BURTONSVILLE ELEMENTARY SCHOOL ADDITION

FEASIBILITY STUDY

October 2013

Prepared for

Montgomery County Board of Education

By SAMAHA ASSOCIATES, P.C.

SAMAHA

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BURTONSVILLE ELEMENTARY SCHOOL - ADDITION

15516 Old Columbia Pike
Burtonsville, MD 20866

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I. INTRODUCTION

INTRODUCTION

This feasibility study for the Burtonsville Elementary School addition was conducted for Montgomery County Public Schools (MCPS) by the architectural firm of Samaha Associates, P.C. The existing school is located at 15516 Old Columbia Pike, Burtonsville, MD 20866. Work was performed under the direction of the MCPS Department of Facilities Management, Division of Construction.

FEASIBILITY STUDY PARTICIPANTS

The Feasibility Study participants reviewed the design concepts for the addition at Burtonsville Elementary School. Meetings occurred on the following dates:

December 18, 2012
January 7, 2013
January 22, 2013
Community Presentation: February 5, 2013

The proposed designs are a result of the recommendations, suggestions and guidance during the feasibility study process.

Participants

Ms. Kimberly Kimber	Principal - Burtonsville Elementary School
Ms. Lauren Anguish	Teacher - Burtonsville Elementary School
Mr. Rakesh Bagai	Division of Construction - MCPS
Ms. Kim Brown	Teacher - Burtonsville Elementary School
Ms. Elizabeth Burn	Teacher - Burtonsville Elementary School
Ms. Nghia Cao	Parent - Burtonsville Elementary School
Ms. Nancy Carey	Teacher - Burtonsville Elementary School
Ms. Laura Ciavarella	Teacher - Burtonsville Elementary School
Ms. Shari Clark	Parent - Burtonsville Elementary School
Ms. Lauren College	Teacher - Burtonsville Elementary School
Ms. Jennifer D'Asto	Teacher - Burtonsville Elementary School
Mr. Paul Falkenbury	Architect - Samaha Associates
Ms. Victoria Franceski	Teacher - Burtonsville Elementary School

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Ms. Rabiah George	Teacher - Burtonsville Elementary School
Ms. Terry Gobourne	Teacher - Burtonsville Elementary School
Ms. Susan Goff	Teacher - Burtonsville Elementary School
Ms. Lizzette Goyne	Teacher - Burtonsville Elementary School
Ms. Caitlin Hartog	Teacher - Burtonsville Elementary School
Ms. Gina Hendershot	Teacher - Burtonsville Elementary School
Ms. Lynn Hendrickson	Teacher - Burtonsville Elementary School
Ms. Beth Hester	Teacher - Burtonsville Elementary School
Ms. Sarah Hill	Teacher - Burtonsville Elementary School
Ms. Robin Hudspeth	Teacher - Burtonsville Elementary School
Ms. Dorothy Hyatt	Teacher - Burtonsville Elementary School
Ms. Falguni Kanthan	PTA Treasurer - Burtonsville Elementary School
Ms. Jennifer Keplinger	Teacher - Burtonsville Elementary School
Ms. Eun Kim	Teacher - Burtonsville Elementary School
Ms. Stacie Kinhart	Teacher - Burtonsville Elementary School
Ms. Kim Kunber	Parent - Burtonsville Elementary School
Mr. Akalnesh Mamo	Parent - Burtonsville Elementary School
Mr. Mark Manetti	Architect - Samaha Associates
Ms. Carmel Mansour	Teacher - Burtonsville Elementary School
Ms. Amelia Martin	Teacher - Burtonsville Elementary School
Ms. Amy McCarty	Samaha Associates
Ms. Carla McEachern	Teacher - Burtonsville Elementary School
Ms. Julie Morris	Division of Long Range Planning - MCPS
Ms. Jennifer Murch	Teacher - Burtonsville Elementary School
Ms. Charie Negosh	Parent - Burtonsville Elementary School
Ms. Liz Newcomb	Teacher - Burtonsville Elementary School
Ms. Dipali Patel	Parent - Burtonsville Elementary School
Ms. Renee Patrick	Teacher - Burtonsville Elementary School
Ms. Tali Perez	Teacher - Burtonsville Elementary School
Mr. Mark Pharaoh	PTA President - Burtonsville Elementary School
Ms. Nicole Quinones	Teacher - Burtonsville Elementary School
Ms. Sarinya Rapeepun	Teacher - Burtonsville Elementary School
Ms. Denise Renfrew	Teacher - Burtonsville Elementary School

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Ms. Fatima T. Sallia	Student - Burtonsville Elementary School
Ms. Tewoh-Elow Sallia	Parent - Burtonsville Elementary School
Ms. Aimee Sanders	Parent - Burtonsville Elementary School
Ms. Shagala Sansom	Teacher - Burtonsville Elementary School
Ms. Elizabeth Schneider	Teacher - Burtonsville Elementary School
Ms. Bettye Sellman	Teacher - Burtonsville Elementary School
Mr. Mike Shpur	Division of Construction - MCPS
Ms. Hilary Siegel	Teacher - Burtonsville Elementary School
Ms. Felita Smith	Teacher - Burtonsville Elementary School
Ms. Memo Smith	Teacher - Burtonsville Elementary School
Ms. Karen Spezio	Teacher - Burtonsville Elementary School
Ms. Jillian Storms	Maryland State Department of Education
Ms. Niki Straub	Teacher - Burtonsville Elementary School
Mr. David Sweet	Parent - Burtonsville Elementary School
Ms. Cynthia Taylor	Teacher - Burtonsville Elementary School
Mr. Sebastian Teclar	Parent - Burtonsville Elementary School
Ms. Janine Vernot	Teacher - Burtonsville Elementary School
Ms. Patricia Warnock-Safford	Teacher - Burtonsville Elementary School

II. EXECUTIVE SUMMARY

PURPOSE

The purpose of this feasibility study is to explore options that satisfy the educational specifications for an addition of six standard classrooms, three kindergarten classrooms and various support spaces to bring the school's capacity to 640 students, thus eliminating the need for the six relocatable classrooms currently in use. The specifications also provide for the repurposing of the music room, instrumental music room, and dual purpose room back to their original uses, as these spaces have been taken over for use as standard classrooms. Two add-alternates, one for a four classroom addition and one for the expansion of the multipurpose room and kitchen were also explored to bring the school capacity up to 740 students. Each instructional area will have adequate learning space, work areas, restrooms, and storage.

HISTORY

The original Burtonsville Elementary School was constructed in 1952. There have been many additions to the school over the years (1954, 1958, 1960, 1965, and 1974), and a modernization in 1993. The existing one-story 71,349 square foot school sits on a 12.22 acre site with a capacity of 455 students.

METHODOLOGY

The site has been evaluated by a design team of architects, engineers, and consultants to determine the feasibility of building an addition to Burtonsville Elementary School that meets the educational specifications, dated December 18, 2012 and summary of space requirements.

The study is based on the following:

- Consensus workshops with the Feasibility Study participants and MCPS staff
  - There were four meetings.
  - There were 64 different attendees.
  - There were five different building concept option refinements.
  - There were three different site option refinements.
- Review of the educational specifications and summary of space requirements provided by MCPS.
- Visual analysis of the existing site by the design team.
- Analysis of the existing plants.
- Topographic and boundary survey including a preliminary Natural Resources Inventory/ Forest Stand Delineation

II. EXECUTIVE SUMMARY

OVERVIEW

The existing 71,349 square foot Burtonsville Elementary school sits at the northeast corner of the site with a student capacity of 455. Six portable classrooms are located to the west of the existing school and are used to support the current student enrollment of 685 students. The bus loop, visitor parking, staff parking, and service area are located to the south of the building. Additional staff parking is located to the West of the building, with hard surface play areas and mulched play areas to the North of the parking lot. The athletic fields are located to the West of the staff parking and hard surface play areas.

Three options are presented within and were designed with input from the Feasibility Study participants. All three options meet the instructional programmatic requirements for the elementary school. Option 1 was the preferred option of the Feasibility Study participants. Cost estimates were established for each option, and are presented in the description of options section of this report.

COMMON DESIGN ELEMENTS FOR EACH OPTION

COMMON SITE ELEMENTS

- Bus loading is modified to allow for seven buses at a time to queue in front of the school.
- Student drop-off is modified to create a lane allowing a parking aisle and a separate circulation lane to avoid stacking of cars while parents wait for their children.
- Additional staff parking is provided.
- One softball field is reoriented to accommodate larger staff parking lot to the west of the building.
- Hard surface play area is reconfigured to accommodate the addition.
- Visitor parking is provided at the front of the school.
- Bus loading is double striped for use as parking after school hours.

COMMON BUILDING ELEMENTS

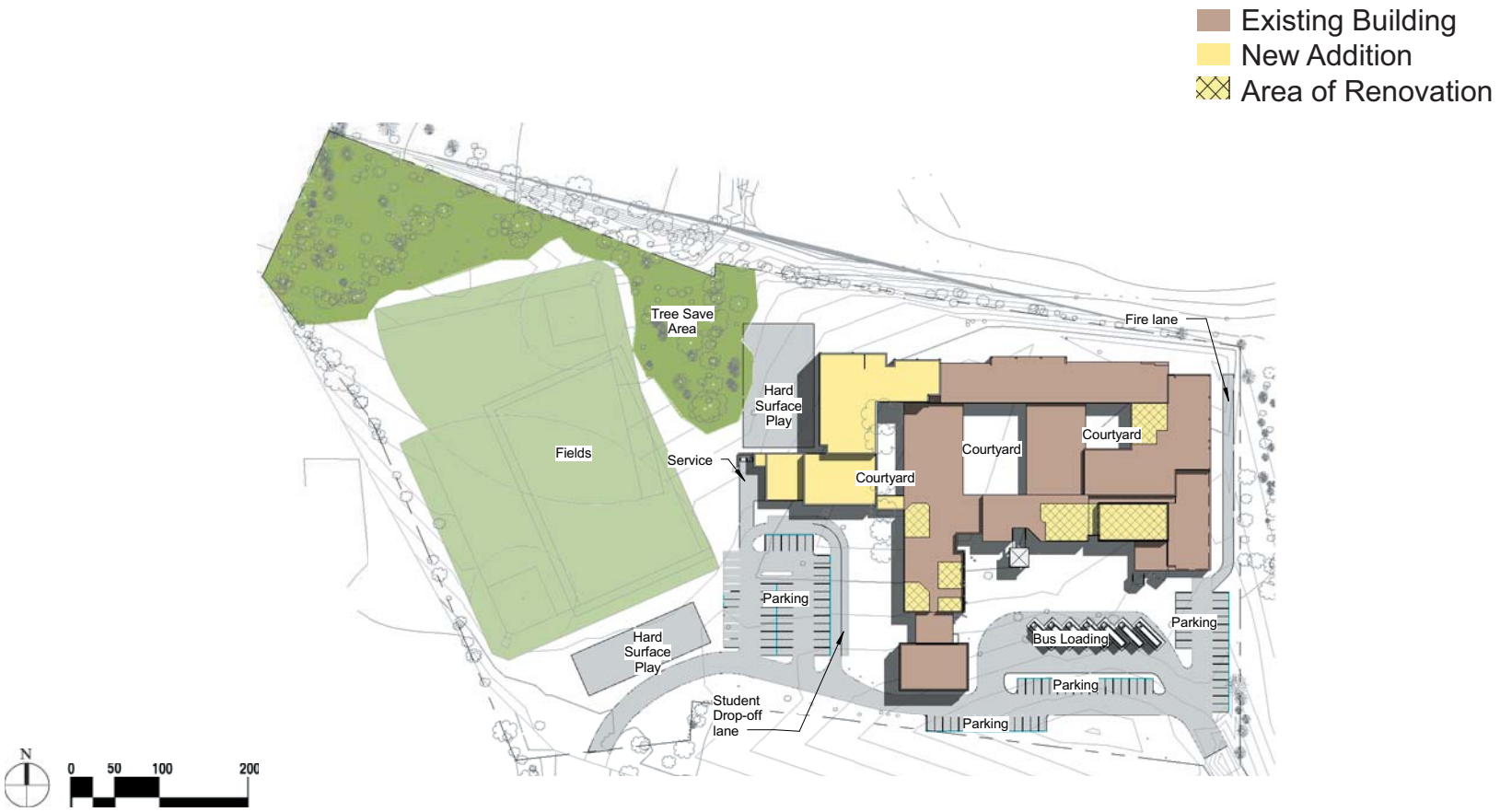
- Renovate music room, instrumental music room, and dual purpose room back into there original functions as they are currently used as classroom space.
- Renovate one classroom into two small instructional support rooms.
- Renovate main entrance to create a secure vestibule.
- Group Kindergarten classrooms.
- Reconfigure multipurpose room so students are not queing in the corridors.
- Vegetated Roof system on the new addition.

II. EXECUTIVE SUMMARY

OPTION 1

Option 1 is a two-story 27,660 square foot classroom addition to the west of the existing building. A new multipurpose room and kitchen is provided as a one-story portion of the addition. The existing bus loop, and parking lots are reconfigured to accommodate seven buses, additional staff parking, and a two lane student drop off area.

TOTAL COST WITH ALTERNATES = $12,334,000

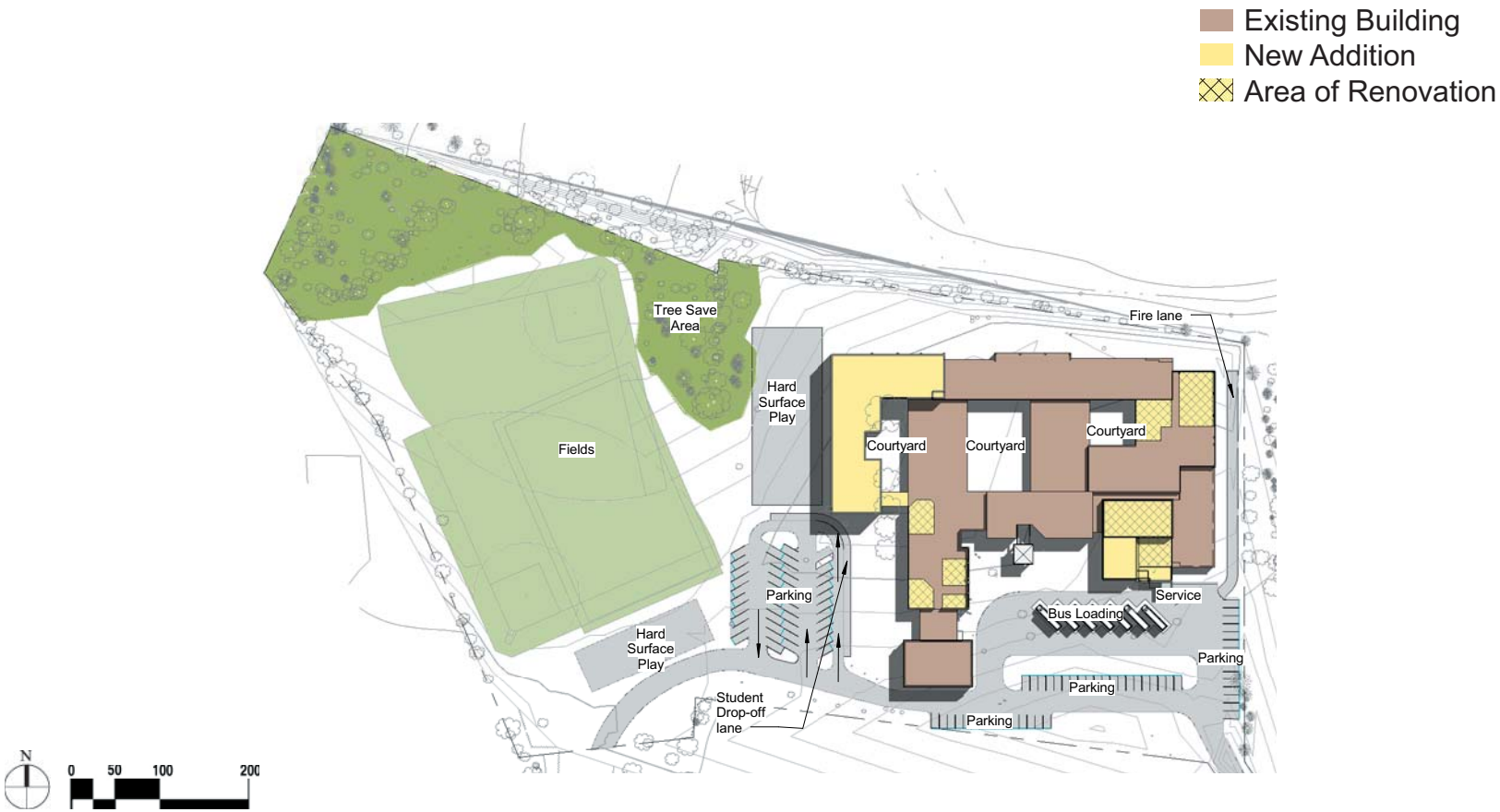


II. EXECUTIVE SUMMARY

OPTION 2

Option 2 is a two-story 29,165 square foot classroom addition to the west of the existing building. The multipurpose room and kitchen are expanded in their existing location. The existing bus loop, and parking lots are reconfigured to accommodate 7 buses, additional staff parking, and a two-lane student drop off area.

TOTAL COST WITH ALTERNATES = $12,861,000

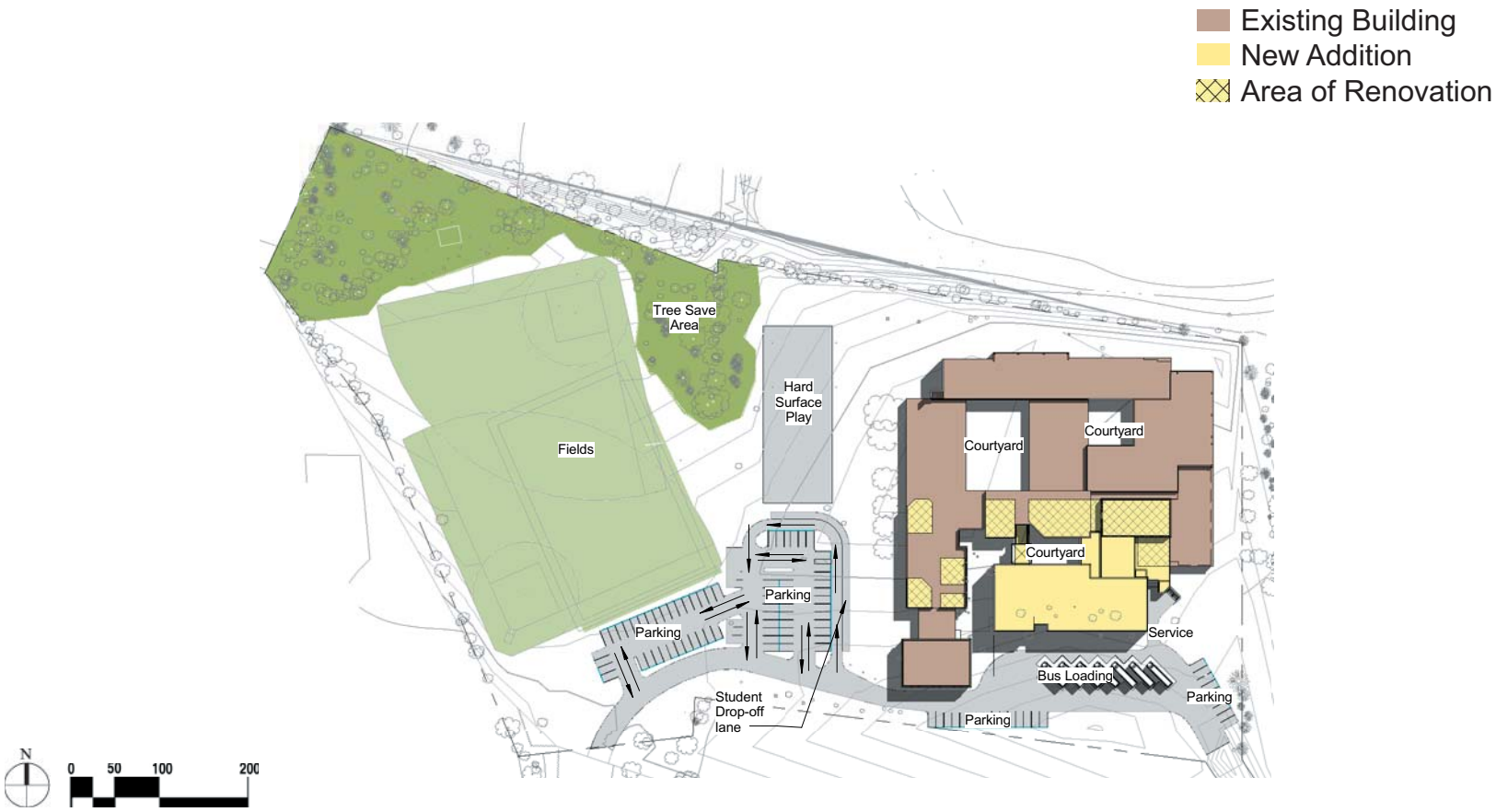


II. EXECUTIVE SUMMARY

OPTION 3

Option 3 is a two-story 28,050 square foot classroom addition to the south of the existing building. The addition at the front of the building provides a new entrance into the school. The multipurpose room and kitchen are expanded in their existing location. The existing bus loop, and parking lots are reconfigured to accommodate seven buses, additional staff parking, and a two-lane student drop off area.

TOTAL COST WITH ALTERNATES = $12,586,000



II. EXECUTIVE SUMMARY

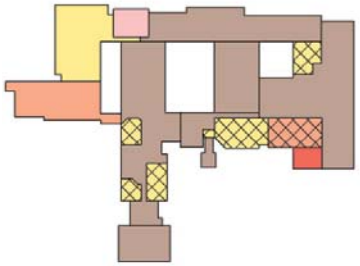
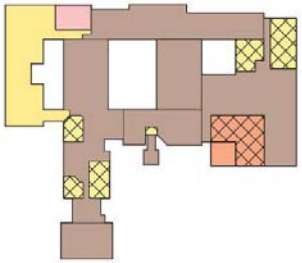
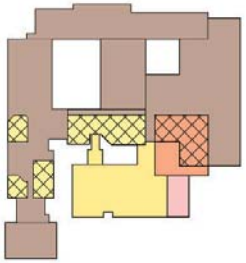
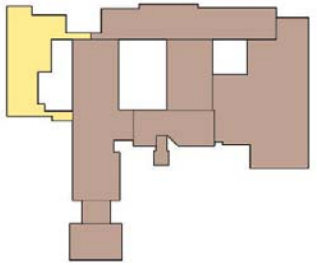
OPTION 4

Option 4 is a two-story 20,955 square foot classroom addition to the west of the existing building.

TOTAL COST (NO ALTERNATES) = $7,812,000

II. EXECUTIVE SUMMARY

GRAPHIC AND ECONOMIC ANALYSIS

	OPTION 1	OPTION 2	OPTION 3	OPTION 4
Existing Building New Base Bid New Add Alternate 1 New Add Alternate 2 Renovation Base Bid Renovation Add Alternate 2				
Existing Building	71,349 SF	71,349 SF	71,349 SF	71,349 SF
New Base Bid	21,605 SF	22,440 SF	21,325 SF	20,955 SF
Renovation Base Bid	7,560 SF	7,560 SF	7,890 SF	
New Add Alternate 1	4,265 SF	4,080 SF	4,080 SF	0 SF
New Add Alternate 2	3,330 SF	2,645 SF	2,645 SF	0 SF
Renovation Add Alt. 2	2,305 SF	4,370 SF	4,370 SF	0 SF
Demolition	1,540 SF			
Base Bid Total	92,954 SF	**93,789 SF**	**92,674 SF**	**92,304 SF** **$7,812,000**
Total with Alternates	99,009 SF $12,334,000	**100,514 SF $12,861,000**	**99,399 SF $12,586,000**	

PDF/FEASIBILITY STUDY COST OUTLINE (000's)
PREFERRED OPTION 1

Construction Estimate (Option 1)	10,019
Planning Cost	1,172
Contingency and Related Costs	1,143
Total	**12,334**

II. EXECUTIVE SUMMARY

CONCLUSIONS AND RECOMMENDATIONS

The following course of action is recommended to meet the program requirements for the addition to Burtonsville Elementary school. The recommendations are consistent with MCPS standards, meet program requirements and address the interests and many concerns of the school staff and the community as represented by the Feasibility Study participants.

In accordance with the opinions of the Feasibility Study participants and MCPS staff, it is recommended that option 1, as described in section V, and its associated site improvements be implemented. The work includes the construction of the addition while the school remains operational.

III. SCOPE, METHODOLOGY, AND GOALS

SCOPE AND INTENT

The purpose of this feasibility study is to explore options that satisfy the educational specifications for an addition of six standard classrooms, three kindergarten classrooms and various support spaces to bring the schools capacity to 640 students. This eliminates the need for the six relocatable classrooms currently in use. The specifications also provide for the repurposing of the music room, instrumental music room, and dual purpose room back to their original uses, as these spaces have been taken over for use as standard classrooms. Two add-alternates, one for a four classroom addition and one for the expansion of the multipurpose room and kitchen are also explored to bring the school capacity up to 740 students. Each instructional area has adequate learning space, work areas, restrooms, and storage.

The new addition meets current specifications relative to educational programs, instructional philosophy, program space allocations, and current energy, ADA, and life safety codes. This feasibility study explores options for an addition to meet the needs of its current and projected student enrollment, while addressing staff and community concerns. The study also provides a cost effective, energy efficient, and safe facility to meet the future needs of the school community.

The architecture, engineering, and design team developed multiple site and building concepts that addressed the goals and objectives as described in this study. The Feasibility Study participants reviewed the progression of these concepts throughout the entire process. Comments and suggestions were discussed, refined, and incorporated after each meeting. The final concepts are presented as options in this report with Option 1 being the preferred option of the study.

III. SCOPE, METHODOLOGY, AND GOALS

METHODOLOGY

The site has been evaluated by a design team of architects, engineers, and consultants to determine the feasibility of building an addition to Burtonsville Elementary School that meets the educational specifications, dated December 18, 2012 and summary of space requirements.

The study is based on the following:

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- Visual analysis of the existing site by the design team.
- Analysis of the existing plants.
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III. SCOPE, METHODOLOGY, AND GOALS

GENERAL GOALS

Throughout the process, several recurring themes established a set of goals and objectives, which the new addition concepts address. These goals and objectives are delineated below.

SITE GOALS AND OBJECTIVES

- Provide a bus lane large enough to accommodate seven buses at one time, to allow bus queing to take place in two stages.
- Provide additional staff parking.
- Provide better enclosure for kitchen trash at the front of the school or relocate the trash area.
- Provide additional hard surface play area to the south of the athletic fields.
- Create a designated student drop-off lane with a by-pass lane.
- Maintain visitor parking at the front of the school.
- Provide double striped bus loading area for use as parking after school hours.
- Provide adequate lighting in the parking lots.

BUILDING GOALS AND OBJECTIVES

- Group Kindergarten classrooms together.
- Reconfigure multipurpose room so students are not queing in the corridors for lunch.
- Locate classroom add-alternate so it is easily constructed in the future if it is not constructed at the same time as the base bid addition.
- Upgrade the health suite which is currently undersized.
- Provide a new secure vestibule.
- Expand the multipurpose room to accommodate a minimum of two grades at one time.
- Repurpose music, instrumental music, and the dual purpose rooms back into their original spaces.
- Provide access from the multipurpose room to the outdoor play areas.

IV. EXISTING CONDITIONS

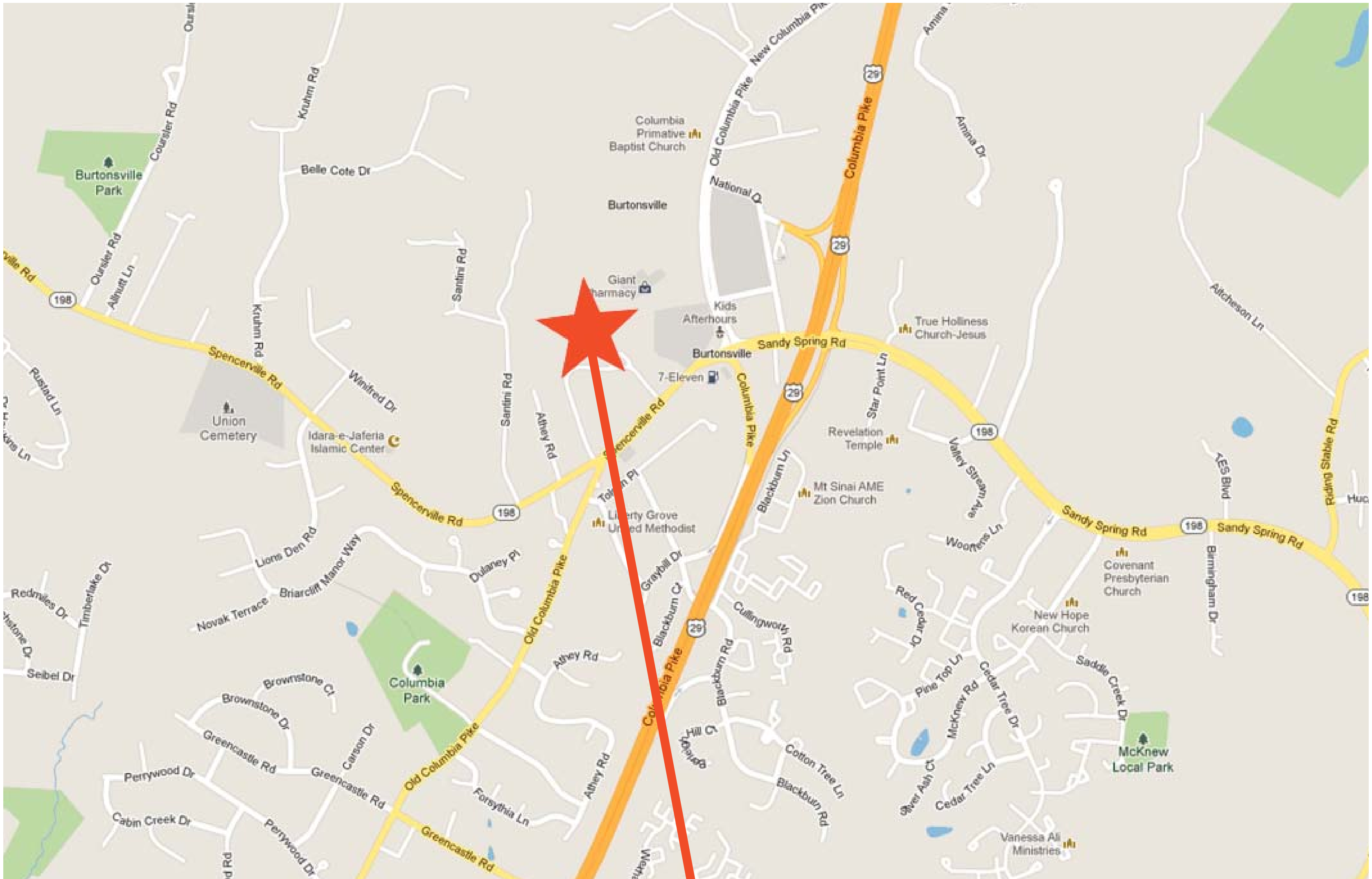
EXISTING CONDITIONS SUMMARY

Burtonsville Elementary School is located at 15516 Old Columbia Pike in Burtonsville, MD. Originally constructed in 1952, the school has had many additions over the years as well as a modernization in 1993. The current school capacity is 455 with a student enrollment of 685. The existing structure contains approximately 71,349 square feet of space, and sits on a 11.9 acre site.

The existing Burtonsville Elementary school sits at the northeast corner of the site. Six relocatable classrooms are currently located to the west of the school. The bus loading, visitor parking, staff parking, and service area are located to the south of the building. Additional staff parking is located to the west of the building, with hard surface play areas and mulched play areas to the north of the parking lot. The athletic fields are located to the west of the staff parking and hard surface play areas.

IV. EXISTING CONDITIONS

VICINITY MAP



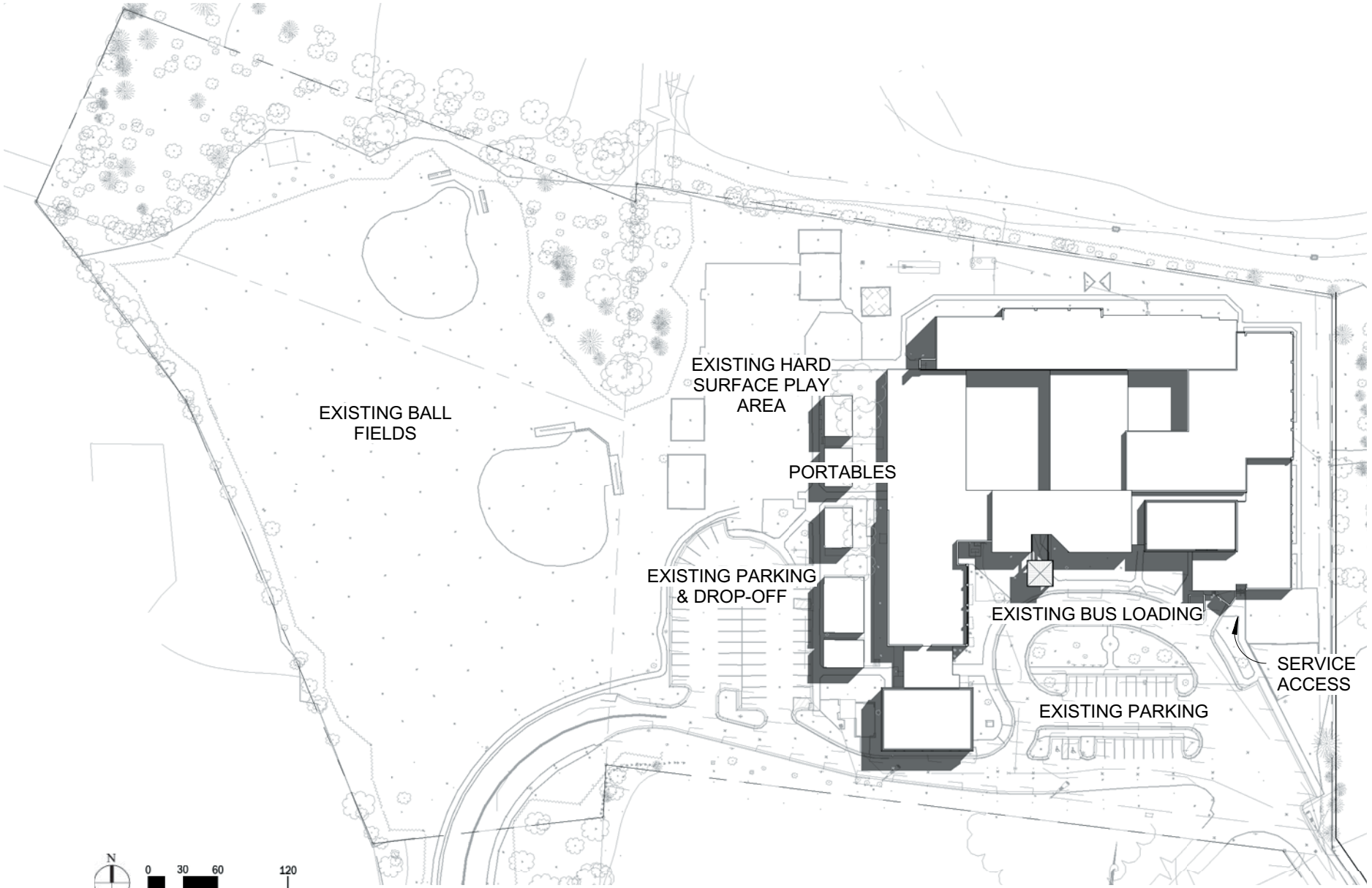
BURTONSVILLE ELEMENTARY SCHOOL
15516 OLD COLUMBIA PIKE
BURTONSVILLE, MD 20866

IV. EXISTING CONDITIONS

LOCATION MAP

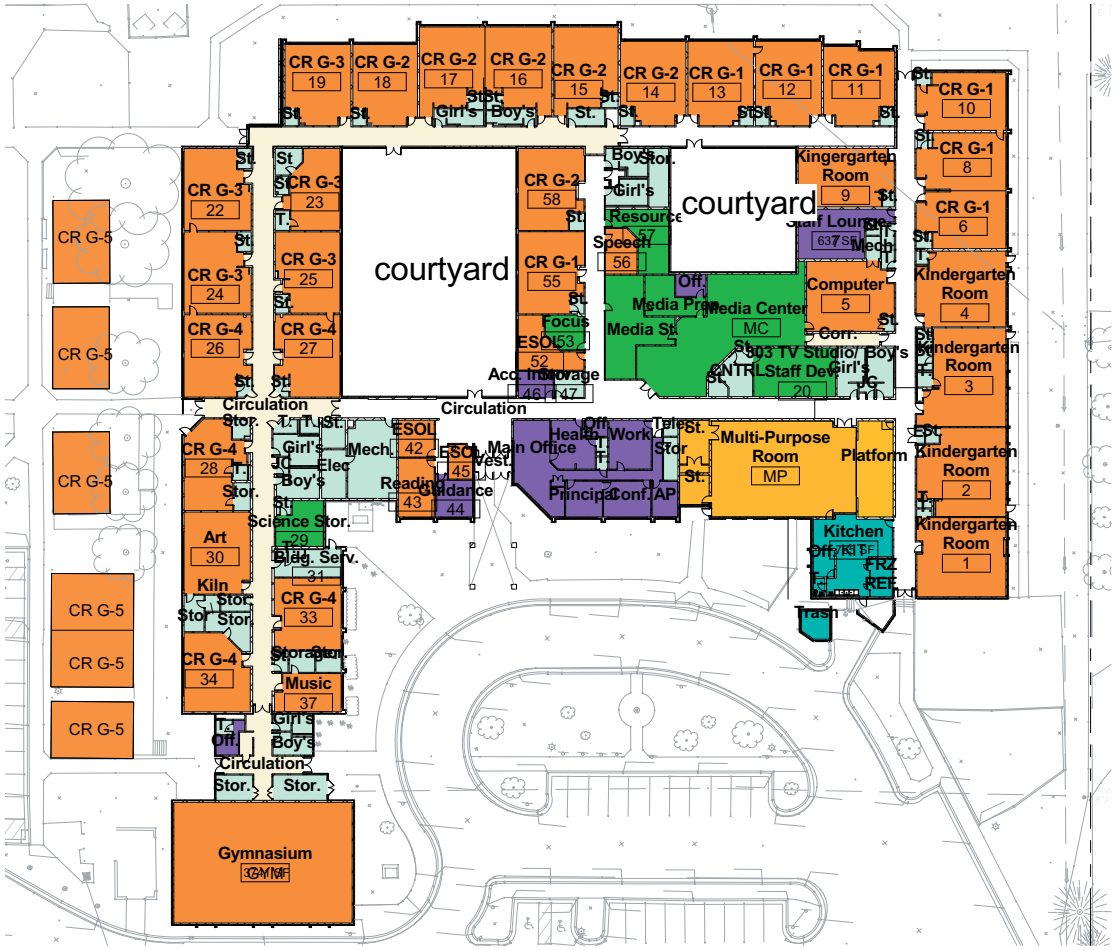
IV. EXISTING CONDITIONS

EXISTING SITE PLAN



IV. EXISTING CONDITIONS

EXISTING FLOOR PLAN



LEGEND

- Administration
- Circulation
- Education Support
- Kitchen - Add Alternate 2
- Multi-Purpose
- Multipurpose - Add Alternate 2
- Primary Teaching
- Service

N 0 20 40 80

V. DESCRIPTION OF OPTIONS

GENERAL

Three final options were developed in response to the MCPS educational specifications for the Burtonsville Elementary School addition. Each option addresses the physical and instructional organization of the school in unique ways.

Option 1 explores a two-story addition to the west of the existing school with add alternates.

Option 2 explores a two-story addition to the west of the existing school with add alternates.

Option 3 explores a two-story addition to the south of the existing school with add alternates.

Option 4 explores a two-story addition to the west of the existing school without add alternates.

COMMON DESIGN ELEMENTS FOR EACH OPTION

COMMON SITE ELEMENTS

- Bus loading is modified to allow for seven buses at a time to queue in front of the school.
- Student drop-off is modified to create a lane allowing a parking aisle and a separate circulation lane to avoid stacking of cars while parents wait for their children.
- Additional staff parking is provided.
- One softball field is reoriented to accommodate larger staff parking lot to the west of the building.
- Hard surface play area is reconfigured to accommodate the addition.
- Visitor parking is provided at the front of the school.
- Bus loading is double striped for use as parking after school hours.

COMMON BUILDING ELEMENTS

- Renovate music room, instrumental music room, and dual purpose room back into these original functions as they are currently used as classroom space.
- Renovate one classroom into two small instructional support rooms.
- Renovate main entrance to create a secure vestibule.
- Group Kindergarten classrooms.
- Reconfigure multipurpose room so students are not queing in the corridors.

V. DESCRIPTION OF OPTIONS

STORM DRAINAGE AND STORMWATER MANAGEMENT

There are several existing stormwater management facilities located on the site. A combined oil/grit separator and infiltration trench is located at the southwest side of the parking lot and receives runoff from both parking lots through a single inlet. There is significant ponding and marshy conditions around the infiltration trench and oil separator facility. MNCPPC recommends that this be conveyed to the rear of the school as it could be a safety concern to students. A separate infiltration facility is identified at the southeast corner of the property. This area had several inches of water ponding above grade during the site visit. A facility to the north of the school consists of an oil grit separator and infiltration trench collecting stormwater from the two courtyards.

It can be anticipated that site improvements are required to include Environmental Site Design (ESD) to the maximum extent practicable in order to treat all areas inside the limits of disturbance. If ESD efforts are exhausted and the site still has not been able to reach a hydrologic state of “woods in good condition,” then structural practices may be required as determined by Montgomery County.

Potential ESD stormwater management practices for the site include both micro-scale practices and alternative surfaces. Micro-scale facilities include the utilization of up to a dozen micro-bioretention facilities or submerged gravel wetlands where available open space can be found, such as parking lot islands and around the athletic fields. If required to meet stormwater requirements alternative surfaces such as vegetated roofs may be considered.

It is noted that this project lies within the Primary Management Area (PMA) for tributaries to the Patuxant River. Per MNCPPC environmental regulation, there is a 10% maximum impervious cap on new development. Per the Pre-Mandatory Referral Meeting with MNCPPC, impacts to the design due to the PMA were discussed. The master plan does identify the school addition and states that a limited increase to the imperious area is recommended. The existing imperiousness within the PMA for the school site is currently 35%. MNCPPC will want to limit any added imperviousness due to the building addition improvements.

V. DESCRIPTION OF OPTIONS

MECHANICAL SYSTEMS

HEATING, VENTILATION, AND AIR CONDITIONING

The existing two pipe system installed in 1993 does not have the surplus chilled or hot water capacity nor can it be modified or expanded to support the proposed addition. A new system is required to serve the addition.

The new mechanical system for the classroom addition is designed in accordance with the Department of General Services criteria. The system selection is based upon the life cycle cost analysis of various options: including closet-mounted water cooled heat pumps (boiler/tower system), closet-mounted geothermal heat pumps using a geothermal field, closet mounted chilled/hot water vertical ducted fan coil system with air cooled chiller and high efficiency gas fired boilers, or self contained air cooled variable refrigerant flow heat pumps with ceiling mounted cassette type units for each classroom.

The code required ventilation air is introduced to every classroom from roof mounted dedicated ventilation systems furnished with hot gas reheat for humidity control, heat recovery wheels and digital scroll compressors. The units are air-cooled, with either heating pumps or gas fired furnaces.

The multipurpose room addition/renovation is served by a roof mounted self-contained unit with demand control ventilation. The unit is self contained air cooled with digital compressors, hot gas reheat, heat recovery wheels and gas fired furnaces.

Option 3 provides a new administrative suite. The air conditioning and heating system for the suite is provided by air cooled variable refrigerant flow ceiling cassette units. The code required ventilation is provided by one roof mounted self-contained air cooled/gas fired dedicated outside air system.

A new digital automatic control and an energy management system is installed for the addition. The existing automatic control system shall remain and be integrated into the new system.

V. DESCRIPTION OF OPTIONS

PLUMBING

PLUMBING FIXTURES

New plumbing fixtures are provided in accordance with MCPS Design Standards. The existing domestic water service is extended to support the addition.

FIRE AND DOMESTIC WATER

The existing one-story school is served by a combined 6 inch fire/domestic water service. The entire school is protected by a wet sprinkler system. The domestic water service is 3 inches. It appears that the 3 inch domestic water service is adequate to support the domestic water demands of the addition. The fire service pressure and flow will need to be investigated at the time of the design to determine whether it can serve the two-story addition. The proposed addition is fully protected with a wet sprinkler system designed and installed in accordance with NFPA 13.

SANITARY AND STORM SEWERS

Sanitary and storm drainage will need to be expanded and modified to accommodate the proposed addition.

V. DESCRIPTION OF OPTIONS

ELECTRICAL SYSTEMS

ELECTRIC SERVICE

The existing electric service is 1200 Amp, 277/480V-3phase-4 wire. The service is provided by Baltimore Gas and Electric Company. The power company records indicate with the current maximum demand, an electrical service upgrade is required to support the addition.

The electric service shall be upgraded to a minimum to 2000 Amps, 277/480V-3 phase-4 wire. The electric heavy up should be coordinated with the future plans for the modernization.

EMERGENCY SYSTEM

The 15 KW gas fired generator and entire emergency system is replaced with a new system to meet current N.E.C. standards.

LIGHTING SYSTEM

The addition is provided with an energy efficient lighting system. Standard classroom lighting is MCPS standard pendant mounted direct/indirect-2 lamp fluorescent fixtures. Offices and corridors are provided with standard lenses, 2 x 4 – 2-lamp fluorescent fixtures. Exterior building lighting is by wall packs with 100% cut-off. Lighting levels and lighting power budgets shall comply with the latest International Energy Code.

FIRE ALARM SYSTEM

The existing Simplex Fire Alarm System is replaced with a new system. The Simplex system is no longer supported by MCPS nor does it meet current NFPA and ADA Standards. A new addressable, voice capable type Fire Alarm Control panel with fire alarm speakers and strobes, including manual pull stations is provided, together with a new Fire Annunciator panel.

PUBLIC ADDRESS SYSTEM

The existing system is expanded to support the addition. Option 3 requires relocation of the main PA equipment warranting its replacement with new system.

V. DESCRIPTION OF OPTIONS

OPTION 1 - DESCRIPTION

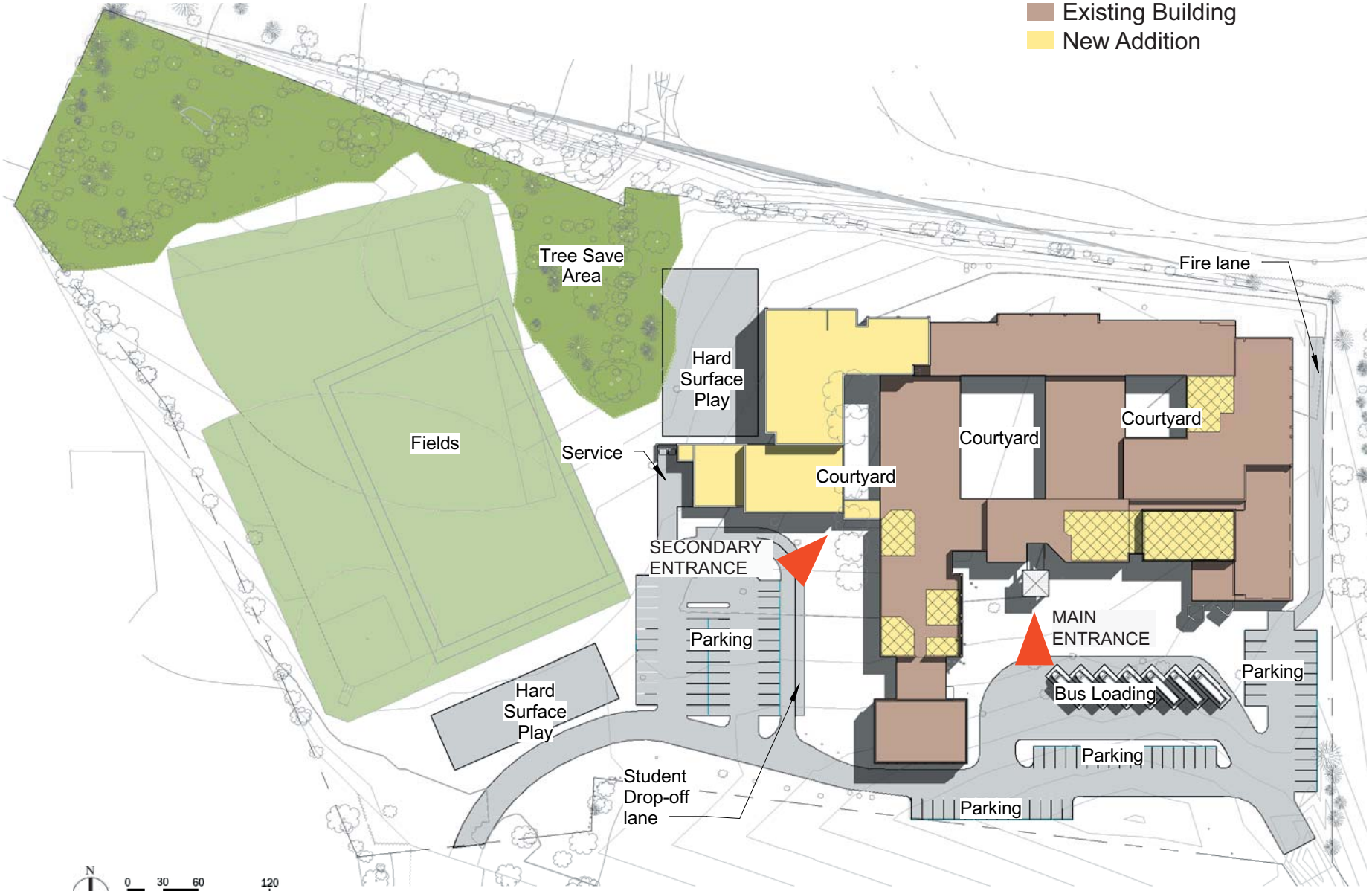
Option 1 is a two-story classroom addition to the west of the existing building. The addition includes seven classrooms and support spaces, four add-alternate classrooms, and a new multipurpose room and kitchen as an add-alternate. The existing multipurpose room is repurposed into two kindergarten classrooms, and an expansion of the health and administration suites which are currently undersized. An additional kindergarten classroom is provided by converting an existing classroom and the teachers lounge into a kindergarten classroom, thus keeping all of the kindergarten classrooms grouped together.

The existing bus loading and parking at the front of the school is reconfigured to accommodate seven buses. The staff parking lot and parent drop off area to the west of the school is reconfigured to accommodate a two-lane parent drop off area allowing a parking aisle and a separate circulation lane. The service area is relocated to the west of the building at the location of the new kitchen. A new hard surface play area is provided to the south of the athletic fields for school use during construction of the addition. The existing hard surface play area is replaced after the construction of the addition is complete.

TOTAL COST WITH ALTERNATES = $12,334,000

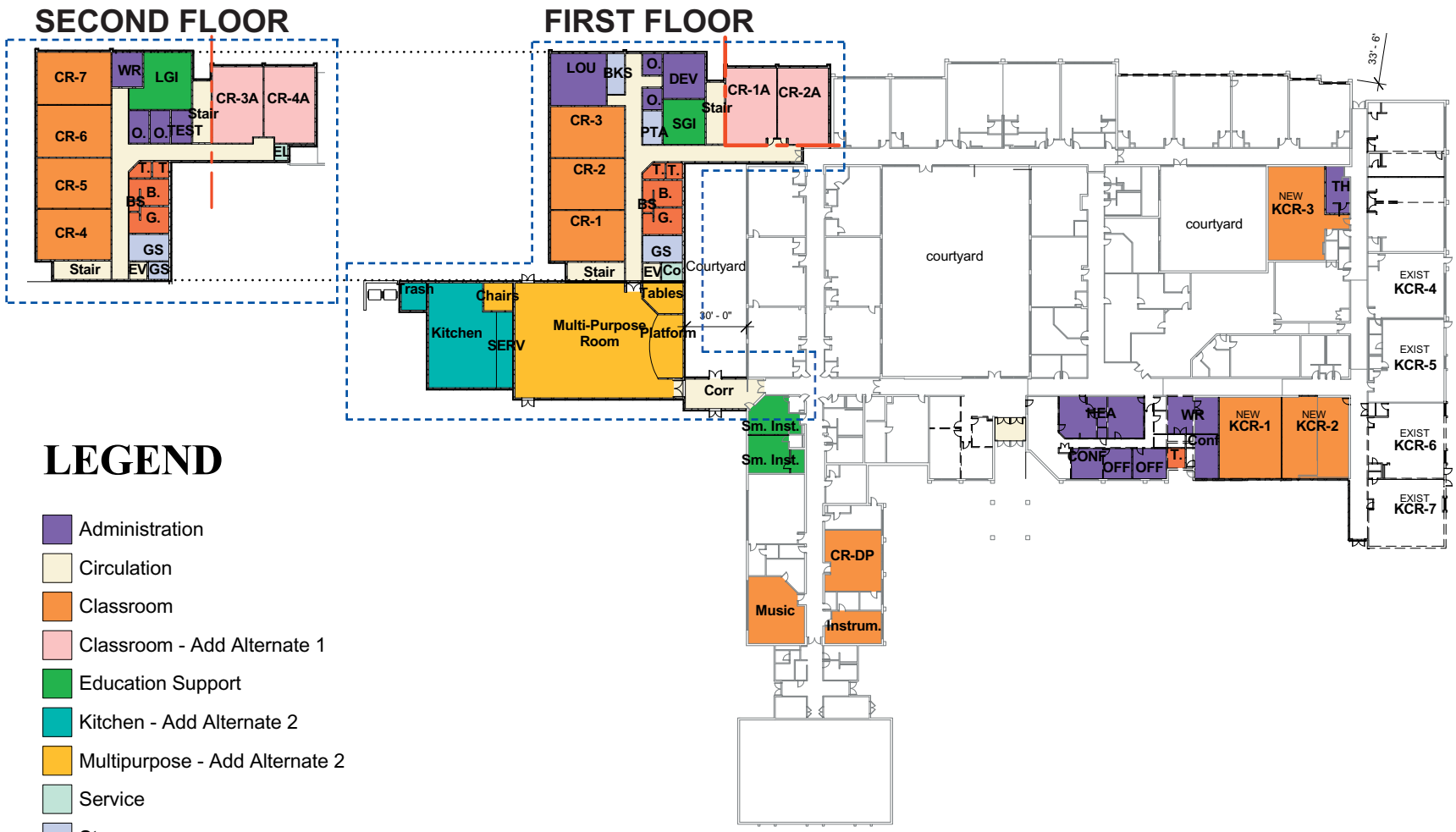
V. DESCRIPTION OF OPTIONS

OPTION 1 SITE PLAN



V. DESCRIPTION OF OPTIONS

OPTION 1 FLOOR PLAN



LEGEND

- Administration
- Circulation
- Classroom
- Classroom - Add Alternate 1
- Education Support
- Kitchen - Add Alternate 2
- Multipurpose - Add Alternate 2
- Service
- Storage
- Toilets
- ---- Beginning of Addition

N 0 20 40 80

V. DESCRIPTION OF OPTIONS

OPTION 1 - ADVANTAGES AND DISADVANTAGES

ADVANTAGES

+ Additional parking is provided. A total of 99 standard spaces and four ADA spaces are provided, 51 plus two ADA in the front, and 48 plus two ADA at the rear lot.
+ A new hard surface play area is provided at the beginning of construction to replace the loss of the existing hard surface play area during construction.
+ A secure vestibule is created at the existing main entrance to enhance security.
+ The existing health suite is undersized. Repurposing of existing work room allows the health suite to expand and meet MCPS educational specification requirements.
+ The existing administration suite is undersized. Repurposing of multipurpose room provides opportunity for expansion of administration suite.
+ Relocation of existing multipurpose room and kitchen allow for easier phasing of construction. Existing facilities function until new facilities are completed. Location of multipurpose adjacent to existing and proposed hard surface play areas is also preferred. Location eliminates noise from lunch queuing in existing kindergarten corridor.
+ Relocation of the kitchen dumpsters and service access functions enhances the main entrance and front of the existing school. Trash removal and delivery access occurs through the student drop-off.

DISADVANTAGES

- Existing relocatable classrooms need to be relocated temporarily during construction to build the new addition.
- Existing hard surface play area is lost during construction to accommodate contractor staging area near the proposed addition.
- Classroom addition will impact existing mature trees to the west of the existing building.

V. DESCRIPTION OF OPTIONS

OPTION 2 - DESCRIPTION

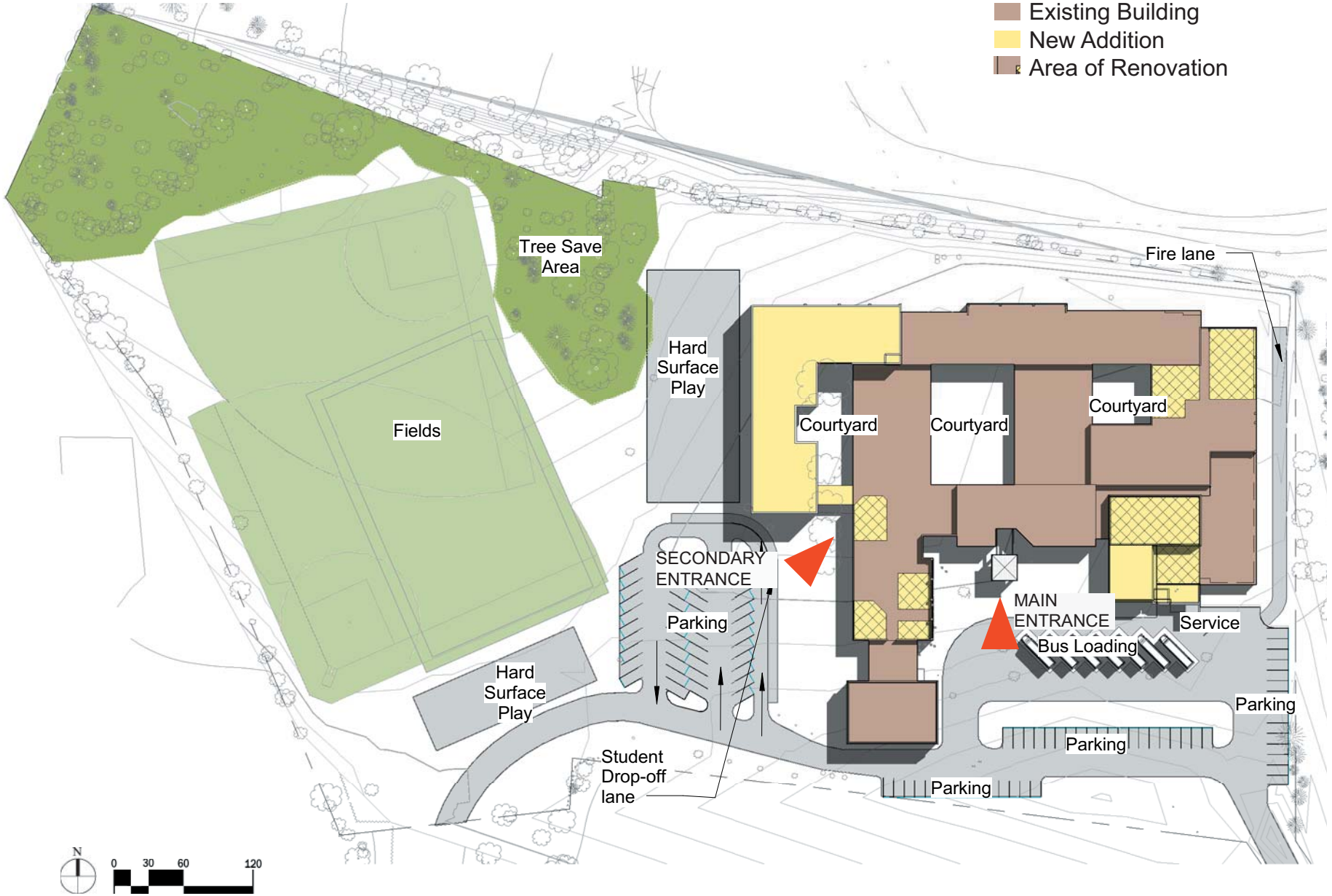
Option 2 is a two-story classroom addition to the west of the existing building. The addition includes ten classrooms and support spaces, and four add-alternate classrooms. The existing multipurpose room and kitchen are expanded in their existing location as and add-alternate. Three classrooms in the northeast corner of the existing building are renovated into two kindergarten classrooms. An additional kindergarten classroom is provided by converting an existing classroom and the teachers lounge into a kindergarten classroom, thus keeping all of the kindergarten classrooms grouped together.

The existing bus loading and parking at the front of the school is reconfigured to accommodate seven buses. The staff parking lot and student drop off area to the west of the school is reconfigured to accommodate a two-lane student drop off area allowing a parking aisle and a separate circulation lane. The service area to the school remains in its current location but it's configuration is improved. A new hard surface play area is provided to the south of the athletic fields for school use during construction of the addition. The existing hard surface play area is replaced after the construction of the addition is complete.

TOTAL COST WITH ALTERNATES = $12,861,000

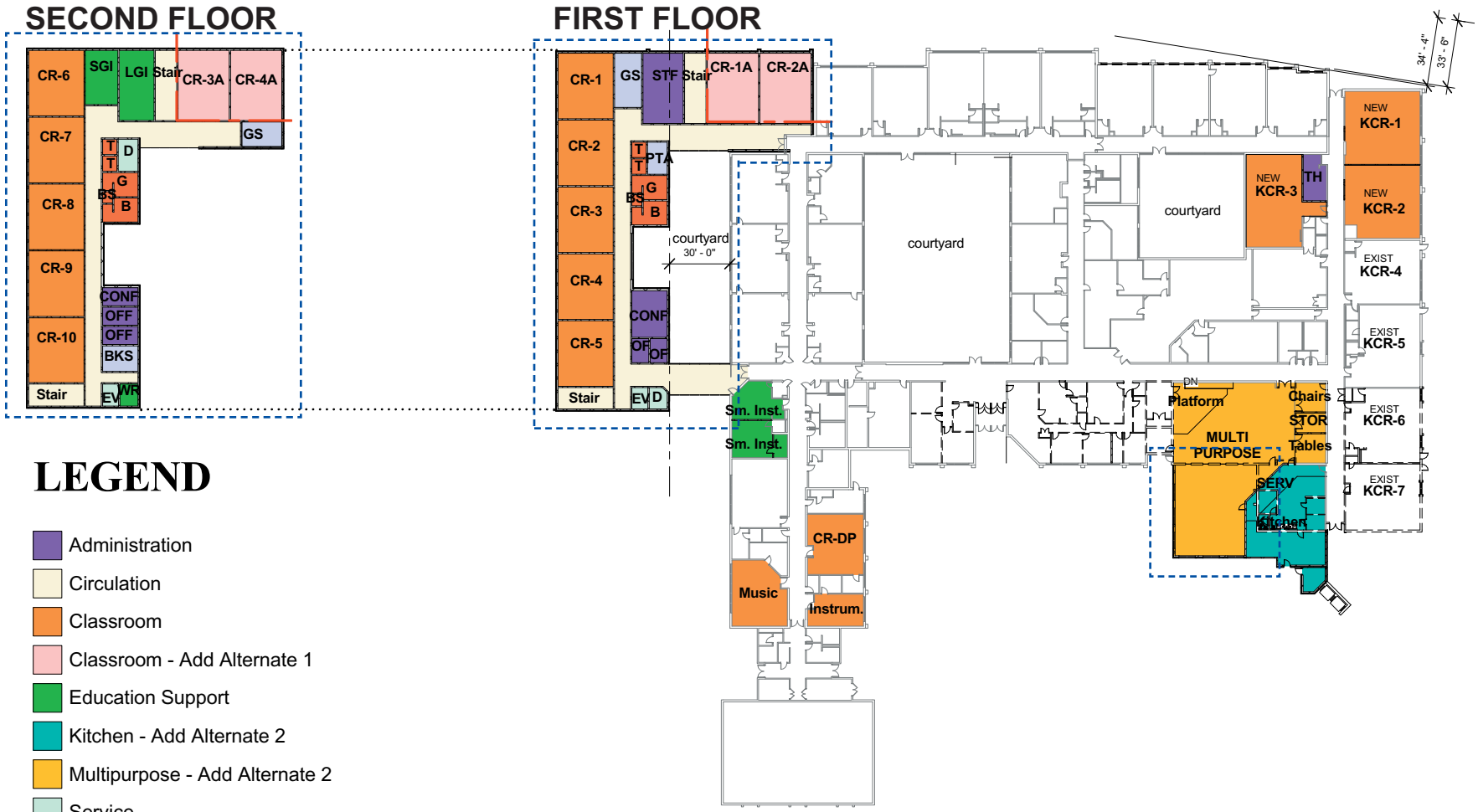
V. DESCRIPTION OF OPTIONS

OPTION 2 SITE PLAN



V. DESCRIPTION OF OPTIONS

OPTION 2 FLOOR PLAN



LEGEND

- Administration
- Circulation
- Classroom
- Classroom - Add Alternate 1
- Education Support
- Kitchen - Add Alternate 2
- Multipurpose - Add Alternate 2
- Service
- Storage
- Toilets
- Area of Addition

N 0 20 40 80

V. DESCRIPTION OF OPTIONS

OPTION 2 - ADVANTAGES AND DISADVANTAGES

ADVANTAGES

+ Additional parking is provided. A total of 88 standard spaces and four ADA spaces are provided, 47 plus two ADA in the front, and 41 plus two ADA at the rear lot.
+ A new hard surface play area is provided at the beginning of construction to replace the loss of the existing hard surface play area during construction.
+ A secure vestibule is created at the existing main entrance to enhance security.
+ The classroom addition is well contained adjacent to the existing building and should be minimally impactful to school operations during construction.
+ The location of the existing trash room and dumpsters is improved, however, they will still remain prominent to the main building elevation.
+ Queuing for lunch currently extends into the kindergarten corridor. This is corrected in the multipurpose/kitchen expansion.
+ Location of existing multipurpose room allows for direct access from the bus loading to the multipurpose room.

DISADVANTAGES

- Existing relocatable classrooms need to be relocated temporarily during construction to build the new addition.
- Existing hard surface play area is lost during construction to accommodate contractor staging area near the proposed addition.
- Classroom addition will impact existing mature trees to the west of the existing building.

V. DESCRIPTION OF OPTIONS

OPTION 3 - DESCRIPTION

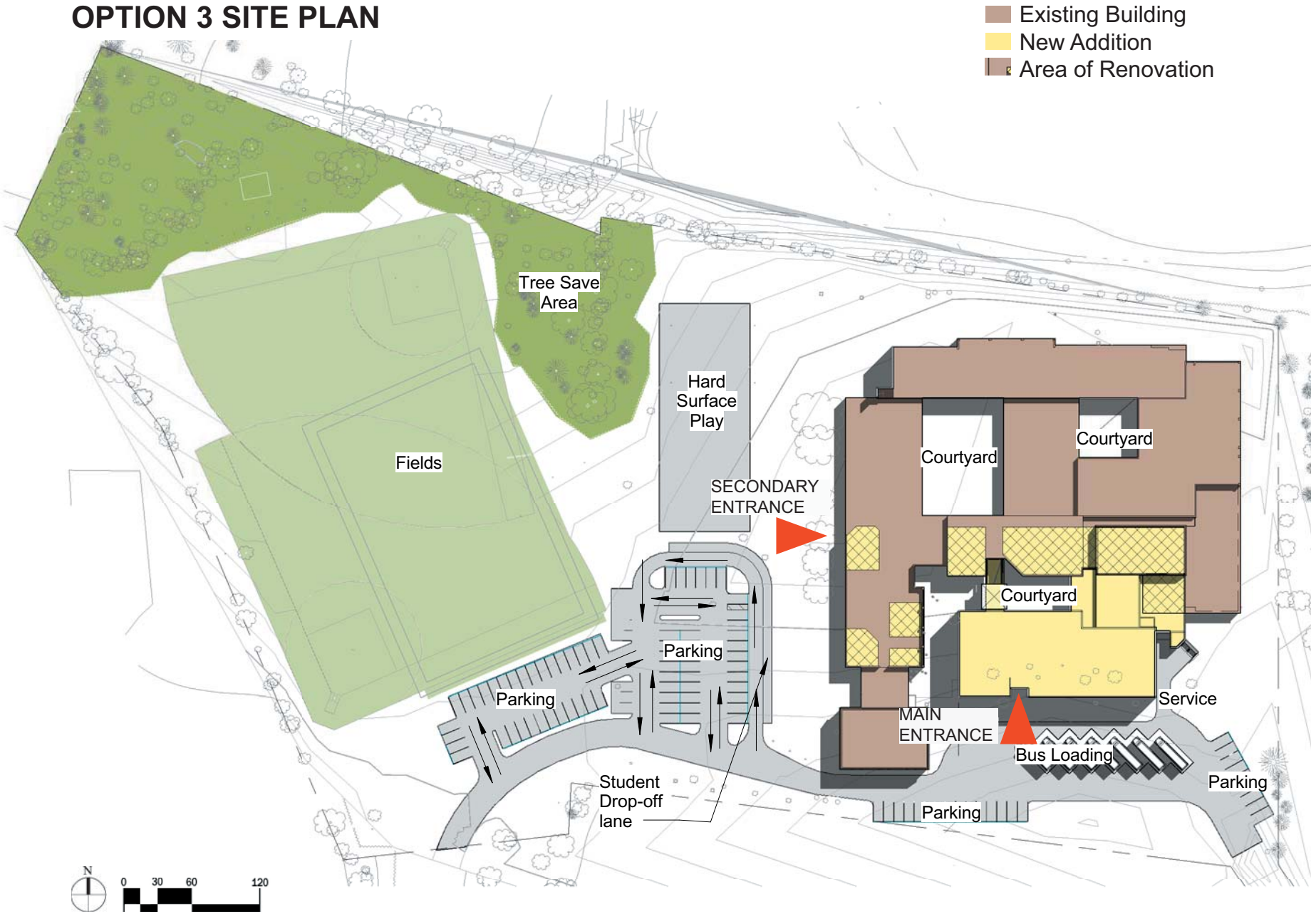
Option 3 is a two-story classroom addition to the south of the existing building. The addition at the front of the building provides a new main entrance into the school. The addition includes six classrooms and support spaces, four add-alternate classrooms, and a new administration and health suite. The existing multipurpose room and kitchen are expanded in their existing locations as an add-alternate. The existing administration area and ESOL classrooms are repurposed into three kindergarten classrooms, keeping all of the kindergarten classrooms grouped together.

The existing bus loading and parking at the front of the school is reconfigured to accommodate seven buses. The staff parking lot and student drop off area to the west of the school is reconfigured to accommodate a two-lane student drop-off area allowing a parking aisle and a separate circulation lane. The service area to the school remains in its current location but it's configuration is improved. A new parking area will also be provided to the south of the existing athletic fields to accommodate lost parking at the front of the school. The existing hard surface play area remains in it's existing location.

TOTAL COST WITH ALTERNATES = $12,586,000

V. DESCRIPTION OF OPTIONS

OPTION 3 SITE PLAN



V. DESCRIPTION OF OPTIONS

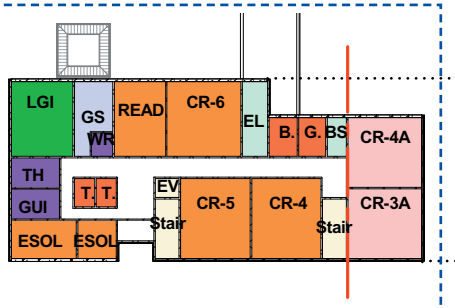
OPTION 3 FLOOR PLAN

LEGEND

- Administration
- Circulation
- Classroom
- Classroom - Add Alternate 1
- Education Support
- Kitchen - Add Alternate 2
- Multipurpose - Add Alternate 2
- Service
- Storage
- Toilets
- Area of Addition

FIRST FLOOR

SECOND FLOOR



V. DESCRIPTION OF OPTIONS

OPTION 3 - ADVANTAGES AND DISADVANTAGES

ADVANTAGES

+ Additional parking is provided. A total of 96 standard spaces and four ADA spaces are provided, 21 plus two ADA in the front, and 75 plus two ADA at the rear lot.
+ Queuing for lunch currently extends into the kindergarten corridor. This is corrected in the multipurpose/kitchen expansion.
+ Existing relocatable classrooms do not need to be relocated temporarily during construction to build the new addition.
+ Existing hard surface play area is maintained during construction.
+ Classroom addition will not impact existing mature trees to the west of the existing building.

DISADVANTAGES

- Most of the existing parking in front of the school will need to be relocated to the rear lot.
- The additional parking provided is remote from the building raising security concerns.
- Classroom alternate will encroach upon existing kitchen requiring renovation of dumpster enclosure, loading dock and recycling room.
- Phasing is the most complicated, as the main entrance to the school is impacted by construction.
- A new entrance to the school is required to facilitate phasing work.

V. DESCRIPTION OF OPTIONS

OPTION 4 - DESCRIPTION

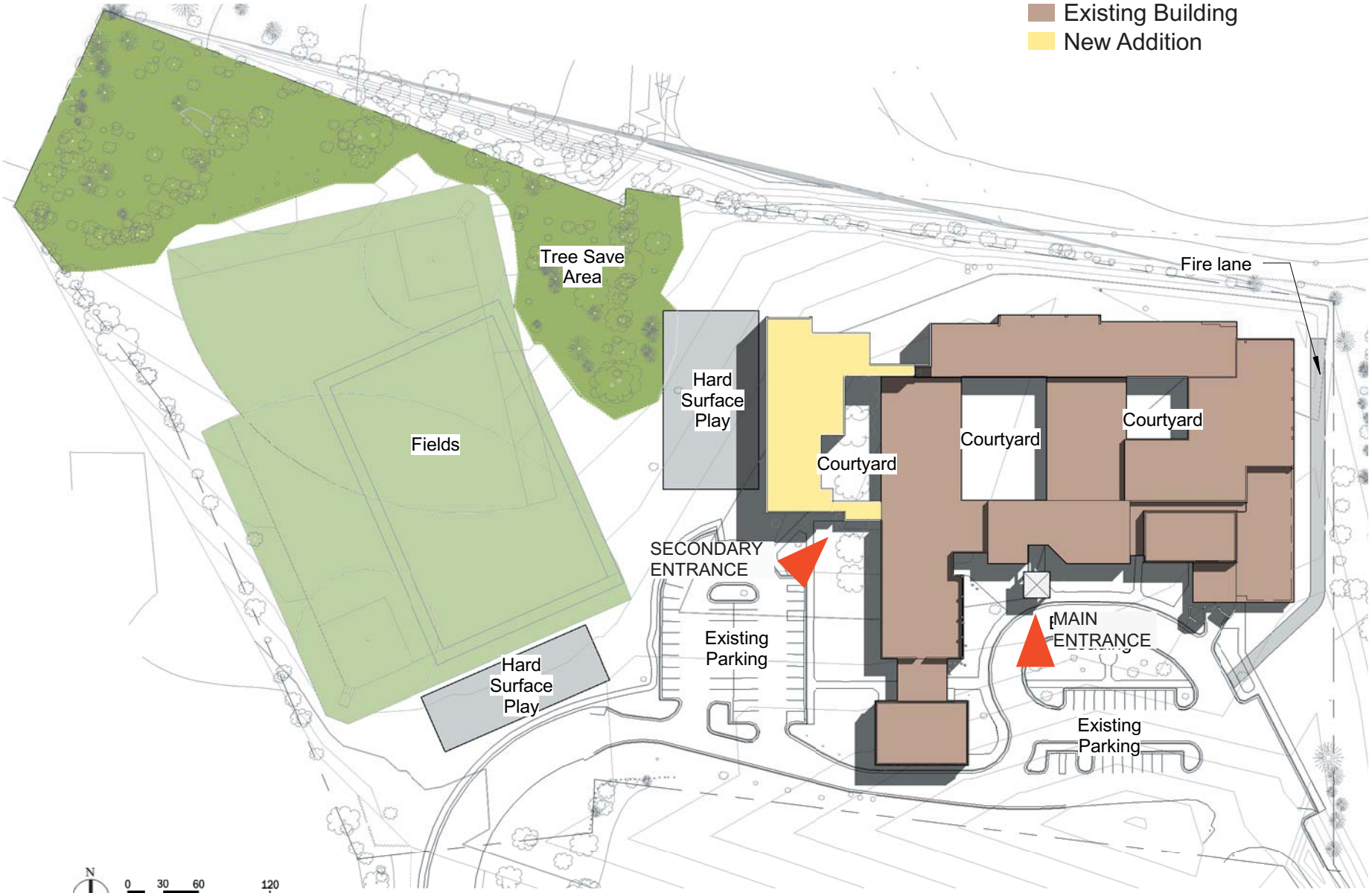
Option 4 is a two-story classroom addition to the west of the existing building. The addition includes six classrooms, three kindergarten classrooms and support spaces. Also included in this option are renovations to the main entrance to make it more secure.

The existing bus loading and parking will remain. A new hard surface play area is provided to the south of the athletic fields for school use during construction of the addition. The existing hard surface play area is to be replaced after the construction of the addition is complete.

TOTAL COST (NO ALTERNATES) = $7,812,000

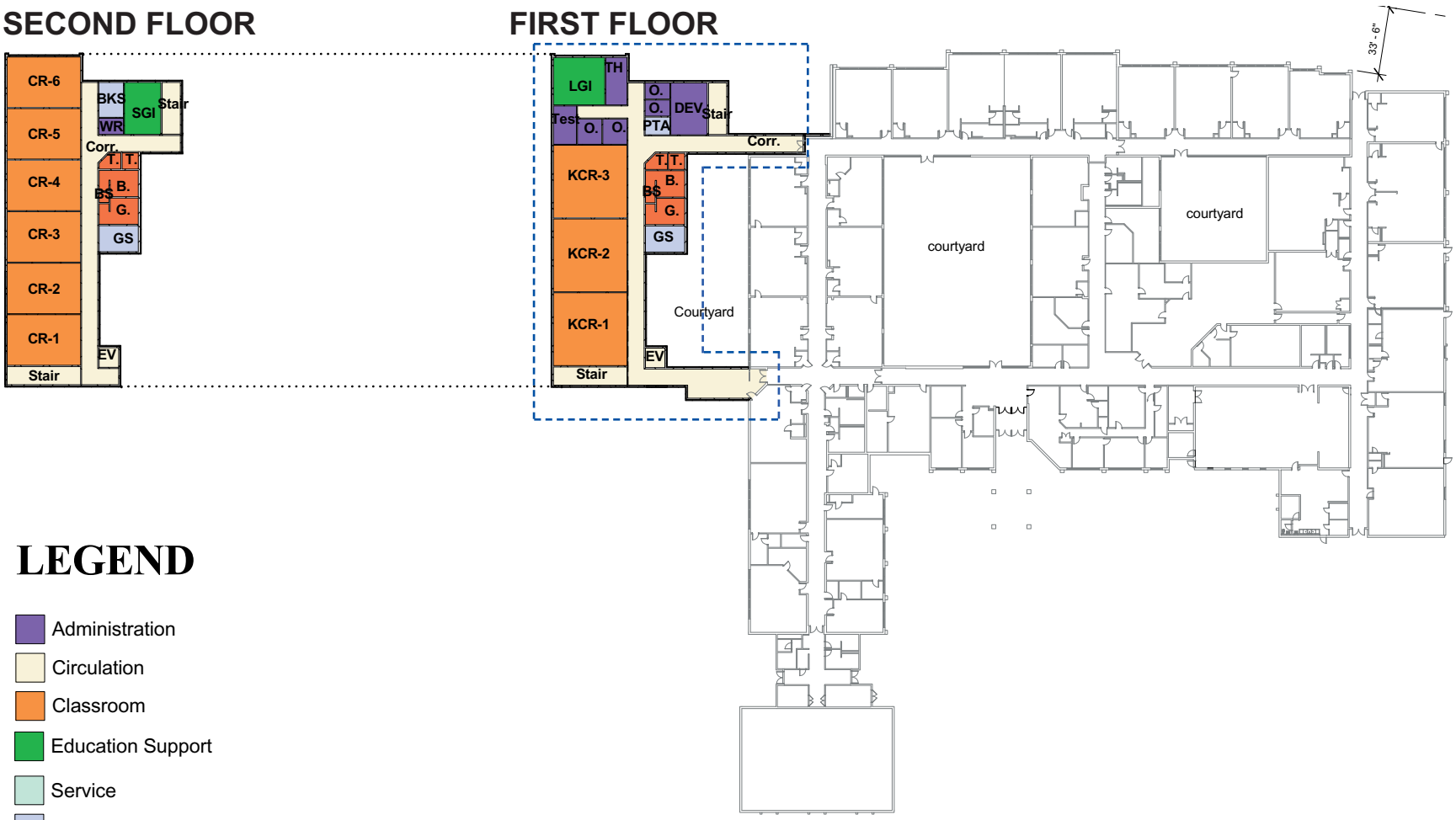
V. DESCRIPTION OF OPTIONS

OPTION 4 SITE PLAN



V. DESCRIPTION OF OPTIONS

OPTION 4 FLOOR PLAN



V. DESCRIPTION OF OPTIONS

OPTION 4 - ADVANTAGES AND DISADVANTAGES

ADVANTAGES

+ Less disruption to the existing school during construction.
+ A new hard surface play area is provided at the beginning of construction to replace the loss of the existing hard surface play area during construction.
+ A secure vestibule is created at the existing main entrance to enhance security.

DISADVANTAGES

- No additional parking will be provided.
- Existing relocatable classrooms need to be relocated temporarily during construction to build the new addition.
- Existing hard surface play area is lost during construction to accommodate contractor staging area near the proposed addition.
- Classroom addition will impact existing mature trees to the west of the existing building.

VI. PROPOSED PROJECT IMPLEMENTATION SCHEDULE AND PHASING

OVERALL PROJECT SCHEDULE	YEAR 1	YEAR 2	YEAR 3	YEAR 4
	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D
ARCHITECT SELECTION	4 WEEKS			
SCHEMATIC DESIGN & MEETINGS	16 WEEKS			
BOE APPROVAL		Spring		
CONSTRUCTION DOCUMENTS	56 WEEKS			
ADVERTISE FOR BID			4 WEEKS	
BID OPENING			4 WEEKS	
BUILDING CONSTRUCTION			64 WEEKS	
SUBSTANTIAL COMPLETION				10/1

VI. PROPOSED PROJECT IMPLEMENTATION SCHEDULE AND PHASING

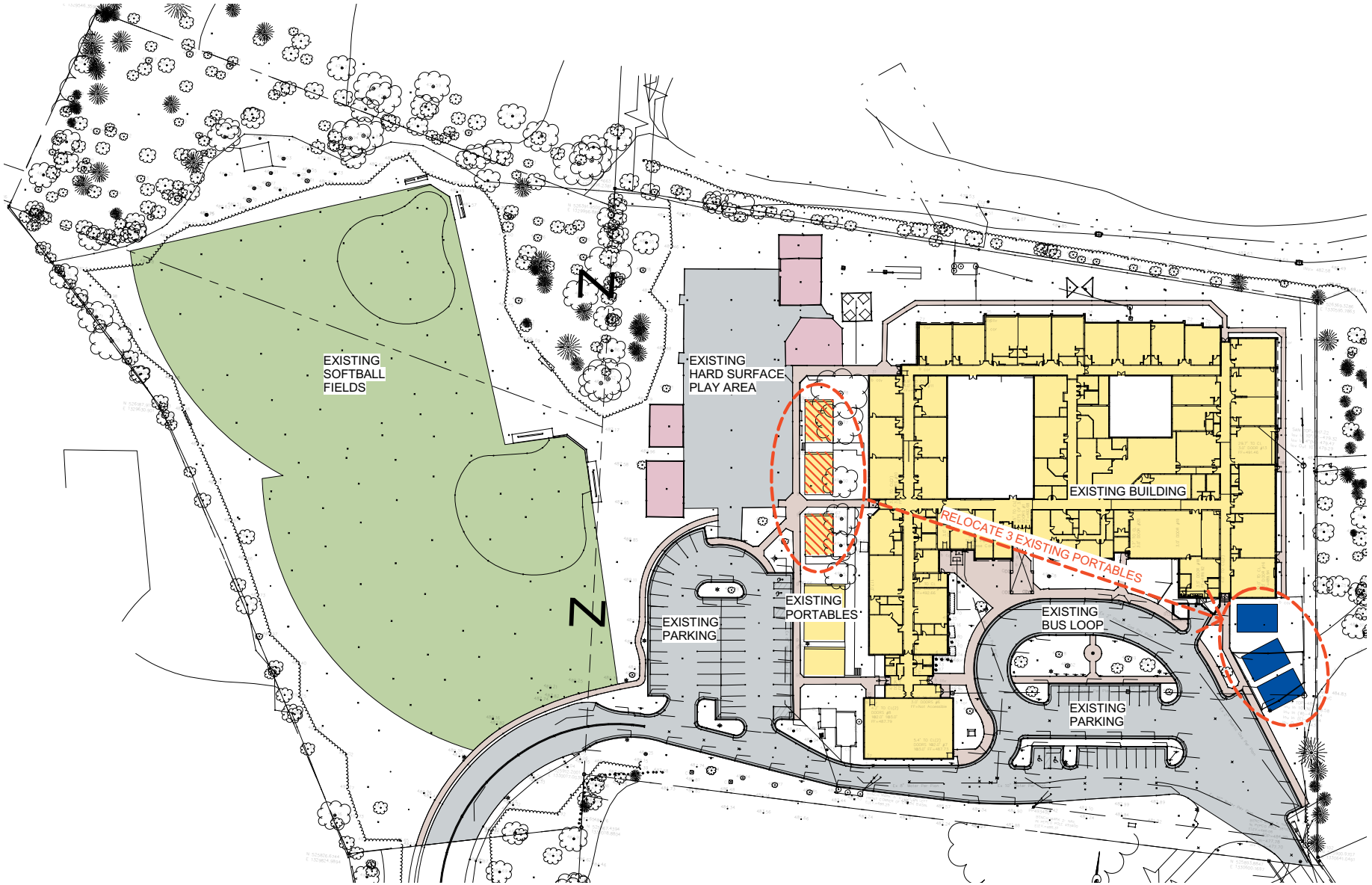
OPTION 1 - PHASING

1. MCPS RELOCATE 3 PORTABLES
2. CONTRACTOR MOBILIZE ON SITE
3. HARD SURFACE PLAY AND FIELDS
4. ADDITION COMPLETED
5. INTERIOR WORK
6. REMOVAL OF ALL PORTABLES
7. SUMMER WORK
8. PARENT DROP OFF
9. DEMOBILIZATION

VI. PROPOSED PROJECT IMPLEMENTATION SCHEDULE AND PHASING

OPTION 1 - PHASING

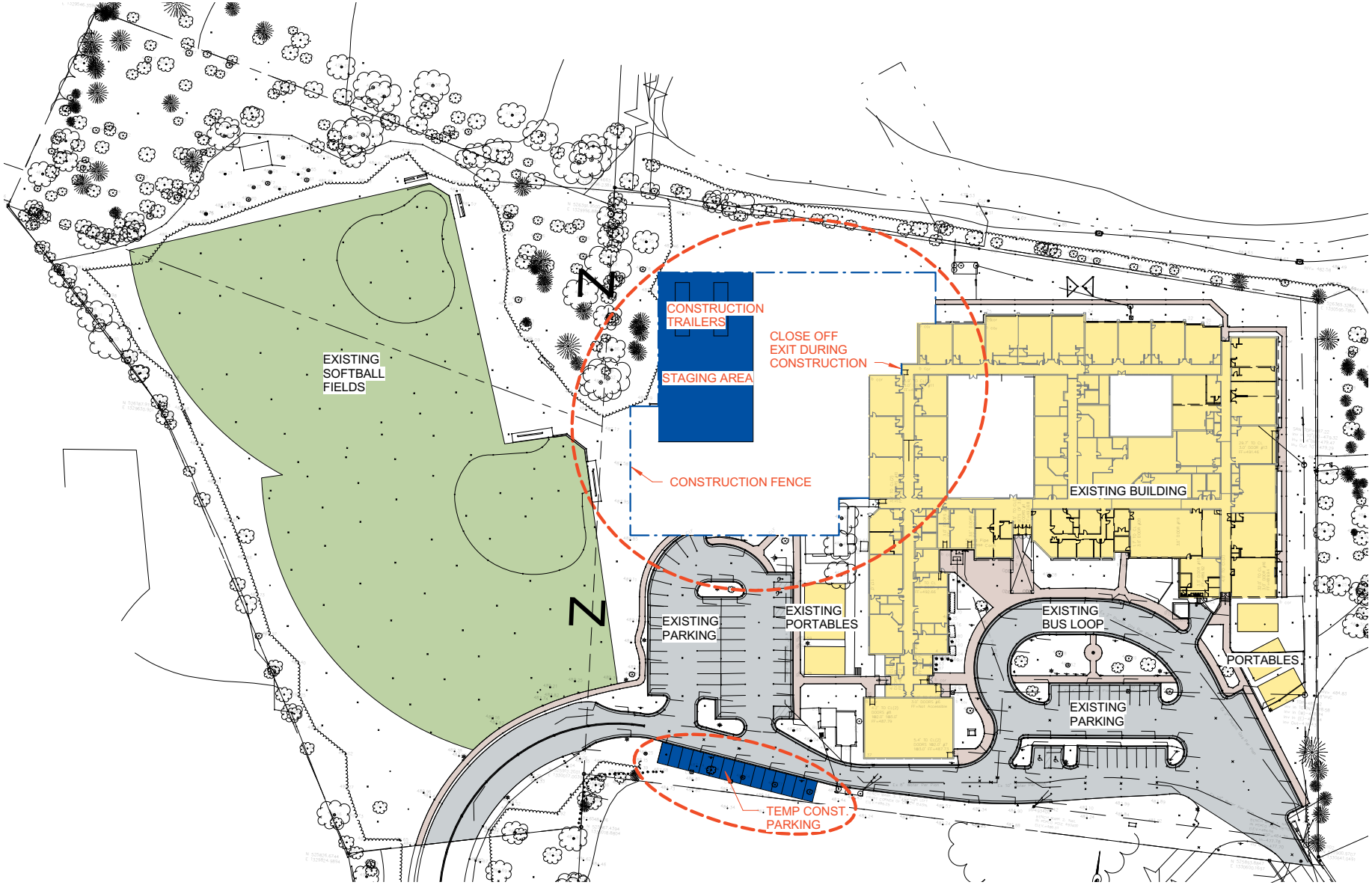
1. MCPS RELOCATE 3 PORTABLES



VI. PROPOSED PROJECT IMPLEMENTATION SCHEDULE AND PHASING

OPTION 1 - PHASING

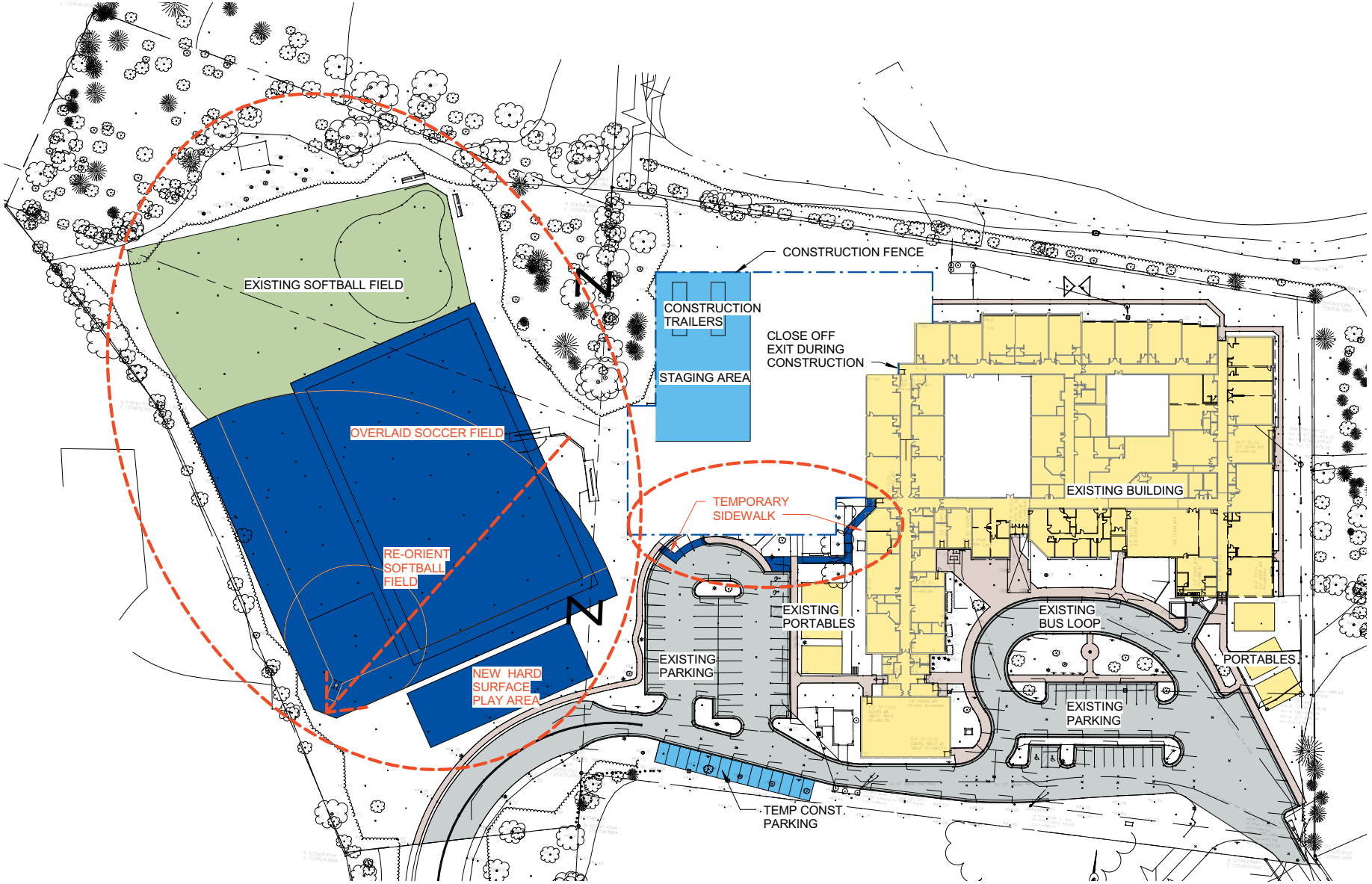
2. CONTRACTOR MOBILIZE ON SITE



VI. PROPOSED PROJECT IMPLEMENTATION SCHEDULE AND PHASING

OPTION 1 - PHASING

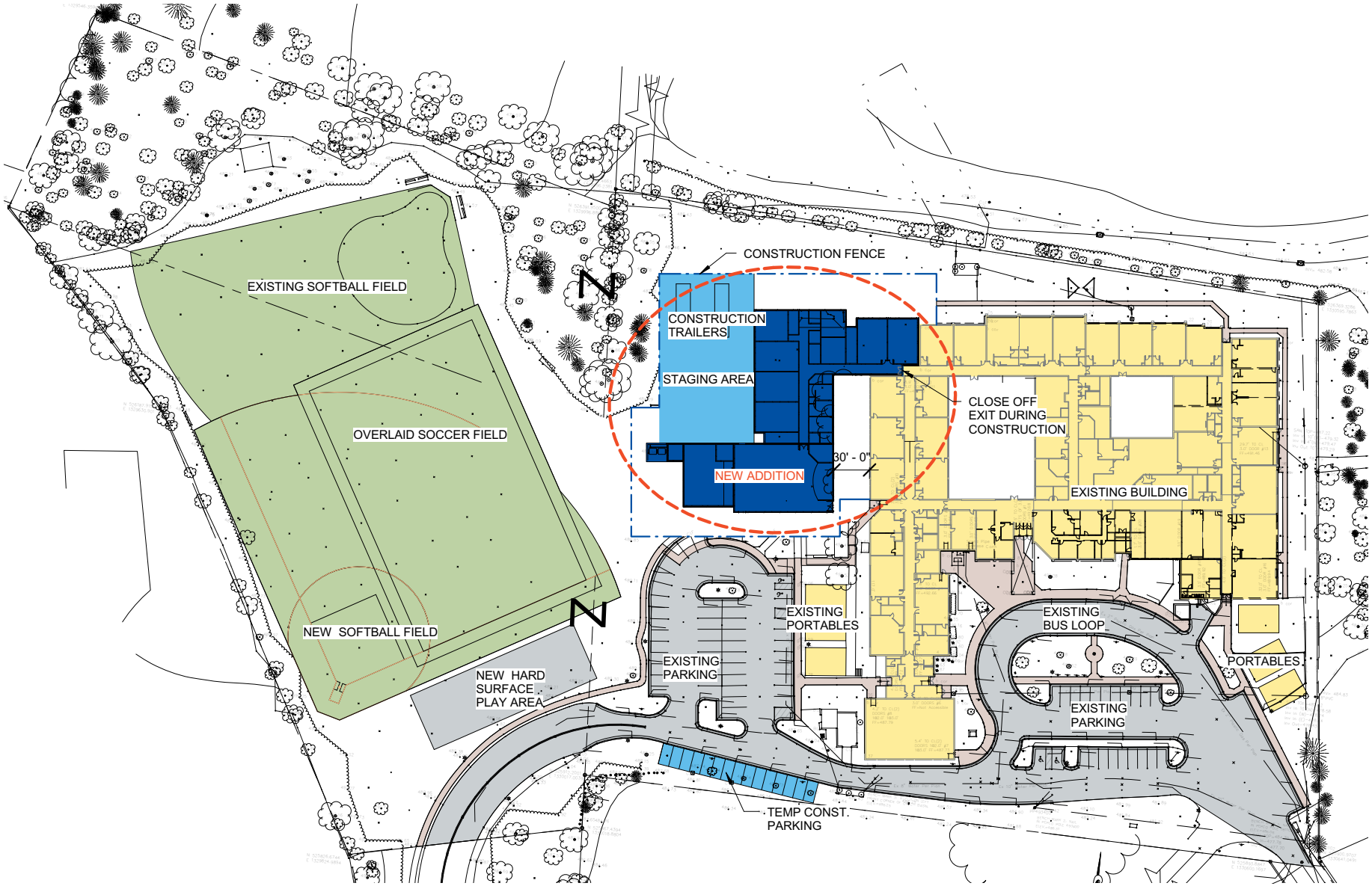
3. HARD SURFACE PLAY AND FIELDS



VI. PROPOSED PROJECT IMPLEMENTATION SCHEDULE AND PHASING

OPTION 1 - PHASING

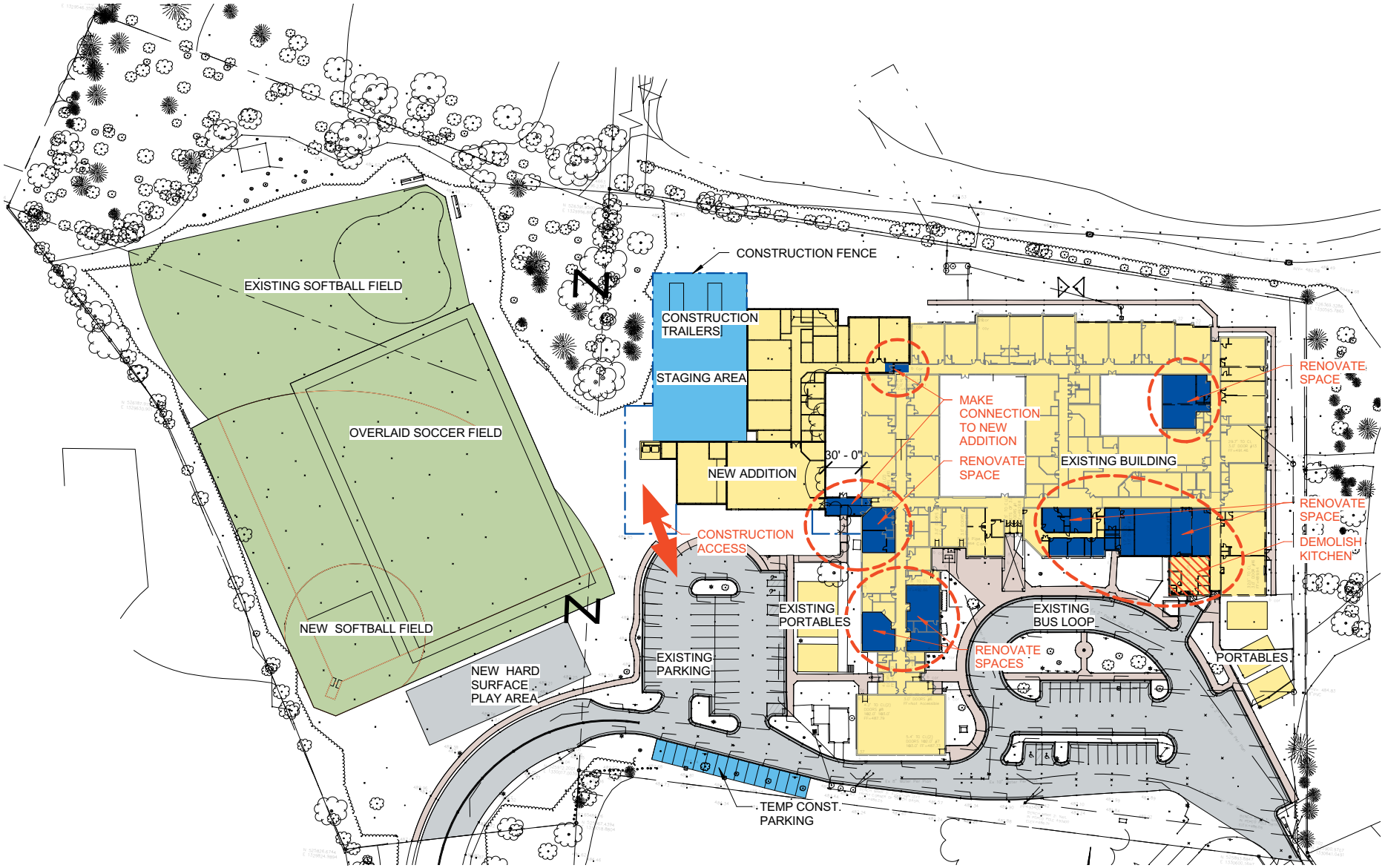
4. ADDITION COMPLETED



VI. PROPOSED PROJECT IMPLEMENTATION SCHEDULE AND PHASING

OPTION 1 - PHASING

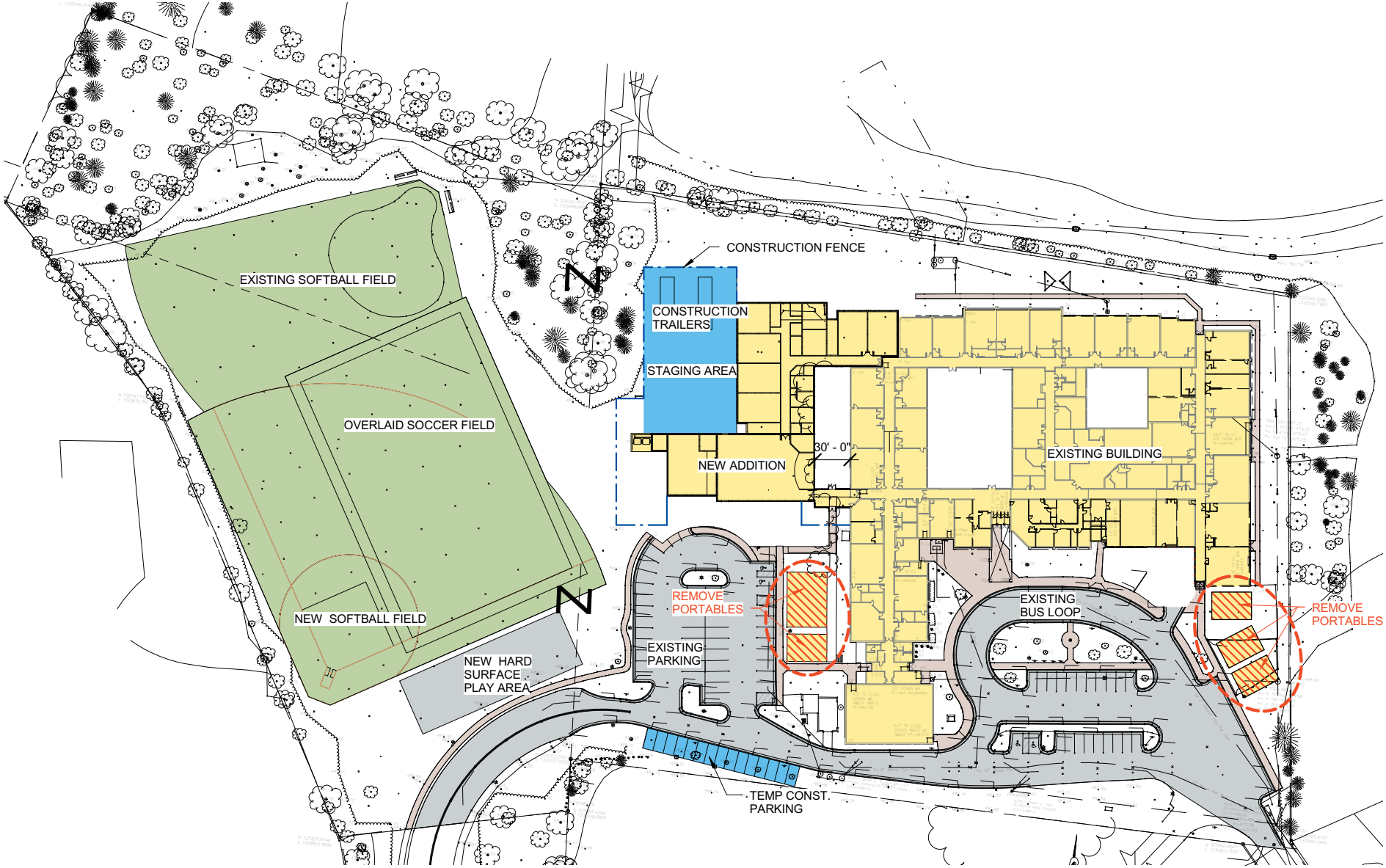
5. INTERIOR WORK



VI. PROPOSED PROJECT IMPLEMENTATION SCHEDULE AND PHASING

OPTION 1 - PHASING

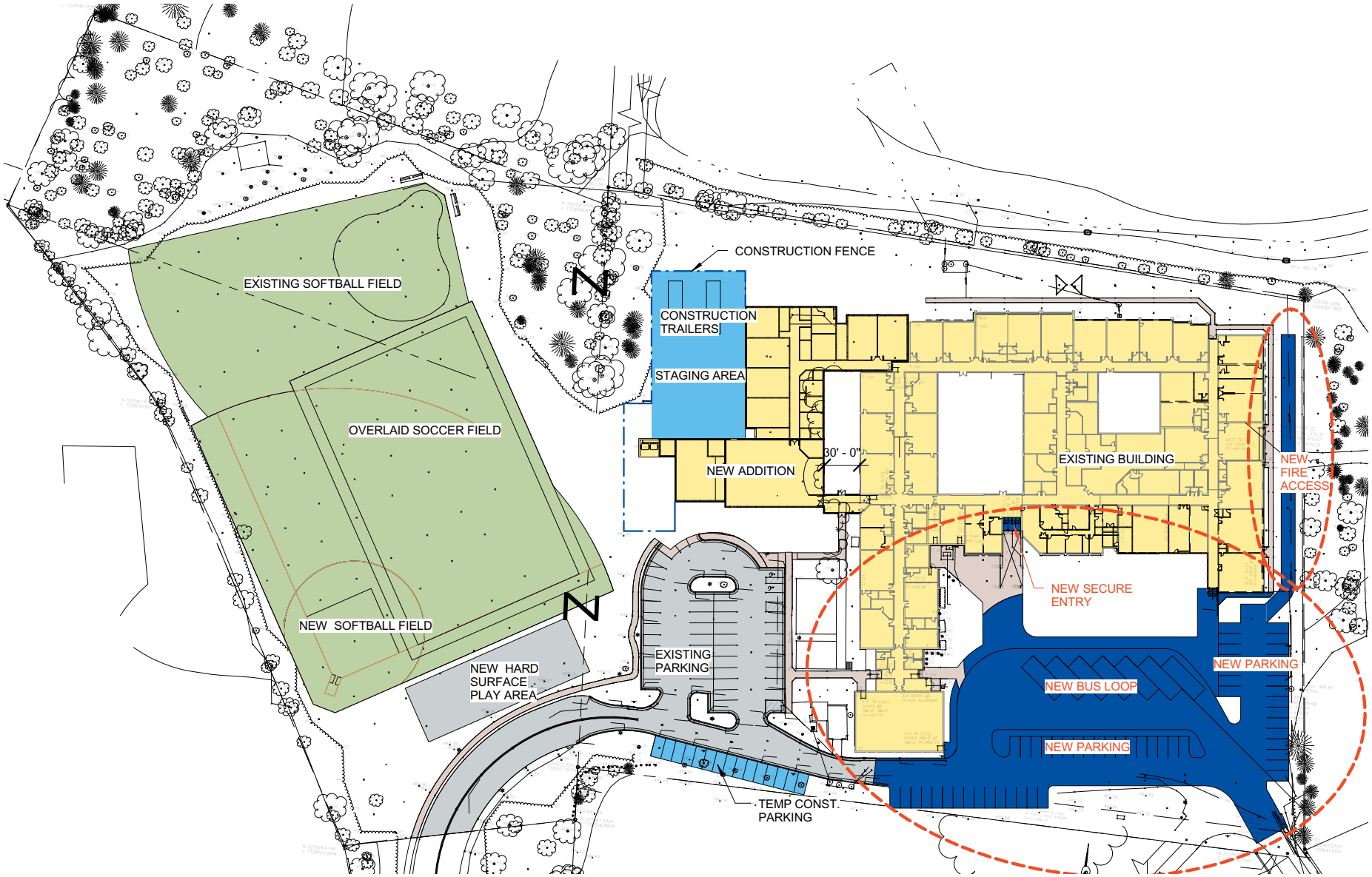
6. REMOVAL OF ALL PORTABLES



VI. PROPOSED PROJECT IMPLEMENTATION SCHEDULE AND PHASING

OPTION 1 - PHASING

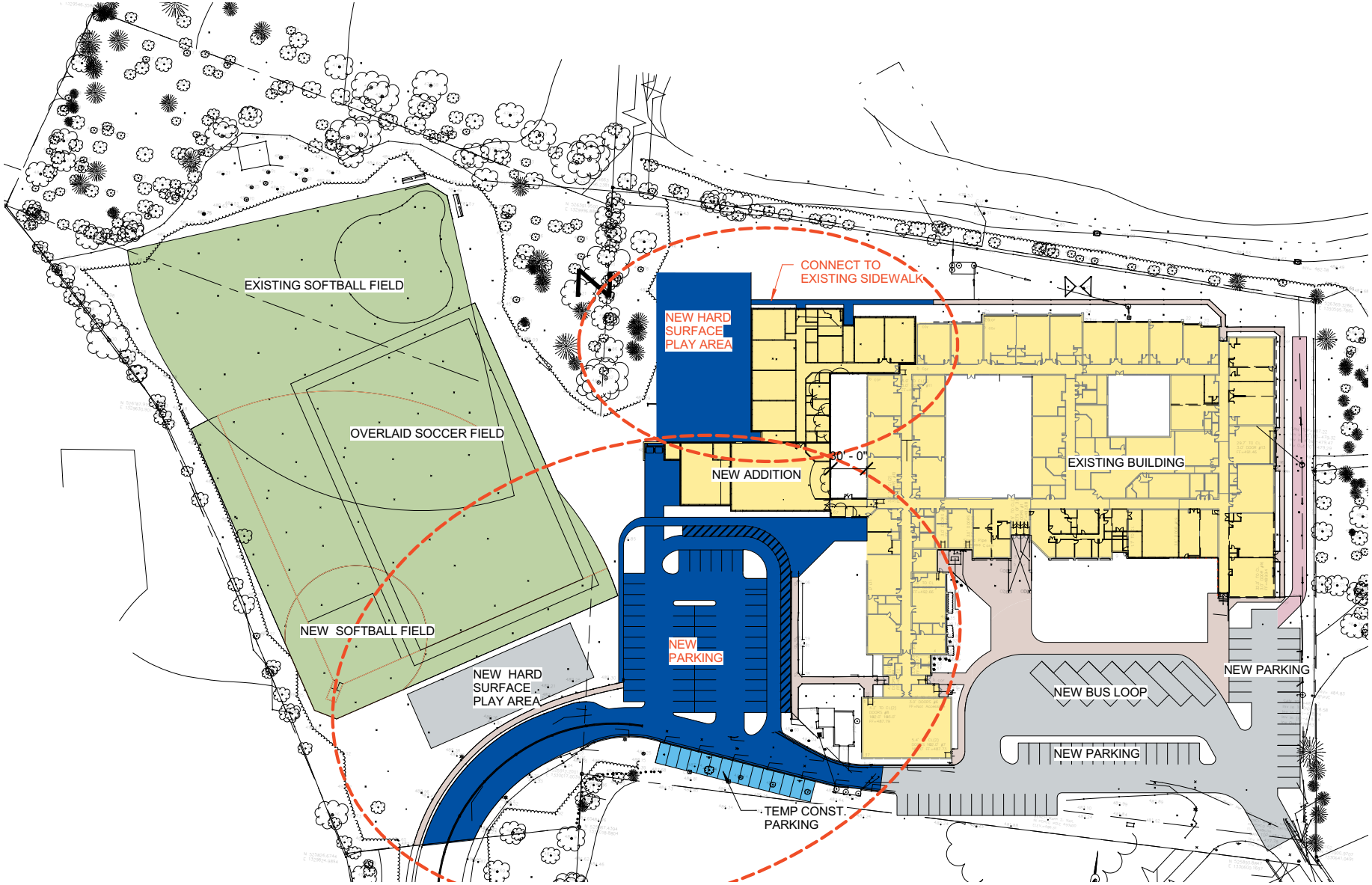
7. SUMMER WORK



VI. PROPOSED PROJECT IMPLEMENTATION SCHEDULE AND PHASING

OPTION 1 - PHASING

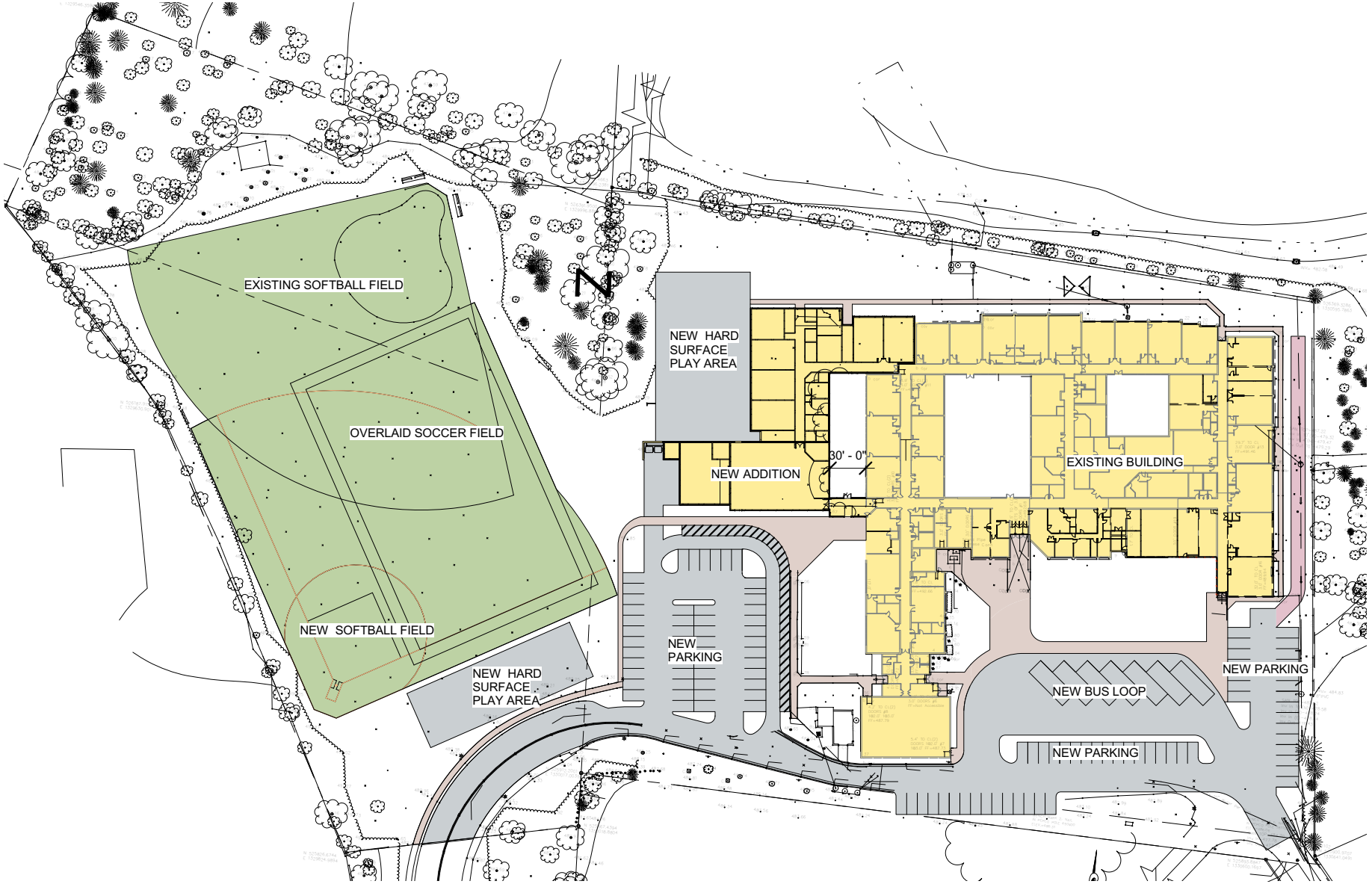
8. PARENT DROP OFF



VI. PROPOSED PROJECT IMPLEMENTATION SCHEDULE AND PHASING

OPTION 1 - PHASING

9. DEMOBILIZATION



VII. APPENDICES

VII. APPENDIX A: SPACE ALLOCATION SUMMARY

When this project is complete, the following spaces are to provided:
Capacity after the addition will be 640
* With the Add-Alternate, capacity after the addition will be 740.

PROGRAM SPACES REQUIRED	#	DESCRIPTION	NET SQ. FT.	TOTAL NET SQ. FT.
IN THE ADDITION:				
CLASSROOMS				
Kindergarten	**3**	Includes 250 s.f. storage	1,300	**3,900**
Standard Grades 1-5	**6**	Includes 150 s.f. storage	900	**5,400**
Music		Repurpose room 34 back to Music	1,050	**0**
Instrumental Music Room		Repurpose room 37 back to Instr. Music	450	**0**
Dual Purpose Room		Repurpose room 33 to Dual Purpose	1,000	**0**
SUPPORT ROOMS				
Large Instructional Support Room	1		600	**600**
Small Instructional Support Rooms	3	Use room 28 as support	450	**1,350**
Therapy/Support Room	1	Provide in renovated room 7/9	250	**0**
Testing/Conference Room	1		150	**150**
Support Staff Offices	2		150	**300**
ADMINISTRATION				
2nd Floor Workroom	1		75	**75**
Staff Lounge	1	Repurpose room 7, into K classroom/Therapy and build new lounge in the addition	700	**700**
STAFF DEVELOPMENT AREA				
Staff Development Office	1		100	**100**
Reading Specialist Office	1		100	**100**
Training/Conference Room	1		450	**450**

VII. APPENDIX A: SPACE ALLOCATION SUMMARY

PROGRAM SPACES REQUIRED	#	DESCRIPTION	NET SQ. FT.	TOTAL NET SQ. FT.
IN THE ADDITION:				
BUILDING SERVICE FACILITIES				
General Storage	2	250 sq. ft. each	250	**500**
Book Storage	1		200	**200**
PTA Storage	1		150	**150**
TOTAL	**9**			**13,975**

ADD-ALTERNATE:				
CLASSROOMS				
Standard Grades 1-5	**4**	Includes 150 s.f. storage	900	**3,600**
MULTIPURPOSE ROOM				
Multipurpose Room	1	Expand by 700 s.f.	3,700	**3,700**
Chair Storage	1		200	**200**
Table Storage	1		200	**200**
Platform	1		450	**450**
KITCHEN/FOOD SERVICES				
Serving Area	1		300	**300**
Walk-in Cooler/Freezer	1		155	**155**
Dry Storage	1		192	**192**
Office	1		100	**100**
Toilet Room	1		70	**70**
Preparation Area	1		555	**555**
Compactor/Trash Room	1		150	**150**
General Storage and Receiving	1		550	**550**

VII. APPENDIX A: SPACE ALLOCATION SUMMARY

PROGRAM SPACES REQUIRED	#	DESCRIPTION	NET SQ. FT.	TOTAL NET SQ. FT.
ADD ALTERNATE:				
ADMINISTRATION				
General Office	1		500	**500**
Workroom	1		350	**350**
Principal's Office	1		250	**250**
Assistant Principal's Office	1		150	**150**
Conference	1		300	**300**
Counselor's Office	1		250	**250**
Telephone Booth	1		50	**50**
Storage	1		100	**100**
Record Room	1		100	**100**
Toilet Room	1		50	**50**
HEALTH SERVICES SUITE				
Waiting Area	1		100	**100**
Treatment/Medication Area	1		120	**120**
Office/Health Assessment Room	1		100	**100**
Health Assesment/Isolation Room	1		100	**100**
Rest Areas	1		200	**200**
Toilet Room	1		50	**50**
Storage Area	1		40	**40**
ADD ALTERNATE TOTAL	**4**			**13,032**
OVERALL TOTAL	**13**			**27,007**

Burtonsville Elementary School Addition

Educational Specifications

Feasibility Study

May 21, 2012
Updated August 28, 2012

Montgomery County Public Schools
Rockville, Maryland 20850

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

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VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

INTRODUCTION

- This document describes the facilities that are needed for the Burtonsville Elementary School addition educational program. The descriptions provide the architect with important guidelines and will be used by staff representatives when reviewing drawings for the facility.
- The program capacity for this school will be 640. With the Add-Alternate, the program capacity for the school will be 740.
- The educational specifications are divided into three sections.
    - The first section, the space summary, lists the type of spaces and square footage required when the project is complete.
    - The second section describes the general design, location, and specific requirements for each type of space in accordance with Montgomery County Public Schools (MCPS) standards.
    - The third section identifies any additional program requirements for the school that were identified by the Facility Advisory participants.
- The architect should show the location for relocatable classrooms, should they be required in the future. These units should be sited in a location where it will not cause conflict with the constructability of a future addition. The necessary utility connections, i.e. electrical power, fire alarm, public address, and data should be provided near the future location of relocatable classrooms.
- The architect will provide a space summary comparison between the programmed space requirements and the proposed after each phase of the project including but not limited to the feasibility study, schematic design, design development, and final design phase.
- For all new schools and modernizations, the project will be designed for LEED Silver certification by the United States Green Building Council (USBGC) under the LEED for Schools guidelines. If this project is a classroom addition, the certification requirement applies only if the addition doubles the existing building footprint. If this project is a building renovation, the certification requirement applies only if the renovation alters more than fifty percent of the existing building gross floor area.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

GENERAL PLANNING CONSIDERATIONS

In the general planning of this building, special consideration is to be given to the following comments and instructions:

- The architect is expected to be compliant with all national, state and local fire safety, life safety, and health code regulations and to follow applicable rules of the State Interagency Committee on School Construction.
- The building is to be accessible to the disabled within the meaning of the latest edition of the Americans with Disabilities Act and to conform to all the latest requirements of the Americans with Disabilities Act Accessibility Guidelines (ADAAG) as published by the U.S. Architectural and Transportation Barriers Compliance Board. (The regulation can be found at http://www.access-board.gov/adaag/html/adaag.htm). In addition to the ADAAG, the Maryland Accessibility Code (COMAR.05.02.02) revised in 2002 also is required for public schools. (The regulation can be found at http://mdcodes.umbc.edu/dhcd2/Title05.pdf)
- The facility is to reflect an appealing visual, acoustic, and thermal environment and is to be properly furnished and equipped. Well chosen colors and textures are to be used. Lighting must meet current guidelines and provide adequate levels.
- High quality materials are to be used in the construction.
- The architect should refer to the MCPS Facility Guideline Specifications when noted. The document can be found at: http://www.montgomeryschoolsmd.org/departments/construction/publications/guidelines.shtm
- The first impression of a building is important. The main entrance to the school should have a clear and inviting identity, and the entrance area should be designed and landscaped to emphasize its importance. A covered walkway from the bus loading area to the front door is desirable. The design of the main lobby area needs to convey a feeling of warmth and welcome. The inclusion of a lighted showcase in which children's work can be displayed is recommended.
- The design of the building and grounds must provide for a secure environment for students and staff. Isolated areas should be minimized and natural surveillance encouraged by eliminating visual barriers.
- For security purposes, all doors into classrooms, conference rooms, offices etc. must have a sidelight window with shades.
- Water coolers should be provided throughout the school.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

- Every teaching station, support space, and core area must be wired for computer, CCTV, and telephone, along with adequate electrical supply in compliance with Maryland Sate design guidelines for Technology in Schools and the MCPS Office of the Chief Technology Office (OCTO) guidelines. Facilities must be adaptable to accommodate rapid development in high technology and its equipment since educational program and organization in this field are dynamic. Space and power supply must be flexible to meet these changing needs.
- Core spaces such as the cafeteria, gymnasiums, and instructional media center should be easily accessible for community use and secure from the rest of the building after school hours.
- An MCPS designed alarm system will provide security for this facility. The architect will provide for this system in consultation with the DOC staff.
- Building code requirements call for less than fifty percent of interior corridor space to be used for displaying flammable materials. Display areas can be provided by a 5' x 5' bulletin board per classroom or an equivalent amount of space in a larger area. Please refer to the MCPS Facility Guideline Specifications.
- Students should have ADA compliant access to the play areas from the multipurpose room. Play areas are to be protected from any vehicular traffic. Unobstructed supervision of play areas from one central area is desirable.
- The school is to be air-conditioned except for the gymnasium and kitchen. Careful placement of glass is required to avoid excess heat gain in occupied areas.
- Some windows must be operable in each space in the building. Transmission of radiation through windows into various portions of the plant is to be considered in relation to heating and ventilating and in relation to planning the building for air conditioning. All instructional spaces should have windows, preferably exterior windows. If the design does not permit exterior windows, windows onto corridors should be provided.
- Zoning the plant for heating and air-conditioning should be related to after-hours use of various areas such as offices, gymnasium, multipurpose room, and the instructional media center. Appropriate location of parking, corridor barriers, and toilet rooms is necessary for after-hours use. Some classrooms nearby the multipurpose room should be zoned for after hour use as well.
- The architect should refer to MSDE's 2006 Classroom Acoustic Guidelines to address the acoustical qualities for classrooms. In addition, the architect should refer to American National Standard, Acoustical Performance Criteria, Design Requirements, and Guidelines for Schools (ANSI S12.60-2002) for additional information.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

- Noise and distracting sounds are to be minimized. In areas such as the multipurpose room and classrooms, which may be used for meetings and adult education, the sound of operating fans for ventilation should not interfere with instruction.
- Adult restrooms should be provided in accordance with the latest code requirements. Adult restrooms in elementary schools will be unisex.
- Spaces that serve no real educational function, such as corridors, should be limited while at the same time assuring an easy to supervise and smooth flow of pupil traffic to and from the instructional media center, multipurpose room, gymnasium, specialized centers, and support rooms.
- Carpeting should be limited to the principal's office, assistant principal's office and conference room in the administration suite and the main reading room of the instructional media center.
- All instructional, resource, or office spaces that students may occupy should be designed with either a sidelight or glass panel in the door and must be able to be supervised from the corridor or an adjacent space. Doors should be provided between classrooms whenever possible, however, expensive folding walls should be carefully considered as they are rarely utilized.
- The classrooms should be designed to accommodate various size groups. Each classroom should be readily adaptable for group work, various presentation formats, and should have maximum connectivity to outside resources.
- The shape of the classroom and the design of built-in features and storage areas should provide optimum net usable floor area. Elongated rooms and features that protrude into floor area, limiting flexibility, are to be discouraged. Rectangular shaped classrooms are preferred.
- Metal adjustable shelving is to be provided in all building storage closets.
- All plan reviews will be coordinated through the Division of Construction.
- Special consideration must be given to energy conservation including total life-cycle costs. The current Maryland State Department of General Service (DGS) requirements will be applied as design criteria. Life-cycle cost accounting in accordance with DGS criteria is required.
- Per COMAR 23.03.02: Regulation .29, all school projects that include replacing or upgrading the electrical system should be designed and constructed sot that a designated public shelter area can be fully powered in the event of an emergency.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

DESCRIPTION OF FACILITIES

Please refer to the summary of spaces in the front of this document for the square foot requirements for each space described below. Square foot allocations should be considered the standard to be followed, although minor deviations are permitted.

PREKINDERGARTEN / KINDERGARTEN CLASSROOM

- If the school has a Head Start program, the classroom should be designed as a prekindergarten/kindergarten classroom.
- Each room should allow flexibility in creation of activity areas and to provide for individualized instruction through arrangement of the “centers” approach.
- An area should be designated for placement of a 12’ by 15’ area rug over the finished floor.
- A 100 square foot walk-in storage closet and 150 square feet of general storage (casework throughout the classroom) is needed.
- When possible there should be interconnecting interior doors between all kindergarten and pre-kindergarten rooms.
- All prekindergarten rooms should have an outside door or be directly accessible to the outside and convenient to the main entrance of the school building.
- The prekindergarten classrooms must have direct access to the prekindergarten play areas. See the Site Requirements section for a description of play areas. The computers should not be located next to a whiteboard where magnets might damage the hardware and software. Glare from the windows on the computer screens should be eliminated as much as possible. Security for the computers should be planned in consultation with the DOC. Computer/technology wiring must be in accordance with MSDE/MCPS guidelines.
- Every classroom must have computer outlets for five student workstations and one teacher workstation. The building information and communications distribution system and other aspects of the building design must comply with the February 2002 revision of the MSDE Maryland Public School Standards for Telecommunications Distribution Systems.
- The main teaching wall layout should be in accordance to MCPS Facilities Guide.

- A sink with a drinking fountain must be provided, with cabinets above and below.
- In a non class-size reduction school, the built-in student wardrobe area must provide 28 individual compartments to store students' belongings. The architect is to refer to the MCPS Facility Guideline Specifications for a typical cubby design. Lockers in the classroom may be considered for the kindergarten classrooms.
- In a class-size reduction school, the built-in student wardrobe area must provide 24 individual compartments to store students' belongings. The architect is to refer to the MCPS Facility Guideline Specifications for a typical cubby design. Lockers in the classroom may be considered for the kindergarten classrooms.
- A total of 20 feet of tackboard and 10 feet of magnetic whiteboard should be installed at eye-level height for small children, with tack stripping along walls for display of student work.
- Each room must have a toilet room that is accessible from within the room and easily accessible from outside. The toilet room will contain a standard height toilet, a sink with child-height mirror, and soap and towel dispensers that are accessible to small children. The light switch should automatically turn on the vent fan.
- Each classroom should be equipped with window blinds per the MCPS design guidelines.
- Battery operated clocks will be installed.
- All classrooms should be equipped with a handicapped accessible sink with drinking bubbler.
- A full-length mirror should be installed.

STANDARD CLASSROOM

- Each room must have an open classroom area with moveable furniture.
- 150 square feet of casework storage is needed in the classroom.
- When possible there should be interconnecting interior doors between all classrooms.
- The computers should not be located next to a whiteboard where magnets might damage the hardware and software. Glare from the windows on the computer screens should also be eliminated as much as possible. Security for the computers should be planned in consultation with the MCPS DOC. Computer/technology wiring must be in accordance with DOC/MSDE/OCTO guidelines.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

- Every classroom must have computer outlets for 5 student workstations and 1 teacher workstation. The building information and communications distribution system and other aspects of the building design must comply with the latest edition of MSDE Maryland Public School Standards for Telecommunications Distribution System.
- The architect should refer to the MCPS Facility Guideline Specifications for the main teaching wall layout.
- Thirty built-in individual compartments in the wardrobe area for storing student personal property are required. The architect should refer to the MCPS Facility Guideline Specifications for a typical cubby design for grades K-1 and grades 2-5. Lockers in the hallway may be used in place of the classroom cubbies.
- If lockers are designed for storing individual student property, the architect should design the facility with 700 lockers if the core capacity is 640 and 815 lockers if the core capacity is 740.
- All classrooms should be equipped with a handicapped accessible sink with drinking bubbler.
- A storage area is needed to hold at least two science kits (approximate 27” x 17” x 12” each) and one math kit in each classroom.
- General storage space must be built in and must accommodate 24- by 36-inch paper and a 4-drawer file cabinet. Each classroom must include 48 linear feet of built-in adjustable shelving.
- A small lockable teacher’s wardrobe must be provided, as per MCPS Facility Guideline Specifications.
- Designated shelf space, not near a window, for an aquarium/terrarium with nearby electrical outlet, is desirable.
- Each classroom should be equipped with window blinds. The specifications for the window blinds will be provided by DOC.
- Electrical and data outlets should be provided in the ceiling for a ceiling mounted LCD projector.
- Battery operated clocks will be installed.
- Shelving or cabinetry should be provided in every teaching station for the VCR and television. A school may choose to place the television and VCR on a cart. Appropriate CCTV receptacles and a duplex outlet should be provided nearby for the operation of the TV and VCR. Placement of the TV should be to maximize student viewing and not be unduly influenced by exterior or interior extraneous light.
- A school may consider reducing the size of each classroom to create small break-out rooms in the school. The number and design of these breakout rooms may be determined by school and MCPS staff.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

SUPPORT ROOMS

Spatial Needs
Large Instructional Support Room
Small Instructional Support Room
Occupational Therapy/Physical Therapy (OT/PT) Room
Testing/Conference Room
Support Staff Offices (two)

LARGE INSTRUCTIONAL SUPPORT ROOM

- Room for a teacher's desk, lockable file cabinet, and assorted sized furniture is desired.
- Every classroom must have computer outlets for two or three student workstations and one teacher workstation. The building information and communications distribution system and other aspects of the building design must comply with the latest edition of MSDE Maryland Public School Standards for Telecommunications Distribution System.
- Approximately 10 to 15 linear feet of magnetic marker board and 10 to 15 linear feet of tack board, both with tack strips and map rails above the boards, should be installed in each classroom. Marker boards should be located so as to reduce glare. Tack strip is needed on all available walls. The architect should refer to the MCPS Facility Guideline Specifications for the main teaching wall layout.
- Each classroom must include a minimum of 50 linear feet of built-in adjustable shelving for books.
- Space for a big book rack should with an incline to display the book open and also for storage beneath for space to lay the books flat should be provided.
- A small lockable teacher's wardrobe must be provided, as per MCPS Facility Guideline Specifications.
- 40 mailboxes should be designed for storage of student work such as folders or notebooks.
- This classroom should be equipped with a handicapped accessible sink with drinking bubbler. Cabinets should be provided above and below the counter area.
- Each classroom should be equipped with window blinds. The specifications for the window blinds will be provided by DOC.

- Electrical and data outlets should be provided in the ceiling for a ceiling mounted LCD projector.
- Battery operated clocks will be installed. The clock should not be mounted behind the projection screen.

SMALL INSTRUCTIONAL SUPPORT ROOM

- Room for a teacher's desk, lockable file cabinet, and assorted sized furniture is desired.
- Every classroom must have computer outlets for two or three student workstations and one teacher workstation. The building information and communications distribution system and other aspects of the building design must comply with the latest edition of MSDE Maryland Public School Standards for Telecommunications Distribution System.
- Approximately 10 to 15 linear feet of magnetic marker board and 10 to 15 linear feet of tack board, both with tack strips and map rails above the boards, should be installed in each classroom. Marker boards should be located so as to reduce glare. Tack strip is needed on all available walls. The architect should refer to the MCPS Facility Guideline Specifications for the main teaching wall layout.
- Each classroom must include built-in adjustable shelving under the windows.
- A small lockable teacher's wardrobe must be provided, as per MCPS Facility Guideline Specifications.
- This classroom should be equipped with a handicapped accessible sink with drinking bubbler. Cabinets should be provided above and below the counter area.
- Each classroom should be equipped with window blinds. The specifications for the window blinds will be provided by DOC.
- Each classroom should be equipped with a retractable projection screen (7' x 7'). The projection screen should not be mounted near any emergency lighting tracks. All areas of the screen should be illuminated and readable when the lights are dimmed.
- Electrical and data outlets should be provided in the ceiling for a ceiling mounted LCD projector.
- Battery operated clocks will be installed. The clock should not be mounted behind the projection screen.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

OCCUPATIONAL THERAPY / PHYSICAL THERAPY (OT/PT ROOM)

- □ Each room must have whiteboard that is mounted two feet off the floor.
- □ A tack board, open and closed lockable storage, open shelving, and a lockable teacher wardrobe are required.
- □ A sink with counter space is required in the OT/PT room.
- □ Room for a teacher's desk, lockable file cabinet, and assorted sized furniture with adjustable legs should be provided.
- □ The OT/PT rooms should be wired for access to one computer workstation each.
- □ The OT/PT requires a ceiling mounted hook for a swing.
- □ The OT/PT room requires lockable storage with sufficient area to house large gross motor equipment (minimum of 35 square feet) such as therapy balls, scooter boards, walkers, balance beams, ramps, etc.

TESTING / CONFERENCE ROOM

- □ School and/or central office staff test individual students or small groups of students. Typical testing includes psychological, diagnostic, vision/hearing, gifted, and makeup testing for required standardized tests. This room also will be used to accommodate post-test conferences with teachers and/or parents.
- □ This room needs acoustical treatment as well as video, voice, and data outlets.

SUPPORT STAFF OFFICES

- □ Office space is needed for permanent as well as itinerant support staff (curriculum coordinator, team coordinator, social worker, psychologist, auditory and vision specialists, and psychiatrist).
- □ A teacher's wardrobe should be provided for itinerant staff use.
- □ Video, voice, and data outlets should be provided.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

MULTIPURPOSE ROOM AND PLATFORM

Spatial Needs
Multipurpose Room
Platform
Chair Storage
Table Storage

MULTIPURPOSE ROOM

- The multipurpose room should have a ceiling height of 12–14 feet.
- A building service utility closet should be provided near the entrance to the multipurpose room for convenient lunch cleanups.
- Table storage and chair storage must be located adjacent to the multipurpose room.
- Exits from the multipurpose room must be sufficient to allow maximum seating.
- Toilet rooms and an electric water cooler should be near the multipurpose room to allow for public use.
- Audiences need to be able to hear and see presentations from all locations in the room.
- Ventilation equipment noise must not inhibit use of the space for auditorium purposes.
- Acoustical treatment is needed.
- Proper lighting and sound amplification are required.
- Each side of the risers at the multipurpose room floor level should be equipped with CCTV/data/voice/modem/electrical receptacles.
- Lighting, windows, fire alarm box, clock, and ceiling must be protected to prevent damage by balls.
- Outdoor play areas should be accessible from the multipurpose room. Children should not have to cross driveways or parking lots to access the play areas.
- An audio loop system should be provided for hearing impaired students; guidelines are available through the Division of Construction.

- An independent sound system should be provided in the multipurpose room.
- A call button to the main office should be provided.

PLATFORM

- The platform should have a proscenium opening 24 feet wide. The depth is to be 15 feet deep. The platform floor is to be three risers above the multipurpose room floor. A full set of platform curtains is to be provided. An 8'x10' motorized projection screen is to be provided. Platform steps must NOT be carpeted.
- The platform must be accessible to the physically handicapped.
- Each side of the platform should be equipped with CCTV/data/voice/modem/electrical receptacles.

CHAIR AND TABLE STORAGE

- Storage rooms are required for the storing the tables in the multipurpose room and folding chairs.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

FOOD SERVICES

- The kitchen is operated as a “finishing kitchen” and should include an area for dry storage, a manager’s workstation, toilet facilities, preparation and serving area, and a receiving area for daily deliveries.
- A sheltered dock is preferred and should be separate from other school receiving.
- Delivery flow path must be clear of preparation area.
- The trash room should be separate from the rest of the building i.e. no common walls.
- The trash room should not be accessed from the kitchen.
- Air conditioning must be available at all times in elementary kitchens, storage, and office.
- Code requirements for lighting, surfaces, and equipment must be met. These requirements are included in the MCPS Facility Guideline Specifications.
- Windows must have screens.
- Receiving door should be 48” wide and must be self-closing with peephole and doorbell to manager’s office.
- An easy to mop, slip resistant quarry tile floor is required. Color of grout should be the same or darker than the color of the floor.
- There should be direct access to both the hallway and the multipurpose room to facilitate one-way circulation through the serving line.
- A minimum 9’ ceiling height is recommended.
- A building service closet with floor type mop basin shall be located outside the kitchen but readily accessible to the kitchen.
- A dedicated circuit is required for the cash register with under the floor conduit for connection to the computer in the manager’s office.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

SERVING AREA

- □ A 26 ft. long serving line with 3-ft. clearance at each end should be provided.
- □ The color selection will be approved by Food Services.
- □ A single door refrigerator and microwave oven on a cart adjacent to the service area is needed.
- □ A wall clock and tack board should be located on a wall so it is visible from the serving line wall.

WALK-IN COOLER / FREEZER

- □ A 7’ 9” x 8’ 8 1/2” cooler is required.
- □ A 7’ 9” x 10’ 8 1/2” freezer with a height of 8’ 6” is required.
- □ A mobile polymer shelving and dunnage is required.
- □ A roof top compressor is required.

DRY STORAGE

- □ The recommended dimension for the dry storage area is 12’ x 16’.
- □ A mobile polymer shelving and dunnage i required.
- □ Adequate ceiling height for top shelf storage should be considered.
- □ This space should be totally secure and free of roof access ladders or electrical panels.
- □ Locking cabinets for chemical storage should be provided.

MANAGER’S OFFICE

- □ Visibility to delivery and serving area is required.
- □ The office should be located away or protected from outside door draft.
- □ Desk (NIC), file (NIC), telephone, tack board, and LAN access are required.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

TOILET ROOM

- □ A hand sink with soap and towel dispenser, sanitary napkin disposal, and 3 full-height lockers are required.

PREPARATION AREA

- □ A roll-in double convection oven is required.
- □ An oven cart and dolly (2 each) are required.
- □ A half size range is required.
- □ A heat removal exhaust hood is required.
- □ Work tables, one 6 ft. and the other 8 ft. with 2 drawers each, under the table are needed.
- □ Arlington wire baskets (500 each) and dollies (10 each) are required.
- □ Hand sink with pedals and soap and towel dispensers that meet the code requirements are needed.
- □ A three compartment sink, 24” x 24” x 14”, with 24 inch drainboards, is required. Disposal in drainboard with pre-rinse spray is required.
- □ A 6-foot louvered shelf above with hooks is required.
- □ A mobile warmer to accommodate Arlington baskets is needed.
- □ Two utility carts are required.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

ADMINISTRATION SUITE

Spatial Needs
General Office
Workroom
Code Red/Code Blue Command Center
Principal's Office
Assistant Principal's Office
Conference Room
Counselor's Office
Telephone Room
Storage Room
Records Room

- The administration suite must be located with good access from the main entrance of the school and visual oversight of the main entrance and bus drop-off area.
- The suite must be a natural first stop for visitors to the school and must, therefore, have direct corridor access. A security vestibule must be designed so that all visitors must enter the general office to check in before entering the school.
- Spaces need to be arranged for student and visitor flow and for efficient use by office staff.
- The general office is to be treated as the center of the administration suite with direct access to the principal's office, the workroom, and the health suite.
- A coat closet is to be provided for office staff and visitors.
- The Administration suite should be carpeted.
- Sufficient electrical outlets are to be provided (where feasible, quadruplex outlets may be utilized) as well as CCTV receptacle for the general office, principal's, and assistant principal's offices.
- A glass display case should be located in the vestibule of the Administration suite entrance.
- The administration suite should be designed with separate toilet rooms. If the school chooses, one of these toilet rooms may be located in the principal's office.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

GENERAL OFFICE

- A counter should be provided near the entrance to greet and separate visitors from staff and to provide a place to write.
- Space for two to three staff persons is required behind the counter.
- The general office should be equipped with a staff bulletin board.

WORKROOM

- The location of mailboxes should not create congestion by impeding the smooth flow of traffic in the general office and hallways.
- Cabinetry appropriate for storing a variety of office and school supplies should be designed along one wall of the workroom.
- A portion of countertop is to be more than 30 inch wide to accommodate a large paper cutter.
- Space adequate for a large copying machine with necessary electric service and ventilation is required.
- A sink is needed in the workroom.
- There should be direct access to a corridor from the workroom.
- The workroom should be treated acoustically to keep machine and work noises at low levels.

COMMAND CENTER

- An interior room in the school needs to be designated as the command center for Code Red/Code Blue emergencies. In many schools, the workroom in the administration suite may serve this purpose. The room cannot be on an outside wall.
- The room designated as the command center must have all data and communication equipment including data, cable, phone, and public address (PA) system.
- The PA console should be located in the room that is designated as the command center.
- Window coverings such as mini blinds or roller shades must be provided for all windows and doors to the command center.

- In secondary schools, the security camera monitors should be located in this area.
- The space designated as the Command Center must be large enough to accommodate up to six staff persons.
- Storage space is needed for the Code Red/Code Blue emergency kit.

PRINCIPAL'S OFFICE

- This office should be carpeted.
- This office should be equipped with a tack board and two-shelf adjustable bookcases under the windows. Each shelf must be able to hold a 12 inch notebook upright.
- The office should be directly accessible to the conference room through a connecting door.
- This office should have good visible access of the main entrance and to the bus drop-off area.

ASSISTANT PRINCIPAL'S OFFICE

- This office should be carpeted.
- This office should be equipped with a tack board and two-shelf adjustable bookcases under the windows. Each shelf must be able to hold a 12 inch notebook upright
- This office should have good visible access to the main entrance and bus drop-off.

CONFERENCE ROOM

- The conference room should be carpeted.
- The conference room is to have a whiteboard, a tack board, and one bookcase.
- The conference room should be equipped with a telephone jack.
- Casework should be provided on one wall with two, two-drawer file cabinets for confidential records, letters forms, etc.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

COUNSELOR'S OFFICE

- This office should be carpeted.
- The counselor's office should be easily accessible from the classrooms and near, but not a part of, the administration suite and should have a window.
- This office needs a whiteboard, tackboard, telephone, and bookshelves.

TELEPHONE BOOTH

- A small room where a teacher can talk privately on the telephone is required. (The room needs a door with a window, or a "phone in use" light.)
- This room should have a small built in countertop and room for one chair.
- This room should be carpeted.

STORAGE AND RECORDS ROOM

- Two lockable rooms are needed for storage of office supplies and student records.
- The records room needs space for lockable file cabinets.

2ND FLOOR WORKROOM

- This room requires appropriate electrical wiring and ventilation to house a copier for staff use.
- This room requires a work counter and cabinets under and over the counter for storing supplies.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

HEALTH SERVICES SUITE

Spatial Needs
Waiting Area
Treatment/Medication Area
Office/Health Assessment Room
Health Assessment/Isolation Room
Rest Area
Toilet Room
Storage Room

- The Health Services Suite should be in complete compliance with COMAR 13A.05.05.10A.
- The health suite must meet accessibility requirements of the ADA, and at a minimum, include spaces for waiting, examination and treatment, storage, resting, a separate room for private consultation and for use as the school health services professional's office, a toilet room, and lockable cabinets for storing health records and medications.
- A designated school health services professional must be involved in the planning of the health services suite.
- The architect should refer to MSDE document, School Health Services, June 2002 for specific utility information.
- The suite should be designed to provide easy visual supervision of all the spaces by the health services professional. The suite should be laid out so that an additional workstation for a health professional can be positioned near the treatment and waiting areas.
- In addition to access to the general office, the health services suite also must have a window into the general office so that office staff may monitor the room when heath staff is unavailable.
- The health room also must have a door to the corridor.
- Ventilation is important throughout the health suite.
- The countertops should be seamless to aid in maintaining sanitary conditions.
- The floor finish should be an easily cleaned non-absorbent material. Carpet should not be used in any areas of the health suite.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

- A non-porous ceiling material should be used. Vinyl-coated ceiling tile or painted drywall is an acceptable choice.
- If any of the areas are enclosed then glazed walls areas should be provided.
- The health suite requires wall and base cabinets, lockable file cabinets, for storing health records. A portion of these cabinets must be lockable to store medications, medical supplies, and equipment.

WAITING AREA

- The waiting area should have space for four to eight chairs.
- A small tack board should be provided in the waiting area to display health care and other information of importance to students and staff.

TREATMENT / MEDICATION AREA

- This area should be adjacent to the waiting area to facilitate the efficient flow of students.
- This area should have a kitchen type sink with cabinets above and below (including a locked medicine cabinet), a 34-inch high countertop, and a small residential style refrigerator/freezer to store medical supplies and foods.
- A minimum of 12 linear feet of wall and base cabinets should be provided.
- The freezer should have an icemaker.
- The treatment area also requires a computer.

OFFICE / HEALTH ASSESSMENT ROOM

- The room requires one computer, fax machine, and electronic connection and physical proximity to a copy machine.
- The spaces used for consultation and examinations must be enclosed with sufficient acoustical isolation to ensure complete privacy and confidentiality.
- A small sink, with cup, towel, and soap dispensers should be provided.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

HEALTH ASSESSMENT / ISOLATION ROOM

- The spaces used for consultation and examinations must be enclosed with sufficient acoustical isolation to ensure complete privacy and confidentiality.
- A small sink, with cup, towel, and soap dispensers should be provided.

REST AREA

- This area should not be a fully contained room but rather an area that can provide privacy for each cot with a draw curtain on a ceiling track.
- The rest area needs space for two to four cots, and one bedside cabinet.
- There should be a separate privacy room within the rest area, with a door and space for a cot and a single pedestal desk and chair.
- In the rest area and privacy room, supplementary power ventilation capable of 20 changes per hour should be provided, with control by means of a separate switch within the health suite.

TOILET ROOM

- One ADA toilet should be provided.
- The toilet room should be accessed without having to go through another functional space in the health suite such as a rest area.
- Ideally, students should be able to enter the health suite solely to use the toilet room without disrupting other activities.

STORAGE ROOM

- The storage area is to have space sufficient for a four drawer locked file cabinet, a wardrobe for coats, and space for storing large items such as wheelchairs.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

STAFF DEVELOPMENT AREA

Spatial Needs
Staff Development Office
Reading Specialist Office
Training/Conference Room

STAFF DEVELOPMENT OFFICE

- The staff development area should be located near the classrooms.
- The office should include one workstation.
- This office needs a whiteboard, tack board, closet, and video, voice, and data outlets.

READING SPECIALIST OFFICE

- The staff development area should be located near the classrooms.
- The office should include one workstation.
- This office needs a whiteboard, tack board, closet, and video, voice, and data outlets.

TRAINING / CONFERENCE ROOM

- This room will be used for staff training needs.
- This room should include ample shelving for training materials.
- The room should be able to comfortably accommodate up to 12 participants seated around a conference table.
- A whiteboard and tack board should be installed.
- The wiring for an overhead LCD projector should be provided.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

STAFF LOUNGE

- The staff lounge is a place for staff members to relax, study, plan, and think together.
- Two toilet rooms are required just outside of the staff lounge. The toilet rooms may be labeled “adult” rather than “male” and “female” in an elementary school.
- The staff lounge should contain a compact built-in kitchen with six linear feet of counter space for a microwave and sink and a space for a refrigerator (NIC).
- A clock should be provided.
- A small, enclosed room with countertop and space for one chair is needed for a telephone.
- Ventilation must be provided. An operable window in the staff room is preferred.
- An area should be designated for a computer with jacks for computer & telephone (modem).

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

BUILDING SERVICE FACILITIES

Spatial needs
Building Service Office
Locker/Shower area
Compactor/Trash Room
Recycling Room
General Storage & Receiving Area
General Storage
Building Service Outdoor Storage
Building Service Closets

BUILDING SERVICE OFFICE

- The entire building services area should be located adjacent to the general receiving area.
- The office should be designed as a general office that can accommodate two staff members with two desks and appropriate wiring for computers, phones, etc.

LOCKER / SHOWER AREA

- A locker area must be located near the receiving area.
- Six full-size lockers should be provided in the locker area.
- The locker area should be designed with an enclosed toilet room and shower room for building service staff use.
- An ENERGY STAR stackable washer and dryer is required in this area.

COMPACTOR / CAN WASH / TRASH ROOM

- This room needs to be completely separate from the kitchen spaces with no common walls.
- Trash trucks must have access to this room.
- The room should be heated and have adequate interior lighting, floor drainage, and easily cleanable surfaces.

- Hot and cold water should be available for flushing and cleaning.
- The room should be designed to be pest free and well ventilated.
- Floors should be sloped so that wash down stays within the room and goes down the drain.
- The compactors need to be installed with enough clearance away from the wall to permit staff to access the equipment from all sides.
- A roll-up door for trash transfer to trucks, steam cleaning equipment, and trash collection containers are needed.
- The room should be designed with a ramp to allow trashcans to be rolled to the dock.

GENERAL STORAGE AND RECEIVING AREA

- The receiving area should be enclosed, floor to ceiling, with a chain link fence.
- Flexible shelving is required but should not occupy more than one third of the area.
- This area must be secured.
- Good lighting and easy access to materials being stored are required.
- Electrical outlets, upgraded lighting and ventilation must be provided in this area.

GENERAL STORAGE

- Flexible shelving to accommodate books, teaching aids, large size (24” x 36”) paper, and other instructional supplies is required.
- Good lighting and easy access to materials being stored are required.
- Electrical outlets, upgraded lighting and ventilation must be provided in all large storage rooms for future flexibility.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

BUILDING SERVICE OUTDOOR STORAGE ROOM

- Outdoor storage is to be near the service area and is to be suitable for heavy mowing, snow removal, and other outdoor equipment.
- The dimensions of the outdoor storage area must be able to accommodate two tractors side by side. (one tractor is approximately 9’ long by 7.5’ wide and a second smaller tractor) and other equipment.
- A rolling garage style door and a regular door must be provided.
- A ramped and paved driveway is required for the tractor so that it can access the sidewalk and driveways of the school during snow removal.
- Electrical service and lighting inside must be provided. Access to the light switches must be available at both entrances.
- Proper ventilation for storage of gasoline is required.

BUILDING SERVICE CLOSETS

- At a minimum, there should be a building service closet for each 19,000 gross square of the facility. In addition, there should be a building service closet on each floor and each wing of the facility.
- The closets should be a minimum of 25 sq. ft.
- The building service closet must accommodate a minimum of one utility cart.
- The closet requires shelving for cleaning supplies and a mop/broom holder is required.
- The closet requires a floor mop sink with hot and cold running water and a floor drain.
- Where feasible, closet doors should swing outward in order to maximize the storage area and provide easier access to items within the closets.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

SITE REQUIREMENTS

- The architect should consider the architecture of the neighborhood in designing the building
- The site should be designed to provide a clear view of all play areas and to facilitate supervision from one location.
- Protective fencing may need to be provided near heavily wooded areas, busy streets, steep hills, parking lots and turnaround areas.
- Metal drains/grates should not be located in the playing fields, paved play areas and mulched playground equipment areas.
- Paved areas and fields must be as level as possible. Water should not collect on paved areas or in mulched areas. The architect should consider the architecture of the neighborhood in designing the building.
- The design should retain as many trees as possible in order to buffer the school and the playing fields.
- Pedestrian access must be provided from the surrounding neighborhoods.
- An unimproved area on-site should be designated to serve as an environmental study area in the future.
- A covered area for students in the bus loading area should be provided.
- Space for buses to load at one time is needed. The number of buses will be reviewed during the design phase in consultation with the Department of Transportation.
- Bike racks should be provided near the building.
- Playground equipment areas should not be located at the bottom of hills unless a provision is made to channel water away from the equipment areas.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

DRIVEWAY AND SERVICE DRIVE

- The architect/engineer should refer to the MCPS Facility Guideline Specifications when designing the driveway, bus loop, service drives, etc.
- Bus traffic should be separated from car traffic at all times, when possible. Bus loading zones should be able to accommodate the entire student body.
- A student drop off area should be provided and must be separate from the bus loop area.
- All driveways must be arranged so that children do not cross them to get to the play areas.
- Care for safety of students must be exercised in developing the driveways including use of safety rails in the bus loading area.
- Pedestrian access to the school facilities should be designed to make the best use of community right-of-ways and avoid crossing of loading zone areas.
- The site must comply with the most current ADA or COMAR regulations, whichever is most stringent.
- Site access must be provided to comply with fire protection and storm water management.
- Driveway aprons are to be perpendicular to the centerline of the street; and if there is an intersecting street on the opposite side from the proposed driveways, the driveway apron should line up with the intersecting street.
- Driveways should be located so that vehicle headlights do not project into adjacent homes.
- A service drive is required to service the kitchen, boiler room, and general delivery area. The architect should refer to the MCPS Facilities Guide.
- Site access must be provided to comply with fire protection and storm water management regulations.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

PARKING

- Ideally, a minimum of 80 parking spaces should be designed initially for a school with regular staffing allocations, with future expansion possible. At schools with class-size reduction, 100 parking spaces should be provided.
- The parking area should be designed to maximize safety and minimize speed.
- Adequate lighting should be provided.
- Parking area should have two exits.
- Guardrails or bollards are to be installed to protect fields and play areas.

LANDSCAPING

- Planting should include screen planting and other planting needed for erosion control.
- Existing plant stock, if on site, is to be evaluated for reuse and protected accordingly.
- Landscaping to support energy conservation and to relate the building to the site with aesthetic appeal must be included.
- Consideration should be given to safety and security when selecting plant materials.
- Provision for outdoor watering must be included.
- The landscaping plan should include areas for outdoors environmental education programs.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

PHYSICAL EDUCATION SITE REQUIREMENTS

The items described below are for a school that meets the preferred site size of 12 usable acres. At schools with smaller sites, the architect is to work with MCPS staff, including the Physical Education Curriculum Coordinator, Safety Director, and school staff to determine layout of the play areas. The outdoor physical educational instructional space should not be compromised for playground equipment.

SOFTBALL FIELDS

- Two softball fields should be provided with the following design requirements:
- 250’ radius, with a soccer field superimposed should be provided if possible. See below for the soccer field dimensions.
- The site size will determine the number and dimension of the softball fields.
- Softball fields should have metal benches protected by fencing for each team’s use.
- The fencing and benches should not interfere with soccer field usage.
- The softball backstops (2) shall be in diagonal corners of the field or in corners on the same side. See the diagram in the MCPS Facilities Guideline Specifications.
- Softball infields are not skinned for elementary schools. However, one field may be skinned if it does not significantly impact the soccer playing area.

SOCCER

- The site size will determine the size of the soccer fields. The elementary school size soccer field is 150’x240’ however the minimum size field should be 105’ x 180’.
- No permanent goals or temporary goals should be installed on the soccer fields.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

PAVED PLAY AREAS

- Two paved areas, 80’ x 100’ should be provided if the site permits.
- If located adjacent to one another, a grassy strip of at least 20’ should be between the two paved areas.
- One area should have four basketball goals with appropriate striping (see diagram in the MCPS Facility Guideline Specification).
- A second area, designated for primary use, shall be striped according to drawings provided in the MCPS Facility Guideline Specification. On small sites, this pave area should be fenced for use by Grade Kindergarten students.

KINDERGARTEN PAVED PLAY AREA

- A third paved area, at least 40’x 60’ but preferably 80’ x 100’, is desired, is needed for the Kindergarten students.
- This area needs to be located adjacent to the Kindergarten playground (mulched) area and close to the other paved play areas.
- This area requires a fence around it or adequate separation from the other paved play areas.
- The area will be striped according to drawings provided in the Facility Guideline Specification.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

PLAYGROUND EQUIPMENT AREAS (MULCHED AREAS)

- One or two areas shall be provided near the playing fields and large paved play area for playground equipment. Each area should be approximately 40'x40'. The size and shape of the play area will be developed during the design process in consultation with MCPS staff.
- The area shall be level, bare ground, unseeded, and no sod. MCPS will provide equipment dimensions for these areas.
- An underground drainage system must be provided.
- The loose-fill surfacing material (engineered wood fiber) must meet ADA requirements. A border must be provided to contain the filler. The surfacing materials must meet or exceed safety specifications for shock absorbing qualities as outlined by US CPSC.

KINDERGARTEN PLAY AREA (MULCHED AREA)

- A mulched kindergarten play area of 40' x 60' should be located adjacent to the kindergarten paved play area described in the physical education section for playground equipment. The size and shape of the play area will be developed during the design process in consultation with MCPS staff.
- The area shall be level bare ground, unseeded, and no sod. MCPS will provide equipment dimensions for this area.
- Protective fencing should enclose the area.
- An underground drainage system must be provided.
- The loose-fill surfacing material (engineered wood fiber) must meet ADA requirements. A border must be provided to contain the filler. The surfacing materials must meet or exceed safety specifications for shock absorbing qualities as outlined by US CPSC.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

PREKINDERGARTEN PLAY AREAS

- If the school has a prekindergarten, Head Start, or Preschool Education Program, then a separate and fenced outdoor play is required.
- This area must be adjacent to the classrooms with access directly from the classrooms.
- If the school does not have a prekindergarten program than the outdoor play area should be master planned so that it can be added on at a later time.
- The prekindergarten play area should include a 40'x40' paved play area and a 40'x40' mulched area. The architect will consult with the MCPS staff on the design of the playground equipment.

ADDITIONAL REQUIREMENTS FOR BURTONSVILLE ES

- This project is within the larger context of the Burtonsville Crossroads Neighborhood Plan. Any changes to site access and connectivity should be coordinated with the Montgomery County Planning Department.
- As an Add-Alternate to this project, the design team should explore expanding the multipurpose room and kitchen and providing four additional classrooms to bring the school to a 740 capacity.
- It is desirable to renovate Rooms 6, 8, 10 into two new Kindergarten rooms and Room 9 and Staff Lounge room 7 into one new Kindergarten room and one new Therapy/support room in order to keep the entire Kindergarten team together.
- If the above renovations are done, it will be necessary to provide four replacement classrooms and a new staff lounge in the addition. These four replacement classrooms are in addition to the six new standard classrooms listed in the Space Summary.
- Repurpose room 34 back to Music.
- Repurpose room 37 back to Instrumental Music.
- Repurpose Room 33 to Dual Purpose room.
- Repurpose Room 28 to two small instructional support rooms.
- Provide therapy/support room in renovated room 7/9.
- Repurpose room 7 into K classroom/Therapy and build new staff lounge in the addition.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

- Repurpose COM room 50A back into TV studio.
- Repurpose room 46 into office space; move Staff Developer to new space in the addition.
- Repurpose room 45 into office space; move ESOL teacher to new space in the addition.
- There may be opportunities on the adjacent Athey property to the west of the school site for play areas and/or fields.
- There should be future opportunities for on-street parking and sidewalks along a new system of local streets and access road that will provide secondary access to Burtonsville ES.
- There may be opportunities for future shared parking with adjacent properties.
- The project should minimize increases to impervious surface. A two-story addition is highly desirable.
- It is important to provide a security vestibule at the main entrance.
- It is desirable to locate one or both new offices at a new, secondary entrance to the school, to oversee arrival and dismissal on the left side of the building.
- It is important to maintain protective fencing and a tree buffer around the school property, to the greatest extent possible, particularly along the side adjacent to the Burtonsville Shopping Center. There are forest conservation easements around the east and rear sides of the school property.
- It is desirable to add a sidewalk or path from the side entrance and parking lot around the gym to the main entrance of the school.

VII. APPENDIX C: EXISTING CONDITIONS SURVEY

GENERAL SITE INFORMATION

The Burtonsville Elementary School facility is situated on a 12.22 acre property comprised of three parcels and located at 11516 Old Columbia Pike in Burtonsville, Maryland within Election District 05. The property is found on ADC Map book grids 5169-A3 and 5167-K3 and has tax account numbers of 05-00252054, 05-00251904, and 05-00251755. The site is zoned RC and is bounded to the north by the Burtonsville Town Square shopping center stormwater management easement area, to the east by Burtonsville Town Square shopping center, to the south by a partially undeveloped parcel owned by the Burtonsville Volunteer Fire Department, to the southwest by a Montgomery County owned parcel developed specifically for the school entrance, and to the East by a farmette referred to as the Athey Property, which was acquired by Montgomery County Parks and Recreation at the end of 2012.

Based on the current Montgomery County Zoning Ordinance, dimensional regulations for the property will include the following:

Front setback – 50’
Side setback – 20’
Rear setback – 35’
Maximum Building Height – 50’
Maximum Lot Coverage – 10%

Burtonsville Elementary School – Aerial (Courtesy of Google Earth)

VII. APPENDIX C: EXISTING CONDITIONS SURVEY

MASTER PLAN

The Burtonsville Crossroads Neighborhood Master Plan (Approved December, 2012) addresses the future plan for the properties to the south and west of the site and environmental concerns that affect the adjacent Kruhm Road tributary and the larger Patuxant River. The Athey property, to the west of the school site, is planned for a future local park for active recreation. The Burtonsville Volunteer Fire Department property, to the south of the school, is planned for a future public gathering area and, in conjunction with the school and the Athey Property, will be known as the "Public Green". The master plan details the expansion of Burtonsville Elementary School to accept increased capacity of the surrounding community and includes installation of a vegetative roof. There is also a plan to build an access road to eliminate congestion on Old Columbia Pike also adding a suitable secondary access to the school. This is indicated in the graphic below. The new road will be accompanied by new bike paths as well.

A meeting with Maryland National Capital Park and Planning Commission (MNCPPC) was conducted on April 18, 2013 that confirmed the above information with respect to planned access road. A copy of the meeting minutes for that meeting has been included, as well as, previously approved plans for the access road improvements. It is noted that the access road plans were previously approved for construction, however, county funding put the project on hold. According to DOT personnel, the projected start date will not be until the 2016-2017 fiscal year. As this project was designed prior to the current stormwater management regulations, is it unknown if the project can move forward as is, or if updated stormwater management design will be required.

Master Plan Right-of-Way (Courtesy of MNCPPC)

VII. APPENDIX C: EXISTING CONDITIONS SURVEY

SITE ANALYSIS

ADJOINING STREETS

The public right-of-way for Old Columbia Pike is accessible by a panhandle portion of the school property at the southeast corner of the site. It is noted that the main access entrance to the school crosses the Montgomery County owned parcel to the southwest. This parcel was specifically developed to provide access to the school from Old Columbia Pike, but is separately owned by Montgomery County and not the Board of Education. This two-lane road is lined by a single sidewalk, offering the main vehicular and pedestrian access into the property. The pavement appears to be in good condition, and generally free from substantial cracking. The parallel sidewalk appears to be in fair condition. However, there are several bushes that have overgrown the sidewalk that may make accessibility questionable. Since it appears that this parcel is not considered a public right-of-way, access to the site from Columbia Pike may not be considered an accessible route per ADA right-of-way guidelines. There are several ditches that parallel the road and drain from the school site towards Old Columbia Pike. Closer to the school site, these ditches are retaining water in areas, which may indicate that slope for drainage may be an issue. The signalized intersection of Old Columbia Pike at Spencerville Road at this access road appears to have recently been upgraded to meet ADA regulations. No verification of ADA compliance was conducted.

The panhandle alley at the southeast is in poor shape. This is a very narrow area that is unmarked and abuts dumpsters and loading areas of local business. This provides for undesirable views.

Alley way– Looking north towards the school's main entrance

Alley way– Looking south away from the school's main entrance

VII. APPENDIX C: EXISTING CONDITIONS SURVEY

As stated previously, the Burtonsville Crossroads Neighborhood master plan proposes a public right-of-way that encroaches about 45 feet onto the southeastern corner of the property possibly eliminating five existing parking spaces of the front parking lot. While this may truncate the property slightly, it would provide a suitable secondary entrance to the property in the future.

SITE PARKING AND CIRCULATION

ON SITE PEDESTRIAN AND VEHICULAR ACCESS

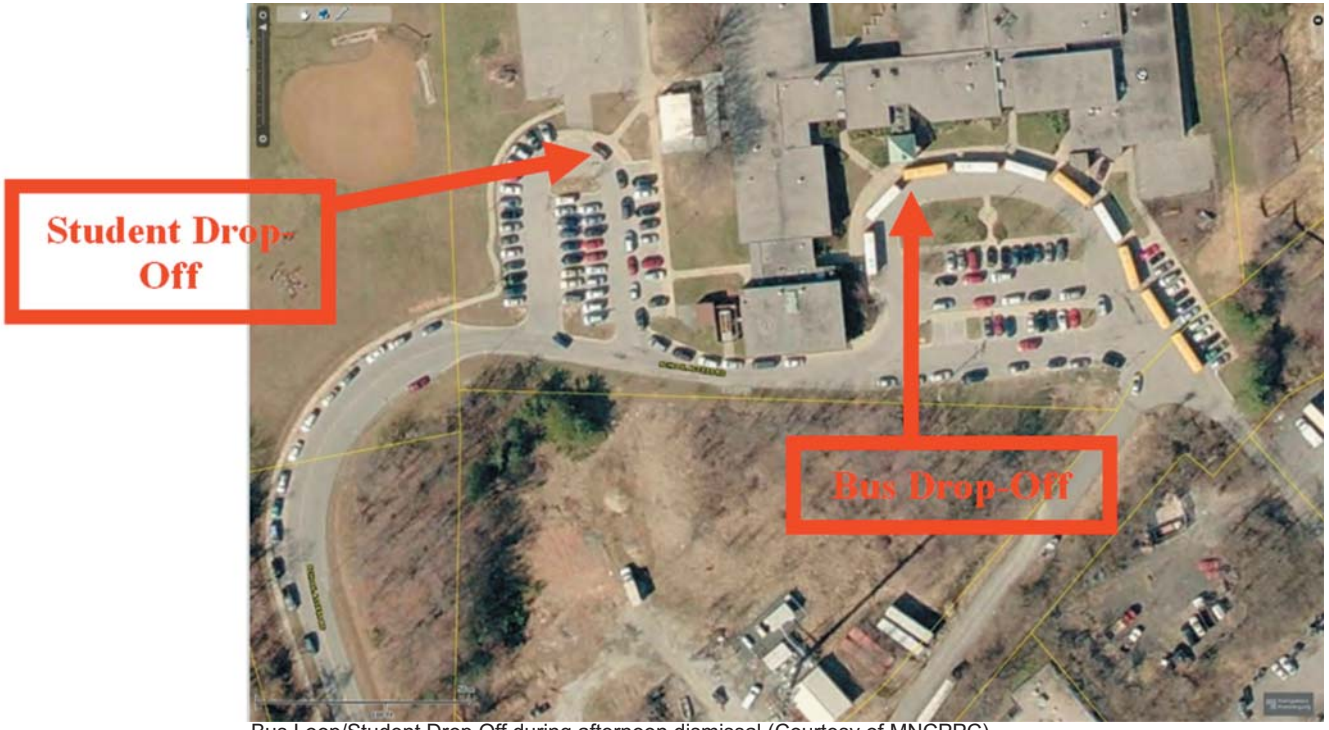
The main site entry at the southwest corner of the site offers access into the side parking lot, and parent drop-off areas. This two-way access road is approximately 40-feet wide with parallel unmarked street parking and appears to be in good condition and of adequate size. All bus traffic and some parent vehicular traffic to and from the site is provided through this signalized access entrance. The panhandle access entry is a poorly maintained alley that is only used by parents and staff for vehicular access. Since this location enters at the bus loop, it is likely that congestion due to traffic movements between buses and parents occurs.

Pedestrian access is afforded through the sidewalk along the adjacent Montgomery County owned parcel, which is met by the on-site sidewalks that lead to the building and surrounding play areas. However, there is not a connecting sidewalk in front of the school from the parent drop-off to the school main entrance and bus drop-off area. All students for this school are either dropped off by parents or dropped off by buses; there are no walkers. It is recommended that all areas are brought within compliance of current ADA requirements.

VII. APPENDIX C: EXISTING CONDITIONS SURVEY

BUS LOOP

The bus-loop consists of a 25-foot drive aisle which occupies the southeastern portion of the site and pulls directly in front of the building's main entrance. Because the bus-loop is only accessed by driving past the parent drop off, it may commonly result in vehicular conflicts. With approximately 290-feet of queuing space and enough width for buses to pass one another, it appears that the size of the bus-loop is insufficient for the 14 buses that are currently serving the school. In terms of ADA accessibility, there are curb ramps located on the sidewalk along the bus-loop; however, no passenger loading area is provided. Although the existing layout is functional, it is not ideal for the buses that serve this school. The larger concern is the insufficient curb space for drop-off; forcing student to walk between parked cars. This safety hazard could be reduced by increasing the length of the drop-off loop. It is recommended that the student drop-off loop be expanded to provide more curb length. Any site improvements shall meet all applicable ADA requirements.



Bus Loop/Student Drop Off during afternoon dismissal (Courtesy of MNCPPC)

VII. APPENDIX C: EXISTING CONDITIONS SURVEY

STUDENT DROP-OFF LOOP

The student drop-off loop is located on the west side of the building and consists of a 60-foot long curb, 24-foot wide, two-way drive aisle which circles the main parking lot. This parking lot is one-way during the morning and afternoon drop-off. The loop shares the same driveways as the side parking lot. It does not appear that student drop-off is accessible per ADA regulation, as there is only one small asphalt ramp located in the travel lanes that does not meet current ADA guidelines for slope requirements. Students are dropped off and picked up at the location indicated on the pervious photo. It is recommended that the student drop-off loop be expanded to provide more room for cars to pull up to the curb and to eliminate parking directly on the drive drop-off aisle. Current ADA compliance is also recommended for inclusion to site improvements, including a passenger loading area and accessible curb ramps. As stated previously, there is no connecting sidewalk between this area and the bus-loop area. A connecting sidewalk is recommended.

Side Parking Lot - Looking North at Student Drop-Off

VII. APPENDIX C: EXISTING CONDITIONS SURVEY

ON SITE PARKING

Currently, there are two separate areas for parking. The side parking is located west of the existing building and contains 47 spaces. It appears there is striping for handicap spaces; however the spaces are not compliant per ADA. These accessible spaces are not marked as per ADA or MCDOT regulations. The second parking lot is located in front of the main entrance and is surrounded by the bus drop-off loop and contains 22 spaces, two (2) of which are designated as accessible spaces. These spaces offer poor access to the building as they are situated in the furthest row from the main entrance and do not provide an accessible route to the main building entry. The existing school offers a total of 69 existing spaces, which is less than the education specification requirement of 100 spaces. Therefore, additional parking is recommended to be provided.

Both lots shall provide adequate ratios of handicap spaces in compliance with current ADA guidelines. The asphalt in the parking lots are in poor condition. There are several potholes and areas what the asphalt has settled. The most glaring deficiency is the lack of ADA signage and associated accessible routes. It is recommended that the overall site layout be revisited in order to separate the parking lots from the drop-off and bus loops and that a comprehensive ADA compliance upgrade be performed.

VII. APPENDIX C: EXISTING CONDITIONS SURVEY

ON SITE LOADING

The loading areas are located to the east of the main school entrance at the front of the school. The small size and location of the loading dock may make it difficult to maneuver a truck for loading. Dumpsters are set aside for the building in an existing parking space near the loading area. It is recommended that improvements to the property consider loading and location of the dumpster's during future development.

Front Entrance - Old Sidewalks Meet New

Front parking lot looking toward the east shopping center

VII. APPENDIX C: EXISTING CONDITIONS SURVEY

SIDEWALKS

The existing site predominantly provides sidewalks from Old Columbia Pike across an adjacent Montgomery County owned property, previously developed specifically for Burtonsville Elementary School, to the parent drop-off location. There is also sidewalk located in the parking lot at the main entrance to the school; however, this sidewalk does not connect in front of the school to the western sidewalk where the student drop-off is located. The sidewalk near the main entrance stops at the panhandle portion of the property and does not connect to Old Columbia Pike. Access around the rear of building is connected by a concrete sidewalk and the interior courtyards also include meandering paths for pedestrian access. While the hard surface play areas and mulched play areas are connected, the fields currently do not have sidewalk access as required by ADA.

It should be noted that the existing network of sidewalks may not be in compliance with ADA. Several locations were inspected and did not meet current ADA regulations. Since the main access to the site is across adjacent Montgomery County property, the only accessible route is over the pavement in the panhandle from Old Columbia Pike. There is no connecting sidewalk in the Old Columbia Pike right-of-way to warrant this as an accessible entrance and this entrance presents unsafe pedestrian access since there are no sidewalks from the public right-of-way to the main entrance to the school. In addition, the site lacks compliant wheelchair ramps from the handicap parking areas. It should be anticipated that site improvements will likely include comprehensive sidewalk replacement in order to bring all areas of the site within ADA compliance.

FIRE ACCESS

Currently, the bus-loop and loading area access drive are not well delineated with signage as on-site fire lanes. Although the bus-loop and the loading drive both appear to meet the current dimensional requirements of a fire lane, the combined hose reach of the two do not provide adequate coverage of the building. It can be assumed that any site improvements will require fire access to be provided around the building.

VII. APPENDIX C: EXISTING CONDITIONS SURVEY

SITE TOPOGRAPHY

The property currently has a drainage divide that splits the site in two. The drainage divide runs along the north side of the sidewalk entering the site from the west, along the north side of the parent drop-off loop, and then runs diagonally across the existing school from southwest to northeast. The area north of this drains to the north and the existing adjacent stormwater quantity pond, and the area south of this drainage divide drains towards the south and across the adjacent properties. The property is relatively flat, so no proposed retaining walls should be considered for the building addition. Per the meeting with MNCPPC staff, it may be a requirement of the project to drain stormwater at the front of the school to the rear in order to help eliminate the ponding conditions that currently exist along the front property line.

VEGETATION

The majority of significant on-site vegetation is located in the northwestern quadrant of the site with a small forested area that extends south between the ball fields and the hard surface play areas. It will be important to coordinate site improvements for the avoidance of any large trees or forest areas during construction. If the proposed improvements involve impacts to specimen trees, a variance of the forest conservation law will need to be approved by the MNCPPC. Furthermore, impacts to significant trees and areas classified as forest cover will likely trigger forest conservation requirements. The extent of forest conservation will depend upon an approved Natural Resources Inventory/Forest Stand Delineation. However, there is little area on the site to provide additional forest planting. Therefore, offsite planting may be required.

WATER AND SEWER

The existing building is served by the 20-inch mainline, contract #570269, built in 1959 that runs along the Old Columbia Pike right-of-way. A 10" service connection enters the site through the panhandle on the east side of the site and serves several fire hydrants, as well as, the building. Sanitary sewer service is located in the same location. It is assumed that both water and sewer service sufficiently meet the current needs of the building and should also meet the needs of any prospective improvements. However, without confirmation from WSSC, it is unknown if the existing inside meter will be allowed to remain, or if a new external meter will be required.

According to WSSC, the site is in a 660A pressure zone with a High Hydraulic Gradient of approximately 710 and a Low Hydraulic Gradient of approximately 598. On that basis, per WSSC prescribed calculations, the water pressure at the existing connection to the water main in Old Columbia Pike is approximated to be between 46 p.s.i. and 97 p.s.i. The exact pressures and flows should be confirmed via field testing at the time of design.

It is noted that as part of the future access road improvements, water and sewer improvements were proposed on the previously approved plan.

GAS, ELECTRIC, AND TELEPHONE

All utility service connections enter the site from the eastern panhandle before they connect to the building. There is a 2" gas that currently serves the existing building. Electric and telephone enter the site through the panhandle via overhead lines and then are routed underground to the building. As the previously approved plans for the future access road do not show dry utility information, it is unknown if any gas/electric/telephone/etc. improvements are proposed or how construction may impact service to the building.

VII. APPENDIX C: EXISTING CONDITIONS SURVEY

STORM DRAINAGE AND STORMWATER MANAGEMENT

There are several existing stormwater management facilities located on the site. A combined oil/grit separator and infiltration trench is located at the southwest side of the parking lot and receives runoff from both parking lots though a single inlet. There is significant ponding and marshy conditions around the infiltration trench and oil separator facility. MNCPPC recommends that this be conveyed to the rear of the school as it could be a safety concern to students. A separate infiltration facility is identified at the southeast corner of the property. This area had several inches of water ponding above grade during the site visit. A facility to the north of the school consists of an oil grit separator and infiltration trench collecting stormwater from the two courtyards.

Stormwater Management Facility

It can be anticipated that site improvements are required to include Environmental Site Design (ESD) to the maximum extent practicable in order to treat all areas inside the limits of disturbance. If ESD efforts are exhausted and the site still has not been able to reach a hydrologic state of “woods in good condition,” then structural practices may be required as determined by Montgomery County.

Potential ESD stormwater management practices for the site include both micro-scale practices and alternative surfaces. Micro-scale facilities include the utilization of up to a dozen micro-bioretention facilities or submerged gravel wetlands where available open space can be found, such as parking lot islands and around the athletic fields. If required to meet stormwater requirements alternative surfaces such as vegetated roofs may be considered.

It is noted that this project lies within the Primary Management Area (PMA) for tributaries to the Patuxant River. Per MNCPPC environmental regulation, there is a 10% maximum impervious cap on new development. Per the Pre-Mandatory Referral Meeting with MNCPPC, impacts to the design due to the PMA were discussed. The master plan does identify the school addition and states that a limited increase to the imperious area is recommended. The existing imperiousness within the PMA for the school site is currently 35%. MNCPPC will want to limit any added imperviousness due to the building addition improvements.

Primary Management Area-Aerial (Courtesy of Google Earth)

VII. APPENDIX C: EXISTING CONDITIONS SURVEY

SITE SOILS

Per the Soil Survey of Montgomery County, Maryland the predominant soils on the site are in the Gaila, Chillum, Beltsville, and Urban Land series. According to the USDA, the depth to bedrock for this area is generally greater than five feet.

In terms of hydrology, all on-site soil groups are characteristically known to provide good drainage and allow adequate infiltration with the exception of the urban land soils. These soils have a 'D' hydrologic soil group classification and are only found within the panhandle of the site. The remaining areas of the site have a 'B and C' hydrologic soil group rating and which should allow for adequate infiltration type stormwater management facilities.

The elevation of the water table could limit the available locations for stormwater facilities or impact how they are constructed. The graphic below indicates potential depths below existing grade that the seasonal high water table could exist based on NRCS mapping. It is impossible to determine the exact areas and depths without further geotechnical investigation.

Construction of stormwater facilities, as well as utilities, in these areas may require pumping of groundwater. In addition, the stormwater management facilities may require an impermeable liner.

Depth to water table-Aerial (Courtesy of Google Earth)

VII. APPENDIX C: EXISTING CONDITIONS SURVEY

FLOOD PLAINS, STREAM VALLEY BUFFERS AND NON-TIDAL WETLANDS

Initial investigations reveal that the site is located outside of mapped floodplain in Zone “X” as shown per FEMA Flood Insurance Rate Maps numbers 24031C0380D and 24031C0385D.

According to the U.S. Fish and Wildlife Mapping services there are no nationally recognized wetlands located on or around the site. However, the design plans for the adjacent access road did exhibit non-tidal wetlands and Waters of the U.S. in close approximate to the school site.

Due to the nearby tributary, the PMA transition zone creates a buffer area with specific development requirements as indicated previously.

HARD PLAY SURFACE

There are two hard play surfaces located on the side and front of the school. The school no longer uses the front play surface or mulched play area. The overall condition of the surface is poor as ponding occurs during and after rain events. The existing mulched areas and jungle gym should be brought into compliance with ADA regulation. There are several older pieces of play equipment that are in disrepair and scattered throughout the site that could pose a safety risk. Per the meeting with MNCPPC it is recommend to limit the amount of imperiousness within the PMA area for the site

Side hard play surface- from parking lot facing north

Front unused hard play surface and mulch area- from school facing south

VII. APPENDIX C: EXISTING CONDITIONS SURVEY

PRE-MANDATORY REFERRAL MEETING MINUTES

ADTEK

Patrick East Business Center
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Frederick, Maryland 21701

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Meeting Minutes	**Project Name:** *Burtonsville Elementary School Addition Pre-Mandatory Referral Meeting*
To: *Mark Manetti, AIA* *Samaha Associates, PC* *10521 Rosenhaven Street, Suite 200* *Fairfax, VA 22030* *Phone: 703-691-3311*	**Meeting Location:** *Maryland National Park and Planning Commission (MNCPPC)* *8787 Georgia Avenue* *Silver Spring, Maryland 20910*
	Date of Meeting: *04/05/2013* **Today's Date:** *04/18/2013 Rev. 05/06/2013*
cc: *All Attendees*	**Project No.:** 1379.02

Attendees:	**Firm:**	**Phone:**	**Fax:**	**E-Mail:**
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VII. APPENDIX C: EXISTING CONDITIONS SURVEY

The following are items discussed during the referenced meeting:

1. *Mr. Manetti introduced the project and discussed the nine (9) classroom addition with an alternate of four (4) additional classrooms. The building addition is approximately 24,000 s.f. and is proposed to extend the northwest corner of the building. The existing portables are planned to be temporarily relocated on-site during the building addition construction.*

2. *Mr. Manetti and Mr. Fritz gave an overview of the existing site and the proposed site improvements. The bus loop area at the main entrance to the school is proposed to be slightly rearranged and the parking area to the west of the school is will be expanded. A total of 104 spaces are currently proposed. The orientation of the fields are proposed to be modified. One hard surface play area that will be displaced by the building addition will be relocated and an additional hard surface play area is proposed. It was noted that the current main vehicular access to the site is across an adjacent property owned by Montgomery County and not specifically the Board of Education. In addition, the only true access to the site is through the panhandle at the east of the property. The group discussed how the school property was somewhat secluded as there are several business along Old Columbia Pike that are in front of the school.*

3. *Ms. O'Connor brought up that a nearby property referred to as the Katz property is proposing multifamily units which could have an impact on the growth of the school. She also provided information on the proposed future roadway that will be extend adjacent to the property. This roadway will include on-street parking, a bike path, and a regional stormwater pond. Mr. Fritz mentioned that this new road will truncate a small corner of the school property and it was discussed that there could be several parking spaces shown on the proposed site layout that would be eliminated. Mr. Fritz did state that the new roadway will provide a much needed second vehicular entrance to the school.*

4. *Traffic circulation was briefly discussed and the current issues that the school incurs where conveyed by the design team. Mr. Kim asked if the school population would increase and Mr. Bagai stated that the school is at its core capacity and the building addition is only related to the current population. Mr. Kim stated that a full traffic report would not be required. However, a circulation plan would still be required for his review.*

   Follow Up: The design team revisited the base addition of nine (9) classrooms after the meeting. This would keep the current enrollment, but, the alternate with four (4) additional classrooms will increase the core capacity of the school and potential future enrollment. Mr. Kim confirmed via email that a traffic study is not needed according to the Mandatory Referral Guidelines. However, vehicular and pedestrian access plan, as well as, an internal site circulation and a pedestrian neighborhood connectivity study is required.

5. *Mr. Strok discussed the environmental items related to the site. He stated that there was a previous Forest Conservation Plan (FCP) associated with the site. This FCP included the Montgomery County owned access road which is the adjacent property that the school's main vehicular entrance is located. In addition, as part of the FCP, portions of nearby Blake High School were included as reforestation for the Burtonsville Elementary School property. Mr. Strok stated they were still in conversation regarding the specifics of this previously approved plan with MNCPPC. Mr. Strok mentioned that a variance would be required if there would be any impacts to specimen trees. MNCPPC staff agreed. Mr. Strok also provided information that a portion of this site is located in a Primary Management Area (PMA). MNCPPC staff discussed the 10% impervious cap for development within the PMA. Mr. Fritz quoted the Burtonsville Crossroads Master Plan stating that it recommends "…limited expansion above the existing level of imperviousness for the elementary school…" Mr. Fritz also stated that the existing imperviousness within the PMA for the property was at approximately 35%. MNCPPC staff asked how much the imperviousness was with the proposed improvements. Mr. Fritz stated he would look into it.*

   Follow Up: Mr. Fritz evaluated the proposed conditions and found that the impervious area for the proposed design is approximately 40%. Therefore, from existing to proposed, a 5% increase is proposed.

6. *Mr. Strok mentioned that a Natural Resources Inventory / Forest Stand Delineation (NRI/FSD) has been prepared and submitted to MNCPPC for review, but has not yet been approved. He also discussed several locations of potential wetlands on the property along the southeast property lines and also at the northwest corner of the site and that a formal Jurisdictional Determination has not been performed.*

7. *Ms. O'Connor provided information that Montgomery County Parks had purchased the adjacent Athey property towards the end of 2012. The Master Plan was discussed again as this area is referenced to as the "Public Green" and includes the school property, the Athey property to the west, and the adjacent Fire Department property to the south. It was noted that is area is planned to be a joint park area used for active recreation for the community.*

8. *Due to the PMA, Ms. Nelson recommend that the design team conduct a meeting with Montgomery County Department of Permitting Services (DPS) staff to discuss particulars related to stormwater management for the project. The ponding water on or adjacent to the site were also discussed. Ms. Nelson suggested that the water table may be high for this area.*

9. *Ms. Nelson also questioned if parking for the school could be located along the access road or even on the Athey property.*

10. *MNCPPC staff inquired about the existing chiller. Mr. Manetti stated that it will likely remain and be upgraded, but that the design team could look at providing mechanical equipment on the building addition roof.*

11. *Mr. Bagai suggested that a green roof is typically utilized for building additions and that it would be considered for this project for the building addition roof area. Mr. Fritz asked if the green roof or even pervious pavement could be counted towards the imperviousness cap. Ms. Nelson replied that these measures are still considered imperviousness for the purposes of the PMA. Mr. Fritz went on to explain that pervious pavement may not be an option since the site was previously developed and may have compacted soils.*

12. *MNCPPC staff suggested that the building addition be located outside the PMA near the bus loop. Mr. Manetti explained that this location does not work for the school programmatically.*

13. *The adjacent Burtonsville Fire Department site was discussed. The new road will pass through this site which is currently an unattractive temporary storage yard. Ms. O'Connor stated that an existing cellular tower on the site provides income for the fire department and will remain in the future. Ms. Nelson asked if MCPS could acquire some of this property with the potential to put parking on it to keep the imperviousness out of the PMA. She reiterated that a meeting with DPS is warranted to discuss how the roadway stormwater management may impact the development. She also implied that the project may warrant the need to collect the potential wetland water along the southeast property lines and divert it to the stormwater pond at the rear of the school for the adjacent shopping center.*

14. *A brief conversation regarding the existing courtyards occurred. It was stated by the design team that these areas will remain unchanged due to the building addition.*

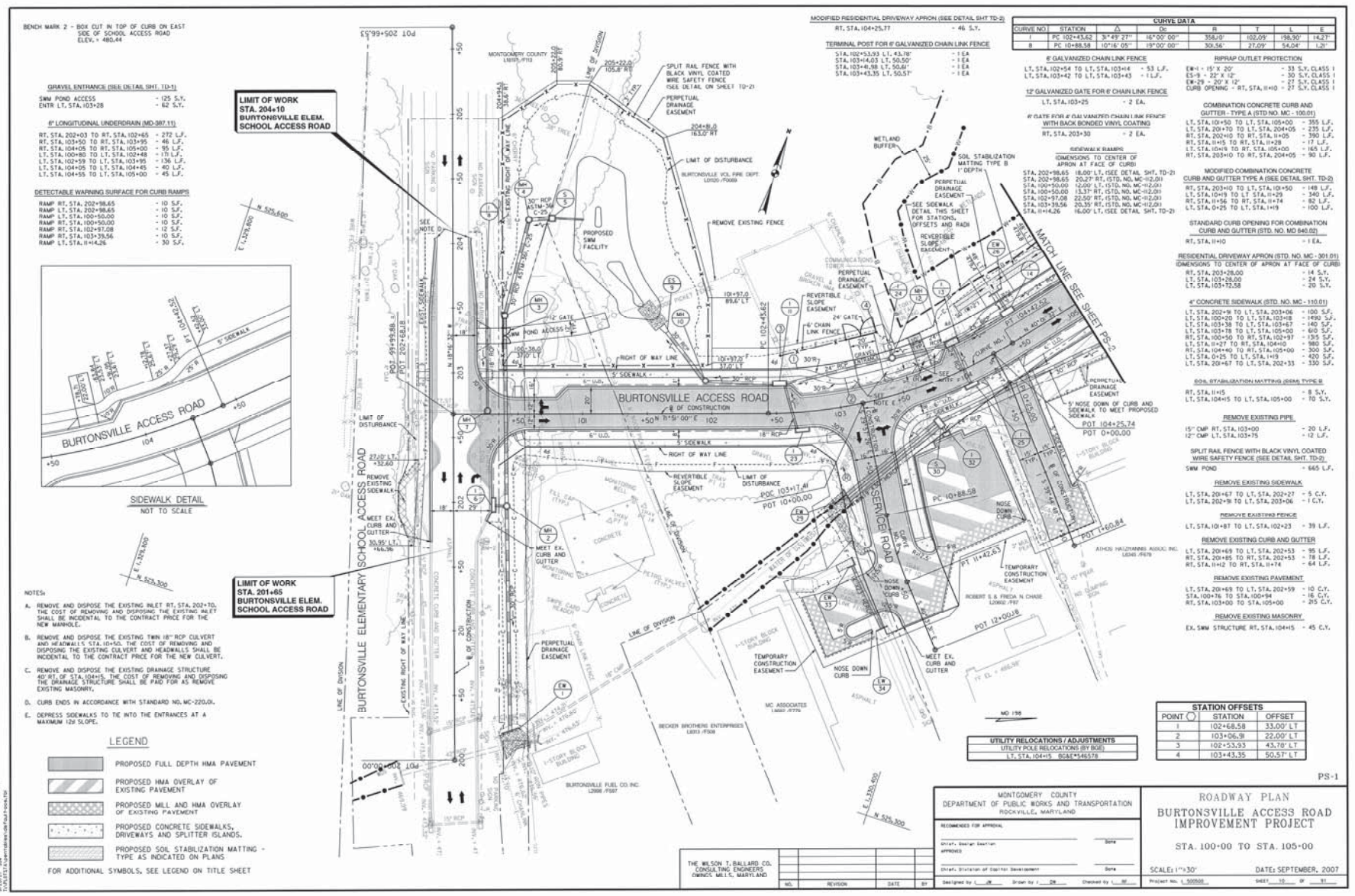
15. *MNCPPC staff recognized that this project will be require to be reviewed by the Planning Commission and cannot be a staff level approval since there are several specimen trees being removed and additional parking is being added.*

16. *MNCPPC recommended that the second hard surface play area move outside the PMA or get smaller within the PMA and that imperviousness in general should be moved outside the PMA if possible.*

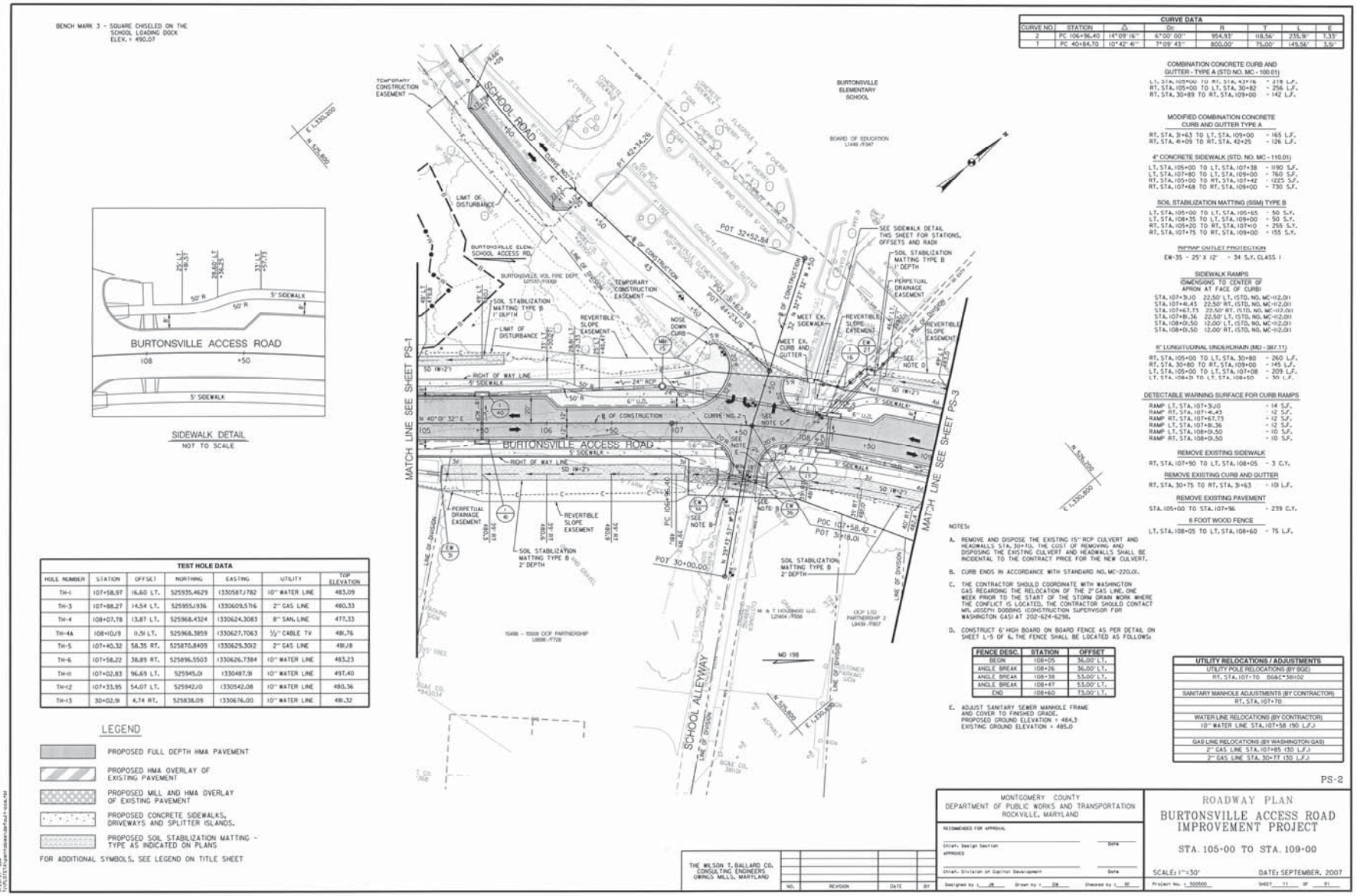
17. *Mr. Bagai confirmed that MCPS will consult with DPS regarding stormwater management for the site.*

VII. APPENDIX C: EXISTING CONDITIONS SURVEY

ACCESS ROAD IMPROVEMENTS



VII. APPENDIX C: EXISTING CONDITIONS SURVEY



TEST HOLE DATA						
HOLE NUMBER	STATION	OFFSET	NORTHING	EASTING	UTILITY	TOP ELEVATION
TH-1	107+58.97	16.60 LT.	525935.4629	1330587.1782	10" WATER LINE	483.09
TH-3	107+88.27	14.54 LT.	525955.1936	1330609.5716	2" GAS LINE	480.33
TH-4	108+07.78	13.87 LT.	525968.4324	1330624.3083	8" SAN. LINE	477.33
TH-4A	108+10.19	11.51 LT.	525968.3859	1330627.7063	½" CABLE TV	481.76
TH-5	107+40.32	58.35 RT.	525870.8409	1330629.3012	2" GAS LINE	481.18
TH-6	107+58.22	38.89 RT.	525896.5503	1330626.7384	10" WATER LINE	483.23
TH-11	107+02.83	96.69 LT.	525945.01	1330487.91	10" WATER LINE	497.40
TH-12	107+33.95	54.07 LT.	525942.10	1330542.08	10" WATER LINE	480.36
TH-13	30+02.91	4.74 RT.	525838.09	1330676.00	10" WATER LINE	481.32

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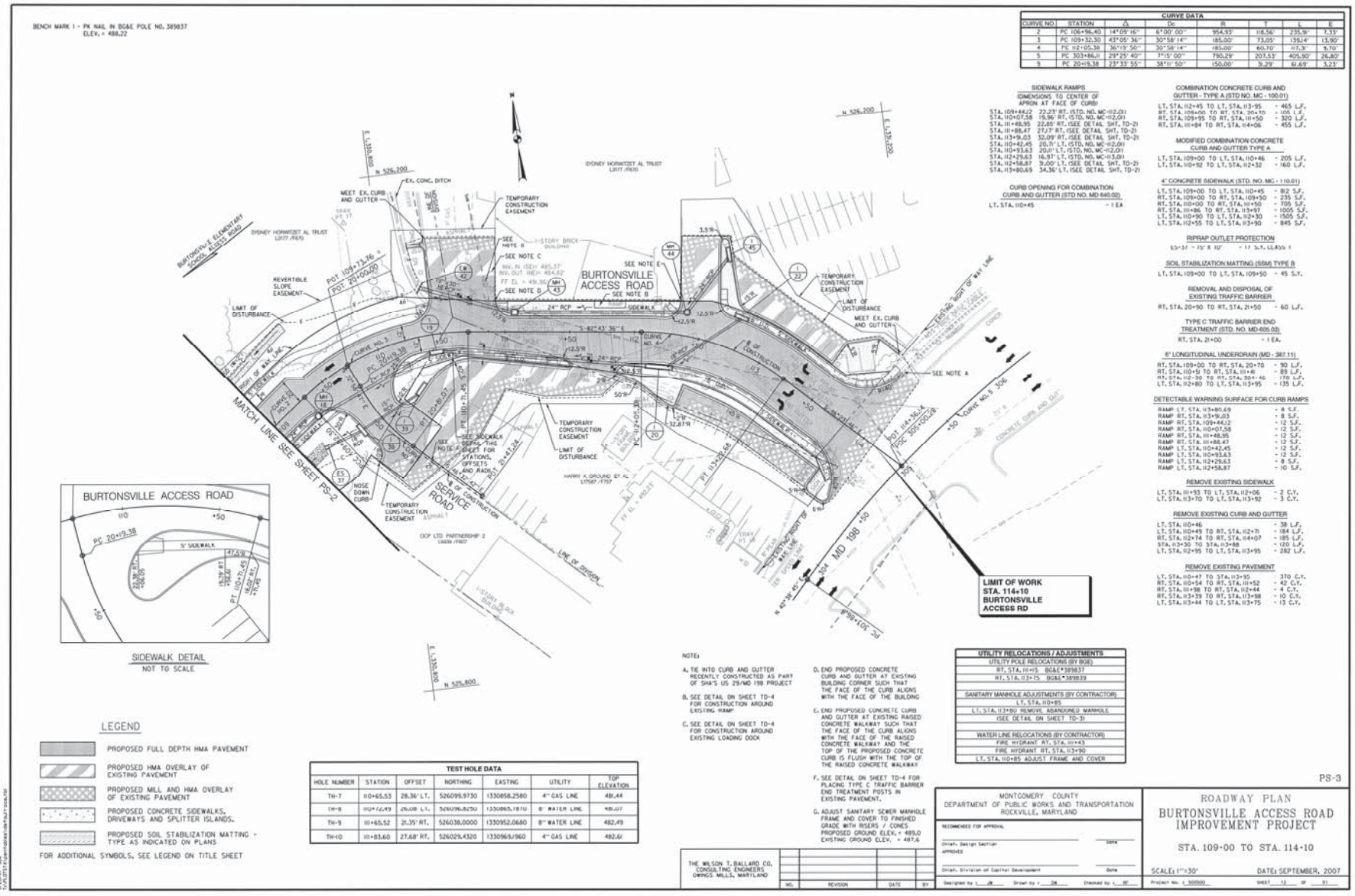

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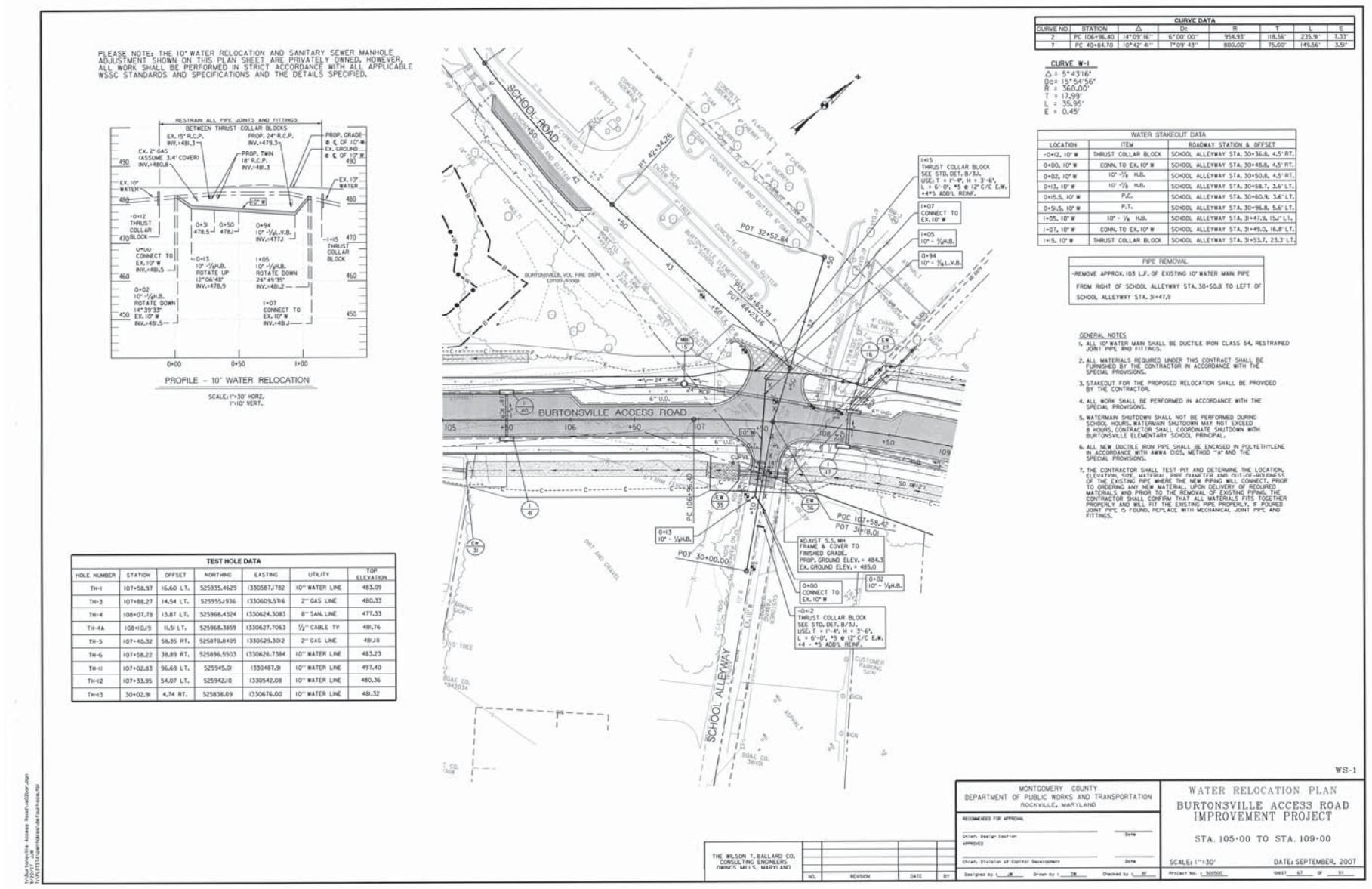

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TH-13	30+02.91	4.74 RT.	525838.09	1330676.00	10" WATER LINE	481.32

CURVE DATA							
CURVE NO.	STATION	Δ	Dc	R	T	L	E
2	PC 106+96.40	14°09'16"	6°00'00"	954.93'	118.56'	235.98'	7.33'
7	PC 40+84.70	10°42'46"	7°09'43"	800.00'	75.00'	149.56'	3.56'

CURVE W-1
Δ = 5°43'16"
Dc = 15°54'56"
R = 360.00'
T = 17.99'
L = 35.95'
E = 0.45'

WATER STAKEOUT DATA		
LOCATION	ITEM	ROADWAY STATION & OFFSET
-0+12, 10" W	THRUST COLLAR BLOCK	SCHOOL ALLEYWAY STA. 30+36.8, 4.5' RT.
0+00, 10" W	CONN. TO EX. 10" W	SCHOOL ALLEYWAY STA. 30+48.8, 4.5' RT.
0+02, 10" W	10" -⅛ H.B.	SCHOOL ALLEYWAY STA. 30+50.8, 4.5' RT.
0+13, 10" W	10" -⅛ H.B.	SCHOOL ALLEYWAY STA. 30+58.7, 3.6' LT.
0+15.5, 10" W	P.C.	SCHOOL ALLEYWAY STA. 30+60.9, 3.6' LT.
0+51.5, 10" W	P.T.	SCHOOL ALLEYWAY STA. 30+96.8, 5.6' LT.
1+05, 10" W	10" - ⅛ H.B.	SCHOOL ALLEYWAY STA. 31+47.9, 15.J' L1.
1+07, 10" W	CONN. TO EX. 10" W	SCHOOL ALLEYWAY STA. 31+49.0, 16.8' LT.
1+15, 10" W	THRUST COLLAR BLOCK	SCHOOL ALLEYWAY STA. 31+53.7, 23.3' LT.

VII. APPENDIX D: EXISTING PHOTOGRAPHS

MAIN ENTRANCE

MEDIA CENTER

GYMNASIUM

MULTIPURPOSE ROOM

VII. APPENDIX D: EXISTING PHOTOGRAPHS

CLASSROOM

COURTYARD

CLASSROOM

CORRIDOR

VII. APPENDIX D: EXISTING PHOTOGRAPHS

PORTABLES

HARD SURFACE PLAY AREA

FIELDS

MAIN ELEVATION