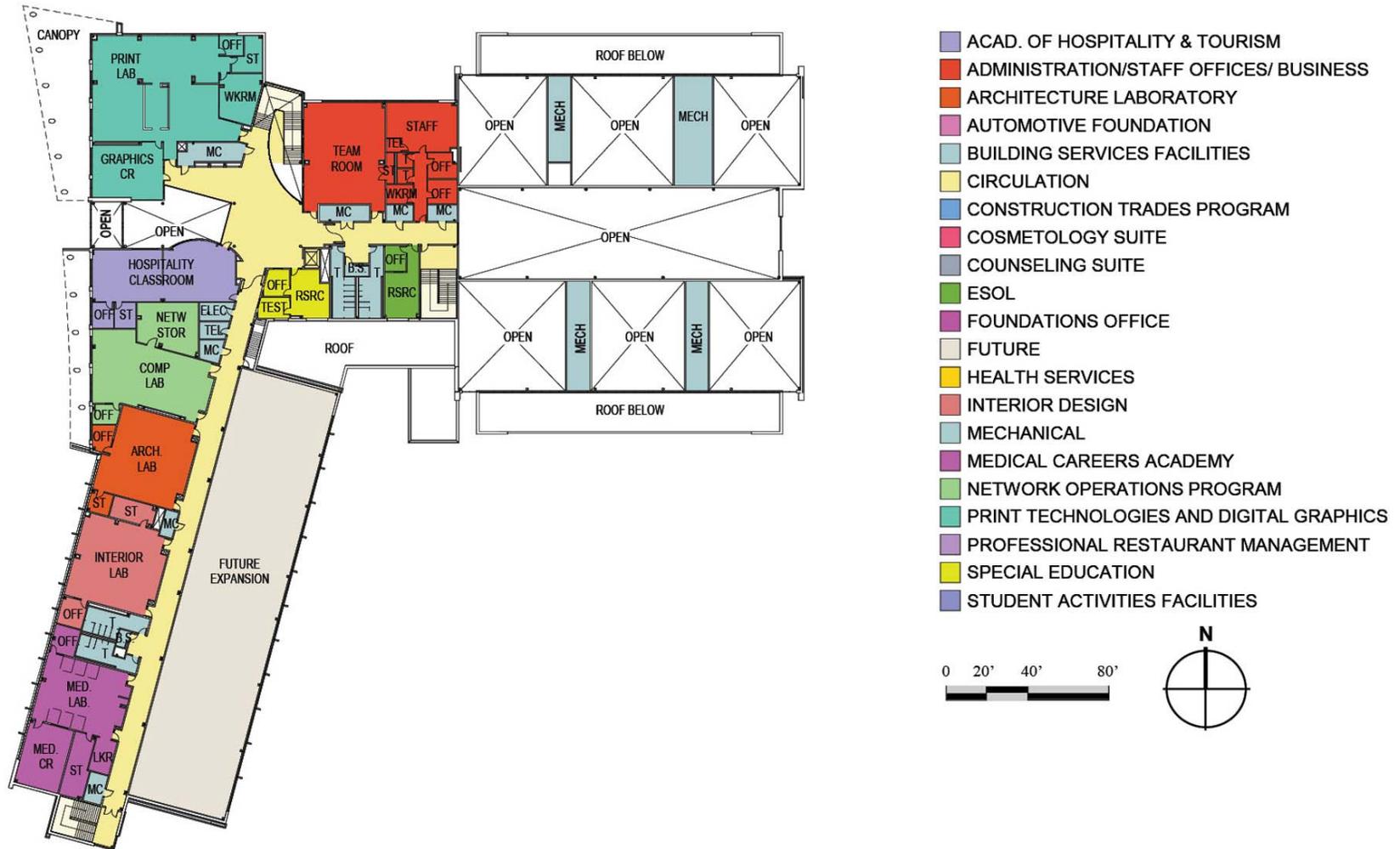
Proposed Lower Level Plan – Thomas Edison High School of Technology



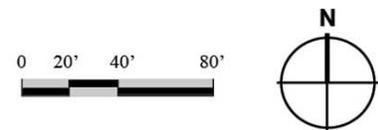
Proposed Main Level Plan – Thomas Edison High School of Technology



Proposed Upper Level Plan – Thomas Edison High School of Technology



- ACAD. OF HOSPITALITY & TOURISM
- ADMINISTRATION/STAFF OFFICES/ BUSINESS
- ARCHITECTURE LABORATORY
- AUTOMOTIVE FOUNDATION
- BUILDING SERVICES FACILITIES
- CIRCULATION
- CONSTRUCTION TRADES PROGRAM
- COSMETOLOGY SUITE
- COUNSELING SUITE
- ESOL
- FOUNDATIONS OFFICE
- FUTURE
- HEALTH SERVICES
- INTERIOR DESIGN
- MECHANICAL
- MEDICAL CAREERS ACADEMY
- NETWORK OPERATIONS PROGRAM
- PRINT TECHNOLOGIES AND DIGITAL GRAPHICS
- PROFESSIONAL RESTAURANT MANAGEMENT
- SPECIAL EDUCATION
- STUDENT ACTIVITIES FACILITIES



Proposed Elevations – Thomas Edison High School of Technology



THOMAS EDISON HIGH SCHOOL OF TECHNOLOGY - WEST ELEVATION



THOMAS EDISON HIGH SCHOOL OF TECHNOLOGY - NORTH ELEVATION



Proposed Elevations – Thomas Edison High School of Technology (continued)



THOMAS EDISON HIGH SCHOOL OF TECHNOLOGY - EAST ELEVATION



THOMAS EDISON HIGH SCHOOL OF TECHNOLOGY - SOUTH ELEVATION



Project Team, Schedule, and Estimated Construction Costs

Design Team Members

Architect:	Grimm + Parker Architects
Civil Engineer:	ADTEK Engineers, Inc.
Structural Engineer:	ADTEK Engineers, Inc.
Mechanical/Electrical Engineer:	Gipe Associates, Inc.
Technology Consultant	Wright Engineering
Kitchen Consultant	Nyikos Associates
LEED Consultant	Sustainable Design Consulting, Inc.

Project Schedule

Preliminary Plans Presentation:	September, 2012
Construction Documents Completed:	May, 2013
Award Construction Contract:	July, 2013
Project Completed:	July, 2018

Estimated Construction Cost

Existing Building:	361,280 square feet
Demolition	361,280 square feet
New Construction – Wheaton High School	332,625 square feet
<u>New Construction – Thomas Edison High School of Technology</u>	<u>101,430 square feet</u>
Total	434,055 square feet

Construction Cost Estimate for Building and Site:	\$119,681,000
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