

Existing Condition Report & Concept Study



HOWARD COUNTY PUBLIC SCHOOL SYSTEM

25 April 2006



Smolen ■ Emr + Associates Architects office@smolenemr.com

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April 25, 2006

Mount Hebron High School

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The schematic design for Mount Hebron High School will be developed with the participation of the Mount Hebron High School, Howard County Public School System staff and the design team. Information was collected by the design team through cursory visits to the site and review of previous modification record documents to determine the existing conditions. This information was used in conjunction with information gathered at initial meetings with the Howard County Public School System and Mrs. Bohn the principal of Mount Hebron High School. The Howard County Public School System will hold weekly meetings with the Mount Hebron Planning Committee and the design team to review the concept designs achieve consensus and arrive at a final viable solution. The plans will then be developed and implemented by the design team.

Smolen ■ Emr + Associates Architects wishes to sincerely thank in advance, the Howard County Public School System and all involved in the planning of this project for their active participation in this process.

Primary Objective

The design team was tasked to provide a comprehensive review of Mount Hebron High School, document deficiencies and adequacies and provide an optimal solution to address the current issues faced by the school. The Concept Study was defined and developed with the participation of Mrs. Bohn, the principal of Mount Hebron High School, the Design Team and the Howard County Public School System staff. Thru this process the Design Team studied the existing facility relative to the current usage, the standard High School Educational Specification and the concerns voiced by the school. Some noted concerns related to circulation issues at the school main entrance, the entrance to the auditorium and the back corridor intersection with an egress stair from the second floor. Deficiencies in the current school space plan were noted including deficiencies in the Administration Area, and Music Suite.

In addition to the primary educational specification requirements, other facility deficiencies stated by the School were noted during the investigation stage of the feasibility study process. Some noted concerns related to deficiencies in the cafeteria, administration support, technology program, physical education program, home economics program, and auditorium wing. The design team working with Howard County Public School staff has addressed all issues and concerns of the aforementioned items and have incorporated solutions into the new comprehensive design plan of Mount Hebron High School.

Schedules

Committee Meetings

May 2006

Schematic Design Report Presentation to the Board
of Education for Review and Approval

DD/Construction Document Report Presentation to the
Board of Education for Review and Approval

Construction Sequence

Advertise for Bids

February 2007

Bids Received

March 2007

Board Approval

April 2007

Construction Start

June 2007

Completion of Project

August 2009

The proposed schedules allow the continuous use of the facility. Significant components of the construction will occur during the summers of 2007, 2008 and 2009.

Existing Facility Analysis

Architectural Facility Analysis:

The analysis of this facility is based on a cursory visit to the site, meetings with the Howard County Public School System Staff and with Mrs. Bohn of Mount Hebron High School. Key issues for the school have been identified and reviewed.

The school site is situated at the intersection of St. John Lane and Old Frederick Road (Route 99). The main entrance to the site, located at the intersection of these roads is the primary entrance for the busses; faculty, students and the student drop off. The primary site circulation issues relates to the intermingling of buses and student traffic. The limited bus loop is used in the mornings for both bus and student drop off creating an unsafe and extremely congested condition. The use of this space for both drop off and access to the faculty parking lot creates traffic congestion on the site which back up to both Old Frederick and St. John.

The situation for the afternoon dismissal is complicated by the fact that the current bus loop is not large enough to hold the 25 buses servicing the school. The buses park chevron style at the top of the student parking lot. This positions the buses away from the building with unprotected access for the students.

The existing facility, built in 1964, has under gone several renovations and additions. The original design was repeated in several locations including Atholton High School. The building included both two story and single story portions. Some of the renovations, additions and modifications to this facility are listed below:

- 1968 – Classroom, locker room and cafeteria additions
- 1970 – Auditorium addition
- 1975 – Music and language arts addition with Auxiliary gym.
- 1977 – Classroom addition and locker room renovation.
- 1997 – Addition of two story classroom wing at the northwest corner.
- 1998 – Roof top mechanical renovation
- 2000 – HVAC Renovation
- 2004 – Science Wing Renovation

Mount Hebron High School has a current student population of 1,457 students in grades nine through twelve.

The existing plan consist of two main components. The western portion of the building contains the primary teaching spaces and the auditorium. The eastern portion of the facility contains the athletic departments, cafeteria and tech ed. curriculum. These two portions of the building are connected by two corridors, one located at the front of the school and one in the back. The building does have loop pedestrian circulation corridors within each portion of the building and between the two sides of the building. The many interconnecting corridors creates several overloaded intersections which become impassable during certain times.

As a result of the multiple renovations and additions, a number of undesirable conditions have been created significantly, there are numerous interior teaching spaces with no access to natural light. The media center, encompassed by the 1997 addition, has been renovated to provide skylights to provide

Architectural Facility Analysis (continued):

natural light. With the book stacks and the expansive nature of the media center, the adjacent interior rooms lack direct sunlight and do not get much of the indirect natural light from the skylight. This condition exists throughout the building.

The main entrance to the building is at the center of the bus loop. A front exterior courtyard is framed by the cafeteria, front corridor and two story classroom area. A canopy covers a portion of this courtyard creating a gathering area for students. As students gather in this location, the confined space prevents inhibits access to the school by other arriving students and faculty. This problem is a result in large part due to the lack of an interior space for students to congregate. The front entrance corridor is minimal also and is not adequate for both student gatherings and the required interior circulation.

The interior of the auditorium was recently renovated providing a mechanical lift for access to the stage and new interior finishes. The lobby provided at the side of the auditorium for use with after hour performances is not optimally located and is currently used for storage. The front of the auditorium and main egress from the auditorium empties directly into an intersection of two corridors which are not of sufficient width to accommodate the capacity of the auditorium. This condition promotes in this area and creates student circulation problems.

As mentioned earlier there are a number of circulation issues within the building. The corridors with multiple jogs in the left side of the building create circulation problems in addition to being difficult to supervise. Due to the configuration of the second floor, certain stairways are more conveniently located there by creating over crowded situations in the stair and connecting corridors during student movement between classes.

Working with the natural grade elevations of the site, the additions to the school have introduced several levels into the floor plans. The different levels of the first floor are connected by a series of ramps. These ramps will be investigated to determine the compliance with current code and ADAAG requirements.

It has been determined the existing school does not meet the classroom count per the current Ed. Spec. The school has compensated for this by assigning multiple program areas to some classrooms, depending on the class requirements and schedule. The lack of teaching spaces has also adversely influenced the location of certain classes. Several programs have scheduled classes outside of their subjects cluster.

Structural Facility Analysis:

The purpose of the site visit was to survey the existing building. Our comments and observations are as follows:

The original building structural drawings are dated January 15, 1964.
The original building is both a one story and a two story building.

The construction of the original building and its additions consists of several different construction types as follows:

- a. Portions of the building are wall bearing – floors and roof.
- b. There are some areas where concrete columns are used and other areas where steel columns are used.
- c. Some floors are concrete slabs over steel joists.
Some floors are concrete slabs over steel beams.
- d. The beams supporting the floors are:
Concrete beams in some areas.
Steel beams in some areas.
- e. The roof decks are:
Poured gypsum roofs in some areas.
Metal deck in some areas.
- f. The roof deck is supported by steel joists.
- g. The beams supporting the roofs are:
Concrete beams in some areas.
Steel beams in some areas.

The floor to floor heights in the two story areas and the floor to roof heights in the one story areas, in many cases, are shorter than what we would use if we were designing a new building.

The first floor has numerous ramps and steps in order to traverse from one elevation to another. We do not know if these meet ADA criteria.

The existing building structure is in good condition, based on visual observations. However, not until construction starts and ceilings, ductwork, piping, etc. are removed so that the structure is more visible will be able to determine the actual condition of the structure.

If the current building is renovated/enlarged the following items need to be considered:

- A. The existing roof will require additional structural members for any new mechanical equipment added to the existing roof. It is a slow, tedious process to reinforce the existing roof by adding new beams.
- B. If the new addition is taller than the existing building (for example a new two-story addition or a taller one-story addition) then there will be increased drifting onto the existing roof. The existing roof will require additional structural members to reinforce the existing roof. As stated above, it is a slow process to add the new beams.

Structural Facility Analysis(continued):

C. In the wall bearing portions of the building, there is no flexibility for enlarging spaces, introducing corridors, etc. In order to provide flexibility, some of the bearing walls will have to be removed. This will require shoring up the existing structure (floor, roof, walls) and removing some of the existing bearing walls. The new beams, new columns and new footings will have to be added to create the final building.

D. Working outside an existing building is a difficult process.

It is difficult to move steel, materials to the required locations.

Shoring is required.

There is limited space to work.

It is difficult to erect steel since the existing roof is in place and a crane cannot be used. The steel beams may have to be spliced.

The construction is not efficient.

The construction is labor intensive.

E. Since no one knows exactly how the existing building is constructed, there will be discoveries made that will require changes to be implemented in the field.

In summary, the existing building, based on a cursory site visit, is a good structurally sound building. If minor changes were going to be made to the building, then possibly make the changes and keep the building.

The proposed scope of work for this project is quite extensive i.e. the final building will be significantly different than the existing building. This means that there be extensive modifications to the existing building and yet the building in the final configuration will still be compromised by a structure that is too short, bearing walls that are not in the best location, floors that are connected by ramps, etc. Also, there are other compromises – Architectural, Mechanical, and Electrical that are inherent in modifying an existing structure.

By the time this renovation of Mount Hebron is complete the majority of the structural portion of the building will be approaching forty years old and a significant portion of the building will be more than forty-five years old. In our opinion, rebuilding portions of the building or even rebuilding the entire building should be seriously considered.

Mechanical/Electrical Facility Analysis:

MECHANICAL

General

Mt. Hebron High School has been modernized, renovated and modified many times, along with multiple additions over the 40 year life of the school. As each change occurred, different or what was considered state-of-the-art type mechanical systems were added. With this in mind, realize that about every type of HVAC equipment is installed at the building. These are just a few of the items installed; centrifugal chiller, semi-hermetic chiller, reciprocating chiller, forced-draft cooling tower, air-cooled condenser unit, indoor air-handling units, rooftop air-handling units, energy recovery units, reheat systems, VAV systems, unit ventilator systems, four-pipe system, two-pipe system, ductless split system, and electric heat. There was no master plan for the mechanical system for the school. The equipment in the school is well-maintained, however due to age; some equipment will need to be replaced in the near future. Unification of the mechanical systems should be considered. The following is a detailed description of the existing systems and their condition.

Heating System

- Two cast-iron boilers produce heating water for the entire school building. The boilers are manufactured by H.B. Smith (Model 650 Mills – 19 sections), which appear to be 5 or 6 years old, and use natural gas for firing. The net output capacity for each boiler is 8,614 mbh. Both boilers are functioning adequately to satisfy the existing school and should have some excess capacity if a small addition is planned for the school. The burners on the boilers are Power Flame. Each boiler is equipped with a thermal shock in-line circulator. An air-charged type expansion tank is installed which requires more maintenance than a bladder type expansion tank. Both boilers are connected to a common breeching that connects to a single masonry stack. Boiler venting operates as a natural draft arrangement. Combustion air is provided by a louver at the top of the exterior boiler room door and a vent duct through the roof. The size and arrangement does not meet present day CSD-1 boiler code used in the State of Maryland. The heating water pumps are in fair condition. They could handle some additional flow, but replacement should be considered due to condition. It should be noted that the existing underground tunnel around the original school is filled with old abandoned pipes covered in asbestos insulation. The Owner should consider removing all the piping and insulation if a major systems overhaul is planned.

Mechanical/Electrical Facility Analysis (continued):

Cooling System

- The school is cooled by several systems. The systems consist of the following:
 - The old classroom wing of the school and several miscellaneous areas are served by a water-cooled McQuay chiller installed in 1994. The centrifugal chiller is in good condition but has no excess capacity. The chilled water pump and condenser water pump are in fair condition. An Evapco forced-draft cooling tower produces conditioned condenser water to chiller. The cooling tower is in fair condition and will need to be overhauled or replaced in the near future.
 - The Auditorium chilled water is produced by a Trane semi-hermetic compressor chiller. The chiller is not operating now due to mechanical problems. The main chiller noted above is being used to serve the Auditorium. The chilled water pump and condenser water pump are in fair to poor condition and will need replacement. The Baltimore Air Coil forced-draft cooling tower that is connected to the Auditorium chiller has been recently overhauled and is in good condition but is not operating since the chiller is shutdown.
 - The Media Center chilled water is produced by a Bohn reciprocating chiller with an air-cooled condenser. The chiller is in fair condition and will need an overhaul in the near future. The condenser is mounted in the penthouse with the chiller and is equipped with a centrifugal fan that discharges heat from the coil through a ducted connection to the exterior. The chilled water pump is in fair condition. Equipment cannot handle any additional cooling load.
 - The majority of the school is cooled with a mixture of direct expansion (DX) type equipment. Age of this equipment varies from 1-year-old to 25-years-old. This equipment will be clarified in more detail in the HVAC systems section of this report.

HVAC Systems

The building is zoned into different areas utilizing various types of HVAC systems. The following is a breakdown of the system components.

- *Original Classroom Wing*

This section was renovated in the year 2000. The classrooms are equipped with unit ventilators, some with outside air intakes, and the offices and miscellaneous areas have fan coil units. A two-pipe heating and cooling system serves this equipment. Two rooftop 100 percent outside air energy recover units provide conditioned air to the spaces. The majority of this equipment is in good condition.

Mechanical/Electrical Facility Analysis (continued):

- *Classroom Addition in 1977*

These classrooms are heated and cooled by two rooftop units that supply cooled conditioned air to each room. The branch duct serving the room has a duct-mounted reheat coil installed. The Mammoth rooftop units appear to be original. The units are showing some age but exact year of installation is not known. This type of system provides very good room control, but utilizes high energy consumption.

- *Shop Wing Classrooms*

These rooms are conditioned by individual rooftop units with DX cooling. The ductwork is exposed on the roof for one classroom. The units are fairly new and appear to have several more years of service available.

- *Computer Room*

Most computer rooms are served by split DX systems, some ducted and others ductless. The age of this equipment varies from one-year to many years old. Several units will need to be replaced in a few years. We did find two computer rooms conditioned from the local central system which do not have cooling available year round.

- *Science Classrooms*

how much

This area was renovated in 2004 and most of the equipment is in very good condition. Unit ventilators from the 2000 renovation were reused during this renovation, with the systems upgraded to meet state science room regulations.

- *Media Center*

This area is served by its own penthouse. The small reciprocating chiller serves the indoor air-handling unit in the penthouse. The supply air is ducted into the Media Center. The individual offices are served by VAV control terminals connected to the main unit ductwork. Due to age, this equipment is in fair condition and will need replacement in a few years.

- *Gymnasium Wing*

This wing of the building is heated only. All units are located indoor. Two air-handling units serve the main gymnasium, two air-handling units serve the auxiliary gym, and one unit each serves the two exercise rooms. The locker rooms are conditioned by ceiling-mounted unit ventilators. All equipment is original and is in fair to poor condition and will need replacement soon.

Mechanical/Electrical Facility Analysis (continued):

- *Cafeteria*

This room is conditioned by two air systems. The outside air is conditioned through an energy recovery unit and the room supply air is conditioned by a rooftop unit with DX cooling. The energy recovery unit is in good condition but the room supply air unit looks to be many years old and may need replacement soon.

- *Auditorium*

As noted earlier, the chiller serving the Auditorium is not in service. The Auditorium was built in 1972. The air-handling unit serving the space appears to be original. These units are installed in the basement area below the Auditorium. These units should be replaced in the near future.

- *Administration Office*

This space is served by a rooftop unit with duct-mounted heating coils to serve the individual rooms. The unit appears to be in good condition.

- *Guidance Offices*

There two guidance areas, each served by their own rooftop unit. One area is served with duct-mounted reheat coils and the other is supplied as one common zone. The equipment is in good conditioned and has several years of service available.

Control System


The existing control system for the building is a Johnson Controls "Metasys" system with a combination pneumatic operator with direct digital controllers (DDC). There are several duplex air compressors with refrigerant air dryers in the building. One system is in very good condition but the others need to be overhauled or replaced. A unified control system throughout the school building would be very cost effective.

Plumbing Systems

The building appears to be served by a single water service. Service is equipped with a water meter but no strainer or backflow preventer device. There is also a 2 psi gas service used for the boilers and water heaters.

The domestic hot water heaters are A.O. Smith Legend gas-fired heaters with a horizontal storage tank with a capacity of approximately 1,000 gallons. Heaters are in fair condition.

Mechanical/Electrical Facility Analysis (continued):



Based on the age of the building, tests should be run to determine if lead solder was used when the original school piping system was installed. Consideration should be given to replacing the piping if the lead is leaching into the water system.

Many plumbing fixtures appear to be original. The water closets are floor-mounted, urinals are wall-mounted and lavatories are individual wall hung with hot and cold water faucets. Several toilet rooms do not meet the Americans with Disability Act (ADA) requirements.

Fire Protection System

The majority of the building is sprinklered but system was added in many of the original construction portions. Actual age of system is not known. Fire service is equipped with an alarm check valve but no backflow preventer. The existing building is separated into several fire zones. Exact zone layout is not known at this time. If building addition is planned, sprinkler zones can be added to the system.

ELECTRICAL

Power Distribution

The school has two electrical services from BGE. The services are located on opposite ends of the building. The first service is 120/208 volts to a 3,000A Square D switchboard. This service and equipment was installed in 2002. A dedicated electrical room was created and the old service was removed from the Boiler Room. This new electrical room houses the automatic transfer switch and emergency panel and the fire alarm control panels. The meter on the switchboard was indicating a demand load of 550 amps, so there is a lot of spare capacity here. There is also space for additional circuit breakers.

The second service is 277/480 volts to a 2,000A Federal Pacific switchboard. This board has four mains. They serve a chiller, rooftop air conditioning units, and a group of subbreakers that feed other mechanical equipment and panelboards. The board also appears to be tapped to a 600A disconnect switch that feeds a kitchen panel. The date on the switchboard is 8/71. It is located in a remote corner of the chiller room and serves the Auditorium wing and associated additions. There are also two dry type transformers and several panelboards adjacent to the switchboard. This equipment is old and in poor condition. It has exceeded its expected life by several years and should be replaced. There is no space for expansion or new circuit breakers in the existing switchboard. It may also be desirable to combine the two services into one. This will ease the maintenance and serviceability concerns that accompany two remote services.

Panelboards throughout the building are located recessed in corridor walls. They appear to be original to the construction of each area of the building and should be scheduled for replacement. The exception is the recently renovated science rooms.

Mechanical/Electrical Facility Analysis (continued):

Classrooms typically have 4 or 5 receptacles that have been added in wiremold. These include receptacles for the TV, computers, and general use.

There is no separate computer power distribution system in the school.

Emergency Power

Emergency power consists of a 45 kW Onan generator outside of the Boiler Room. The generator serves the automatic transfer switch and new Panel EM. The generator is approximately 25-years-old but is exercised weekly and still operates properly. Panel EM serves emergency lights and the fire alarm system.

Lighting

Fluorescent lighting is used throughout the school. Fixtures in classrooms and offices are generally recessed 2' x 4' with acrylic lenses and appear to be in fair to good condition. Recessed fluorescent 1' x 4' fixtures are used in most corridors. Some portions of corridors use surface-mounted fixtures. The Cafeteria uses recessed mounted 2' by 4' and 1' by 4' fixtures. The gymnasiums have surface-mounted 2' x 4' fixtures with wire guards.

Fire Alarm System

The fire alarm system is a low-voltage zoned system, Siemens (Pyrotronics) System 3. This is an old technology type panel that is currently serving the needs of the building. Notification devices are horns and strobes. There is no voice evacuation system. The school is lacking the quantity of visual devices required by ADA. There are no strobe lights in the classrooms.

The control panel appears to have space for two additional zones. Replacement of the panel and system should be considered with any significant expansion or renovation of the building.

A Silent Knight digital communicator provides reporting capability for the fire alarm system.

Intercom System

The school intercom is a Rauland Telecenter 21 located in the Main Office. It has the capability to perform selected local calls to classrooms or paging throughout the school. Each classroom has a speaker and a wall phone. An integral master clock is included. The system can be expanded for future additions.

The intercom system is connected to the media retrieval system.

Mechanical/Electrical Facility Analysis (continued):

Each classroom has an individual battery clock. There are no synchronized clocks in the school.

A separate local sound system is present for the gymnasium and auditorium.

Telephone System

The telephone system is through the intercom system. A separate key system for telephones is not present. The incoming demarc point is located in the Boiler Room.

Cable TV System

The school has TV outlets in corridors and in every classroom. The outlets are connected to a media retrieval system located in the Media Center storage room. The system does not appear to be used for classroom presentations. Only the hallway TVs are used to display announcements. TVs in classrooms are connected to the teacher's computers or a local VCR. The media retrieval system should be upgraded to current technology.

Security System

The school has a security system throughout. Keypads are used to arm and disarm the system. Wall- and ceiling-mounted motion detectors are used to activate the system. Magnetic locks are on every exterior door with proximity readers and main entries. The main system manufacturer is Galaxy Control System. The panels are located in an alcove in the main office. There is no room at this location for expansion.

Data Wiring System

A Cat 5 wiring system has been installed throughout the school. This system provides connectivity for the Computer Room, Media Center, offices and classrooms. Each typical classroom has one outlet for the teacher's computer and another outlet with 3 data ports for the student station. Cabling in computer labs generally runs across the floor to serve the computers. The school server equipment is located in a storage room near the Media Center. Remote hub locations are found throughout the school with major distribution racks located in the Elevator Machine Room and in a storage closet on the second floor. The rooms have no cooling and limited ventilation and access to the equipment can be impaired with materials that are stored in the rooms. The system can be expanded, however, the hub locations should be moved to dedicated, conditioned spaces.

Existing Site Plan

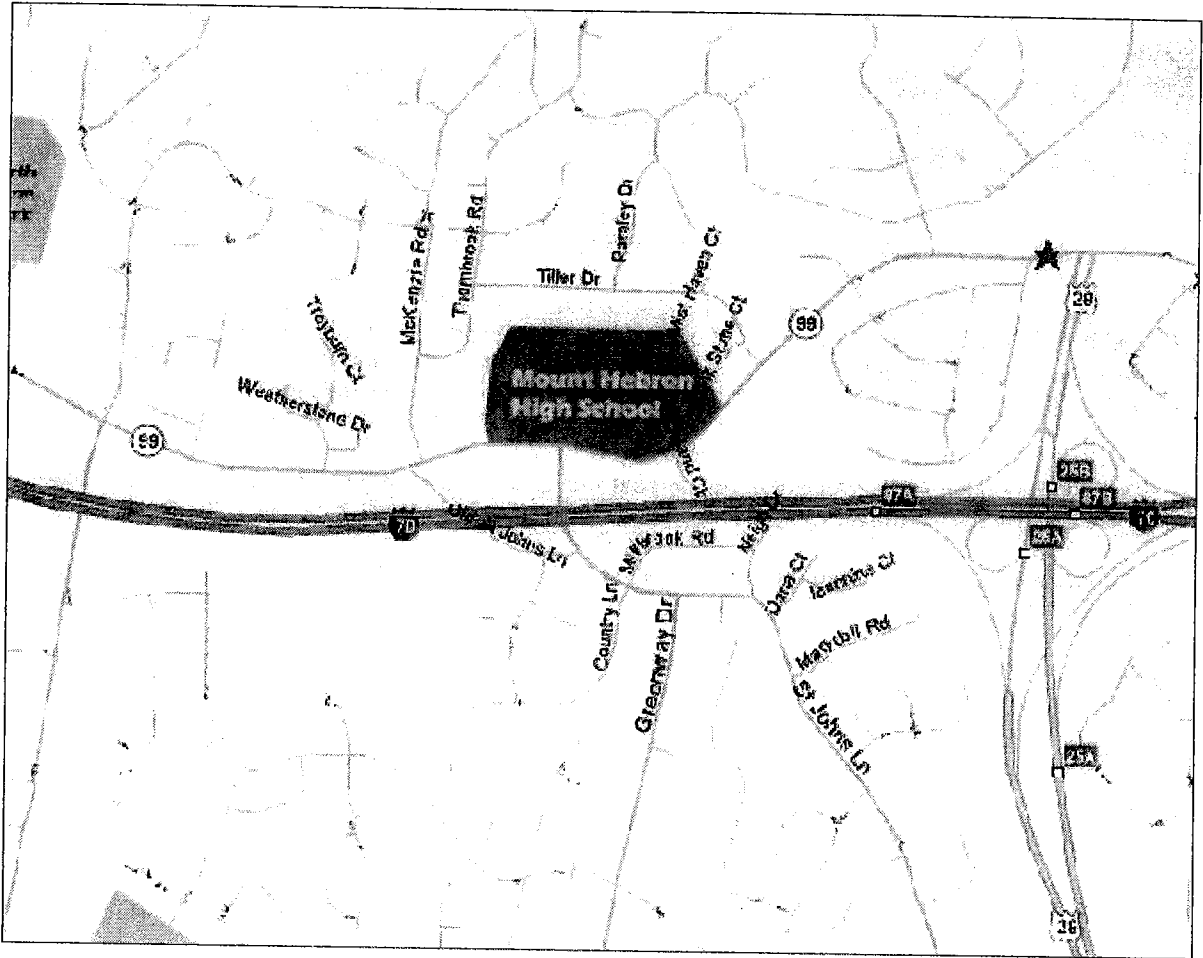
Key features of the existing site plan are listed below and identified by circled numbers on the site plan.

General

Mount Hebron High School is situated on 40.055 acres on Old Frederick Road (Route 99) in Ellicott City. The school is surrounded by residential property along Tiller Rd., McKenzie Rd. and St. John Lane. Vehicular access to the high school is from the intersection of St. John Lane and Old Frederick Road and the only traffic light at the site.

1. The main entrance to the site is from the only traffic light intersection on the site. Traffic entering the site at this point must enter the bus loop combining the bus and personal car traffic.
2. All traffic entering the site at the central entrance must proceed into the bus loop. Student drop off and bus drop off in the mornings occur at the front of the building in the bus loop at the same time. This creates stacking of both busses and personal car traffic. The onsite stacking creates a site access issue and prevents other vehicles from entering the site in a timely manner. The resulting affect is a stacking of vehicles on both St. John Lane and Old Frederick Road.
3. Two faculty parking lots are located on the east side of the site off the bus loop. This area provides access to the rear of the building, baseball and football fields.
4. The kitchen loading dock and dumpsters are located at the front right of the building off of the right faculty parking lot.
5. Parking in front of the auditorium is accessible at the end of the bus loop and through the student parking lot.
6. Student parking is to the west of the building and in front of the auditorium.
7. Student parking accessible is from Old Frederick Road at the far left of the property. This access is a two lane road for entrance and egress traffic.
8. The 25 busses stack chevron style at the front of the student parking near the practice fields during the afternoon dismissal.
9. Two Storm Water Management (SWM) ponds exist along Old Frederick Road at the front right and left extremities of the property.
10. A construction access road at the rear of the building acts as an access road for emergency vehicles for both the building and the football stadium.
11. Practice fields for lacrosse and soccer. The fields are located at a diminished elevation from the school. The grade on this portion of the building slopes away and down to the practice fields.
12. Existing mechanical rooms located in basement areas accessible from the exterior located under the Guidance and musical wings.
13. Existing baseball field located on the west portion of the site.
14. Existing softball field located on the north western portion of the site.
15. Existing stadium with home and visitor bleachers and running track.

Vicinity Map



Existing Floor Plan

Listed below are features of the existing school as well as issues of concern that were mentioned by Mrs. Bohn. The numbered items correspond to the circle numbers on the drawings pages.

1. The front entrance was noted to be a gathering space for the student body during the morning arrival with complicates the circulation and arrival of faculty and other students.
2. The main entrance lobby is a corridor and provides limited protected space for students during peak hours of arrival and dismissal.
3. The main office does not meet the current Ed. Spec. requirements.
4. The front of the auditorium is a intersection of two highly trafficked corridors. The lack of a lobby at this area complicates circulation during school hour performances and assemblies.
5. The existing auditorium lobby is located at the exterior side of the auditorium and is useful for queuing only during after hour performances. The space is currently used for table storage.
6. The current stage has limited wing areas and no back of house. There is no workshop located off the stage as in the prototype high school and current Ed. Spec. An exterior loading dock does not existing to provide exterior access to the performance areas.
7. The Music department is located at the behind the auditorium next to the English department. The Dance studio is currently located in the opposite end of the school as the Music and English departments.
8. Ramps to lower levels do not appear to meet the current ADA codes. The ramp at the English department exceeds the allowable slope and contains no hand rails.
9. The existing Child Development program is located on the interior of the facility adjacent to a courtyard. This does not provide visual access for parent drop off. The access to the classroom is through an exterior door and down a corridor away from the main entrance and is not easily monitored by the main office.
10. This intersection is of two major corridors serving primary circulation to the classrooms and the west side of the building. The intersection circulation problems are compounded by the addition of a central stair adjacent to this location.
11. The original portion of the second floor contains HVAC issues.
12. Portions of the school are sprinkled, but the entire facility is not covered.
13. The existing weight room is located off the main gym and is closed to the gym only with a metal fence. The weight room is separated by masonry partitions and is difficult to observe by one instructor.
14. The auxiliary gym is located at the far west extremity of the building and is solely accessible on the interior of the school from the locker rooms.
15. The locker room areas are separated into multiple rooms and offers poor surveillance.

In addition to the above noted items, Mount Hebron High School is lacking several spaces per the current Ed. Spec. including a JROTC program. The current classrooms in the facility are used for multiple subjects during different periods. Multiple subjects are put into classrooms as teaching space is found and are not all clustered together in one central location.

Existing Building Graphic Summary and Analysis

The following section contains a numeric and graphic analysis of the overall existing building, created by a visual inspection of the facility. The yellow represents areas missing in the existing Mount Hebron High School in comparison to the Educational Specifications (Ed. Spec.) and spaces provided in the Prototype High School.

Numerical Analysis of Existing Facility

	SF per room	Qty.	PROGRAMMED	EXISTING	DIFFERENCE
A. Administration					
Attendance Office	120 S.F.	1	120 S.F.	173 S.F.	53 S.F.
Bookkeeper/Business Manager	150 S.F.	1	150 S.F.	200 S.F.	50 S.F.
Conference Room (desired -not req.)	200 S.F.	1	200 S.F.	0 S.F.	-200 S.F.
Conference Room	200 S.F.	1	200 S.F.	0 S.F.	-200 S.F.
Mailroom/Workroom	600 S.F.	1	600 S.F.	365 S.F.	-235 S.F.
Parent/Committee Vol. Room	150 S.F.	1	150 S.F.	0 S.F.	-150 S.F.
Principal's Office/Toilet/Closet	250 S.F.	1	250 S.F.	212 S.F.	-38 S.F.
Principal's Secretary's Office	120 S.F.	1	120 S.F.	0 S.F.	-120 S.F.
Reception Area	600 S.F.	1	600 S.F.	386 S.F.	-214 S.F.
School Store/Storage	200 S.F.	1	200 S.F.	S.F.	-200 S.F.
Storage Room	120 S.F.	1	120 S.F.	78 S.F.	-42 S.F.
Staff Toilet/Closets	110 S.F.	1	110 S.F.	84 S.F.	-26 S.F.
Storage Rooms	100 S.F.	1	100 S.F.	0 S.F.	-100 S.F.
Assistant Principal's Office	150 S.F.	4	600 S.F.	488 S.F.	-112 S.F.
Assistant Principal's Office (desired - not req)	150 S.F.	1	150 S.F.	0 S.F.	-150 S.F.
Police Liaison Office	120 S.F.	1	120 S.F.	294 S.F.	174 S.F.
Total			3,790 S.F.	2,280 S.F.	-1510 S.F.
B. Art Studios					
General Art Studios	1,300 S.F.	2	2,600 S.F.	2,343 S.F.	-257 S.F.
Central Storage	650 S.F.	1	650 S.F.	670 S.F.	80 S.F.
Sculptural Media/Kiln Room	900 S.F.	1	900 S.F.	0 S.F.	-900 S.F.
Photo Studio/Darkroom	800 S.F.	1	800 S.F.	243 S.F.	-557 S.F.
Department plan/ prep.	180 S.F.	1	180 S.F.	0 S.F.	-180 S.F.
Total			5,130 S.F.	3,156 S.F.	-1,974 S.F.
C. Auditorium					
Auditorium (incls. 578 s.f for control room)	8,200 S.F.	1	8,200 S.F.	7,081 S.F.	-1,119 S.F.
Commons Room (includes toilets)	2,600 S.F.	1	2,600 S.F.	914 S.F.	-1,686 S.F.
Workshop	1,200 S.F.	1	1,200 S.F.	0 S.F.	-1,200 S.F.
Mini-theater Instructional Space	3,000 S.F.	1	3,000 S.F.	0 S.F.	-3,000 S.F.
Storage Rooms	1,000 S.F.	1	1,000 S.F.	532 S.F.	-468 S.F.
Stage/Wings	3,600 S.F.	1	3,600 S.F.	2,156 S.F.	-1,444 S.F.
Ticket Booth/Lavs/Concession (lobby)	500 S.F.	1	500 S.F.	920 S.F.	420 S.F.
Total			20,100 S.F.	11,603 S.F.	-8,497 S.F.
D. Business & Computer Management					
Computer Labs	1,060 S.F.	4	4,240 S.F.	800 S.F.	-3,440 S.F.
Computer science	1,060 S.F.	4	1,060 S.F.	1,075 S.F.	15 S.F.
Typing Lab	1,060 S.F.	4	1,060 S.F.	1,388 S.F.	328 S.F.
Storage	240 S.F.	1	240 S.F.	S.F.	-240 S.F.
Teacher Planning	60 S.F.	1	60 S.F.	S.F.	-60 S.F.
Total			6,660 S.F.	3,263 S.F.	-3,397 S.F.
E. Cafeteria/Food Service					
Can Wash	110 S.F.	1	110 S.F.	95 S.F.	-15 S.F.
Dry Storage Room	500 S.F.	1	500 S.F.	378 S.F.	-122 S.F.
Laundry/Custodial Closet	60 S.F.	1	60 S.F.	0 S.F.	-60 S.F.
Refrigerator/Freezer	260 S.F.	1	260 S.F.	350 S.F.	90 S.F.
Office	80 S.F.	1	80 S.F.	129 S.F.	49 S.F.
Locker Room/Toilet	160 S.F.	1	160 S.F.	89 S.F.	-71 S.F.
Dishwashing Area	330 S.F.	1	330 S.F.	271 S.F.	-59 S.F.
Kitchen & Serving	2,100 S.F.	1	2,100 S.F.	1,769 S.F.	-331 S.F.
Student Dining	7,600 S.F.	1	7,600 S.F.	5,380 S.F.	-2,220 S.F.
Soap Storage	105				
Total			11,200 S.F.	8,461 S.F.	-2,739 S.F.

Numerical Analysis of Existing Facility

	SF per room	Qty.	PROGRAMMED	EXISTING	DIFFERENCE
F. Custodial Area					
Bathroom/Showers (2)	120 S.F.	2	240 S.F.	S.F.	-240 S.F.
Custodial Office	200 S.F.	1	200 S.F.	S.F.	-200 S.F.
Shop & Storage	500 S.F.	1	500 S.F.	S.F.	-500 S.F.
General School Storage	600 S.F.	1	600 S.F.	S.F.	-600 S.F.
Outside Storage	150 S.F.	1	150 S.F.	S.F.	-150 S.F.
Additional Storage	160 S.F.	2	320 S.F.	S.F.	-320 S.F.
Total			2,010 S.F.	0 S.F.	-2,010 S.F.
G. English Language Arts					
Classrooms	800 S.F.	10	8,000 S.F.	9,059 S.F.	1,059 S.F.
Teacher Planning (13 teachers)	60 S.F.	13	780 S.F.	S.F.	-780 S.F.
Central Storage	550 S.F.	1	550 S.F.	S.F.	-550 S.F.
Seminar Room	375 S.F.	2	750 S.F.	S.F.	-750 S.F.
Technology Resource Room	860 S.F.	1	860 S.F.	S.F.	-860 S.F.
Journalism / Yearbook	1,300 S.F.	1	1,300 S.F.	S.F.	-1,300 S.F.
Total			12,240 S.F.	9,059 S.F.	-3,181 S.F.
H. Foreign Language and ESOL					
Language Resource Center	860 S.F.	1	860 S.F.	S.F.	-860 S.F.
Classroom	800 S.F.	4	3,200 S.F.	6,220 S.F.	3,020 S.F.
Seminar Room	375 S.F.	1	375 S.F.	S.F.	-375 S.F.
Teacher's Planning Area	360 S.F.	1	360 S.F.	489 S.F.	129 S.F.
Storage	300 S.F.	1	300 S.F.	S.F.	-300 S.F.
Total			5,095 S.F.	6,709 S.F.	1,614 S.F.
I. Gifted and Talented					
Gifted & Talented Classroom	800 S.F.	1	800 S.F.	880 S.F.	80 S.F.
Pathways	800 S.F.	1	750 S.F.	476 S.F.	-274 S.F.
Storage	50 S.F.	1	50 S.F.	0 S.F.	-50 S.F.
Teacher Planning	60 S.F.	1	60 S.F.	0 S.F.	-60 S.F.
Total			1,660 S.F.	1,356 S.F.	-304 S.F.
J. Guidance					
Office	120 S.F.	6	720 S.F.	630 S.F.	-90 S.F.
Records/Registrar's Office	300 S.F.	1	300 S.F.	227 S.F.	-73 S.F.
Workroom	200 S.F.	1	200 S.F.	139 S.F.	-61 S.F.
Conference Room	220 S.F.	1	220 S.F.	212 S.F.	-8 S.F.
Reception	400 S.F.	1	400 S.F.	301 S.F.	-99 S.F.
Career Center	1,200 S.F.	1	1,200 S.F.	930 S.F.	-270 S.F.
Data Clerk	120 S.F.	1	120 S.F.	0 S.F.	-120 S.F.
Psychologist Office	120 S.F.	1	120 S.F.	90 S.F.	-30 S.F.
BSAP Academic Mentor Office	120 S.F.	1	120 S.F.	S.F.	-120 S.F.
ALPS Office	150 S.F.	1	150 S.F.	S.F.	-150 S.F.
MD. Tomorrow Office	120 S.F.	1	120 S.F.	S.F.	-120 S.F.
Contract Room	450 S.F.	1	450 S.F.	S.F.	-450 S.F.
Storage at the guidance and computer science	150 S.F.	1	150 S.F.	138 S.F.	-12 S.F.
Professional Develop. School's Office	150 S.F.	1	150 S.F.	S.F.	-150 S.F.
Professional Develop. Seminar Space	600 S.F.	1	600 S.F.	S.F.	-600 S.F.
Total			5,020 S.F.	2,667 S.F.	-2,353 S.F.
K. Health Suite					
Waiting/Treatment	200 S.F.	1	200 S.F.	206 S.F.	6 S.F.
Office	120 S.F.	1	120 S.F.	59 S.F.	-61 S.F.
Cluster Nurse Office	120 S.F.	1	120 S.F.	0 S.F.	-120 S.F.
Cot Rooms	160 S.F.	2	320 S.F.	378 S.F.	58 S.F.
Storage	80 S.F.	1	80 S.F.	21 S.F.	-59 S.F.
Toilets	4 S.F.	20	80 S.F.	74 S.F.	-6 S.F.
Health Classroom	800 S.F.	1	800 S.F.	768 S.F.	-32 S.F.
Health CI storage	50 S.F.	1	50 S.F.	0 S.F.	-50 S.F.
Health CI T. Planning	60 S.F.	1	60 S.F.	0 S.F.	-60 S.F.
Total			1,830 S.F.	1,506 S.F.	-324 S.F.

Numerical Analysis of Existing Facility

	SF per room	Qty.	PROGRAMMED	EXISTING	DIFFERENCE
L. Home Economics					
			PROGRAMMED	EXISTING	DIFFERENCE
Food & Nutrition Lab	960 S.F.	1	960 S.F.	1,113 S.F.	153 S.F.
Classroom	800 S.F.	1	800 S.F.	0 S.F.	-800 S.F.
Child Development Lab	900 S.F.	1	900 S.F.	1,030 S.F.	130 S.F.
Miscellaneous storage at child development	150 S.F.	1	150 S.F.	137 S.F.	-13 S.F.
Food Lab Storage	300 S.F.	1	300 S.F.	98 S.F.	-202 S.F.
Teacher Planning	120 S.F.	1	120 S.F.	0 S.F.	-120 S.F.
Total			3,230 S.F.	2,378 S.F.	-852 S.F.
Child Development Outdoor Play area			2,200 S.F.	S.F.	-2,200 S.F.
M. JROTC					
Classroom/Drills	750 S.F.	2	1,500 S.F.	S.F.	-1500 S.F.
Planning Office	340 S.F.	1	340 S.F.	S.F.	-340 S.F.
Uniform Storage	600 S.F.	1	600 S.F.	S.F.	-600 S.F.
Total			2,440 S.F.	0 S.F.	-2,440 S.F.
N. Mathematics					
Classrooms	900 S.F.	10	9,000 S.F.	6,915 S.F.	-2,085 S.F.
Technology Resource Room (Math Skills)	860 S.F.	1	860 S.F.	1,167 S.F.	297 S.F.
Math Book/Storage Rooms	300 S.F.	1	300 S.F.	S.F.	-300 S.F.
Teacher Planning	70 S.F.	10	700 S.F.	S.F.	-700 S.F.
Total			10,860 S.F.	8,072 S.F.	-2,788 S.F.
O. Media					
Main Reading Room	5,900 S.F.	1	5,900 S.F.	6,433 S.F.	533 S.F.
Technology Resource Room	860 S.F.	1	860 S.F.	S.F.	-860 S.F.
Office and Work Space	300 S.F.	1	300 S.F.	634 S.F.	334 S.F.
Media Production	600 S.F.	1	600 S.F.	S.F.	-600 S.F.
Storage (books & AV equipment)	800 S.F.	1	800 S.F.	348 S.F.	-452 S.F.
Distribution Center	300 S.F.	1	300 S.F.	S.F.	-300 S.F.
TV Studio (includes control rm)	800 S.F.	1	800 S.F.	729 S.F.	-71 S.F.
Total			9,560 S.F.	8,144 S.F.	-1,416 S.F.
P. Music					
			PROGRAMMED	EXISTING	DIFFERENCE
Instrumental Rehearsal Room (130 students)	2,880 S.F.	1	2,880 S.F.	2,312 S.F.	-568 S.F.
Instrumental Equipment Storage	300 S.F.	1	300 S.F.	144 S.F.	-156 S.F.
Instrumental Repair Space	160 S.F.	1	160 S.F.	172 S.F.	12 S.F.
Instrumental Uniform Storage	220 S.F.	1	220 S.F.	184 S.F.	-36 S.F.
Choral Rehearsal Room	1,275 S.F.	1	1,275 S.F.	1,091 S.F.	-184 S.F.
Choral Uniform Cabinet Space	45 S.F.	1	45 S.F.	0 S.F.	-45 S.F.
Choral Storage/Workroom	220 S.F.	1	220 S.F.	0 S.F.	-220 S.F.
Practice Rooms	65 S.F.	4	260 S.F.	566 S.F.	306 S.F.
Electronics/Piano Laboratory	440 S.F.	1	440 S.F.	0 S.F.	-440 S.F.
Ensemble Room/Music Library	435 S.F.	1	435 S.F.	0 S.F.	-435 S.F.
Piano Storage	46 S.F.				
Total			6,235 S.F.	4,469 S.F.	-1,766 S.F.

**Numerical Analysis
of Existing Facility**

	SF per room	Qty.	PROGRAMMED	EXISTING	DIFFERENCE
			PROGRAMMED	EXISTING	DIFFERENCE
Main Gym					
Main Gym	10,000 S.F.	1	10,000 S.F.	10,000 S.F.	0 S.F.
Auxiliary Gym	4,800 S.F.	1	4,800 S.F.	4,826 S.F.	26 S.F.
Wrestling	2,058 S.F.	1	2,058 S.F.	1,934 S.F.	-124 S.F.
Weight Training Room	2,925 S.F.	1	2,925 S.F.	2,238 S.F.	-687 S.F.
Locker Rooms	1,883 S.F.	2	3,766 S.F.	2,337 S.F.	-1,429 S.F.
Shower Rooms	400 S.F.	2	800 S.F.	346 S.F.	-454 S.F.
Drying Rooms	160 S.F.	2	320 S.F.	647 S.F.	327 S.F.
Toilet Rooms	170 S.F.	2	340 S.F.	S.F.	-340 S.F.
Teacher Planning	400 S.F.	1	400 S.F.	0 S.F.	-400 S.F.
Team Rooms	300 S.F.	4	1,200 S.F.	928 S.F.	-272 S.F.
2-Coaches' Planning (incl. toilets and stor.)	480 S.F.	1	480 S.F.	433 S.F.	-47 S.F.
Athletic Director's Office (incl. stor.)	120 S.F.	1	120 S.F.	S.F.	-120 S.F.
Training Room (incl. storage)	400 S.F.	1	400 S.F.	S.F.	-400 S.F.
Laundry Room	150 S.F.	1	150 S.F.	314 S.F.	164 S.F.
Storage Area (Main Gymnasium)	610 S.F.	1	610 S.F.	284 S.F.	-326 S.F.
Outside Storage	850 S.F.	1	850 S.F.	S.F.	-850 S.F.
Office (1st flr. By main gym)	150 S.F.	1	150 S.F.	258 S.F.	108 S.F.
Team Room Storage	220 S.F.	1	220 S.F.	S.F.	-220 S.F.
Small Storage Areas	420 S.F.	1	420 S.F.	S.F.	-420 S.F.
Towel Rooms (2)	121 S.F.			242	
Total Storage for All of P.E.	1,330 S.F.				
Total			30,009 S.F.	24,787 S.F.	-5,464 S.F.
Science					
Earth Science Lab	1,350 S.F.	2	2,700 S.F.	1,394 S.F.	-1,306 S.F.
Biology	1,500 S.F.	3	4,500 S.F.	4,991 S.F.	491 S.F.
Physical Science	1,500 S.F.	4	6,000 S.F.	S.F.	-6,000 S.F.
Prep. for Biology/Earth Science	800 S.F.	1	800 S.F.	868 S.F.	68 S.F.
Prep. for Chemistry	300 S.F.	1	300 S.F.	410 S.F.	110 S.F.
Storage Area	350 S.F.	1	350 S.F.	S.F.	-350 S.F.
Seminar Area	375 S.F.	1	375 S.F.	S.F.	-375 S.F.
Project Area	375 S.F.	1	375 S.F.	S.F.	-375 S.F.
Teacher Planning	540 S.F.	1	540 S.F.	557 S.F.	17 S.F.
Greenhouse	510 S.F.	1	510 S.F.	S.F.	-510 S.F.
Chemistry Lab	2,678 S.F.			2,678	
Physics Lab	2,809 S.F.			2,809	
Total			16,450 S.F.	13,707 S.F.	-8,230 S.F.
Social Studies					
Classrooms	800 S.F.	10	8,000 S.F.	6,571 S.F.	-1,429 S.F.
Teacher Planning	660 S.F.	1	660 S.F.	805 S.F.	145 S.F.
Seminar Room	375 S.F.	1	375 S.F.	S.F.	-375 S.F.
Storage/work room	400 S.F.	1	400 S.F.	417 S.F.	17 S.F.
Technology recourse	860 S.F.	1	860 S.F.	S.F.	-860 S.F.
Total			10,295 S.F.	7,793 S.F.	-2,502 S.F.
Special Ed. Related Services					
OT/PT Area	300 S.F.	1	300 S.F.	S.F.	-300 S.F.
OT Storage	60 S.F.	1	60 S.F.	S.F.	-60 S.F.
Speech Language Therapy (incl. Storage)	150 S.F.	1	150 S.F.	S.F.	-150 S.F.
Conference Room	220 S.F.	1	220 S.F.	S.F.	-220 S.F.
Teacher Planning (Therapists)	180 S.F.	1	180 S.F.	S.F.	-180 S.F.
Classrooms	600 S.F.	5	3,000 S.F.	S.F.	-3,000 S.F.
Life Skills CR (Living on Your Own)	600 S.F.	1	600 S.F.	764 S.F.	164 S.F.
Teacher planning	360 S.F.	1	360 S.F.	121 S.F.	-239 S.F.
Special Ed. Storage	300 S.F.	1	300 S.F.	121 S.F.	-179 S.F.
Career Connection's Office	500 S.F.	1	500 S.F.	S.F.	-500 S.F.
Emotional Disturbance Classrooms	600 S.F.	2	1,200 S.F.	S.F.	-1,200 S.F.
Emotional Disturbance T-Planning	180 S.F.	1	180 S.F.	S.F.	-180 S.F.
Emotional Disturbance Time-Out Rm	42 S.F.	1	42 S.F.	S.F.	-42 S.F.
Emotional Disturbance Storage	60 S.F.	1	60 S.F.	S.F.	-60 S.F.
Total			7,050 S.F.	1,006 S.F.	-6044 S.F.

**Numerical Analysis
of Existing Facility**

	SF per room	Qty.	PROGRAMMED	EXISTING	DIFFERENCE
V. Staff Lounge					
Dining/Lounge	625 S.F.	2	1,250 S.F.	514 S.F.	-736 S.F.
Total			1,250 S.F.	514 S.F.	-736 S.F.
W. Student Organizations					
Student Store	375 S.F.	1	375 S.F.	S.F.	-375 S.F.
Storage	50 S.F.	1	50 S.F.	S.F.	-50 S.F.
Total			425 S.F.	0 S.F.	-425 S.F.
X. Technology Education					
Fabrication/Production Lab	2,400 S.F.	1	2,400 S.F.	2,317 S.F.	-83 S.F.
Material Storage	250 S.F.	1	250 S.F.	S.F.	-250 S.F.
Project Storage & Finishing	200 S.F.	1	200 S.F.	251 S.F.	51 S.F.
Office (between Spec. Ed. and Tech Ed.)	150 S.F.	1	150 S.F.	77 S.F.	-73 S.F.
Communications Laboratory	1,400 S.F.	1	1,400 S.F.	S.F.	-1,400 S.F.
Storage at tech ed. and special ed.	200 S.F.	1	200 S.F.	233 S.F.	33 S.F.
Storage	200 S.F.	1	200 S.F.	S.F.	-200 S.F.
Teacher Planning	120 S.F.	1	120 S.F.	S.F.	-120 S.F.
Total			4,920 S.F.	2,878 S.F.	-2,042 S.F.
			PROGRAMMED	EXISTING	DIFFERENCE
SUBTOTAL				123,808 S.F.	
Y. Un-identified spaces					
GRAND TOTAL				123,808 S.F.	

- 61,580 S.F.

Proposed Site Plan

With review of the existing site with Howard County Public Schools and Mrs. Bohn of Mount Hebron, several key issues were noted. Among these issues included the mixing of busses, student drop off and faculty arriving in the morning. This creates traffic congestion inside the site which translates to the adjacent state roads. Traffic intending to access the site is forced to stack on St. John lane and Old Frederick Road.

Along with the stacking of cars, students congregate at the main entrance in the morning. The lack of an interior front commons space and a limited exterior space create a circulation problem for arriving students and faculty.

During a review of the site with the design team, it was determined the busses during the afternoon dismissal stack in the student parking lot away from the building. This area is not protected from the weather and makes the students walk out into the elements. This condition also mixes the busses and students drivers in the same lot and site exit.

Key features of the proposed site plan are listed below and are identified by circle numbers on the Site Plan.

1. The main entrance is to be widened to four lanes allowing for two lanes of traffic to enter the site. The two lanes of egress allow for traffic flow out of the site more regularly and prevent unnecessary stacking.
2. The bus loop has been widened to provide enough space for the stacking of 25 busses in front of the school for dismissal. This allows for a shorter access to the busses for the students and separates the busses from student traffic.
3. The faculty parking has been located in the center of the bus loop, shortening the distance required to travel in the bus loop, separating personal traffic from bus traffic.
4. The bus loop drive narrows at the end of the faculty parking and is to be combined with signs to deter provide bus and emergency access to the bus loop only.
5. An access at the north west end of the bus loop was provided for the kitchen utilities and emergency access to the stadium.
6. The bus loop was pulled away from the front of the building to provide a larger and more continuous bus drive. This opens up the front of the building to provide a larger are for students to congregate.
7. The bus loop has been separated from the student parking lot by a n island designated for bus drop off on one side and student drop off on the other.
8. The student parking lot and student drop off access is from the secondary entrance, separating this traffic from the bus and faculty traffic alleviating undue congestion. This will reduce the amount of stacking on both St. John Lane and Old Frederick Road.
9. The student parking lot and student drop off entrance has been widened to provide a right turn lane out of the site. This will provide better flow of traffic in the afternoon dismissal at this intersection.
10. The kitchen loading dock will remain unchanged.
11. In review of the site, the ball fields will remain unchanged.

Proposed Front Lobby Renovation

The front lobby of the school was pointed out by the principal, Mrs. Bohn, as one of the key issues for the school. This area is used by the student body in the morning for a gathering space. The majority of the space is exterior and is covered by a canopy. The congregating of students presents a problem for other arriving students and faculty accessing the building.

Key features of the proposed front lobby renovation floor plan are listed below.

1. The administration area was noted to have spaces missing with regards to the current Educational Specifications. This was resolved by creating a new administration suite with the required spaces.
2. The administration suite was relocated to the front of the corridor with views of the site and bus loop. This location gives the administration a better sight line of the parking lots and bus loop for security purposes.
3. The location of the administration suite provides better security and surveillance of the adjacent corridor for drop off of the child development room.
4. The administration suite opens on to the new interior commons area providing a visual connection for visitors to the school. The adjoining wall between the commons and the administration would be glass providing surveillance for this space and the school's main entrance.
5. The cafeteria will be expanded to meet the square footage requirements per the current Ed. Spec. and attain a physical connection to the new commons.
6. The staff dining and lounge will be relocated to the exterior of the new cafeteria portion.
7. The new interior commons space would continue and open up to the central courtyard. This will open up the space and promote student use of the courtyard.
8. Existing administration spaces on either side of the commons would be renovated to gain additional required space.

Proposed Performing Arts Addition and Renovation

The performing arts area of the school, which currently includes the auditorium and music suite, are not currently up to the required spaces of the Ed. Spec. In review of the current plan, the dance and drama room is located on the opposite end of the school. This location was due to the proximity of the locker rooms. Several required support spaces for the performing arts would be proposed.

Key features of the proposed performing arts addition and renovation floor plan are listed below.

1. The workshop has been added to the exterior of the building adjacent to the auditorium. The current space is missing from the building. This location provides access for deliveries of material and equipment for performances.
2. The dance and drama room located on the western side of the building will be relocated to be adjacent to the related spaces. The student dressing/commons areas will be added centrally located to this location for ease of access and use of spaces.
 - The actual teaching volumes appear to be adequate however, much of the spaces are used to accommodate support program which is lacking.
 - By adding the support spaces and rededicating the teaching spaces the program can be met.
 - Demolition and replacement of the music suite should also be considered.
3. The music suite, a noted issue for the school, will be renovated to provide a better teaching environment and add crucial support spaces for the department.
4. Corridor space will be added to provide emergency egress from the auditorium.
5. A ticket booth and toilet rooms are added to the renovated auditorium entrance and lobby for use by the community for after school hours performances.

Proposed Circulation Renovations

The second key issues noted by Mrs. Bohn, was the front entrance to the auditorium. The current lobby is located on the side of the auditorium and is useful only for after school hours performances. The entrance is located at the intersection of two corridors and provides a minimal space for queuing of students and egress capacity after performances.

The other circulation issue revolves around a rear corridor intersection. This location is the intersection of the main rear corridor and the main vertical corridor. To compound the issue, the central stair to the math and science departments on the second floor empties adjacent to the narrow intersection.

Key features of the proposed circulation renovations floor plan are listed below.

1. The intersection at the main entrance to the auditorium has been increased to provide for more volume and better circulation.
2. The lobby addition moves into the adjacent courtyard bringing in softer northern light.
3. Wall area has been increased providing the opportunity for a student display and gallery space.
4. The lobby addition has been created in a way as not to remove direct light from teaching spaces across the courtyard.
5. The rear corridor intersection has been increased to provide for more open space for circulation.
6. A new convenience stair has been added at the courtyard to decrease the demand on the existing egress stair adjacent to the intersection. This stair would terminate in the increased volume space. The additional corridor width at this critical location will provide an opportunity for students to merge into moving traffic.
7. Opening up the corridor in front of the courtyard provides an opportunity to bring more light into the corridors and indirect light into the front of the adjacent media center as well.

Proposed 18 Classroom Addition

In reviewing the current usage and layout of the school, thru a cursory inspection of the site, it has been determined the school is missing 18 classrooms with regards to the current Ed. Spec. Several current classrooms are subject to the use by multiple departments throughout the day. The addition of these classrooms provides greater flexibility for the school in their programming.

Key features of the proposed 18 classroom addition floor plan are listed below.

1. The location of this addition was determined due to site restrictions of accessible route and the proximity of the stadium in the rear of the school.
2. The connection to the existing school would be through a planning area on the 2nd floor, the stair well on both floors, and a single classroom on the first floor. The classroom and planning could be relocated to the addition.
3. The renovated stair well would be relocated to the addition and be provided exterior access for egress requirements.
4. A double loaded corridor loop circulation would be provided.
5. A central courtyard would help provide natural light to the interior teaching spaces.
6. The sloping grade provides an opportunity for a lower level which can accommodate additional program mechanical spaces, as well as outside storage.
7. Construction of this addition will not only provide the additional capacity required; but doing so would allow reallocation of current spaces to consolidate educational program departments.

Proposed Courtyard Classroom Addition

The main central courtyard is currently used for child development program. The classroom opens onto the courtyard and a play area is provided outside the classroom. The adjacent north wall of the courtyard is a single loaded corridor. If additional teaching spaces are required, this would be a viable location for additional classrooms. The child development room would need to be relocated. A possible location for the child development classroom would be the renovated front lobby adjacent to the administration and main entrance.

If the program for this particular school does not require the full 18 classroom addition; some additional classroom spaces can be provided in this location.

Proposed Overall Floor Plan

The following are features of the proposed school that address Ed. Spec. requirements as well as solutions to issues of concern that were mentioned by Mrs. Bohn. The individual features of this proposed plan are independent and can be selected individually as the needs of the school require. The numbered items correspond to the circle numbers on the drawing pages.

1. Proposed Front Lobby Renovation – relocating the renovated administration and introduction of a protected front commons area for students to gather. Expansion of cafeteria including relationship to entry service.
2. Proposed Performing Arts Addition and Renovations – addition of lacking programmed spaces and renovation of the music suite.
3. Proposed Circulation Renovations – Renovation of the corridor intersection at the auditorium and renovation of the congested rear corridor intersection.
4. Proposed 18 Classroom Addition – Addition of 18 classrooms and support spaces found to be missing from the Ed. Spec. on the cursory investigation
5. Proposed Courtyard Classroom Addition – Addition of classroom spaces in the central courtyard for additional teaching space.

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