Youth's Benefit Elementary School Study

- Primary Elementary Building
- Intermediate Elementary Building

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Presented by

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1.0 EXECUTIVE SUMMARY

1.1 INTRODUCTION

Gilbert Architects Inc. was hired by Harford County Public School System to provide a Feasibility Study on Youth's Benefit Elementary School that includes both Primary and Intermediate buildings on the site. This study was divided into three components: a Program Assessment to identify how well each building is supporting the delivery of the educational program to the students; a Facilities Condition Assessment to identify the condition of the existing buildings and Schematic Options with approximate schematic cost estimates for each option. Gilbert Architects Inc.(GAI) along with sub-consultants Site Resources Inc.(SRI), Baker Ingram & Associates (BIA), Gipe Associates Inc.(GII) and Nyikos Associates Inc.(NAI) worked together to provide information for this Feasibility Study.

This report is divided into 6 sections:

- This Executive Summary section gives an overview of the results of the programmatic and existing conditions assessments as well as a summary of the schematic process for both the Primary and Intermediate buildings at Youth's Benefit ES.
- A separate section for each Schematic Option is broken down with a plan summary, plan space summary, site plan and plan of the option. A Schematic Design SF Cost Estimate of all the options is also provided under its own section.

1.2 PROGRAMMATIC ASSESSMENT

1.2.1 Approach

The following approach was utilized to identify the Program requirements for Youth's Benefit ES and to establish a measurable methodology for analyzing existing conditions and creating Schematic Options.

- **Establish Baseline** - GAI reviewed the General Educational Specifications for Deerfield Elementary School developed by Grimm + Parker Architects for Harford County Public School System in March 2007. A space summary of required program areas was then created and amended to include modifications to this Feasibility Study.
- **Document Review** – Copies of existing floor plans and site plans were secured from the School System. These plans were used to survey, review and analyze programmatic space locations and square footages compared to Deerfield ES and Maryland State Department IAC Guidelines.
- **Meetings/Interviews** – A series of meetings with Planning & Construction, the Principals, Assistant Principals, staff and Harford County Parks & Recreation were conducted between March and June of 2007. These meetings helped clarify and identify some of the major problems or deficiencies at Youth's Benefit.
- **Surveys** – Utilizing the existing plans, site surveys were conducted by all consultants on various occasions. Surveys were conducted on both the Primary and Intermediate buildings to rate the existing site and building conditions and identify any potential deficiencies. A recent site survey, completed for Parks & Rec's sports complex development, was also utilized.
- **Facilities Conditions Assessment** – Using the information gathered from building surveys, this section provides a narrative from GAI and consultants regarding each disciplines assessment of the existing conditions at the Primary and Intermediate buildings in narrative format. These reports will provide Harford County School System a baseline of the existing conditions and guidance with any decisions regarding which option best suites the schools needs in renovation, demolition and or new construction.

- **Options/ Schematic Cost Estimates –** Using information gathered from documents, surveys and meetings per above, several schematic plan options and estimates were created for review and input from Harford County Public School System for this Feasibility Study.

1.2.2 Programmatic/ Feasibility Assessment Understanding

The basis for this Feasibility Study was to compare the current facilities to Deerfield's Educational Specifications and State Public School Construction Program Standards along with State Rated Capacity requirements. It should be noted that it is not unusual to find many educational program deficiencies within older facilities due to the constantly changing environment of school facility design standards. While the school met the educational criteria at the time it was originally designed, upgrades would be necessary to meet current standards and the school districts needs as described in the various options. In fact, both the Primary and Intermediate buildings were found to be in generally good condition due to the excellent maintenance programs (with realistic funding limitations) that are being implemented by the Harford County Public School System.

1.3 SCHEMATIC SUMMARY

Our initial approach to the project was to evaluate systemic renovations to both buildings, with minor program enhancements. Based on initial discussions and completed facility assessments by the design team, we explored additional options including program enhancements, small additions, and major renovations. Three target capacities were identified, consisting of 884, 1021 and 1158. The major implications of program enhancements and additions greatly impacted existing structures and systems, as well as site development. During discussions with the leadership team, as the various program items were identified and phasing options were explored, the concepts and capacities strongly indicated major replacement and new construction. In summary, it is the perceived direction that a replacement school with a targeted capacity of 1090, completed over limited phasing would be the best option, with the least impact to the existing educational environments that all three buildings provide.

The following will summarize the four (4) options that were further analyzed for program delivery, capacity options, phased construction and educational impact to the existing program:

- Option 1 – 884 Capacity for grades Pre-K to 5: This option maintains the existing Primary Building with a large new 2-story addition and demo's the existing Intermediate Building.
- Option 2 – 1021 Capacity for grades Pre-K to 5: This option maintains majority of the Primary and Intermediate Buildings with some demolition and minor in-fill additions along with a new 2-story central addition which would link both existing buildings. The Primary Building would still function as a Primary ES serving Pre-K to 2nd grade while the Intermediate Building would still serve grades 3 to 5 as it does now.
- Option 3 – 1158 Student Capacity for grades Pre- K to 5: Similar to Option 2, Option 3 also maintains majority of the Primary and Intermediate Buildings with some demolition and minor in-fill additions along with a new 2-story central addition which would link both existing buildings. The new central addition would house all the same elements as Option 2 but in a slightly different orientation. The grade level locations would also be the same as Option 2 but house one additional classroom per each grade level.
- Option 4 – 1090 Capacity for grades Pre-K to 5: This option is similar to Option 1 but is all new construction. The existing Primary and Intermediate buildings would be demo'd during phased construction. This option features efficiency in circulation while maximizing the program square footage.

1.4 FACILITIES CONDITIONS ASSESSMENT

Attached in this section are Preliminary Assessment Reports which summarize the existing conditions of both the Primary and Intermediate buildings. Findings and any recommendations for each building are addressed under each specific report section/ discipline (Site/ Architectural/ Structural and MPE).

The Primary building was originally built in 1953 and over the years has undergone multiple additions to meet educational requirements, but in general several major core spaces have not been upgraded to meet increased enrollment or curricula changes. This single story building now consists of 39,256 square feet of space, a basement level mechanical room, and crawl space under the original portions of the building. In addition, the structural floor system is expensive to modify for new or modified space planning options. The existing windows are original and are ribbon type with some areas having portions that are glass block located above the glazing system. The windows are single pane and are not conducive to new energy guidelines. A separate Kindergarten Annex, consisting of 4,585 square feet, was constructed in 1968.

The Intermediate building was originally constructed in 1973 and consists of 52,775 square feet of space. The building is single story with basement mechanical room and attic space that houses the air handling systems. The structure is a mix of masonry bearing walls, steel columns and beams and wood glue laminated beams and joists supporting a wood plank roof decking. This building has minimal windows and is constructed in an educational pod type of arrangement with core spaces clustered together.

The three buildings are independently located on the site; however, based on the current procedures within the school system, a single principal and some key staff travel between buildings on a routine basis.

1.4.1 ARCHITECTURAL/ BUILDING

Programmatic Review:

The current classroom configuration is 8 per each grade level in grades K through 3; 7 classrooms in grades 4-5, but starting next year grades 4-5 will need 8 classrooms. In addition there is no pre-k at this site - they are enrolled in private Pre-K's. There is a possibility of full or 1/2 day Pre-K in future. Also, Kindergarten classroom capacity is targeted at 20 students or fewer in Harford County Public Schools.

Special ED students with wheel chairs and life skills needs are currently enrolled in both buildings. There is a current need to accommodate Resource Rooms in both buildings. Populations of 600-700 students require one Resource Room in each building, but with present population and future growth two will be required at the Intermediate level at a minimum.

In addition to grade level configurations, the present program lacks a parent volunteer room, itinerant and support spaces - currently housed in the Principal's office. Music classes are held on the stages at each building, which have poor acoustics, poor ventilation and are also used for storage of school supplies. Both Health Suites do not meet present COMAR guidelines for layout or size, and possibly full ADA access. There is currently one nurse in each building

Beyond daily education programs, both buildings are used by the Y day-care Before and After School program, including summers, requiring dedicated storage capacity.

In addition to the program shortfalls that are common between the buildings, listed below are some additional program issues per each building:

Spatial Inefficiencies at the Primary Center

- There is no teacher planning center.
- The Computer Lab was converted to a dedicated Art Room. Three Lap tops are used in each classroom in lieu of the Computer Lab. The Media Center prep/storage room was converted to a Special Ed. Classroom.
- The Kindergarten classrooms do not have dedicated toilet rooms – corridor gang toilets are used.
- Lunch Programs run from 11:30 to 1:15in the Primary Center - in continuous feed - therefore- no dedicated cafeteria/gym space.
- Very inadequate storage capacity.

Spatial Inefficiencies at the Intermediate Center

- All teaching wings have open space classroom, using movable furniture/casework to create separations between rooms. Teaching is affected by mechanical noise, poor acoustics, and poor indoor lighting.
- The Media Center, also open plan, has a sunken floor area with non-compliant ADA access.
- Teacher planning rooms have been converted to Special Education rooms.
- Security Lock-down capability is non-existent due to open plan.
- Very inadequate storage capacity.

Spatial Inefficiencies at the Kindergarten Annex

- The Annex does not have an interior corridor system- circulation is direct to exterior or through adjacent classrooms.
- The Annex building is not physically attached to the Primary Building- students and staff must travel between buildings for some programs
- Mechanical systems at the Annex are nearing the end of their useful life.

Security: From a security standpoint, neither building has secure entry vestibules, allowing direct access into the building spaces – not uncommon in older facilities under different facility design standards. Staff and faculty maintain vigilance on exterior entry points during school occupation and all visitors are required to register in the main offices at each building.

Accessibility and codes:

Life Safety systems include fire alarm panel and audio systems at all three buildings, but no sprinkler system due to original code requirements. Major renovations or additions to the existing buildings would involve code updates, including, most likely, a sprinkler system. Complete code review with current codes was not part of this study.

In addition to program assessments, additional assessments were organized to review the following major components: Kitchen and Food Service, Site, Structural, Mechanical – including Life Safety systems and domestic water, and Electrical systems.

KITCHEN AND FOOD SERVICE

General Description:

The primary-elementary school was constructed in 1953, with additions in 1962, 1965, and 1995; and consists of approximately 39,256 square feet. The intermediate elementary school was constructed in 1973 and consists of 52,775 square feet. A separate Kindergarten Annex was constructed in 1968, with 4,585 square feet. The Primary and Intermediate buildings each contain separate satellite warming/serving kitchens receiving prepared foods from the local high school. Each kitchen contains a full dishroom with soiled and clean dishtables and automatic conveyor type dishmachines.

Existing Conditions – Primary School Building:

The majority of the equipment is original to the 1950's Construction. The majority of the building equipment, although well-maintained, is old, outdated, inefficient and has seen its' useful life. Electric service is poorly inadequate, and circuit breakers are tripping-off constantly. Lack of electrical outlets to merchandise added food items. The walls are glazed green block promoting an "Institutional" feeling. Light levels are below current standards making the space dark and very uninviting. Floors are quarry tile throughout and in good condition. Ceilings are 12"x12" applied acoustic tiles in violation of health code. The kitchen was originally sized for an on-site prep-production operation and consequently has areas of unused space.

Existing Conditions – Intermediate School Building:

Recently renovated, the equipment is newer and in good condition. Walls are light in color and lighting is brighter promoting an inviting atmosphere. Ceilings are 2x4 lay-in suspended grid with recessed fluorescent fixtures. Floors are quarry tile throughout. The overall space is consistent with square footages comparable to a receiving kitchen.

Four alternatives have been proposed for expansion/modernization or new construction.

Option 1: 884 Capacity:

The overall kitchen will contain approximately 1,925 square feet. The facility will be equipped with all-new commercial-grade appliances meeting current N.S.F. requirements and installed according to local governing health codes. All countertops and work surfaces will be of durable stainless steel finishes, and mounted on legs or swivel casters to promote sanitation and ease of cleaning. The kitchen will be equipped to continue operation as a satellite/warming facility receiving prepared food in bulk, re-thermalized on-site, and served breakfast and lunch meals to the students and staff. Meals will be served on re-usable compartmented trays via a serving line equipped with hot and cold stations. Trays and utensils will be washed and sanitized through a high-temperature dishmachine.

The overall kitchen will encompass the following functional work areas:

- Walk-in Cooler/Freezer Storage
- Dry Storage
- Manager's Office
- Re-thermalizing Area
- Serving – (2) Lines

- Dish/Pot Washing
- Utility Closet/Chemical Storage
- Staff Toilet/Locker

Option 2: 1021 Capacity:

The overall kitchen will contain approximately 2,025 square feet. The facility will be equipped with all-new commercial-grade appliances meeting current N.S.F. requirements and installed according to local governing health codes. All countertops and work surfaces will be of durable stainless steel finishes, and mounted on legs or swivel casters to promote sanitation and ease of cleaning. The kitchen will be equipped to continue operation as a satellite/warming facility receiving prepared food in bulk, re-thermalized on-site, and served breakfast and lunch meals to the students and staff. Meals will be served on re-usable compartmented trays via a serving line equipped with hot and cold stations. An Ala Carte area will be added for students wanting to supplement their lunches brought from home. Trays and utensils will be washed and sanitized through a high-temperature dishmachine.

The overall kitchen will encompass the following functional work areas:

- Walk-in Cooler/Freezer Storage
- Dry Storage
- Manager's Office
- Re-thermalizing Area
- Serving – (2) Lines plus Ala Carte Window
- Dish/Pot Washing
- Utility Closet/Chemical Storage
- Staff Toilet/Locker

Option 3: 1158 Capacity:

The overall kitchen will contain approximately 2,400 square feet. The facility will be equipped with all-new commercial-grade appliances meeting current N.S.F. requirements and installed according to local governing health codes. All countertops and work surfaces will be of durable stainless steel finishes, and mounted on legs or swivel casters to promote sanitation and ease of cleaning. The kitchen will be equipped to continue operation as a satellite/warming facility receiving prepared food in bulk, re-thermalized on-site, and served breakfast and lunch meals to the students and staff. Meals will be served on re-usable compartmented trays via a serving line equipped with hot and cold stations. An Ala Carte area will be added for students wanting to supplement their lunches brought from home. Trays and utensils will be washed and sanitized through a high-temperature dishmachine.

The overall kitchen will encompass the following functional work areas:

- Walk-in Cooler/Freezer Storage
- Dry Storage
- Non-Food Storage
- Manager's Office
- Re-thermalizing Area
- Serving – (2) Lines plus Ala Carte Window
- Dish/Pot Washing

- Utility Closet/Chemical Storage
- Staff Toilet/Locker

Option 4: 1090 Capacity: (All New Building)

The overall kitchen will contain approximately 2,009 square feet. The facility will be equipped with all-new commercial-grade appliances meeting current N.S.F. requirements and installed according to local governing health codes. All countertops and work surfaces will be of durable stainless steel finishes, and mounted on legs or swivel casters to promote sanitation and ease of cleaning. The kitchen will be equipped to continue operation as a satellite/warming facility receiving prepared food in bulk, re-thermalized on-site, and served breakfast and lunch meals to the students and staff. Meals will be served on re-usable compartmented trays via a serving line equipped with hot and cold stations. An Ala Carte area will be added for students wanting to supplement their lunches brought from home. Trays and utensils will be washed and sanitized through a high-temperature dishmachine.

The overall kitchen will encompass the following functional work areas:

- Walk-in Cooler/Freezer Storage
- Dry Storage
- Manager's Office
- Re-thermalizing Area
- Serving – (2) Lines plus Ala Carte Window
- Dish/Pot Washing
- Utility Closet/Chemical Storage
- Staff Toilet/Locker
- Receiving/ Loading Area is shown off the Kitchen/ Mechanical room for ease of deliveries. (The sq. footage for this is not included in the overall kitchen calculation)

1.4.2 SITE ASSESSMENT

Existing Site Location and Conditions:

The project site, known as Youth's Benefit Elementary School, is located in Harford County at 1901 Fallston Road. The site is comprised of approximately 26.18 acres and is zoned AG. The major point of vehicular access to the Youth's Benefit Elementary School site is a signalized driveway entrance from Fallston Road (MD Route 152). The site is bounded by a cultivated field on the northwestern edge. Existing wooded area adjoins the site on the northeast and a recreation complex is located on the southeast side of the elementary school site. Additionally, Fallston Road bounds the southern limits of the site.

The current enrollment is approximately 1046 students as of September 30, 2006.

Conceptual Site Design:

Four options have been proposed for expansion/modernization. These consist of an Option 1- 884 student capacity, an Option 2 - 1021 student capacity, an Option 3 - 1158 student capacity and an Option 4 - 1090

student capacity (all new construction). All Options 1-4 maintain the existing traffic light and the existing secondary entrance south of the traffic light.

Option 1 (884 capacity) is a new addition to the existing Primary Building. It uses the existing Primary bus/parent drop off for bus drop off exclusively and a new parent drop off is proposed in conjunction with a reconfigured and expanded parking lot at the entrance of the new addition. The service drive is located off of the new bus drop off.

For both Option 2 (1021 capacity) and Option 3 (1158 capacity), a new addition links the existing Primary and Intermediate Buildings. The existing bus/parent drop off at the Primary Building becomes the new Primary student parent drop off. The new service drive is accessed off of this new Primary student parent drop off. The new bus drop off is located at the main entrance of the new addition. The Intermediate Building parent drop off is proposed with an exclusive access from Fallston Road to the existing Intermediate building. All traffic flow configurations were designed to segregate bus and car traffic as much as possible.

Option 4 (1090 capacity) consists of one new building that will house both the Primary and Intermediate students. A new upper level parking lot is provided at what was once the existing bus/ parent drop off at the demolished Primary Building. This parking lot will serve as staff parking during the day. In the evening, it will serve as parking for the adjacent Parks & Rec baseball fields. The new service drive is located off of this parking lot. The bus drop off is centrally located at the main entrance of the new building. A separate parent drop off with additional visitor and staff parking is located beyond the bus drop off in the location of the demolished Intermediate building. All traffic flow configurations were designed to segregate bus/car traffic and maximize the site use as much as possible.

Utilities:

Water

Existing
Three wells with associated permit numbers HA-72-0695, HA-88-0604 and HA-94-3506 currently provide water to the existing complex at a total tested rate of 77 gallons per minute. Harford County Health Department has calculated an average daily peak usage rate based on metered flows during the first half of the year 2000 to be 5425 gpd.

Proposed
If the new additions or new building will be sprinklered, flow testing of the existing wells may be required and fire flow demand calculated by a fire protection engineer. It is probable that a water storage tank for fire protection will be required for the future expansion at an onsite location to be determined.

Septic System

Existing
The site is currently served to two septic fields; one field to the south, serving the primary elementary and the remaining field to the north beneath the existing baseball field serving the intermediate elementary building. In all options the septic field serving the primary elementary school building is impacted and cannot be used for future expansion and modernization.

Proposed
The northern septic field will may require redesign and expansion. When the northern field was originally designed a per capita flow rate of 25 gallons per day (gpd) was used. A representative of the Harford County Health Department informed Site Resources, Inc. that the per capita flow rate for any new design would be

16 gpd indicating that the northern septic field has additional capacity. A simple extrapolation would show that if the northern field capacity is recalculated based on the 16 gpd flow rate, the existing field would accommodate 1031 students and faculty. If expansion is necessary, general soil conditions from the original percolation tests and the USDA Soil Survey of Harford County indicate satisfactory conditions for additionally septic trenches.

Storm Drain

Existing
There are several storm drain building connections for the existing schools in addition to the storm drain system located in the northwest parking area. The majority of the storm drains flow to a single point at the west side of the parking lot. This drainage is ultimately conveyed to the existing drainage swale located northwest of the school.

Proposed
The parking lot additions will be constructed over the existing parking lot and all existing storm drains and roof leader connections that pass through the existing lot will need to be relocated or adjusted to accommodate the new design. The new storm drain will ultimately outfall to proposed stormwater management (SWM) facility.

Stormwater Management:

Existing
Per review of previous site plans, there is no indication of an existing stormwater management facility for the Youth's Benefit School site.

Proposed
The site is bisected by a watershed line running approximately northwest to south east through the center of the existing building complex. The watershed to the northeast drains to Winters Run in the Bush River Sub-Basin, a Use IV-P watershed as defined by the Maryland Department of the Environment. The watershed to the southwest flows to Little Gunpowder Falls in the Gunpowder River Area Sub-Basin, a use III watershed. SWM quantity and quality management will be required for new construction that does not occur in the area of previously impervious land uses e.g. buildings, parking lots, etc... Any construction that occurs in the area of previously impervious land uses will only require water quality management for 20% of that impact.

We propose a SWM facility in the area of the existing baseball field on the northwest side of the site that will accommodate SWM for the new parking lot construction and the majority of the expansion/modernization. A possible location for the facility has been labeled on the concept site plans. Additional small water quality facilities may be required for areas of construction not able to drain to the main facility and their locations are to be determined during final design.

Environmental:

Grading Permit
Since there will be more that 5,000 square feet of disturbance, a grading permit will be required.

Forest Conservation
It will be necessary to address forest conservation requirements. The site improvements will be reviewed with Harford County Planning staff to confirm the items that will be required to address this requirement.

Harford County Development Process:

Development Advisory Committee (DAC)
After the alternative selection has been made, it will be necessary to prepare a DAC Plan for submittal and review by DAC. It is not clear at this time if this site will be subject to the newly adopted community input meeting requirements.

1.4.3 STRUCTURAL ASSESSMENT

A general structural assessment was conducted by Baker Ingram and Associates for the Youth's Benefit Elementary School. The field survey took place on April 4, 2007. The assessment included a general visual review of the structural conditions of the building envelope and the framing that was visible without the use of staging or the removal of finishes. Existing structural drawings of the building were a valuable resource for our evaluation. District maintenance staff reported that there are no known structural concerns.

GENERAL

The Youth's Benefit Elementary School Campus is comprised of three single-story structures. The Primary Building was constructed in 1953. Additions to the original structure were built in 1962, 1965, and 1994. With the exception of the 1994 addition, the floor area is built over an accessible crawl space. The floor structure consists of "Dox" plank on masonry bearing walls; the roof framing consists of steel columns, steel beams, and steel bar joists supporting a poured gypsum roof deck.

The 1994 addition has slab-on-grade structure for the floor. The roof structure consist of steel beams and steel bar joist with 1 ½" steel roof deck, supported by a mix of masonry bearing walls and steel tube columns.

In 1968 a Kindergarten Annex was constructed adjacent to the Primary Elementary School. The floor structure is slab-on-grade with out a crawl space. The roof structure is a combination of steel beams, steel bar joist and masonry bearing walls supporting an "Insulrock" deck.

An Intermediate Elementary School was built on the site in 1973. This structure was also constructed without crawl space. The roof structure is a mix of masonry bearing walls, steel columns, steel beams, steel bar joist, wood glue laminated beams, and wood 4 x 8 joists supporting structural wood fiber plank.

The review was general in nature and intended to identify areas of significant structural concern or areas that present a safety concern. The investigation was accomplished from within the crawl space and from the first floor, the mechanical mezzanines in the intermediate building, and exterior of the buildings.

EXISTING CAMPUS BUILDING SUMMARY

The general condition of the Primary Elementary School and Kindergarten Building structural systems are very good, no signs of distress were found in primary structural members. The level of damage to the "Dox" plank framing of the first floor is nominal and does not currently affect the structural capacity.

The Intermediate Elementary Building structural system is in good condition with the exception of a number of the 4 x 8 wood joists in areas "B" and "D".

OBSERVATIONS

Primary Elementary School Building:

1. The "Dox" planks are in generally good condition. There are areas where holes have been cut through the plank. In three of these locations the reinforcing steel has been exposed. See photographs 1, 2, & 3.
2. In the second "room" south of the boiler room a concrete beam has been notched for a conduit, see photo 4.
3. Many of the pipe hangers in the craw space are rusting see photograph 5.
4. In general the masonry walls are in good repair. Along the wall with the 1997 addition there is an area of wall that was damaged. See photo 6.
5. The roof framing was observed in areas without ceilings and at random locations through out the building. There are no signs of structural damage or concerns in the roof framing of the building.

Kindergarten Annex:

1. The Kindergarten building has hard ceilings, preventing a visual review of the roof framing. There was no sign of structural concerns.
2. The building is slab-on-grade construction. The walls all appear in good condition.

Intermediate Elementary School Building:

1. The Intermediate Elementary school building is also of slab-on-grade construction. The walls all appear to be in good condition.
2. The portions of the building which are steel framed also do not have any apparent structural problems.
3. In the mechanical mezzanine of area "D" insect damage was noted on one of the wood 4 x 8's, see photographs 7 and 8.
4. The 4 x 8's over the north east two bays of area "B" and one over the mechanical mezzanine access have horizontal cracks. They also are visibly deflected downward over their length. See photo 9.
5. Horizontal cracking is also visible in the wood framing over the library media center, see photograph 10 and 11

CONCLUSIONS/RECOMMENDATIONS

There are no major structural concerns with the Primary Elementary School and Kindergarten buildings.

Any planned renovations will need to address the local damage to the "Dox" plank. The areas of exposed reinforcing should be repaired with grout to protect the reinforcing, and restore the full strength of the plank. The ventilation of the crawl space should be improved to reduce the rusting of the pipe hangers. Finally, the wall damage noted should be repaired.

For some of the options the Intermediate Elementary school building is to be demolished to make room for the proposed new school and or addition. During the time frame the building is occupied, the horizontal cracks in the 4 x 8 framing mentioned above should be monitored for further progression, until the building is no longer occupied. The insect damage noted did not appear to be ongoing, and it does not appear to be of a structural concern. It also should be monitored for any additional infestations for the remainder of the building life.

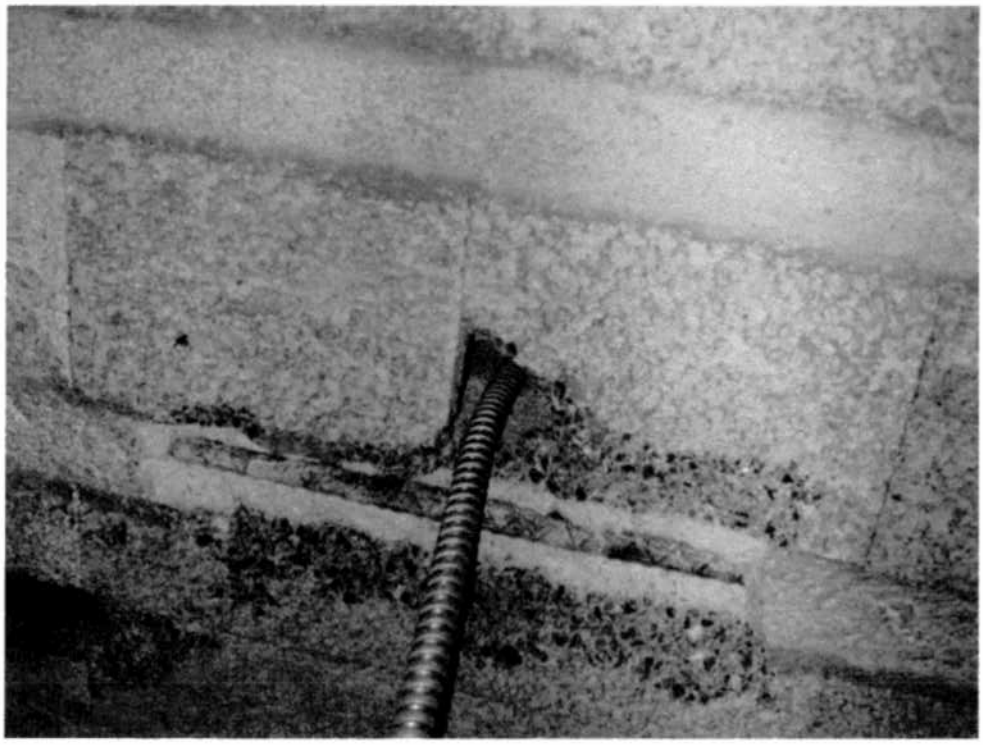


Photo 1: Steel reinforcing exposed by plank modification.

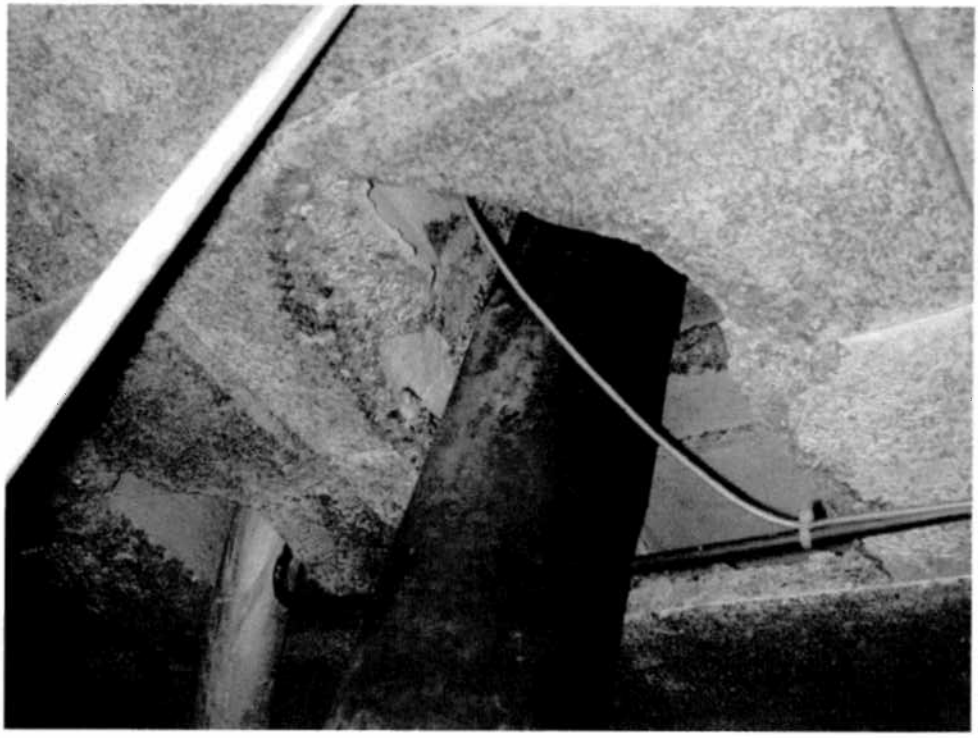


Photo 2: Steel reinforcing exposed by plank modifications.

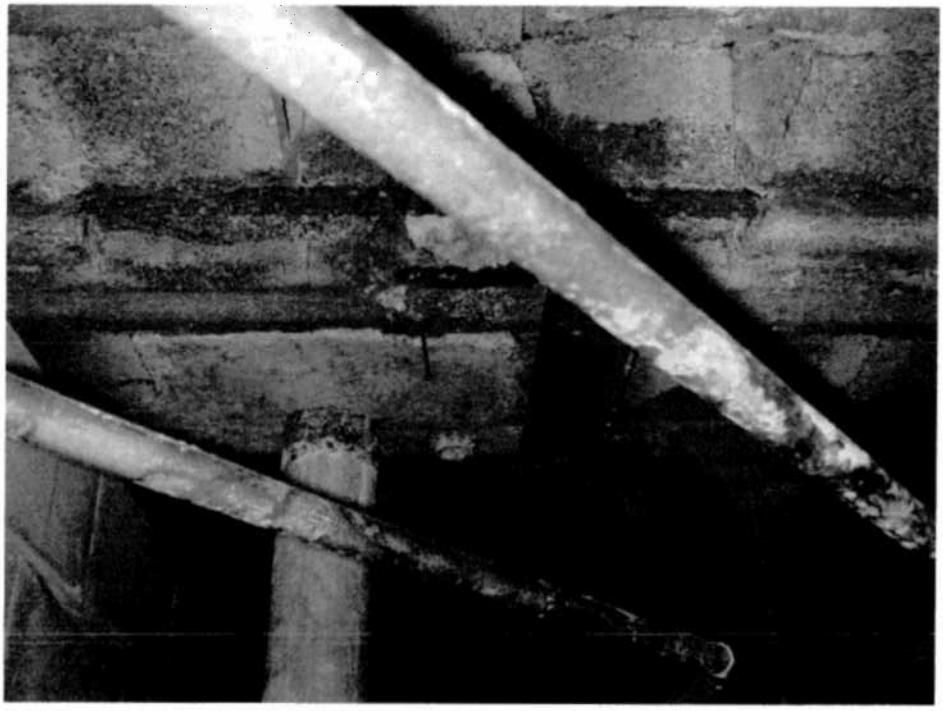


Photo 3: Exposed steel reinforcing.

Photo 4: Notched concrete beam.

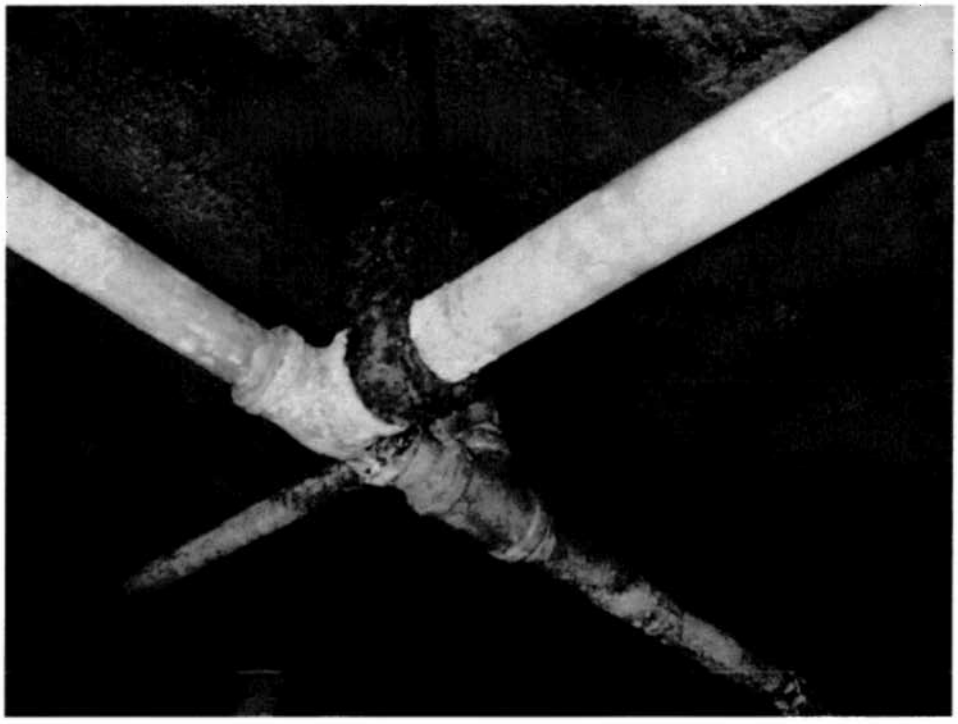


Photo 5: Pipe hanger condition.

Photo 6: Wall damage at addition tie-in.

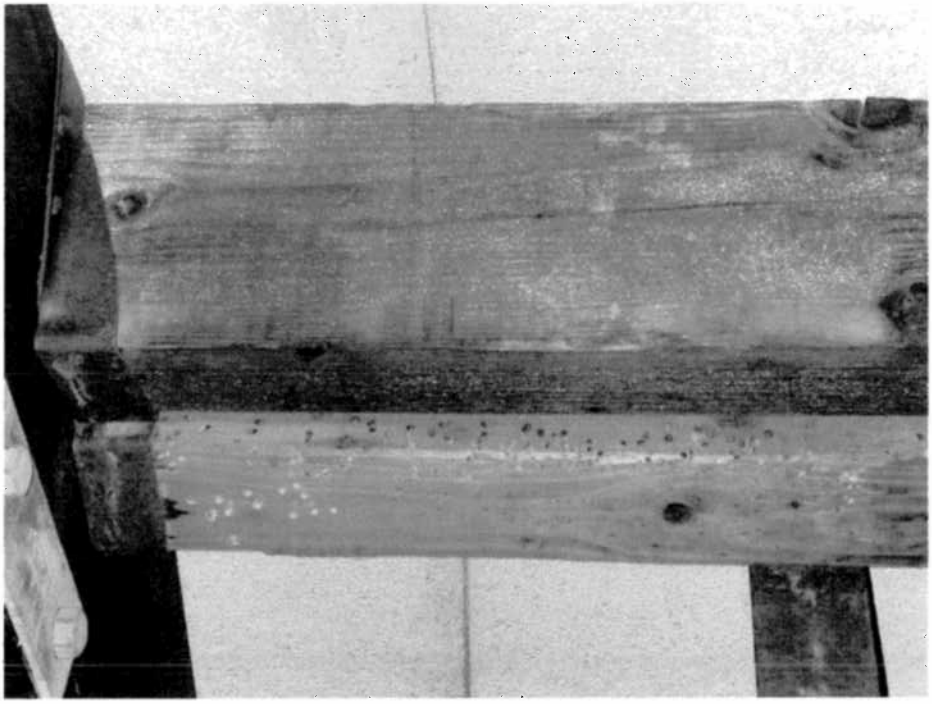


Photo 7: Insect damage to 4 x 8 roof purlin.

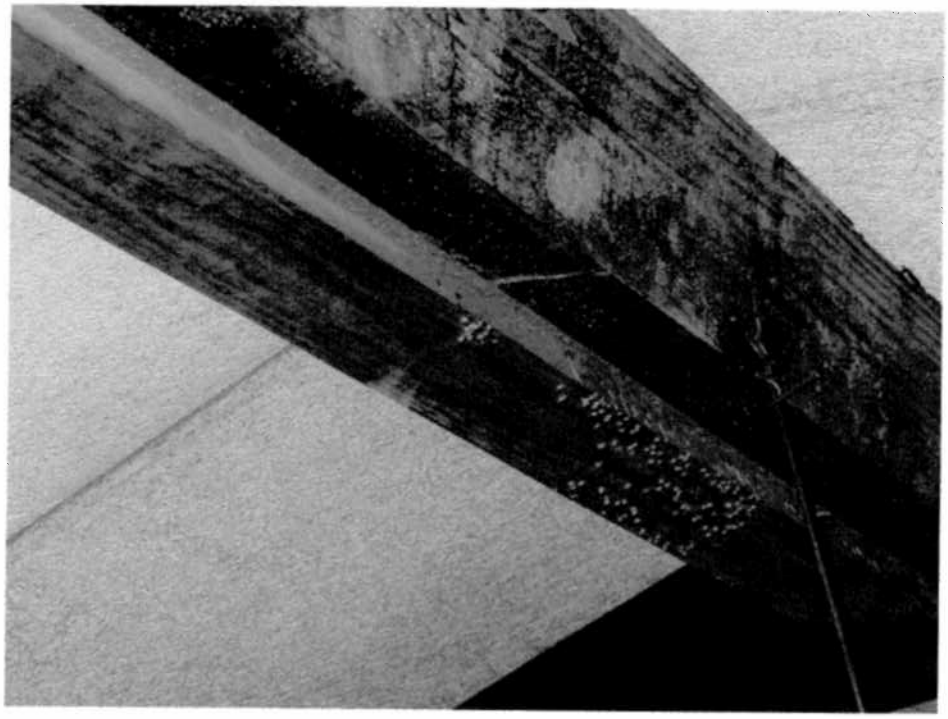


Photo 8: Other end of insect damaged roof purlin.

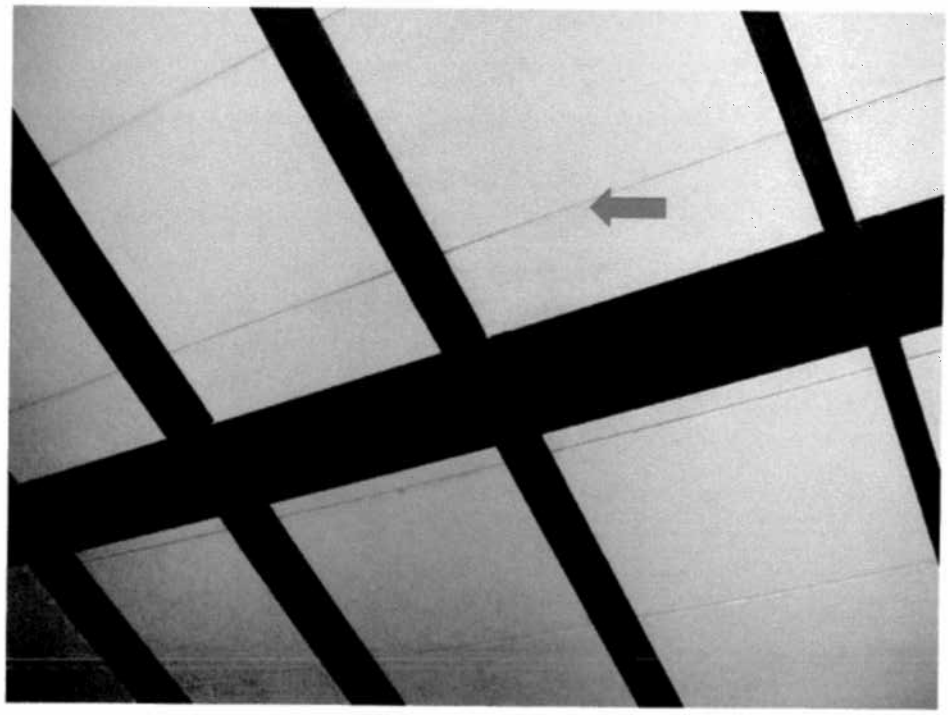


Photo 9: Horizontal cracks in 4 x 8s.

Photo 10: Horizontal cracks in wood framing over library.

Photo 11: Roof framing with horizontal cracks.

1.4.4 MECHANICAL ASSESSMENT

General Summary

The existing Primary school was constructed in 1953, with additions in 1962, 1965, and 1995; and consists of approximately 39,256 square feet. The building is single-story with Basement Mechanical Room and full crawl space.

The Media Center was part of a renovation/addition constructed in 1995 and has air conditioning. The Kindergarten Building HVAC System has not been replaced.

The remainder of the building is heated and ventilated only. The existing boiler was replaced in 1995; however, all the existing heating units and steam/condensate piping systems are original (52, 42, and 39 years old). There are three (3) steam heat loops located in the crawl space, which upfeed to terminal units. The boiler is energy source is fuel oil, which is located in an underground storage tank. The 1965 addition consist of unit ventilators with electric heating coils in lieu of being steam-fired. The majority of the heating units consist of vertical unit ventilators.

A Kindergarten Annex, with 4,585 square feet, was constructed in 1968.

The intermediate elementary school was constructed in 1973 and consists of 52,775 square feet. The building is a single-story with basement mechanical room and attic space.

The building consists of a central chilled water cooling plant and hot water heating plant. A dual temperature hydronic distribution system serves single zone and multizone air handling units primarily located in the attic space, while a separate heating water loop serves terminal heating devices.

An under-ground fuel oil tank serves the hot water boilers.

Potable water is provided by two (2) water wells and is stored in an underground hydropneumatic tank.

The potable water system for each building has independent chemical treatment systems. The Primary and Intermediate buildings have interconnecting piping for emergency conditions.

All mechanical and plumbing systems and equipment are beyond their useful lives in both buildings and are recommended to be replaced in their entirety.

Under all concepts, a central heating plant (oil-fired boilers) and cooling plant (air-cooled chillers) are proposed to meet the heating and cooling needs. Single zone constant volume and variable air volume air distribution systems are proposed.

Similarly, a common fire protection tank with fire pump is proposed to serve the building as well as a common potable water storage tank system and associated chemical treatment.

1.4.5 ELECTRICAL ASSESMENT

General Summary

The existing Primary building has two incoming electrical services – a 120/240V, single-phase service dating to the original construction of the building in 1953 and a 120/240V, three-phase service installed during the 1965 addition. The existing service equipment varies between 40 and 50 years in age and has exceeded its life expectancy. The existing Intermediate building is fed from a 480/277V, three-phase service which dates to the building's construction in 1973. This equipment has also exceeded its life expectancy. Due to the age of the existing equipment and the increased HVAC load, a new electrical service will be required.

The existing building lighting fixtures date to the original construction of the respective buildings. With the extensive above-ceiling work associated with the renovation, it is recommended that this system be replaced in its entirety with energy-efficient lighting. Additionally, it is recommended that classroom technology be upgraded, at a minimum, to meet the Maryland Public School Standards for Information and Communications Distribution Systems.

Currently, there is no emergency generator on-site. It is recommended that an emergency backup power system be installed during the renovation. The complementary security and life safety systems within the building will also require consolidation and/or replacement. These renovations would include the extension of the existing fire alarm system and installation of new security and integrated PA and intercom systems.

2.0 Option 1 – 884 Capacity (Pre-K to 5): (119,862 SF)

(2) -Pre-K Classrooms
(7) – Kindergarten Classrooms
(6) – Grade 1 Classrooms
(6) – Grade 2 Classrooms
(6) – Grade 3 Classrooms
(6) – Grade 4 Classrooms
(6) – Grade 5 Classrooms
= 39 Total Classrooms

This option maintains the existing Primary Building with a large new 2-story addition and demo's the existing Intermediate Building. The new addition would house: a Gymnasium w/ stage, Kitchen, Cafeteria w/ outdoor amphitheater, Mechanical, Art, Music, Special Ed and grades Pre-K to 2 classrooms with support spaces. The Administration/ Nurse Suites would also be located in the new addition and serve the main entrance along with parent drop-off and parking for visitors. The existing Primary Building would be renovated and would house grades 3 to 5, Special Ed, Specialist's Areas, Student Services, Media Center and support spaces. The bus drop-off would be located on the upper level at the existing Primary Building in order to maintain a separation between bus and parent traffic.

Option 1 - 884 Students
Additions to Existing Primary Building

Youth's Benefit Elementary School

Space Summary

Activity/Program	State Classrm Cap.	# Teaching Spaces	Total # of Students	Size (ea.)	Total	SUBTOTALS	Program Area Provided	Subtotal of Area Provided
PRIMARY BUILDING								
Academic (Classrooms, etc)								
Pre-K	20	2	40	1,000	2000		2,019	
Kindergarten (full day)	22	7	154	1,100	7700		7,698	
Grade 1 Classrooms	23	6	138	850	5100		5,133	
Grade 2 Classrooms	23	6	138	850	5100		5,110	
Grade 3 Classrooms	23	6	138	850	5100		5,153	
Grade 4 Classrooms	23	6	138	800	4800		5,075	
Grade 5 Classrooms	23	6	138	800	4800		4,851	
Total # Classrooms/ Students		**39**	**884**					
Computer Lab (24 terminals)		1		850	850		861	
Teacher Planning Areas W/Toilet		3		700	2100		1,922	
Learning Lab		0		0	0	37,550		37,822
Art								
Art Room		2		900	1800		2,120	
Kiln Room/Area		1		60	60		0	
Storage Workroom		2		100	200	2,060	0	2,120
Music								
Music Room		2		800	1600		1,779	
Instrumental Music		1		1100	1100		1,099	
Equipment Storage		1		80	80		0	
Piano Lab		0		0	0	2780	0	2878
Physical Education								
Gymnasium/Multi Purpose		1		6,000	6000		6,597	
Office (Shared by 2 instructors)		1		200	200		255	
Staff Toilet w/shower		1		60	60		0	
Storage (Indoor)		1		500	500		0	
Storage (Outdoor)		1		500	500		0	
Stage		1		700	700	7960	741	7593
Specialist's Area								

Option 1 - 884 Students
Additions to Existing Primary Building

Youth's Benefit Elementary School

Space Summary

Enrichment		1		600	600		600	
Math		1		600	600		612	
Reading Resource		1		740	740		739	
Reading Storage Room		1		200	200	2140	195	2146
Special Education								
Classrooms		3		800	2400		2,689	
Spec Ed. Resource Room		1		300	300		436	
Resource Testing Room		1		100	100		320	
Occupational/ Physical Therapy		1		200	200	3000	255	3700
Media Center								
Circulation Desk/Main Reading Area/Instructional Area		1		2,250	2250		4,431	
Office/Work Space/ Inst. Prep		1		750	750		791	
File Server /CDC		1		200	200		389	
Storage		1		500	500		503	
TV Studio		1		500	500		497	
Computer Laboratory		1		800	800	5000	789	7400
Cafeteria								
Cafeteria		1		4,500	4500		4524	
*Kitchen		1		1,540	1540		1925	
Trash		1		100	100		0	
Office		1		100	100		0	
Storage (dry)		1		200	200		0	
Refrigerator/Freezer		1		300	300		0	
Locker Area/ Lavatory		1		100	100		0	
Storage (chair/table)		1		250	250		0	
Dishwash		1		150	150		0	
After School Program Storage		1		150	150	7390	0	6449
YBES to have satallite kitchen								
Faculty Lounge/Planning								
Teacher Lounge		1		550	550		525	
Lavatory (unisex in lounge)		1		50	50		64	
Workroom/PTA Storage W/Toilet		1		600	600	1200	726	1315
Administration								

Option 1 - 884 Students
Additions to Existing Primary Building

Youth's Benefit Elementary School

Space Summary

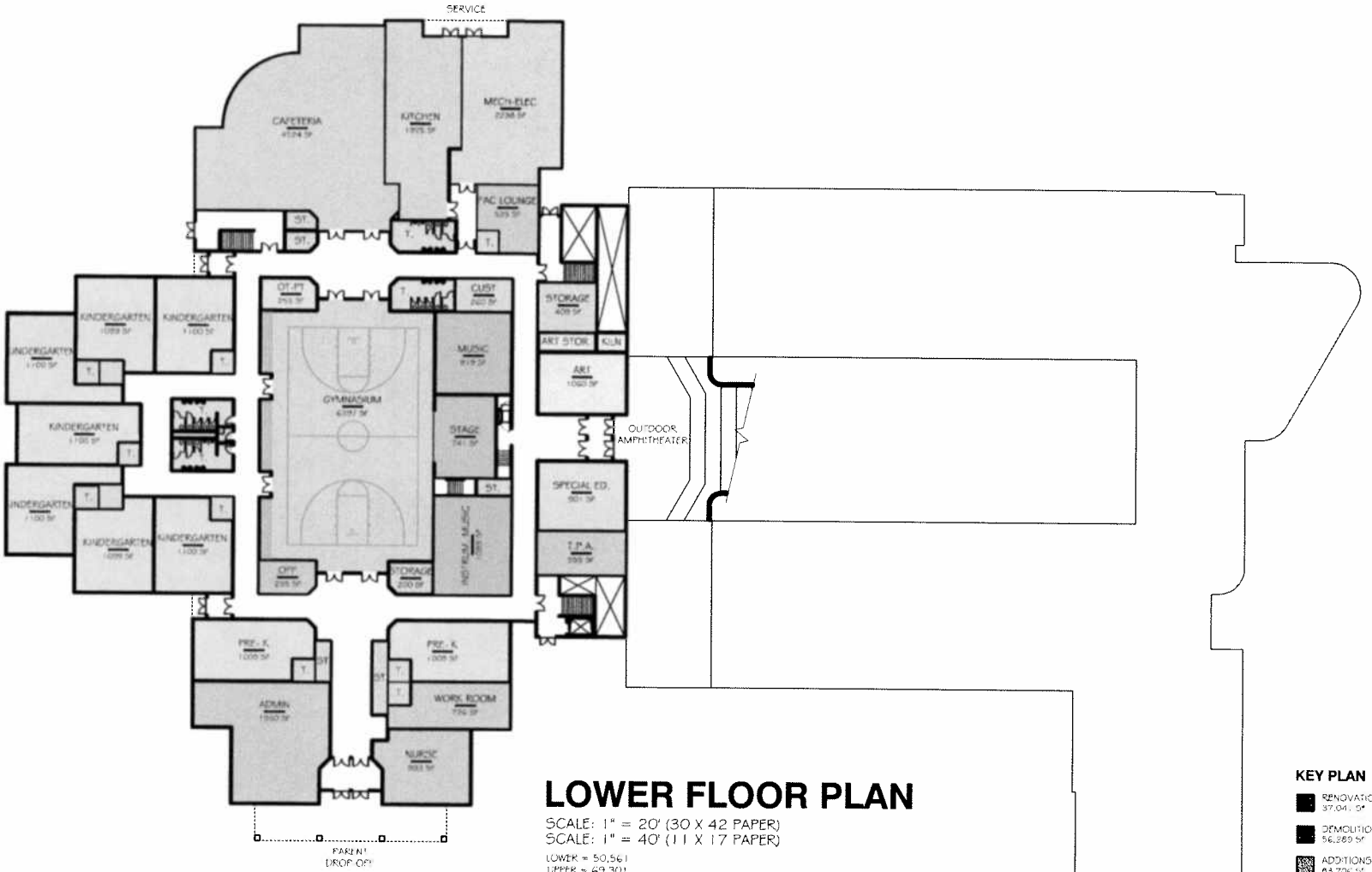
Reception/Secretarial Area		1		650	650		1950	
Principal's Office w/ toilet		1		300	300		0	
Assistant Principal Office		1		200	200		0	
Workroom w/Toilet		1		300	300		0	
Storage (with vault)		1		150	150		0	
Conference Room		1		300	300	1900	0	1950
Student Services Suite/Guldance								
Instructional Facilitator - Office		1		150	150		2014	
Mentor - Office		1		150	150		0	
Counselor's Office		1		300	300		0	
Physchologist's Office		1		300	300		0	
Itinerant Teaching/Diagnostic Area		1		200	200		0	
Speech Room		1		250	250		0	
Recept Area/ Conference Room		1		250	250	1600	0	2014
Health Suite								
Waiting/ Reception		1		100	100		993	
Office		1		150	150		0	
Exam/ Treatment Room		2		150	300		0	
Rest Areas		2		100	200		0	
Toilets		2		60	120	870	0	993
Custodial Services								
Office		1		250	250		260	
Outdoor Maintenance		1		250	250	500	0	260
TOTAL SCHOOL AREA								
Academic (Classrooms, etc)						37,550		37,822
Art						2,060		2120
Music						2,780		2878
Physical Education						7,960		7,593
Specialist's Area						2,140		2146
Special Education						3,000		3,700
Media Center						5,000		7,400
Cafeteria						7,390		6449
Faculty Lounge/Planning						1,200		1315
Administration						1,900		1950

Option 1 - 884 Students
Additions to Existing Primary Building

Youth's Benefit Elementary School

Space Summary

Student Services Suite/Guidance						1,600		2014
Health						870		993
Custodial Services						500		260
TOTAL PROGRAM AREA						73,950		76,640
OVERALL BUILDING AREA								119,862
*Note:								



LOWER FLOOR PLAN

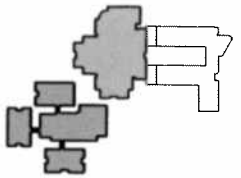
SCALE: 1" = 20' (30 X 42 PAPER)
SCALE: 1" = 40' (11 X 17 PAPER)

LOWER = 50,561
UPPER = 69,301

TOTAL = 119,862

KEY PLAN

RENOVATIONS 37,041 SF
DEMOLITIONS 56,269 SF
ADDITIONS 83,706 SF



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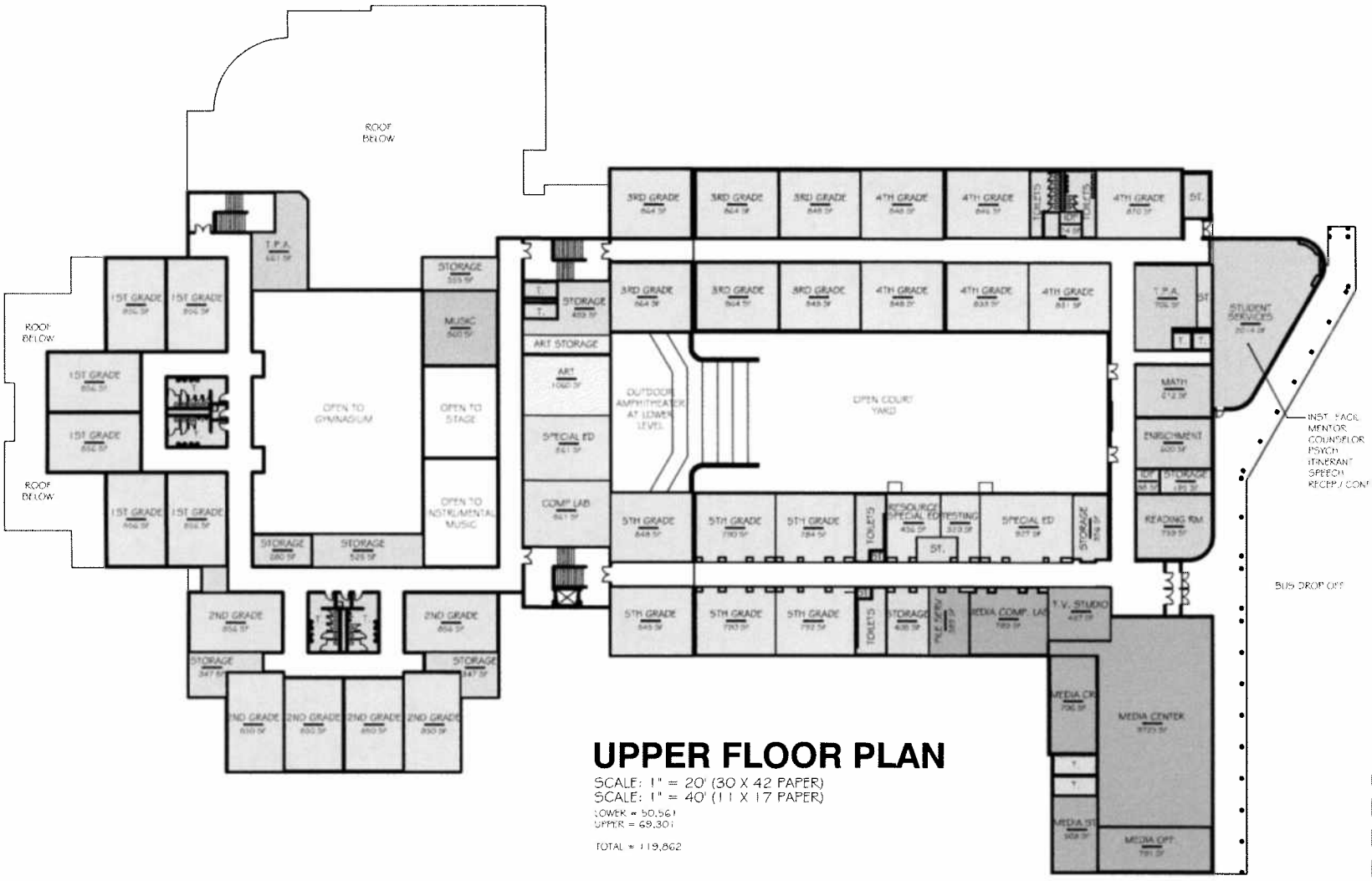
HARFORD COUNTY SCHOOL DISTRICT

YOUTH'S BENEFIT ELEMENTARY SCHOOL

OPTION 1: 884 CAPACITY



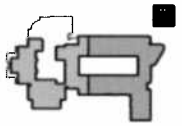
UPPER FLOOR PLAN

SCALE: 1" = 20' (30 X 42 PAPER)
SCALE: 1" = 40' (11 X 17 PAPER)

LOWER = 50,561
UPPER = 69,301

TOTAL = 119,862

KEY PLAN



RENOVATIONS
37,041 SF

DEMOLITIONS
56,299 SF

ADDITIONS
83,706 SF

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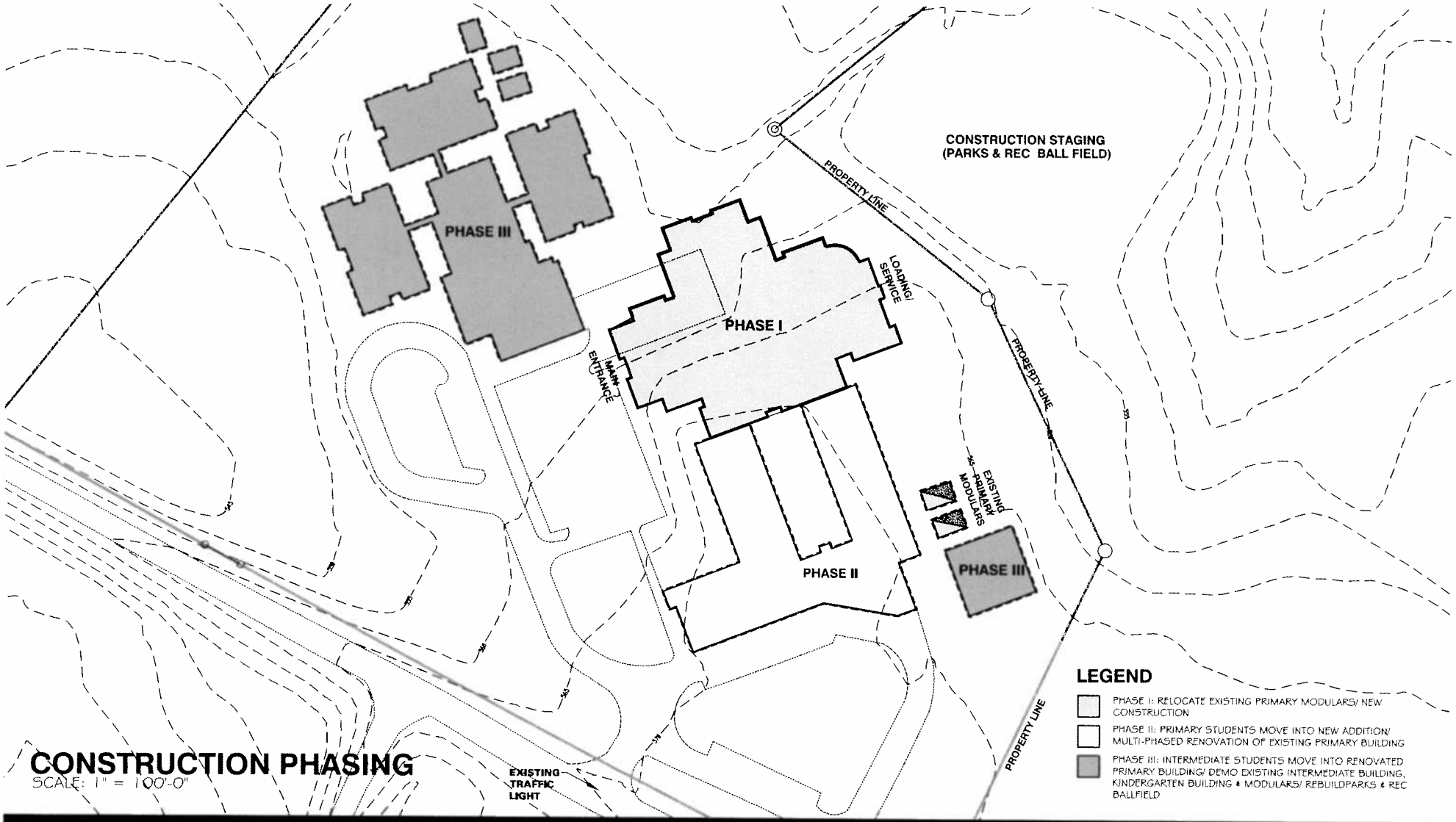
HARFORD COUNTY SCHOOL DISTRICT

YOUTH'S BENEFIT ELEMENTARY SCHOOL

OPTION 1: 884 CAPACITY



CONSTRUCTION PHASING

SCALE: 1" = 100'-0"

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HARFORD COUNTY SCHOOL DISTRICT

YOUTH'S BENEFIT ELEMENTARY SCHOOL

OPTION 1: 884 CAPACITY

3.0 Option 2 – 1,021 Capacity (Pre-K to 5): (140,930 SF)

(2) –Pre-K Classrooms
(8) – Kindergarten Classrooms
(7) – Grade 1 Classrooms
(7) – Grade 2 Classrooms
(7) – Grade 3 Classrooms
(7) – Grade 4 Classrooms
(7) – Grade 5 Classrooms
= 45 Total Classrooms

This option maintains majority of the Primary and Intermediate Buildings with some demolition and minor in-fill additions along with a new 2-story central addition which would link both existing buildings. The new central addition would house: a Gymnasium w/ stage, Kitchen, Cafeteria w/ outdoor amphitheater, Mechanical, Art, Music, Special Ed and 2nd grade classrooms with support spaces. The Primary Building would still function as a Primary ES serving Pre-K to 2nd grade while the Intermediate Building would still serve grades 3 to 5 as it does now. The existing Multi-Purpose Room at the Primary ES would be demo'd to allow for better traffic circulation. The existing Multi-Purpose Room at the Intermediate ES would be converted into a new Media Center for the entire school. With a 1,000 student building capacity, the intent is to have 2 separate parent drop-offs (one each at the Primary/ Intermediate buildings) and one bus drop-off at the new central addition for the entire school. The Administration/ Nurse Suites would be located in the new central addition and serve the main entrance for parents and visitors during school hours.

Option 2 - 1021 Students
Link Existing Buildings

Youth's Benefit Elementary School

Space Summary

Activity/Program	State Classrm. Capacity	# Teaching Spaces	Total # of Students	Size (ea.)	Total	SUBTOTALS	Program Area Provided	Subtotal of Area Provided
PRIMARY BUILDING								
Academic (Classrooms, etc)								
Pre-K	20	2	40	1,000	2000		2,000	
Kindergarten (full day)	22	8	176	1,000	8000		9,125	
Grade 1 Classrooms	23	7	161	850	5950		5,761	
Grade 2 Classrooms	23	7	161	850	5950		5,973	
Grade 3 Classrooms	23	7	161	850	5950		5,976	
Grade 4 Classrooms	23	7	161	800	5600		5,546	
Grade 5 Classrooms	23	7	161	800	5600		5,657	
Total # of Classrooms/ Students		**45**	**1021**					
Computer Lab (24 terminals)		2		850	1700		1730	
Teacher Planning Areas w/Toilet		4		700	2800		3361	
Learning Lab		0		0	0	43,550	0	45,129
Art								
Art Room		2		900	1800		2210	
Kiln Room/Area		1		60	60		0	
Storage Workroom		2		100	200	2,060	0	2,210
Music								
Music Room		3		800	2400		2400	
Instrumental Music		1		1100	1100		1273	
Equipment Storage		1		80	80		259	
Piano Lab		0		0	0	3580	0	3932
Physical Education								
Gymnasium/Multi Purpose		1		6,000	6000		6,168	
Office (Shared by 2 instructors)		1		200	200		160	
Staff Toilet w/shower		1		60	60		0	
Storage (Indoor)		1		500	500		277	
Storage (Outdoor)		1		500	500		227	
Stage		1		1000	1000	8260	1005	7837
Specialist's Area								

Option 2 - 1021 Students
Link Existing Buildings

Youth's Benefit Elementary School

Space Summary

Enrichment		1		600	600		692	
Math		1		600	600		651	
Reading Resource		2		740	1480		1239	
Reading Storage Room		1		200	200	2880	0	2582
Special Education								
Classrooms		4		800	3200		3718	
Spec Ed. Resource Room		1		300	300		402	
Resource Testing Room		1		100	100		136	
Occupational/ Physical Therapy		1		200	200	3800	600	4856
Media Center								
Circulation Desk/Main Reading Area/Instructional Area		1		2,250	2250		6,455	
Office/Work Space/ Inst. Prep		1		750	750		1032	
File Server /CDC		1		200	200		471	
Storage		1		500	500		0	
TV Studio		1		500	500		525	
Computer Laboratory		1		800	800	5000	900	9383
Cafeteria								
Cafeteria		1		5,250	5250		6120	
*Kitchen		1		1,540	1540		2025	
Trash		1		100	100		0	
Office		1		100	100		0	
Storage (dry)		1		200	200		0	
Refrigerator/Freezer		1		300	300		0	
Locker Area/ Lavatory		1		100	100		0	
Storage (chair/table)		1		250	250		0	
Dishwash		1		150	150		0	
After School Program Storage		1		150	150	8140	70	8215
YBES to have satallite kitchen								
Faculty Lounge/Planning								
Teacher Lounge		2		550	1100		1200	
Lavatory (unisex in lounge)		2		50	100		0	
Workroom/PTA Storage w/ toilet		1		600	600	1800	600	1800
Administration								

Option 2 - 1021 Students
Link Existing Buildings

Youth's Benefit Elementary School

Space Summary

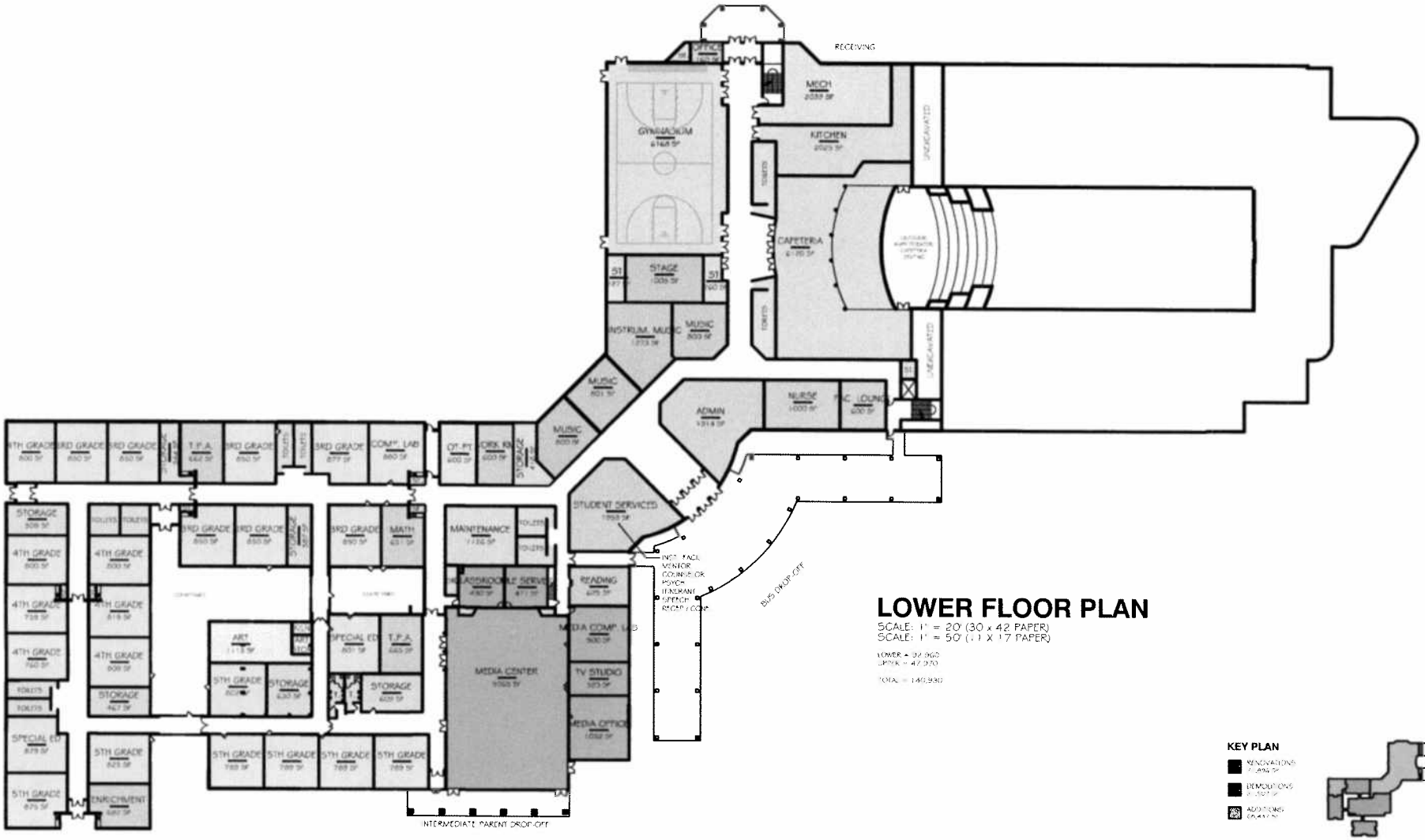
Reception/Secretarial Area		1		650	650		2534	
Principal's Office w/ Toilet		1		300	300		0	
Assistant Principal Office		1		200	200		0	
Workroom w/ toilet		1		300	300		0	
Storage (with vault)		1		150	150		0	
Conference Room		1		300	300	1900	0	2534
Student Services Sulte/Guidance								
Instructional Facilitator - Office		1		150	150		1959	
Mentor - Office		1		150	150		0	
Counselor's Office		1		300	300		0	
Physchologist's Office		1		300	300		0	
Itinerant Teaching/Diagnostic Area		1		200	200		0	
Recept. Conference Room		1		250	250		0	
Speech room		1		250	250	1600	0	1959
Health Suite								
Waiting/ Reception		1		100	100		1000	
Office		1		150	150		0	
Exam/Treatment Room		2		150	300		0	
Rest Areas		2		100	200		0	
Toilet		2		60	120	870	0	1000
Custodial Services								
Office		1		250	250		1126	
Outdoor Maintenance		1		500	500	750	0	1126
TOTAL SCHOOL AREA								
Academic (Classrooms, etc)						43,550		45,129
Art						2,060		2210
Music						3,580		3932
Physical Education						8,260		7,837
Specialist's Area						2,880		2582
Special Education						3,800		4,856
Media Center						5,000		9,383
Cafeteria						8,140		8215
Faculty Lounge/Planning						1,800		1800
Administration						1,900		2534

Option 2 - 1021 Students
Link Existing Buildings

Youth's Benefit Elementary School

Space Summary

Student Services Suite/Guidance						1,600		1959
Health						870		1000
Custodial Services						750		1126
TOTAL PROGRAM AREA						84,190		92,563
OVERALL BUILDING AREA								140,930
*Note:								



LOWER FLOOR PLAN

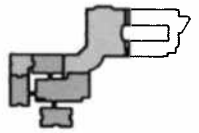
SCALE: 1" = 20' (30 x 42 PAPER)
SCALE: 1" = 50' (11 X 17 PAPER)

LOWER = 99,900
UPPER = 47,070

TOTAL = 146,970

KEY PLAN

- RENOVATIONS
- DEMOLITIONS
- ADDITIONS



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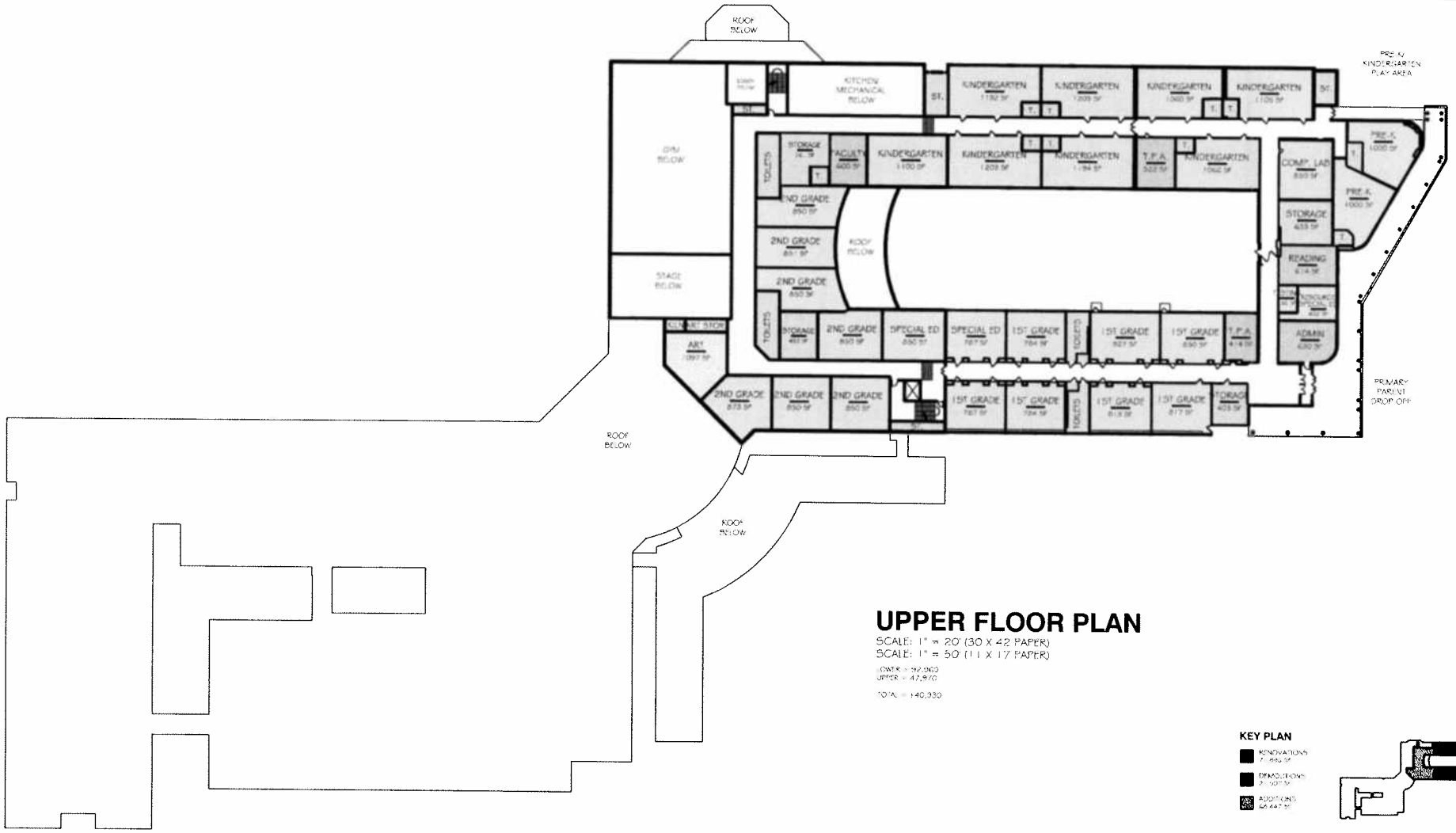
HARFORD COUNTY SCHOOL DISTRICT

YOUTH'S BENEFIT ELEMENTARY SCHOOL

OPTION 2: 1000 CAPACITY



UPPER FLOOR PLAN

SCALE: 1" = 20' (30 X 42 PAPER)
SCALE: 1" = 50' (11 X 17 PAPER)

LOWER = 92,960
UPPER = 47,970

TOTAL = 140,930

KEY PLAN

RENOVATIONS
DEMOLITIONS
ADDITIONS

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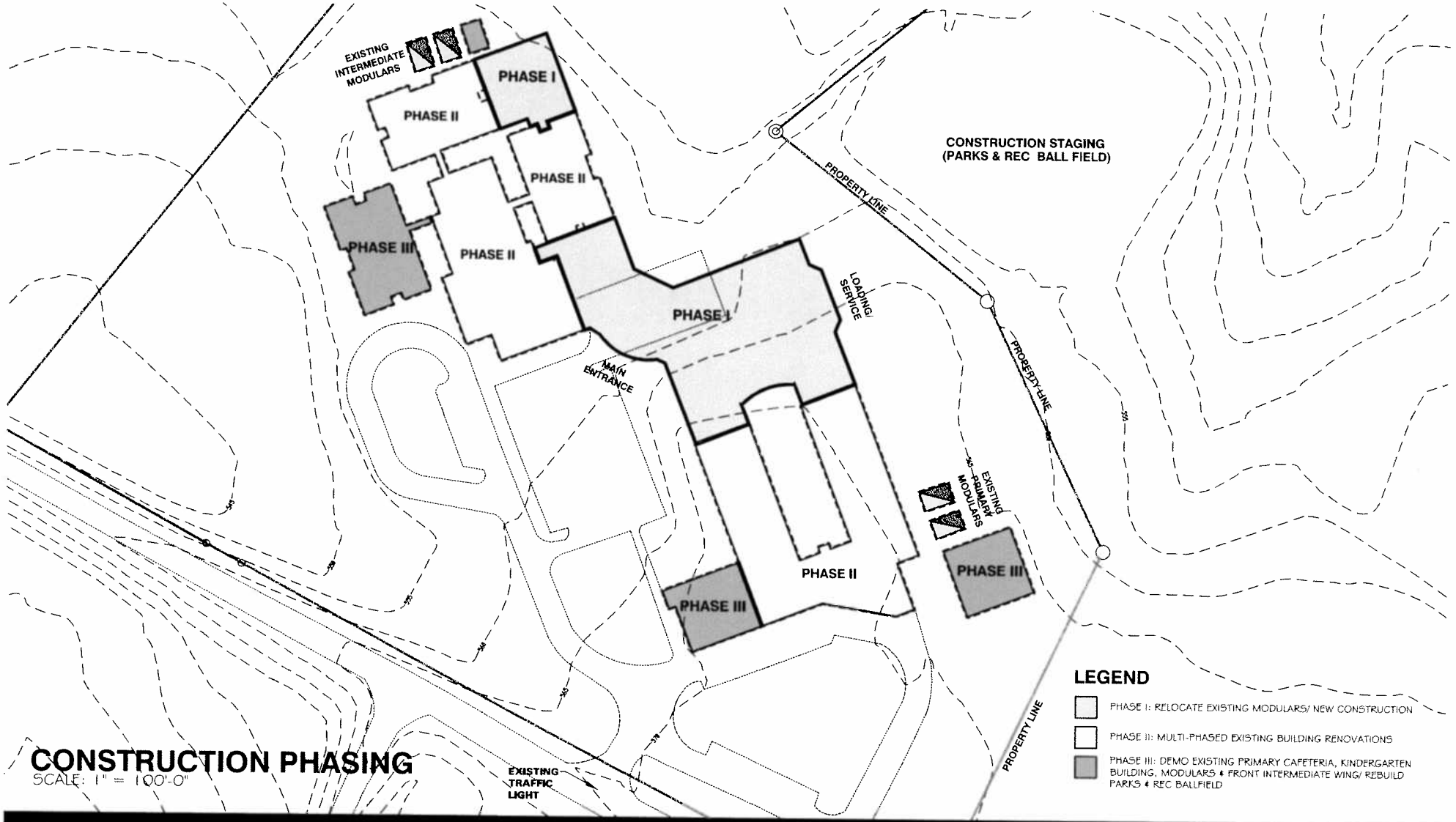
HARFORD COUNTY SCHOOL DISTRICT

YOUTH'S BENEFIT ELEMENTARY SCHOOL

OPTION 2: 1000 CAPACITY



CONSTRUCTION PHASING

SCALE: 1" = 100'-0"

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HARFORD COUNTY SCHOOL DISTRICT

YOUTH'S BENEFIT ELEMENTARY SCHOOL

OPTION 2: 1000 CAPACITY

4.0 Option 3 – 1,158 Capacity (Pre-K to 5): (146,898 SF)

(2) –Pre-K Classrooms
(9) – Kindergarten Classrooms
(8) – Grade 1 Classrooms
(8) – Grade 2 Classrooms
(8) – Grade 3 Classrooms
(8) – Grade 4 Classrooms
(8) – Grade 5 Classrooms
= 51 Total Classrooms

Just like Option 2, Option 3 also maintains majority of the Primary and Intermediate Buildings with some demolition and minor in-fill additions along with a new 2-story central addition which would link both existing buildings. The new central addition would house all the same elements as Option 2 but in a slightly different orientation. The grade level locations would also be the same as Option 2 but house one additional classroom per each grade level. The Administration/ Nurse's Suite location and site orientation would also serve the functions and locations as they do in Option 2.

Option 3 - 1158 Students
Link Existing Buildings

Youth's Benefit Elementary School

Space Summary

Activity/Program	State Classrm. Cap.	# Teaching Spaces	Total # of Students	Size (ea.)	Total	SUBTOTALS	Preliminary Area Provided	Subtotal of Area Provided
PRIMARY BUILDING								
Academic (Classrooms, etc)								
Pre-K	20	2	40	1,000	2000		2,000	
Kindergarten (full day)	22	9	198	1,000	9000		10,286	
Grade 1 Classrooms	23	8	184	850	6800		6,504	
Grade 2 Classrooms	23	8	184	850	6800		6,847	
Grade 3 Classrooms	23	8	184	850	6800		6,854	
Grade 4 Classrooms	23	8	184	800	6400		6,386	
Grade 5 Classrooms	23	8	184	800	6400		6,535	
Total # Classrooms/ Students		**51**	**1158**					
Computer Lab (24 terminals)		1		850	850		1700	
Teacher Planning Areas		4		700	2800		2271	
Learning Lab		0		0	0	47,850		49,383
Art								
Art Room		2		900	1800		2578	
Kiln Room/Area		1		60	60		0	
Storage Workroom		2		100	200	2,060	0	2,578
Music								
Music Room		3		800	2400		2400	
Instrumental Music		1		1100	1100		1100	
Equipment Storage		1		80	80		378	
Piano Lab		0		0	0	3580	0	3878
Physical Education								
Gymnasium/Multi Purpose		1		6,000	6000		6,000	
Office (Shared by 2 instructors)		1		200	200		171	
Staff Toilet w/shower		1		60	60		0	
Storage (Indoor)		1		500	500		150	
Storage (Outdoor)		1		500	500		0	
Stage		1		1000	1000	8260	1199	7520
Specialist's Area								

Youth's Benefit Elementary School

Space Summary

Enrichment		1		600	600		692	
Math		1		600	600		665	
Reading Resource		2		740	1480		1239	
Reading Storage Room		2		200	400	3080	0	2596
Special Education								
Classrooms		4		800	3200		2459	
Spec Ed. Resource Room		1		300	300		397	
Resource Testing Room		1		100	100		141	
Occupational/ Physical Therapy		1		200	200	3800	324	3321
Media Center								
Circulation Desk/Main Reading Area/Instructional Area		1		2,250	2250		6,633	
Office/Work Space/ Inst. Prep		1		750	750		1041	
File Server /CDC		1		200	200		300	
Storage		1		500	500		0	
TV Studio		1		500	500		567	
Computer Laboratory		1		800	800	5000	850	9391
Cafeteria								
Cafeteria		1		6,000	6000		6004	
*Kitchen		1		1,540	1540		2400	
Trash		1		100	100		0	
Office		1		100	100		0	
Storage (dry)		1		200	200		0	
Refrigerator/Freezer		1		300	300		0	
Locker Area/ Lavatory		1		120	120		0	
Storage (chair/table)		1		250	250		0	
Dishwash		1		150	150		0	
After School Program Storage		1		150	150	8910	245	8649
YBES to have satallite kitchen								
Faculty Lounge/Planning								
Teacher Lounge		2		550	1100		1160	
Lavatory (unisex in lounge)		1		50	50		0	
Volunteer Workroom/PTA Storage		1		600	600	1750	600	1760
Administration								

Option 3 - 1158 Students
Link Existing Buildings

Youth's Benefit Elementary School

Space Summary

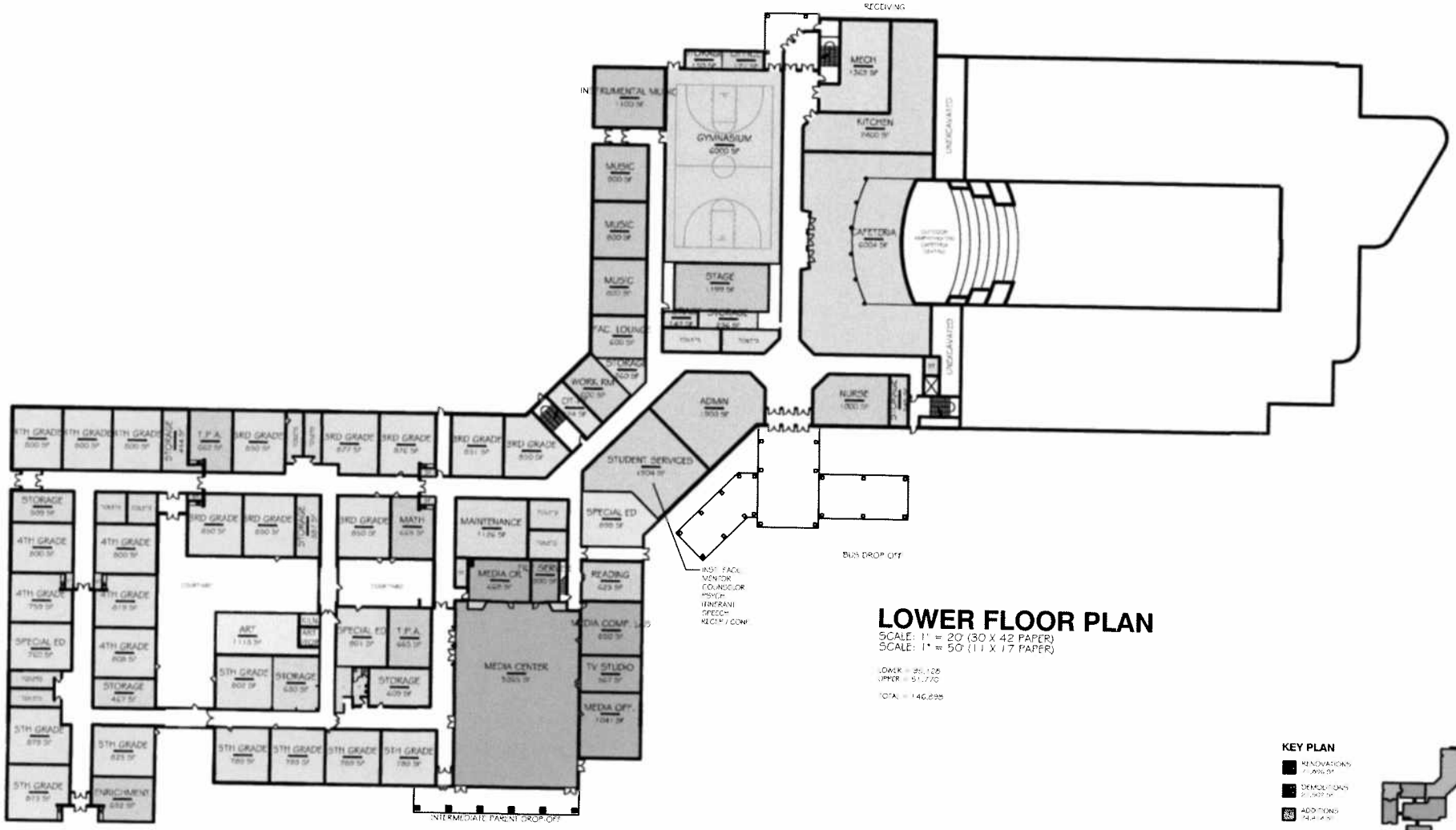
Reception/Secretarial Area		1		650	650		2520	
Principal's Office		1		300	300		0	
Assistant Principal Office		1		200	200		0	
Workroom		1		300	300		0	
Conference Room		1		300	300		0	
Storage (with vault)		1		150	150	1900	0	2520
Student Services Suite/Guidance								
Instructional Facilitator - Office		1		150	150		1904	
Mentor - Office		1		150	150		0	
Counselor's Office		1		300	300		0	
Physchologist's Office		1		300	300		0	
Itinerant Teaching/Diagnostic Area		1		200	200		0	
Speech room		1		250	250		0	
Recept. Conference Room		1		250	250	1600	0	1904
Health Suite								
Waiting/ Reception		1		100	100		1000	
Office		1		150	150		0	
Exam/ Treatment		2		150	300		0	
Rest Areas		2		100	200		0	
Toilet		2		60	120	870	0	1000
Custodial Services								
Office		1		500	500		1126	
Outdoor Maintenance		1		250	250	750	0	1126
TOTAL SCHOOL AREA								
Academic (Classrooms, etc)						47,850		49,383
Art						2,060		2578
Music						3,580		3878
Physical Education						8,260		7,520
Specialist's Area						3,080		2596
Special Education						3,800		3,321
Media Center						5,000		9,391
Cafeteria						8,910		8649
Faculty Lounge/Planning						1,750		1760
Administration						1,900		2520

Option 3 - 1158 Students
Link Existing Buildings

Youth's Benefit Elementary School

Space Summary

Student Services Suite/Guidance						1,600		1904
Health						870		1000
Custodial Services						750		1126
TOTAL PROGRAM AREA						89,410		95,626
OVERALL BUILDING AREA								146,898
*Note:								



LOWER FLOOR PLAN

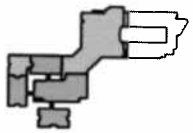
SCALE: 1" = 20' (30 X 42 PAPER)
SCALE: 1" = 50' (11 X 17 PAPER)

LOWER = 89,128
UPPER = 51,770

TOTAL = 140,898

KEY PLAN

- RENOVATIONS
- DEMOLITIONS
- ADDITIONS



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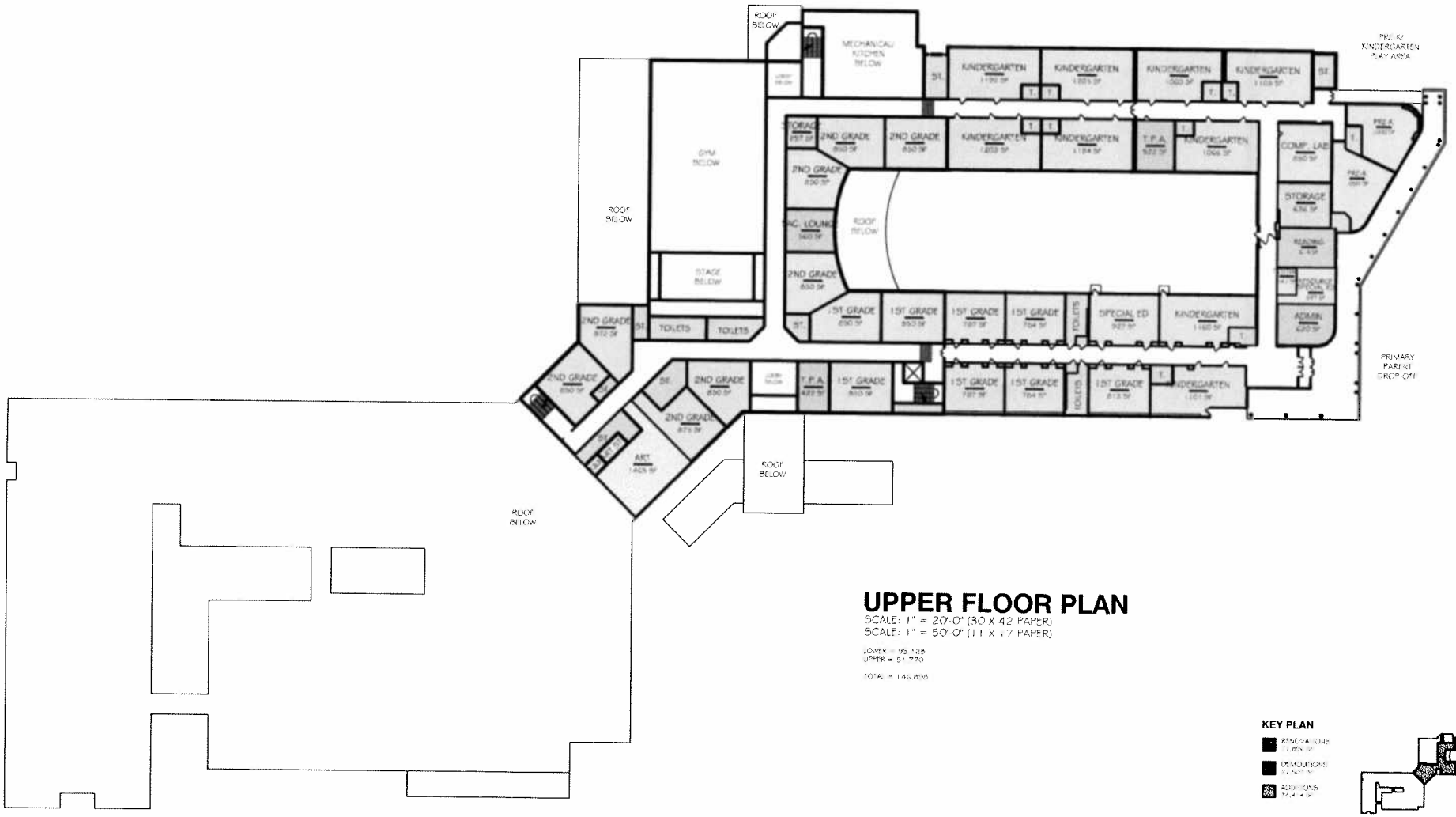
HARFORD COUNTY SCHOOL DISTRICT

YOUTH'S BENEFIT ELEMENTARY SCHOOL

OPTION 3: 1200 CAPACITY



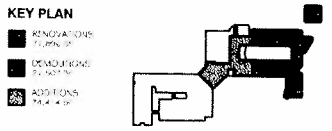
UPPER FLOOR PLAN

SCALE: 1" = 20'-0" (30 X 42 PAPER)
SCALE: 1" = 50'-0" (11 X 17 PAPER)

LOWER = 95,135
UPPER = 51,770

TOTAL = 146,905

KEY PLAN



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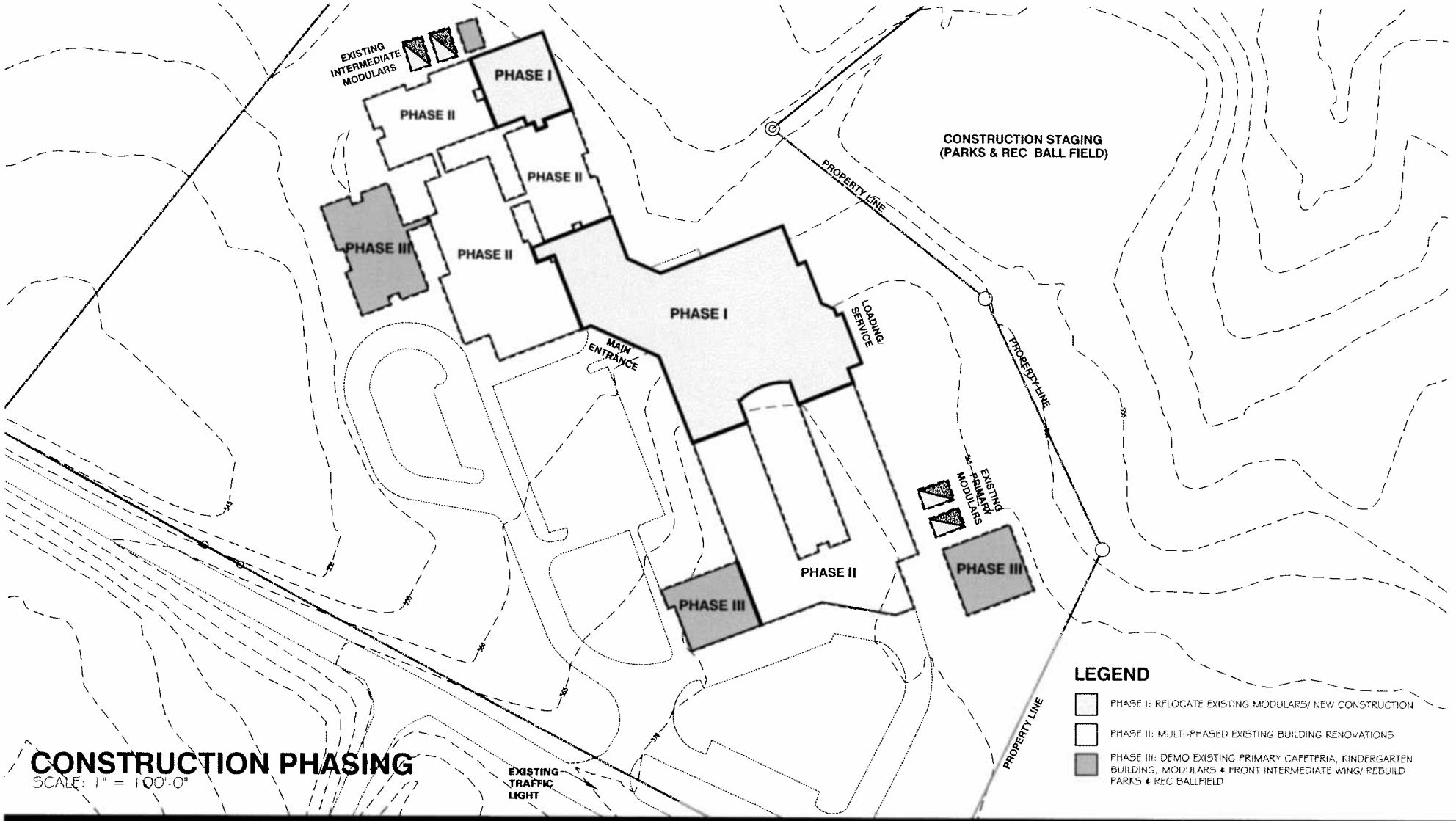
HARFORD COUNTY SCHOOL DISTRICT

YOUTH'S BENEFIT ELEMENTARY SCHOOL

OPTION 3: 1200 CAPACITY



CONSTRUCTION PHASING

SCALE: 1" = 100'-0"

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HARFORD COUNTY SCHOOL DISTRICT

YOUTH'S BENEFIT ELEMENTARY SCHOOL

OPTION 3: 1200 CAPACITY

5.0 Option 4 – 1,090 Capacity (Pre-K to 5): (127,197 SF) – All New Building

(2) –Pre-K Classrooms
(8) – Kindergarten Classrooms
(7) – Grade 1 Classrooms
(7) – Grade 2 Classrooms
(7) – Grade 3 Classrooms
(7) – Grade 4 Classrooms
(7) – Grade 5 Classrooms
(3) – Flexible Classrooms
= 48 Total Classrooms

This option is somewhat similar to Option 1 but is all new construction. The existing Primary and Intermediate buildings would be demo'd. The building consists of a large 2-story area with an attached U-shaped portion corresponding with the second floor. A large courtyard with amphitheater would be accessible from lower and upper floor levels for outdoor learning and large group instruction. The large 2-story area would house: a Gymnasium w/ stage, Kitchen, Cafeteria, Mechanical, Receiving, Art, Music, Special Ed, Media Center, Student Services, Specialist's Areas, a flexible classroom and grades Pre-K to 2 classrooms with support spaces. The Administration/ Nurse Suites would be located on the first floor and serve the main entrance along with parent/ bus drop-off and parking for visitors. The U-shaped portion would house grades 3 to 5, Special Ed, two flexible classrooms, and support spaces.

Option 4 - 1090 Students
Single New Building

Youth's Benefit Elementary School

Space Summary

Activity/Program	State Classrm. Capacity	# Teaching Spaces	Total # of Students	Size (ea.)	Total	SUBTOTALS	Program Area Provided	Subtotal of Area Provided
PRIMARY BUILDING								
Academic (Classrooms, etc)								
Pre-K	20	2	40	1,000	2000		2,110	
Kindergarten (full day)	22	8	176	1,100	8800		8,801	
Grade 1 Classrooms	23	7	161	850	5950		5,950	
Grade 2 Classrooms	23	7	161	850	5950		5,978	
Grade 3 Classrooms	23	7	161	850	5950		6,007	
Grade 4 Classrooms	23	7	161	800	5600		6,007	
Grade 5 Classrooms	23	7	161	800	5600		5,991	
Flexible Classrooms	23	3	69	850	2550		2714	
Total # of Classrooms/ Students		**48**	**1090**					
Computer Lab (24 terminals)		1		850	850		878	
Teacher Planning Areas w/Toilet		4		700	2800		2628	
Learning Lab		0		0	0	46,050	0	47,064
Art								
Art Room		2		900	1800		2132	
Kiln Room/Area		1		60	60		0	
Storage Workroom		2		100	200	2,060	0	2,132
Music								
Music Room		3		800	2400		2518	
Instrumental Music		1		1100	1100		1099	
Equipment Storage		1		80	80		0	
Piano Lab		0		0	0	3580	0	3617
Physical Education								
Gymnasium/Multi Purpose		1		6,000	6000		6,597	
Office (Shared by 2 instructors)		1		200	200		255	
Staff Toilet w/shower		1		60	60		0	
Storage (Indoor)		1		500	500		0	
Storage (Outdoor)		1		500	500		0	
Stage		1		1000	1000	8260	741	7593

Option 4 - 1090 Students
Single New Building

Youth's Benefit Elementary School

Space Summary

Specialist's Area								
Enrichment		1		600	600		575	
Math		1		600	600		600	
Reading Resource		2		740	1480		940	
Reading Storage Room		1		200	200	2880	0	2115
Special Education								
Classrooms		4		800	3200		3273	
Spec Ed. Resource Room		1		300	300		400	
Resource Testing Room		1		100	100		0	
Occupational/ Physical Therapy		1		200	200	3800	255	3928
Media Center								
Circulation Desk/Main Reading Area/Instructional Area		1		2,250	2250		5,000	
Office/Work Space/ Inst. Prep		1		750	750		0	
File Server /CDC		1		200	200		0	
Storage		1		500	500		0	
TV Studio		1		500	500		0	
Computer Laboratory		1		800	800	5000	0	5000
Cafeteria								
Cafeteria		1		5,250	5250		5240	
*Kitchen		1		1,540	1540		2009	
Trash		1		100	100		0	
Office		1		100	100		0	
Storage (dry)		1		200	200		0	
Refrigerator/Freezer		1		300	300		0	
Locker Area/ Lavatory		1		100	100		0	
Storage (chair/table)		1		250	250		0	
Dishwash		1		150	150		0	
After School Program Storage		1		150	150	8140	0	7249
YBES to have satellite kitchen								
Faculty Lounge/Planning								
Teacher Lounge		1		550	550		496	
Lavatory (unisex in lounge)		1		50	50		0	
Workroom/PTA Storage w/ toilet		1		600	600	1200	640	1136

Option 4 - 1090 Students
Single New Building

Youth's Benefit Elementary School

Space Summary

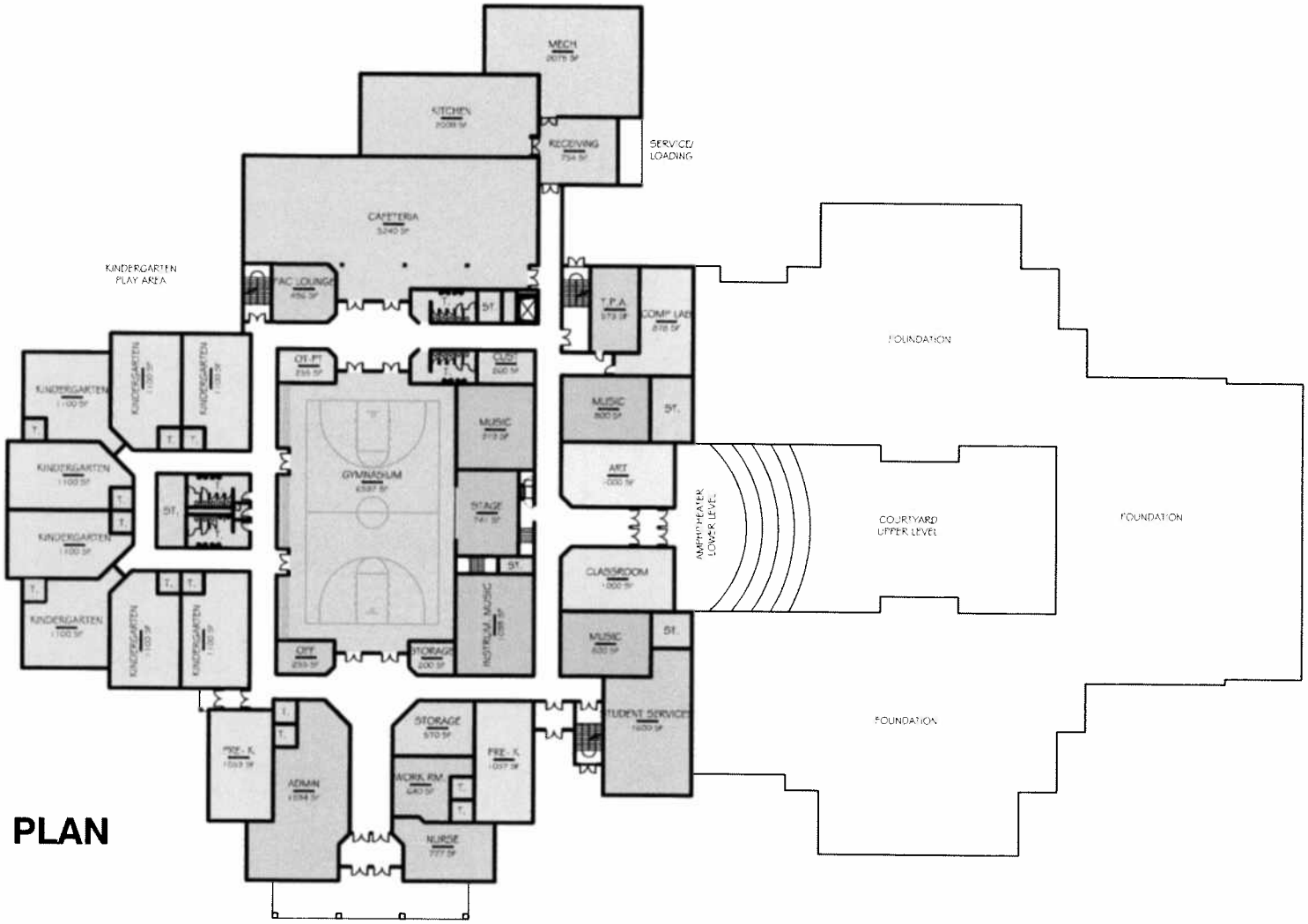
Administration								
Reception/Secretarial Area		1		650	650		1934	
Principal's Office w/ Toilet		1		300	300		0	
Assistant Principal Office		1		200	200		0	
Workroom w/ toilet		1		300	300		0	
Storage (with vault)		1		150	150		0	
Conference Room		1		300	300	1900	0	1934
Student Services Suite/Guidance								
Instructional Facilitator - Office		1		150	150		1600	
Mentor - Office		1		150	150		0	
Counselor's Office		1		300	300		0	
Psychologist's Office		1		300	300		0	
Itinerant Teaching/Diagnostic Area		1		200	200		0	
Recept. Conference Room		1		250	250		0	
Speech room		1		250	250	1600	0	1600
Health Suite								
Waiting/ Reception		1		100	100		777	
Office		1		150	150		0	
Exam/Treatment Room		2		150	300		0	
Rest Areas		2		100	200		0	
Toilet		2		60	120	870	0	777
Custodial Services								
Office		1		250	250		260	
Outdoor Maintenance		1		250	250	500	0	260
TOTAL SCHOOL AREA								
Academic (Classrooms, etc)						46,050		47,064
Art						2,060		2132
Music						3,580		3617
Physical Education						8,260		7,593
Specialist's Area						2,880		2115
Special Education						3,800		3,928
Media Center						5,000		5,000
Cafeteria						8,140		7249
Faculty Lounge/Planning						1,200		1136

Option 4 - 1090 Students
Single New Building

Youth's Benefit Elementary School

Space Summary

Administration						1,900		1934
Student Services Suite/Guidance						1,600		1600
Health						870		777
Custodial Services						500		260
TOTAL PROGRAM AREA						85,840		84,405
OVERALL BUILDING AREA								127,197
*Note:								



OPTION 4:
LOWER FLOOR PLAN

SCALE: 1/40" = 1'-0"

LOWER: 58,033 SF
UPPER: 69,164 SF

TOTAL: 127,197 SF

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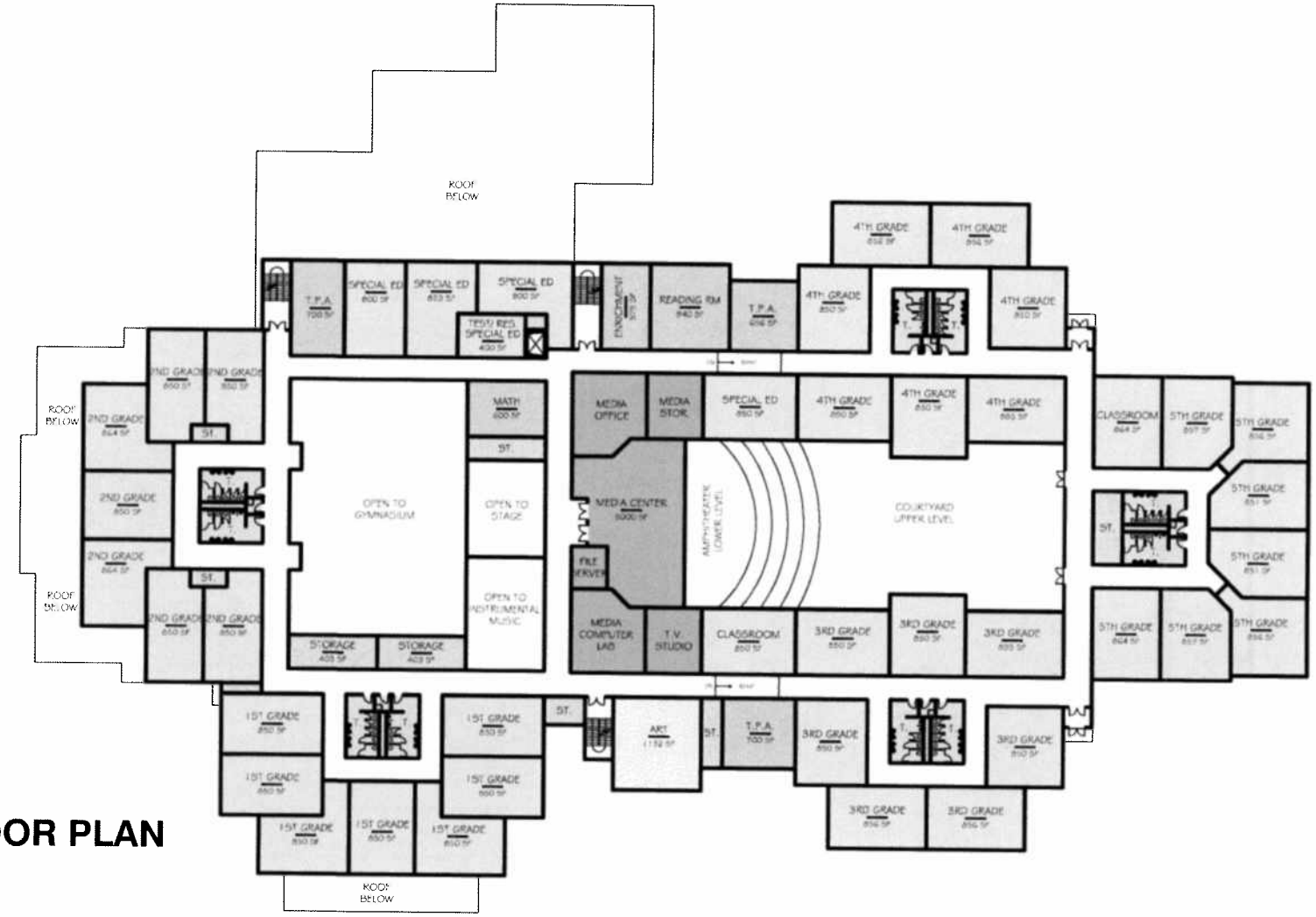
HARFORD COUNTY SCHOOL DISTRICT
YOUTH'S BENEFIT ELEMENTARY SCHOOL
OPTION 4: 1000 CAPACITY



OPTION 4:
UPPER FLOOR PLAN

SCALE: 1/40" = 1'-0"

LOWER: 58,033 SF
UPPER: 69,164 SF

TOTAL: 127,197 SF

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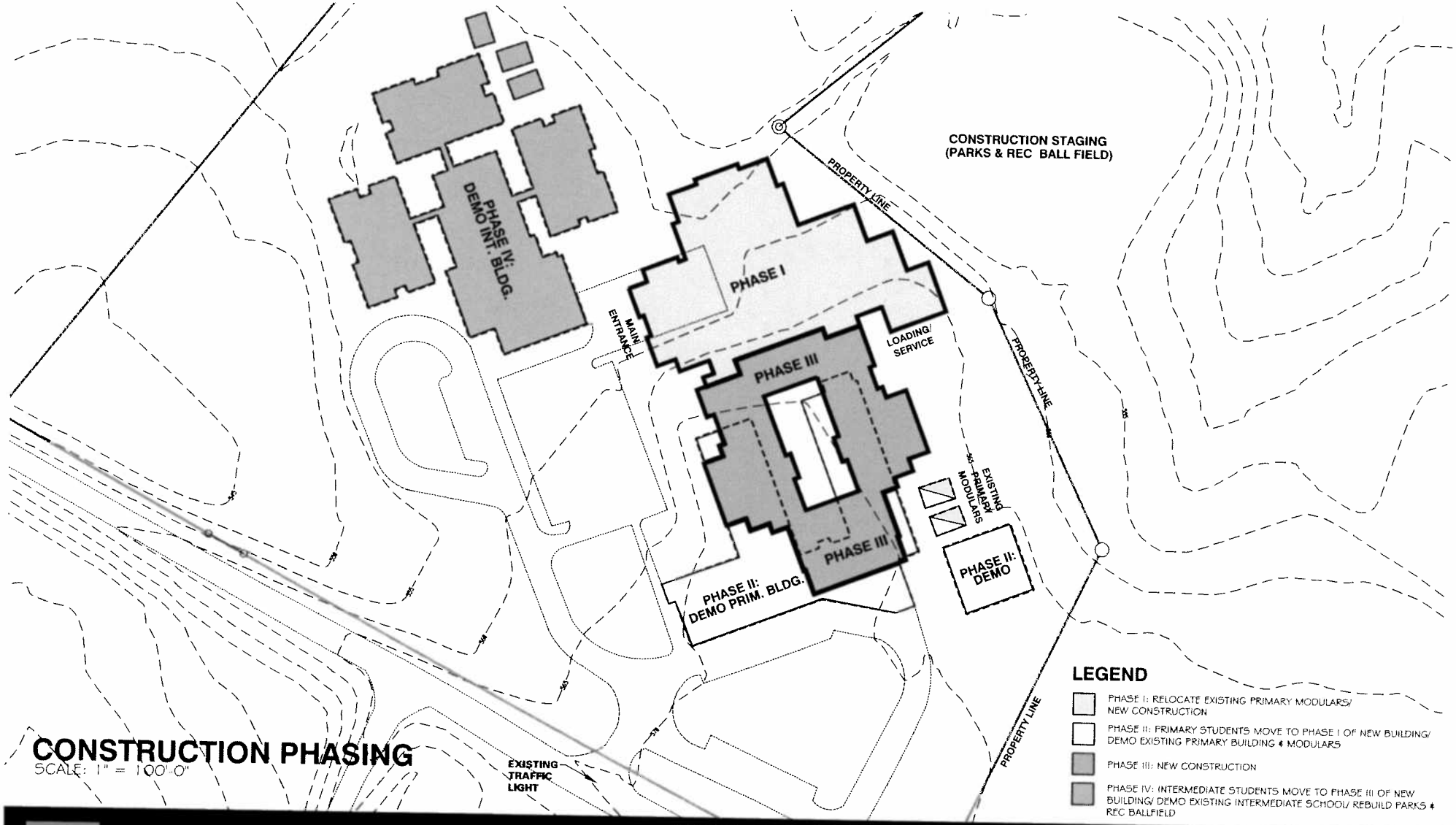
HARFORD COUNTY SCHOOL DISTRICT
YOUTH'S BENEFIT ELEMENTARY SCHOOL
OPTION 4: 1000 CAPACITY



CONSTRUCTION PHASING

SCALE: 1" = 100'-0"

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HARFORD COUNTY SCHOOL DISTRICT

YOUTH'S BENEFIT ELEMENTARY SCHOOL

OPTION 4: 1000 CAPACITY

Youth's Benefit ES Schematic Design SF Cost Estimates				
Cost Breakdown	Option 1	Option 2	Option 3	Option 4
Site	$2,979,294	$2,979,294	$2,979,294	$2,979,294
Renovation	37,041 SF x $200 /SF $7,408,200	71,896 SF x $200 /SF $14,379,200	71,896 SF x $200 /SF $14,379,200	N/A
New Construction	83,706 SF x $240 /SF $20,089,440	68,447 SF x $245 /SF $16,769,515	74,414 SF x $245 /SF $18,231,430	127,197 SF x $240 /SF $30,527,280
Mass Building Demolition	$273,960	$122,590	$122,590	$459,259
Total Cost	**$30,750,894**	**$34,250,599**	**$35,712,514**	**$33,965,833**