



Candlewood Elementary School Modernization

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Completed: 3/11/13

Description

Candlewood Elementary School Modernization

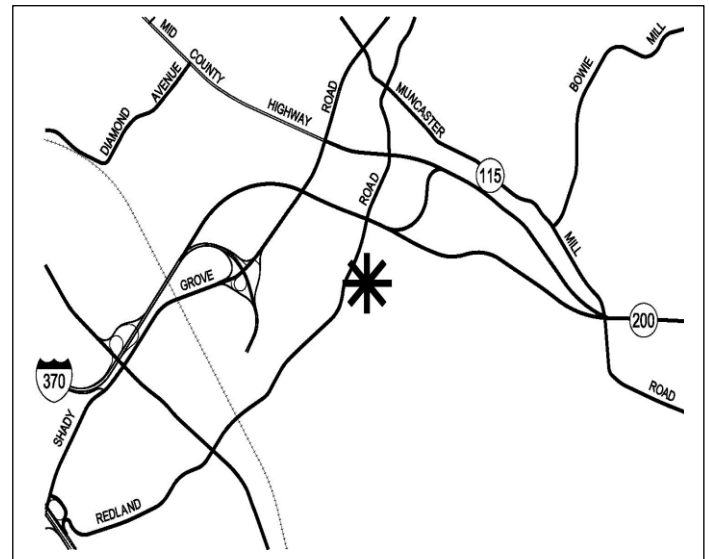
Demolition of existing structure and construction of a new elementary school on the existing site; 7210 Osprey Drive, Derwood; Upper Rock Creek Area Master Plan

***A. Forest Conservation Plan MR2013016: Candlewood Elementary School Modernization**

Staff recommendation: approval with conditions

B. Mandatory Referral No. MR2013016: Candlewood Elementary School Modernization

Staff recommendation: approval to transmit comments to the Public Schools



Summary

This report provides planning staff’s review, analysis and recommendations for the Forest Conservation Plan and Mandatory Referral MR 2013016, Montgomery County Public Schools’ proposal to demolish the existing Candlewood Elementary School, at 7210 Osprey Drive in Derwood, and build a new school on the property. Achieving desirable educational objectives and using environmentally sustainable design techniques to modernize the school make demolition and reconstruction the most cost-effective alternative.

PROJECT DESCRIPTION

The Site

Candlewood Elementary School is located at 7210 Osprey Drive in Derwood, part of the Upper Rock Creek planning area. The site totals 11.78 acres. The school was originally built in 1968, and a classroom addition was added in 1976, for a total of approximately 48,500 square feet in a single story structure. Its current enrollment is 347 students in kindergarten through fifth grade, with an existing program capacity of 434 students.

The school is part of the Candlewood Park community, and, although part of the school property is adjacent to Redland Road, steep, wooded slopes foreclose easy access. The existing school is reached from Osprey Lane, about 3,650 feet (and four streets) from the Redland Road entrance to the neighborhood. There is a single, shared bus loop, student drop-off lane and parking area directly in front of the building. A smaller parking area lies to the north of the school building. A paved play area is directly to the south of the school, and shared playing fields are located to the northwest of the building. As noted, steep wooded slopes lie between the playing field and Redland Road.



The Proposal

MCPS plans to demolish the existing one-story school and replace it with a new two-story facility that will occupy essentially the same part of the property. Achieving the objectives of the educational program for the school in the existing building would require almost doubling its footprint, which in turn would force sharp reductions in outdoor play areas that are not advisable. In addition, existing exterior walls are reinforced masonry and have no insulation. Bringing the existing building up to current energy code standards would mean additional exterior wall facing and interior insulation, using studs and drywall. Finally, the existing building cannot accommodate heating, ventilation and air conditioning systems that meet Leadership in Energy and Environmental Design (LEED) standards. Installing such systems would likely reduce ceiling heights to less than eight feet, which is also undesirable. For these reasons, MCPS concluded that building a new school was the most cost-effective modernization option. The new school will accommodate 502 students; its core spaces—multi-purpose room, gymnasium, media center and administrative offices—can accommodate 740 students. It will have 28 teaching stations, as well as support space for special education activities, instrumental music, staff development and conferences. Space for 12 additional classrooms has been identified in the project’s master plan. MCPS incorporated a number of specific design goals into the project, including public spaces that are grouped together away from classrooms; an administrative suite close to the main entrance, allowing observation of drop-off areas; a gymnasium and multi-purpose room that is accessible to the public during non-school hours; and separate loops for buses and student drop-off.

***A. FOREST CONSERVATION PLAN MR2013016: CANDLEWOOD ELEMENTARY SCHOOL MODERNIZATION**

STAFF RECOMMENDATION

Approval of the Final Forest Conservation Plan for Candlewood MR2013016 with the following condition:

- a. Prior to any land disturbing activities record a Forest Conservation Easement over the area of preserved forest.

As required by the County Forest Conservation Law (Section 22A of the County Code), a Forest Conservation Plan (FCP) for the project was submitted with the Mandatory Referral application. 4.22 acres of forest exist along the southern and western perimeter of the site. Slight encroachments beyond the existing developed area as well as improvements to the stormwater management outfall, will result in 1.25 acres of forest loss. The remaining 2.97 acres of forest will be placed in a forest conservation easement. No additional forest mitigation is required.

ANALYSIS AND FINDINGS

Forest Conservation Plan Variance

Forest Conservation Variance Section 22A-12(b) (3) of the County Code requires applicants to identify certain trees, shrubs, plants, and specific areas as priority for retention and protection (“Protected Trees”). This section requires those areas to be left in an undisturbed condition unless the applicant obtains a variance in accordance with Chapter 22A-21 of the County code. More specifically the vegetation to remain undisturbed includes:

- A. *Trees, shrubs, or plants determined to be rare, threatened, or endangered under:*
 - (1) *The federal Endangered Species Act of 1973,*
 - (2) *The Maryland Nongame and Endangered Species Conservation Act, Natural Resources Article, §§10-2A-01—10-2A-09, Annotated Code of Maryland, and*
 - (3) *COMAR 08.03.08;*
- B. *Trees that:*
 - (1) *Are part of an historic site,*
 - (2) *Are associated with an historic structure, or*
 - (3) *Have been designated by the State or the Department as a national, State, or county champion tree; and*
- C. *Any tree having a diameter measured at 4.5 feet above the ground of:*
 - (1) *30 inches or more, or*
 - (2) *75 percent or more of the diameter, measured at 4.5 feet above the ground, of the current State champion tree of that species as designated by the Department of Natural Resources.*

Unwarranted Hardship Basis

There are eleven (11) Protected Trees in the project area that will be impacted, two of which will need to be removed. All of these trees are located along the perimeter of the existing school compound. Redevelopment of the already developed school site, together with slight encroachment into the perimeter forest area, creates the impact to the trees. Staff has reviewed the Applicant’s justification and, based on the existing conditions of the property, finds that there would be an unwarranted hardship if a variance were not considered as described in the following paragraphs.

Variance Findings

The Planning Board must make findings that the Applicant has met all requirements of this Chapter 22A-21 before granting the variance. Staff has made the following determination on the approval of the variance:

- 1. Will not confer on the Applicant a special privilege that would be denied to other applicants;

Granting the variance will not confer a special privilege on the Applicant as disturbance and removal of trees are due to redevelopment of the existing school and the placement of new playing fields that extend into the existing forest perimeter. Granting a variance request to allow land disturbance within this planned area is not unique to this applicant.

- 2. Is not based on conditions or circumstances which are the result of the actions by the Applicant;

The Applicant has prepared and submitted plans which meet all applicable master plan, and forest conservation requirements. The requested variance is based upon existing site conditions, including the number and locations of the large trees.

- 3. Is not based on a condition relating to land or building use, either permitted or non-conforming, on a neighboring property;

The requested variance is a result of the proposed development and not a result of land or building use on a neighboring property.

4. Will not violate State water quality standards or cause measurable degradation in water quality.

A Stormwater Management Concept Plan has been accepted by the MCDPS – Stormwater Management Section. In accordance with that approval, the concept design will maintain appropriate water quality standards.

Mitigation for Trees Subject to the Variance Provisions – Two (2) trees are proposed for removal in this variance request. The applicant proposes that replacement for these trees occur at a ratio of approximately one inch DBH for every four inches DBH removed. Thirteen (13) three-inch trees will be planted in the area of the parking lot.

County Arborist’s Recommendation on the Variance

In accordance with Montgomery County Code Section 22A-21(c), the Planning Department is required to refer a copy of the variance request to the County Arborist in the Montgomery County Department of Environmental Protection for a recommendation prior to acting on the request. The request was forwarded to the County Arborist and received her response and recommendations on January 18, 2013. She recommended the variance be approved with mitigation.

CONCLUSION

Staff recommends that the variance be granted and finds that the Final Forest Conservation Plan meets all applicable requirements of Chapter 22A of the County Code.

B. MANDATORY REFERRAL NO. MR2013016: CANDLEWOOD ELEMENTARY SCHOOL MODERNIZATION

STAFF RECOMMENDATION

APPROVAL to transmit the following comment to Montgomery County Public Schools:

- A Mandatory Referral for further improvements to the school must include a traffic study, if those improvements increase enrollment capacity beyond 740 students.

ANALYSIS AND FINDINGS

Master Plan

Candlewood Elementary School is located in the Upper Rock Creek Planning Area and is in the Magruder Cluster. The 2004 Upper Rock Creek Area Master Plan did not recommend additional school sites in the planning area, but noted that funds could be set aside in the Capital Improvements Program (CIP) for school modernizations, expansions or construction. The Plan supported the goals and objectives of the CIP. Maintaining the existing low-density character of this part of the County's Residential Wedge is an important objective of the Plan, and attractive, modern and environmentally sustainable school buildings contribute to that residential character. The Plan also recommends improved pedestrian access to community facilities. An existing sidewalk network serves the streets immediately around the school, but open section design on other streets does not provide space for sidewalks.

The school project furthers the goals and objectives of the master plan.

Development Standards

Candlewood Elementary School is located in the R-200 Zone. The Zoning Ordinance sets out a series of development standards for buildings located in the zone. The accompanying table lists each applicable standard and the relevant section of the ordinance, shows the requirement in the R-200 Zone for that standard and finally indicates how the project complies with that standard.

Data Table: Standards in the R-200 Zone

Development Standard	Ordinance Section	Required	Provided
Minimum Tract Area	59-C-1.321(a)	unspecified	513,469 sf (11.78 acres)
Maximum Density of Development	59-C-1.321(b)	unspecified	not applicable
Minimum Net Lot Area	59-C-1.322(a)	20,000 sf	513,469 sf (11.78 acres)
Minimum Lot Width	59-C-1.322(b)	100 feet	768 feet
Minimum Setback from Street	59-C-1.323(a)	40 feet	90 feet
Minimum Side Yard	59-C-1.323(b)(1)	12 feet	21 feet
Sum of Both Sides	59-C-1.323(b)(2)	25 feet	247 feet
Minimum Rear Yard	59-C-1.323(b)(2)	30 feet	44 feet
Maximum Building Height	59-C-1.327	45 feet	34 feet
Maximum Lot Coverage	59-C-1.328	25 percent	12.6 percent
Parking and Loading			
Minimum Setback from Street	59-E-2.81(a)	40 feet	41 feet
Minimum Side Yard	59-E-2.81(a)	12 feet	30 feet
Minimum Rear Yard	59-E-2.81(a)	30 feet	132 feet
Landscape Strip (to ROW)	59-E-2.71	10 feet	34 feet
Landscape Strip (Perimeter)	59-E-2.72	4 feet	20 feet
Internal Landscaping	59-E-2.73	5 percent	18 percent
Number of Spaces	59-E-3.7	unspecified for public schools	86

Environmental Issues

MCPS has designed a school that can be certified for a silver or higher rating by the United States Green Building Council through its LEED certification program. Initiatives in support of LEED certification include:

- Preserving vegetated open space to protect nearby ecosystems;
- Combining reflective roof surfaces and “green” vegetated roof areas to reduce heat island effects inside the school;
- Managing stormwater to reduce the quantity of stormwater runoff and improve its quality;
- Maximizing the amount of natural sunlight that reaches classrooms;
- Maximizing the efficiency of the building by using varying technologies in lighting, heating, ventilation and air conditioning, including geothermal heating and cooling systems, low flow plumbing fixtures and occupant-controlled lighting;
- Placing bike racks and preferred parking for energy efficient vehicles/carpools to encourage alternate forms of transportation.

The project has received approval of its stormwater management concept. Stormwater systems have employed Environmental Site Design techniques, including green roofs, microbioretention facilities and bioswales , that will capture and treat average rainfalls. When storms create runoff that exceeds the capacity of these facilities, an on-site storm drain system will provide safe conveyance to existing public storm drains. When the neighborhood was developed, a local pond on Leopold Terrace was designed to accommodate a portion of the school’s runoff. Half of the school’s runoff will flow through the existing system to the Leopold Drive pond. The remainder will flow through a new storm drain down the slope to Redland Road.

This project is subject to the county's Forest Conservation Laws. MCPS has submitted a Forest Conservation Plan for the property that is subject to a regulatory review and a separate approval by the Planning Board. The review and staff recommendation for the Forest Conservation Plan and the Mandatory Referral are included in this staff report.

Transportation

Candlewood Elementary School is located in the interior of the Candlewood Park neighborhood. Osprey Drive is a secondary residential street with a 60-foot right-of-way, and the school is located on a cul-de-sac. The existing single entrance is located about 130 feet from the cul-de-sac; the proposal includes two additional entrances that will serve the new, separated bus loop. Sidewalks serve Osprey Lane and adjoining streets and MCPS intends to build lead-in sidewalks to reach school entrances.

Separating the school bus loop from parking areas and student drop-off lanes improves safety by eliminating conflicts between cars, buses and pedestrians around the school entrance. The bus loop uses the two new entrances and will be one-way in a counter-clockwise direction. Parking and student drop-off areas are northwest of the bus loop and are reached from the Osprey Drive cul-de-sac. Students who are dropped off can walk to the school entrance without crossing a drive aisle. This circulation system is safe and efficient for both vehicles and pedestrians.

Existing Local Area Transportation Review guidelines state that school modernization projects need not submit full traffic studies for analysis. The MCPS traffic study concludes that traffic capacity at nearby intersections will not exceed congestion standards, even should the school reach its core capacity of 740 students. If MCPS decides to expand Candlewood beyond 740 students, staff recommends that a traffic study be done.

Landscape and Lighting

The landscape plan for the new school focuses on two areas: the parking and student drop off areas at the front of the school along Osprey Drive, and the area between the school and the adjacent homes to the south. Both areas feature a mix of deciduous and evergreen trees, evergreen and deciduous shrubs and groundcovers. The trees will help mask the parking and loading facilities from homes across Osprey Drive as well as providing cover for the biofiltration elements of the stormwater management system. Along the southern boundary, existing trees will be augmented by new plantings that will enhance the natural boundary between the school and its neighbors. In addition, an aluminum picket fence will divide the loading area from the boundary landscaping. The fence will also separate the school's play areas from the wooded slope to Redland Road and set off the playing fields.

Lighting for the property will be concentrated in the parking and loading area; only two lights are shown on the side of the school nearest residences, and they will be sized and oriented to produce no glare toward adjoining houses. Lights for the parking and loading areas will be similarly oriented and sized; no glare will be produced toward houses across Osprey Drive.

OUTREACH

MCPS held four community meetings between October and December 2011, to discuss its schematic design with interested teachers, parents and local residents. These sessions outlined the project schedule, including relocation plans, design details, vehicular and circulation plans, landscaping and other issues. MCPS also met with Planning Department staff in April 2012, prior to finalizing its plans.

Planning staff notified adjacent residents, community meeting participants and local civic associations of the proposal and the Mandatory Referral review, inviting their comments. No formal correspondence on the project had been received as this planning staff finalized this memorandum.

CONCLUSION

The proposed modernization of Candlewood Elementary School generally conforms to the goals, objectives and recommendations of the 2004 Upper Rock Creek Area Master Plan. The project meets the applicable development standards of the R-200 Zone, and its LEED certification initiatives and other environmental design techniques create a sustainable school building. Circulation for both vehicles and pedestrians is safe and adequate. Proposed landscaping will provide satisfactory screening from nearby homes and proposed lighting is not intrusive. Planning staff recommends that the Mandatory Referral be approved, with the condition that a new traffic study be completed if MCPS decides to expand the school beyond 740 students.

Attachments:

- A. FCA Variance
- B. Tree Variance
- C. Proposed Site Plan
- D. Proposed Elevations



DEPARTMENT OF ENVIRONMENTAL PROTECTION

Isiah Leggett
County Executive

Robert G. Hoyt
Director

January 18, 2013

Françoise Carrier, Chair
Montgomery County Planning Board
Maryland National Capital Park & Planning Commission
8787 Georgia Avenue
Silver Spring, Maryland 20910

RE: Candlewood Elementary School, MR 2013016, NRI/FSD application accepted on 6/10/2011

Dear Ms. Carrier:

The County Attorney's Office has advised that Montgomery County Code Section 22A-12(b)(3) applies to any application required under Chapter 22A submitted after October 1, 2009. Accordingly, given that the application for the above referenced request was submitted after that date and must comply with Chapter 22A, and the Montgomery County Planning Department ("Planning Department") has completed all review required under applicable law, I am providing the following recommendation pertaining to this request for a variance.

Section 22A-21(d) of the Forest Conservation Law states that a variance must not be granted if granting the request:

1. Will confer on the applicant a special privilege that would be denied to other applicants;
2. Is based on conditions or circumstances which are the result of the actions by the applicant;
3. Arises from a condition relating to land or building use, either permitted or nonconforming, on a neighboring property; or
4. Will violate State water quality standards or cause measurable degradation in water quality.

Applying the above conditions to the plan submitted by the applicant, I make the following findings as the result of my review:

1. The granting of a variance in this case would not confer a special privilege on this applicant that would be denied other applicants as long as the same criteria are applied in each case. Therefore, the variance can be granted under this criterion.
2. Based on a discussion on March 19, 2010 between representatives of the County, the Planning Department, and the Maryland Department of Natural Resources Forest Service, the disturbance of trees, or other vegetation, as a result of development activity is not, in and of itself, is not interpreted as a condition or circumstance that is the result of the actions by the applicant. Therefore, the variance can be granted under this criterion, as long as appropriate mitigation is provided for the resources disturbed.

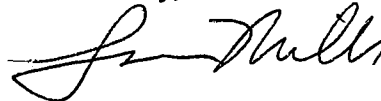
3. The disturbance of trees, or other vegetation, by the applicant does not arise from a condition relating to land or building use, either permitted or nonconforming, on a neighboring property. Therefore, the variance can be granted under this criterion.
4. The disturbance of trees, or other vegetation, by the applicant will not result in a violation of State water quality standards or cause measurable degradation in water quality. Therefore, the variance can be granted under this criterion.

Therefore, I recommend a finding by the Planning Board that this applicant qualifies for a variance conditioned upon the applicant mitigating for the loss of resources due to removal or disturbance to trees, and other vegetation, subject to the law based on the limits of disturbance (LOD) recommended during the review by the Planning Department. In the case of removal, the entire area of the critical root zone (CRZ) should be included in mitigation calculations regardless of the location of the CRZ (i.e., even that portion of the CRZ located on an adjacent property). When trees are disturbed, any area within the CRZ where the roots are severed, compacted, etc., such that the roots are not functioning as they were before the disturbance must be mitigated. Exceptions should not be allowed for trees in poor or hazardous condition because the loss of CRZ eliminates the future potential of the area to support a tree or provide stormwater management. Tree protection techniques implemented according to industry standards, such as trimming branches or installing temporary mulch mats to limit soil compaction during construction without permanently reducing the critical root zone, are acceptable mitigation to limit disturbance. Techniques such as root pruning should be used to improve survival rates of impacted trees but they should not be considered mitigation for the permanent loss of critical root zone. I recommend requiring mitigation based on the number of square feet of the critical root zone lost or disturbed. The mitigation can be met using any currently acceptable method under Chapter 22A of the Montgomery County Code.

In the event that revisions to the LOD are approved by the Planning Department, the mitigation requirements outlined above should apply to the removal or disturbance to the CRZ of all trees subject to the law as a result of the revised LOD.

If you have any questions, please do not hesitate to contact me directly.

Sincerely,



Laura Miller
County Arborist

cc: Robert Hoyt, Director
Walter Wilson, Associate County Attorney
Mark Pfefferle, Chief

October 23, 2012

Mr. Mark Pfefferle
Environmental Planning Division
Maryland National Capital Park and Planning Commission (M-NCPPC)
8787 Georgia Avenue
Silver Spring, Maryland 20910

Re: Candlewood Elementary School
Request for Specimen Tree Variance
MNCPPC NRI# 420112120

Dear Mr. Pfefferle:

On behalf of the Montgomery County Public Schools and pursuant to Section 22A-21 *Variance provisions* of the Montgomery County Forest Conservation Ordinance and recent revisions to the State Forest Conservation Law enacted by S.B. 666, we are writing to request a variance(s) to allow impacts to or the removal of the following trees identified on the approved Natural Resource Inventory/Forest Stand Delineation for the above-named County construction project:

Project Description:

The existing Candlewood Elementary School is located at 7210 Osprey Drive in Derwood, Montgomery County, Maryland. The site is approximately 11.79 acres and is comprised of one parcel owned by The Board of Education. The site currently hosts the existing school, play areas and associated parking. The remainder of the site is wooded, and there is a stream offsite with a buffer that encroaches onto the subject property. The site is surrounded by residential properties and bordered by Redland Road along the northwest property boundary.

Proposed construction consists of a new school, improved circulation and parking, additional play areas and updates for ADA accessibility.

Requirements for Justification of Variance:

Section 22A-21(b) *Application requirements* states that the applicant must:

- (1) Describe the special conditions peculiar to the property which would cause the unwarranted hardship;
- (2) Describe how enforcement of these rules will deprive the landowner of rights commonly enjoyed by others in similar areas;

- (3) Verify that State water quality standards will not be violated or that a measurable degradation in water quality will not occur as a result of the granting of the variance; and
- (4) Provide any other information appropriate to support the request.

Justification of Variance:

- (1) Describe the special conditions peculiar to the property which would cause the unwarranted hardship;

Response: As part of the program, the task was to provide the community with an updated elementary school facility that can accommodate a growing number of students as well as a modernized, safe and healthy environment for young students to learn. Efforts have been made to impact as little of the forest on site as possible because forest is a highly valuable resource.

This buildable site area is restricted by steep slopes and a stream buffer. The buildable area is approximately 8-9 acres, which is minimal for an elementary school. The entire site is being lowered to provide ADA access from the street. The majority of impacts to specimen trees is due to the wall built to improve access to the site.

This work will require disturbance of the root zones of a total of eleven (11) specimen trees. Two (2) of the eleven (11) impacted trees will be required to be removed. It should be noted that the trees which require removal are primarily part of the existing forest on site. If we are not allowed to impact or remove these trees, there would not be adequate room for the development program.

If MCPS is not allowed to impact the trees, the school will not be able to be update due to the close proximity of specimen trees to the school building. As such, this would cause an *unwarranted hardship* to the community that it serves.

- (2) Describe how enforcement of these rules will deprive the landowner of rights commonly enjoyed by others in similar areas;

Response: If the County were required to keep all improvements outside the root zones of the specimen trees, the building would fail to be rebuilt due to the close proximity of specimen trees.

- (3) Verify that State water quality standards will not be violated or that a measurable degradation in water quality will not occur as a result of the granting of the variance;

Response: Tree removals have been minimized by redesign of the layout ensuring the preservation of as many specimen trees as possible. In addition, this property will be developed in accordance with the latest Maryland Department of the Environment criteria for stormwater management. This includes Environmental Site Design to provide for protecting the natural resources to the Maximum Extent Practicable. This includes limiting the impervious areas and providing on-site stormwater management systems. A Stormwater Management Concept is currently under review by the Montgomery County Department of Permitting Services to ensure that this criterion is enforced. Therefore, the proposed activity will not degrade the water quality of the downstream areas and will not result in *measurable degradation in water quality*.

- (4) Provide any other information appropriate to support the request.

Response: The retained forest onsite meets the afforestation/reforestation requirements with no additional planting. However, the 0.20 acre reforestation is proposed to further vegetate the existing stream buffer onsite. The stream buffer reforestation planned for the site is meant to enhance the water quality of the forest and provide a greater environmental and educational quality to the school after its modernization.

As further basis for its variance request, the applicant can demonstrate that it meets the Section 22A-21(d) *Minimum criteria*, which states that a variance must not be granted if granting the request:

- (1) Will confer on the applicant a special privilege that would be denied to other applicants;

Response: The Candlewood Elementary School Modernization is in conformance with the County's General plan. As such, this is not a *special privilege* to be conferred on the applicant.

- (2) Is based on conditions or circumstances which are the result of the actions by the applicant;

Response: Montgomery County Public Schools has taken no *actions leading to the conditions or circumstances* that are the subject of this variance request.

- (3) Arises from a condition relating to land or building use, either permitted or nonconforming, on a neighboring property; or

Response: The surrounding land uses (residences) do not have any inherent characteristics or conditions that have created or contributed to this particular need for a variance.

- (4) Will violate State water quality standards or cause measurable degradation in water quality.

Response: Granting this variance request will not violate State water quality standards or cause measurable degradation in water quality.

Specimen Impacts Summary 30+							
Tree #	Species (Scientific Name)	Species (Common Name)	D.B.H (inches)	Tree Condition	Comments	% CRZ Impacts	Disposition
1	QUERCUS PALUSTRIS	PIN OAK	39	FAIR	OFFSITE/SWOLLEN TRUNK/ DEAD&BROKEN LIMBS/ <u>POTENTIAL REMOVAL WITH OWNER APPROVAL</u>	25%	SAVE & PROTECT
9	QUERCUS PALUSTRIS	PIN OAK	30	FAIR	OFFSITE/BROKEN LIMBS/TOP LEAN/ <u>POTENTIAL REMOVAL WITH OWNER APPROVAL</u>	10%	SAVE & PROTECT
13	QUERCUS PALUSTRIS	PIN OAK	44	FAIR	SPLITS AT 8'/EXPOSED&DAMAGED ROOTS/INCLUDED BARK/BROKEN LIMBS	100%	TO BE REMOVED
15	QUERCUS PALUSTRIS	PIN OAK	34	FAIR	CUT LEADERS/DEAN&BROKEN LIMBS	11%	SAVE & PROTECT
20	QUERCUS PALUSTRIS	PIN OAK	38	FAIR	SPLITS AT 6'/INCLUDED BARK/BROKEN LIMBS	20%	SAVE & PROTECT
22	QUERCUS PALUSTRIS	PIN OAK	49	FAIR	CO-OWNED/BROKEN LEADERS& LIMBS/CONKS	7%	SAVE & PROTECT
23	QUERCUS PALUSTRIS	PIN OAK	32	GOOD	EXPOSED&DAMAGED ROOTS/DEAD& BROKEN LIMBS	15%	SAVE & PROTECT
26	QUERCUS PALUSTRIS	PIN OAK	40	FAIR	GIRDLED ROOTS/VINES/WATER SPROUTS/DEAD&BROKEN LIMBS	12%	SAVE & PROTECT
27	QUERCUS PALUSTRIS	PIN OAK	33	GOOD	EXPOSED&DAMAGED ROOTS/DEAD& BROKEN LIMBS	37%	TO BE REMOVED
34	QUERCUS PALUSTRIS	PIN OAK	34	FAIR	CONKS/BROKEN LIMBS	9%	SAVE & PROTECT
64	QUERCUS PALUSTRIS	PIN OAK	41	FAIR	EXPOSED ROOTS/FUNGUS/ DEAD&BROKEN LIMBS	7%	SAVE & PROTECT

The following adjacent specimen trees will be impacted by construction and require specific treatment to enhance survivability based on conditions noted during an updated site visit on August 17, 2012. Some of the impacted trees designated to be saved will require prolonged monitoring due to current health conditions and may require future removal if the condition of the tree begins to decline:

Tree #1: Work performed in the root zone of the tree calls for remediation of the damaged roots to be performed by a licensed tree expert.

- Roots are to be properly pruned at the point of construction damage.
- Mycorrhizae treatment is to be applied to the damaged roots.
- Vertical mulching is to take place in the area of the affected roots.

Tree #9: Work performed in the root zone of the tree calls for remediation of the damaged roots to be performed by a licensed tree expert.

- Roots are to be properly pruned at the point of construction damage.
- Mycorrhizae treatment is to be applied to the damaged roots.
- Vertical mulching is to take place in the area of the affected roots.

Conclusion:

For the above reasons, the applicant respectfully requests that the Planning Board APPROVE its request for a variance from the provisions of Section 22A of the Montgomery County Forest Conservation Ordinance, and thereby, GRANTS permission to impact/remove the specimen trees in order to allow the construction of this vital project.

The recommendations in this report are based on tree conditions noted at the time the NRI/FSD field work was conducted. Tree condition can be influenced by many environmental factors, such as wind, ice and heavy snow, drought conditions, heavy rainfall, rapid or prolonged freezing temperatures, and insect/disease infestation. Therefore, tree conditions are subject to change without notice.

The site plans and plotting of tree locations were furnished for the purpose of creating a detailed Tree Protection Plan. All information is true and accurate to the best of my knowledge and experience. All conclusions are based on professional opinion and were not influenced by any other party.

Sincerely,

A handwritten signature in black ink, appearing to read "M. Norton", written in a cursive style.

Michael Norton

Copy to:

Mr. Rakesh Bagai, MCPS

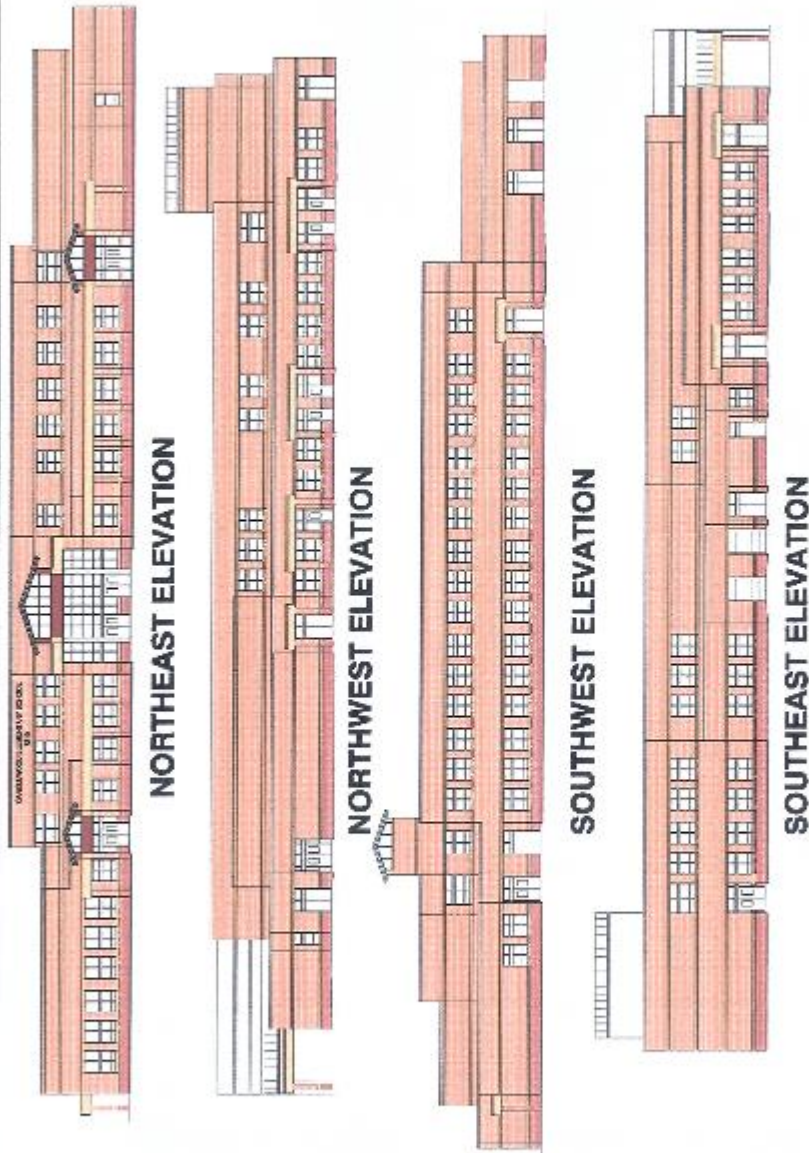
Mr. David Delmar, Delmar Architects

Proposed Site Plan



Candlewood Elementary School Modernization
Delmar Architects, P.A.

Proposed Elevations



Candlewood Elementary School Modernization
Delmar Architects, P.A.