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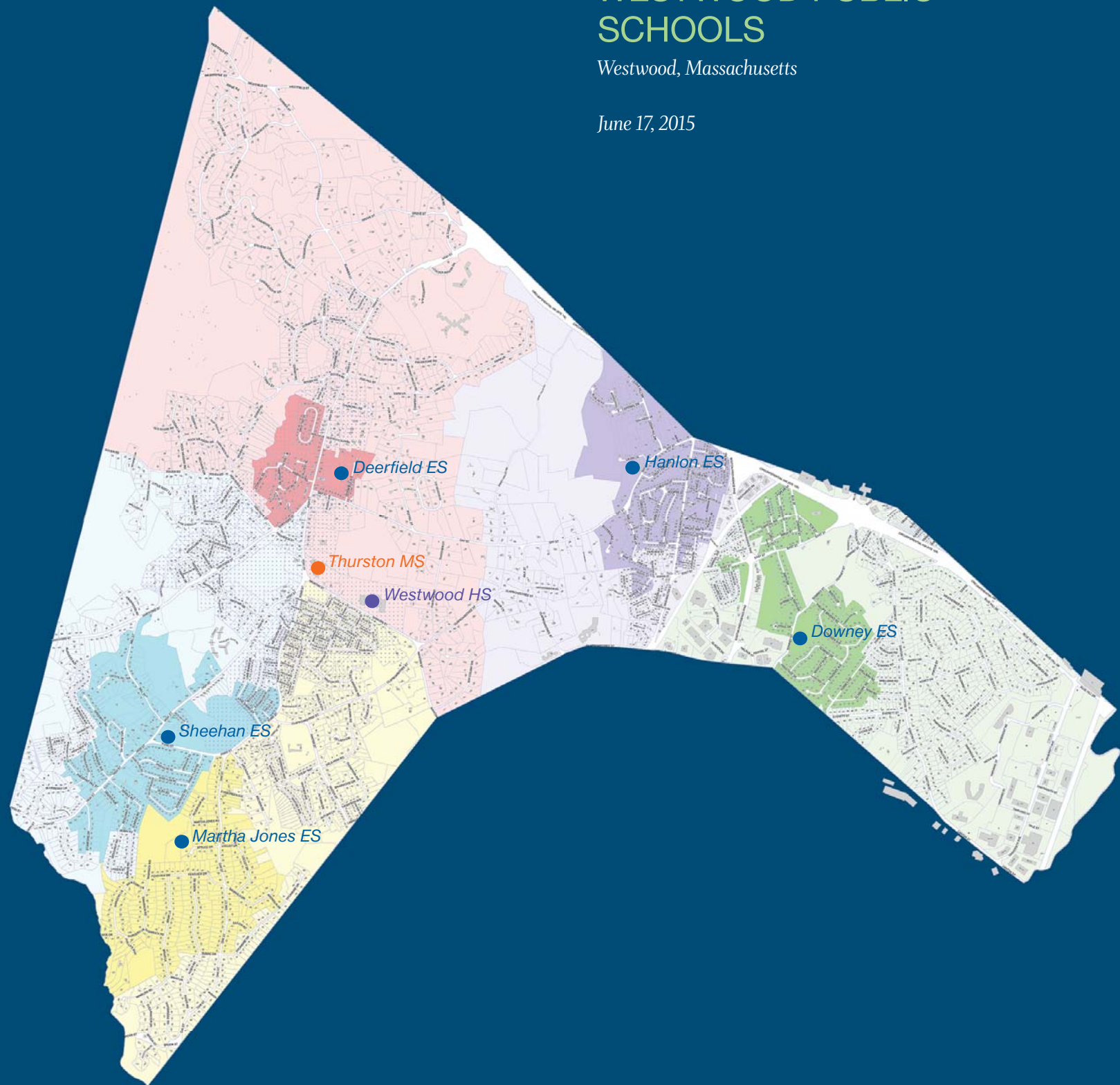
Phase V - Master Plan

Capital Needs Study

WESTWOOD PUBLIC SCHOOLS

Westwood, Massachusetts

June 17, 2015





Phase V - Master Plan
Capital Needs Study
Westwood Public Schools

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Executive Summary

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Executive Summary

1.1

Acknowledgements

Symmes Maini & McKee Associates (SMMA) would like to acknowledge the participation and guidance provided by the district administration, School Committee, and the teachers and staff of the District.

District Administration

Westwood Public Schools Administration
John Antonucci, Superintendent of Schools
Heath Petracca, Director of Business and Finance
Ken Aries, Director of Operations
Allison Borchers, Interim Assistant Superintendent

School Committee

Brian T. Kelly
Charles Donahue
Carol Lewis
John J. O'Brien, Jr.
Josepha A. Jowdy

1.2 Introduction

This report, Phase V, is the fifth and final component of the Capital Needs Study for the Westwood Public Schools. The Phase II report, Demographic Analysis, and the Phase III report, Facilities Assessment are included in the Appendix portion of this document. Phases II and III were completed in the Fall of 2014. Phase IV, Task 1- meeting with school administration and principals to review programming and educational goals was conducted in a series of meetings in November 2014. Minutes from these meetings are also included in the Appendix portion of this document.

Goals

Phase V of this Capital Needs Study sets out to develop strategies for addressing the code and system upgrades required at the elementary schools and the middle school as well as exploring consolidation options that will address the slow decrease in enrollment projected over the next ten years.

Based on the educational, enrollment, and infrastructure needs, conceptual options were developed for three levels of renovations:

Status Quo: Renovations as required for code upgrades and necessary infrastructure and system upgrades

Satisfy Educational Program: Major renovations and/or additions, in addition to systems/code upgrades noted above, as required to satisfy educational programming needs

Consolidation: Major renovations, additions, and new construction, in addition to systems/code upgrades noted above, as required to satisfy educational programming needs

This Capital Needs Study is not an implementation plan. The ideas will require detailed programming with administration, school staff and special program directors that lead to schematic design. These next steps will provide more detailed information to help the Town make decisions on what, where and when to build. Multiple schedule options are provided to assist in developing “what if” timing strategies.

Next Steps following the Study:

- Appropriate funds for further study of the Hanlon site for a potential new elementary school option.
- Develop a strategy for preparing the SOIs (Statement of Interests) to request eligibility into the MSBA (Massachusetts School Building Authority) grant programs.

1.3 Background/Enrollment

Enrollment projections were a key element and point of discussion of the previous Master Plan study prepared by SMMA in 2007 in response to concern of actual population increases and potential future growth from Westwood's University Station development.

The Demographic Study Report, prepared by Cropper GIS Consulting LLC, as part of Phase II of this Capital Needs Study, forecasts that elementary enrollment is expected to decline by 193 students by FY2025. Middle school enrollment is projected the decline by 100 students by FY2025 whereas high school enrollment will experience a slight increase through FY2021 to over 1000 students before declining back to 952 by FY2025. The full Demographic Study is included in the Appendix of this Report.

The table below summarizes the current and projected enrollments at FY2020 as well at FY2025.

Grade Group	Current Enrollment FY 2014-2015	Projected Enrollment FY 2019-2020	Projected Enrollment FY 2024-2025	Projected Enrollment Decline	Design Target Enrollment
Pre K	47	47	47	0	47
Elementary (K-5)	1391	1273	1198	193	1263
Middle School	798	702	698	100	725
High School	971	1032	952	19	-
Total System	3207	3054	2895	312	

Since this Capital Needs Study needs to conclude with recommendations for potential new construction and or redistricting options certain assumptions need to be established in regards to enrollment. These assumed enrollment numbers are listed in the far right column above entitled Design Target Enrollment.

Depending on the rate of decline and assuming that any building renovation, addition, or new construction would not break ground until at least FY2017 a target enrollment was determined to allow for the projected decline in enrollment while providing flexibility if the rate of decline is not as steady as predicted.

1.4

Grade Configuration Discussion

Westwood currently has a grade configuration as follows: K-5, 6-8 and 9-12 with PreK housed at the High School. Many people may think that maintaining the current structure is a given, but a review and discussion of this issue is a good exercise to explore as part of the master planning process. The grade structure must be first and foremost educationally sound. All or most of the grade structures discussed below can be found in school districts across the Commonwealth and elsewhere.

Pros and Cons of different grade structures can include:

- Transitions to another school as part of a different Grade structure can be viewed as disruptive for certain students.
- Adding transitions can in some cases complicate bussing and increase bussing costs.
- Aggregating certain grades together can improve communication between age related teachers, e.g. PreK and K.
- Changing grade structures can in some cases make building use more efficient.
- Redistricting required as a result of some grade restructuring may impact the current “neighborhood school” mentality that currently exists within the Elementary School districts.

Grade Configuration Options

In addition to the current grade configuration (K-5, 6-8 and 9-12/PreK), 3 additional grade configuration options were explored. These were discussed at a preliminary meeting with school administration and select School Committee members. The options are graphically expressed in [Exhibit 1.1](#).

- Option 1: PreK, K-5, 6-8, 9-12: Maintains the current grade configuration; however, redistricting (all districts) would create an equilibrium for class sizes at the elementary school levels.
- Option 2: PreK, K-2, 3-5, 6-8, 9-12 was deleted after preliminary discussions with school administration and select school committee members. This option added a student transition which is felt to be adverse to the districts goals.
- Option 3: PreK-K, 1-5, 6-8, 9-12: A PreK-K school would remove Kindergarten students from 4 of the 5 elementary school districts and remove the PreK classes from the High School into the existing Hanlon school. Redistricting would also be required for all the districts to create parity among the remaining 4 elementary schools for grades 1-5. By removing PreK from the High School, this space could be reclaimed for High School use which would alleviate some of the pressure from current enrollment increases.
- Option 4: PreK-5, 6-8, 9-12: This option was added for the Consolidation options.

Class Sizes

Of particular concern with the current grade configuration and district boundaries are the varying class sizes at the elementary school level and perceived lack of parity in regards to class sizes from one district to another.

For purposes of this study, in those elementary school options that involve redistricting, typical class sizes have been based on the standards set forth by the MSBA:

- Kindergarten: 18 students per class
- Grades 1 through 5: 23 students per class

Current														Comments
PreK	K	1	2	3	4	5	6	7	8	9	10	11	12	Status Quo, Most people are likely comfortable with this configuration
														Comments
Option 1: Redistricting														
PreK	K	1	2	3	4	5	6	7	8	9	10	11	12	Allows for parity among elementary schools
Option 2: Redistricting														
PreK	K	1	2	3	4	5	6	7	8	9	10	11	12	
Option 3: Redistricting														
PreK	K	1	2	3	4	5	6	7	8	9	10	11	12	Not recommended- not all CRs in any of the buildings are KG size (and have toilet rooms)
Option 4: Redistricting														
PreK	K	1	2	3	4	5	6	7	8	9	10	11	12	



Exhibit 1.1

Current														Comments
PreK	K	1	2	3	4	5	6	7	8	9	10	11	12	Status Quo, Most people are likely comfortable with this configuration
														Comments
Option 1: Redistricting														
PreK	K	1	2	3	4	5	6	7	8	9	10	11	12	Allows for parity among elementary schools
Option 2: PreK, K-2, 3-5, 6-8, 9-12-- DELETED														
Option 3: Redistricting														
PreK	K	1	2	3	4	5	6	7	8	9	10	11	12	Not recommended- not all CRs in any of the buildings are KG size (and have toilet rooms)
Option 4: Redistricting														
PreK	K	1	2	3	4	5	6	7	8	9	10	11	12	



Exhibit 1.2

1.5 Educational Program Discussion

Existing Building Capacities

SMMA reviewed the current number of existing classrooms and calculated the existing capacity at each school based on the guidelines and typical class sizes set forth by the MSBA for new construction projects. Required number of Art, Music and full-size SPED classroom spaces are accounted for in these existing capacity calculations even though these particular spaces are shared or housed in repurposed spaces currently. (Deerfield, Sheehan and Hanlon)

Detailed summaries of existing spaces as compared the MSBA standards are included in Appendix 6.4 of this Report. A summary of this information is found in the table below:

	Current 2014-2015 Population <i>(% Building Usage)</i>	2024/2025 Forecasted Enrollment <i>Cropper Report (% Building Usage)</i>	Design Enrollment <i>(% Building Usage)</i>	Existing GSF (including Modulars)	Existing Building Capacity <i>*Based on current MSBA standards 18 students (K) 23 students (1-5)</i>
Deerfield ES	247 <i>(113%)</i>	223 <i>(102%)</i>	229 <i>(105%)</i>	35,078 <i>(2 Sections)</i>	218
Sheehan ES	373 <i>(105%)</i>	292 <i>(82%)</i>	318 <i>(89%)</i>	49,586 <i>(3 Sections)</i>	356
Hanlon ES	226 <i>(104%)</i>	219 <i>(100%)</i>	224 <i>(103%)</i>	34,280 <i>(2 Sections) Extended Day</i>	218
Martha Jones ES	295 <i>(89%)</i>	249 <i>(75%)</i>	264 <i>(79%)</i>	50,796 <i>(2+ Sections)</i>	333
Downey ES	250 <i>(75%)</i>	215 <i>(65%)</i>	228 <i>(68%)</i>	50,692 <i>(2+ Sections)</i>	333
Total for District (K-5)	1,391 <i>(97%)</i>	1,198 <i>(85%)</i>	1,263 <i>(89%)</i>		1,458
Thurston MS	798 <i>(105%)</i>	698 <i>(92%)</i>	725 <i>(96%)</i>	92,278	759

Program Deficiencies

In addition to the calculated program deficiencies of the physical space as defined in the detailed MSBA space summaries (Appendix 6.4), various meetings were conducted by SMMA with school principals, administration and key staff members at each school to determine what the educational goals are and how the existing facilities meet and/or hinder the delivery of these educational goals. Through these discussions there were various patterns that began to emerge. Notes generated from these meetings are located in Appendix 6.3 of this Report.

The following are some of the patterns that were noted:

- At Deerfield, Hanlon and Sheehan; in particular, specialty programs such as Art, Music, Literacy and Math Coach are either sharing spaces or utilizing spaces that were not intended for office or group instruction.
- There is a desire for more break-out spaces located in close proximity to classrooms for small group instruction and intervention services.
- The existing iPad/ laptop cart process that is employed at the Elementary School level is problematic.
- Handicap accessibility, specifically at Deerfield, Hanlon and Sheehan is an issue.
- There is a general lack of storage and custodial space at all schools.
- The Elementary grades would like SmartBoards while they are currently under-utilized at the High School level.
- HVAC Issues, specifically at Deerfield, Hanlon and Sheehan have a negative impact on learning.

Other Programs and Considerations

PreKindergarten (PreK)

PreKindergarten, hereafter referred to as PreK, is centralized in one program and is currently located at the High School. The options for this program are discussed in Section 2 of this Report.

Extended Day

Extended Day is a private after school program that serves Westwood students and families. It operates solely out of Hanlon Elementary school, located in the modular classroom addition.

District Wide Special Education Programs

In addition to the customary Special Education programs (SPED) located in each of the seven schools in the district, there are also district-wide programs housed at a few of the elementary school locations. These programs are described below. The options included in this report include some additional classrooms and areas to serve special education students. At the next level of programming and design, all special education requirements should be reviewed in detail, including all of the special education programs discussed.

- FOCUS: Currently located at Deerfield Elementary, the Focus program was created to accommodate severely physically handicapped students. There are three students from the PreK program enrolled in the Focus program.
- LBLD: Currently located at Sheehan Elementary, this program serves students with language based learning disabilities.
- PEER: Located at Downey Elementary, PEER serves students with autism spectrum disorder.
- STAR: Located at Downey Elementary, the STAR program services students with emotional and behavioral issues.
- WABA: Located at Downey Elementary, the WABA program serves students with autism spectrum disorder who require highly individualized services.

1.6 Facilities Assessment

The Elementary School Buildings and Sites included in the Facilities Assessment Study:

- Deerfield Elementary
- Sheehan Elementary
- Hanlon Elementary
- Downey Elementary
- Martha Jones Elementary
- Thurston Middle School

Westwood High School was not included in this Assessment due to being relatively new construction.

The full Facilities Assessment Report is included in Appendix 6.2 of this Report.

Deerfield Elementary School

Built in 1953 with modular classrooms added around 2008, Deerfield is structurally sound with masonry bearing walls and steel truss roof structure. The roof was recently replaced; however, all of the exterior windows except for the modulares are the original aluminum framed, single pane windows that are in need of replacement.

Although a chair lift was installed to access the lower Gymnasium in 2011, there are still various accessibility issues that exist within the building. Some of these issues include: insufficient accessible parking spaces, inaccessible building entry points, interior door clearance issues, and inaccessible toilet rooms. Due to the level of renovations required and the associated costs, the building will have to be made fully accessible in accordance with the State Building Code and MAAB (Massachusetts Architectural Access Board) regulations.

Except for recent replacement of one of the steam boilers and water heater, much of the plumbing and HVAC infrastructure in the 1953 portion of the building is original and nearing the end of its useful life.

Sheehan Elementary School

Built in 1948 with a sizeable addition constructed in 1967, Sheehan is structurally sound with masonry bearing walls and steel truss roof structure. The roof was recently replaced; however, all of the exterior windows are the original aluminum framed, single pane windows that are in need of replacement.

Some of these issues include: insufficient accessible parking spaces and building entry doors at classrooms, interior door clearance issues, inaccessible toilet rooms. Due to the level of renovations required and the associated costs, the building will have to be made fully accessible in accordance with the State Building Code and MAAB (Massachusetts Architectural Access Board) regulations.

Much of the existing plumbing and HVAC infrastructure and components are original and nearing the end of their useful life.

Hanlon Elementary School

Built in 1951 with modular classrooms added around 2004, Hanlon is structurally sound with masonry bearing walls and a wood framed roof structure. The roof is in poor condition and requires replacement. All of the windows except for the modulares are the original steel and wood framed, single pane windows that are in need of replacement as well.

Although a chair lift was installed to access the stage, there are still various accessibility issues that exist within the building. Some of these issues include: insufficient accessible parking spaces and building entry doors at classrooms, interior door clearance issues, and inaccessible toilet rooms.

Except for recent replacement of one of the steam boilers, much of the plumbing and HVAC infrastructure in the 1951 portion of the building is original and nearing the end of its useful life.

Downey Elementary School

Built in 1957 with a major addition and renovation completed in 2001, Downey is structurally sound with masonry bearing walls and a steel framed roof structure. The overall condition of the building is good.

Martha Jones Elementary School

Built in 1957 with a major addition and renovation completed in 2001, Martha Jones is structurally sound with a combination of concrete pan joist supported by concrete columns and steel framed structures. The overall condition of the building and its elements is good.

Thurston Middle School

The school facility consists of a multi-level school building constructed in 1939 and renovated and added to in stages with the most recent work done in 2009. The multiple additions to the school have not been consistent with the original design for the school and only addressed the functional and educational needs of the school.

1.7 Options Development

The Master Plan options were developed as part of a three tiered approach as defined by the District. The matrix illustrated in Exhibit 1.x provides a diagrammatic representation of the options that were explored in this Study.

The base options, defined as *Status Quo* investigates only necessary code and systems upgrades required.

The second tier, *Satisfy Educational Program*, is intended to match the number of classrooms and resulting student populations with the capacity of the core spaces and non-core academic spaces, such as: Gym, cafeteria, library, music and art, as well as properly provide for special education. Satisfying the educational program may have slightly different implications at each school.

Finally, the third tier, *Consolidate*, explores options for constructing a new elementary school by consolidating 2-3 of the existing elementary districts. Redistricting approaches were also explored in each of the consolidation options.

Each of these options are explored in depth in Section 2 of this Report.

Westwood School District Options Summary

Updated 4/28/2015
10 Year Capital Needs Plan

Legend		Elementary Schools			Middle School		High School		Grand Totals per Options		Potential
Status Quo	Necessary Code and System Upgrades Only Including: Accessibility Upgrades Building Code Compliance MEP Systems Upgrades as Rqd Window Replacement as Rqd	Elementary Schools			Middle School		High School		Grand Totals per Options		Potential
		Deerfield	Sheehan	Hanlon	Martha Jones	Downey	Thurston	Westwood HS	Project Costs	MSBA Reimbursement	
Satisfy Educational Program	Option A-1	Deerfield 229/218 (105%) 2 Sections K-5	Sheehan 318/356 (89%) 3 Sections K-5 Elevator	Hanlon 224/264 (85%) 2 Sections K-5	Martha Jones 264/333 (79%) 2 Sections K-5	Downey 228/333 (68%) 2 Sections K-5	Thurston 725/759 (95%)	Westwood HS 970	Option A-1 \$62,697,129	31% minimum base rate	Accelerated Repairs Boilers, Roof, Windows 31%
	Option B-1	Deerfield 189/218 (87%) 2 Sections K-5 Library, Music, Art	Sheehan 322/356 (90%) 3 Sections K-5 Elevator	Hanlon 224/264 (85%) 2 Sections K-5 Library, Music, Art	Martha Jones 294/333 (88%) 3 Sections K-5	Downey 273/310 (88%) 2 Sections K-5 Extended Day	Thurston 725/759 (95%)	Westwood HS 970	Option B-1 \$78,244,025	31%	Major Renovations Only 1 project
	Option B-3 <i>Redistricting</i> Relocate Extended Day Program	Deerfield 189/218 (87%) 2 Sections K-5 Library	Sheehan 322/356 (90%) 3 Sections K-5 Elevator	Hanlon 224/264 (85%) 2 Sections K-5 Library, Music, Art	Martha Jones 294/333 (88%) 3 Sections K-5	Downey 273/310 (88%) 2 Sections K-5 Extended Day	Thurston 725/759 (95%)	Westwood HS 970	Option B-3 \$77,641,005	31%	Major Renovations Only 1 project
Consolidate	Option C-1a Four Elementary Schools Sheehan and Deerfield Districts Combined Hanlon, M.L. Downey Districts remain as is	Deerfield	New Sheehan 590 Students 4 Sections K-5/Pre-K	Hanlon 224/264 (85%) 2 Sections K-5 Library, Music, Art	Martha Jones 264/333 (79%) 2 Sections K-5	Downey 228/333 (68%) 2 Sections K-5 San Grp Space	Thurston 725/759 (95%)	Westwood HS 970	Option C-1a \$89,733,336		\$43,400,836 \$32,413,550
	Option C-1d Three Elementary Schools Sheehan, Hanlon and Deerfield Districts Combined M.L. Downey Districts remain as is	Deerfield	Sheehan	New Hanlon 800 Students 6 Sections K-5/Pre-K	Martha Jones 264/333 (79%) 2 Sections K-5	Downey 228/333 (68%) 2 Sections K-5 San Grp Space	Thurston 725/759 (95%)	Westwood HS 970	Option C-1d \$91,114,486		\$75,814,386 \$30,739,486 \$43,480,288
	Option C-1e Three Elementary Schools Redistricting for Parity	Deerfield	Sheehan	New Hanlon 550 Students 4 Sections K-5/Pre-K	Martha Jones 373/396 (94%) 3 Sections K-5 San Grp Space 4 CR Addition	Downey 373/396 (94%) 3 Sections K-5 San Grp Space 4 CR Addition	Thurston 725/759 (95%)	Westwood HS 970	Option C-1e \$79,320,180		\$34,065,180 \$33,151,333 \$67,216,513

Proposed new Middle School on Existing Sheehan Site. No add'l land purchase required due to consolidation of Elm Schools. If additional land is available then a proposed new Middle School is feasible in all Options

The Deerfield site is not preferred for a new school option due to localized wetlands, site configuration, and phased construction (temporary modulars req)