

## V-B. Results of the Supply Issues Subcommittee

### 1. *Scope of Assignment*

The Supply Subcommittee was charged with examining the current space characteristics and facility utilization and evaluating potential future space and overall facility utilization in consideration of the quality of education provided. The committee developed the following sub-objectives:

1. Assess the efficiency of current space use within the existing facility.
2. Assess the feasibility of increasing Hillcrest's physical capacity.
3. Model the impact of different enrollment scenarios on the existing school facility.
4. Identify the trade-offs inherent in using the facility in different ways to meet enrollment needs. Consider whether moving from a K-8 model to a K-5 model would solve capacity problems.
5. Make a recommendation to the OUSD on Hillcrest's enrollment capacity.

### 2. *Methodology*

We developed a methodology that included the following steps:

1. Collect data on Hillcrest's outdoor and indoor space, including the playground, classrooms, and breakout rooms (such as the multipurpose room, library, computer room, and science lab).
2. Review space use plan created by Hillcrest staff for 2007-2008 school year.
3. Collect federal, state, OUSD, and other guidelines defining adequate space and space characteristics per student. These included:
  - **Teacher Contract Limit guidelines.** Defined in the current OAE/OUSD Agreement, Article 15: Class Size and Caseloads.<sup>9</sup>
  - **Class Size Reduction (CSR) provisions.** Defined in the California Code of Regulations (CCR), Title 5: Class Size Reduction Program.<sup>10</sup>
  - **School construction requirements.** Defined in the CCR, Title 5: School Facilities Construction.<sup>11</sup>
  - **Recommendations for designing ecologically and pedagogically sound schools.** Developed by the Collaborative for High Performance Schools (CHPS). In May 2007, OUSD pledged to meet CHPS recommendations.<sup>12</sup>
  - **Toilet requirements.** Defined in the California Department of Education (CDE) K-12 Toilet Requirement Summary.<sup>13</sup>

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9 "OAE/OUSD Agreement for the Period July 1 2005-June 30 2008," [webportal.ousd.k12.ca.us/docs/OEA%20Contract%2005-08%20-%20COMPLETE%20Contract.pdf](http://webportal.ousd.k12.ca.us/docs/OEA%20Contract%2005-08%20-%20COMPLETE%20Contract.pdf)

10 California Department of Education, "California Code of Regulations, Title 5," [www.cde.ca.gov/ls/cs/k3/title5.asp](http://www.cde.ca.gov/ls/cs/k3/title5.asp)

11 California Department of Education, "California Code of Regulations, Title 5," [www.cde.ca.gov/ls/fa/sf/title5regs.asp](http://www.cde.ca.gov/ls/fa/sf/title5regs.asp)

12 Collaborative for High Performance Schools, [www.chps.net](http://www.chps.net)

13 California Department of Education, "K-12 Toilet Requirement Summary,"

- **Playground guidelines.** Defined in the CCR, Title 5: School Facility, Small School Site Guidelines.<sup>14</sup>
  - **Earthquake egress requirements.** Defined by the Federal Emergency Management Agency (FEMA).<sup>15</sup>
  - **Fire egress requirements.** Defined in the California Education Code, Sections 32020, Article 2: Gates to School Grounds.<sup>16</sup>
  - **OUSD school-population and classroom-loading guidelines.** Supplied to the LRPC via email from the district in October 2007.<sup>17</sup>
4. Create an adjustable flow model tracking the impact of various enrollment scenarios.
  5. Compare collected data defining required square footage and other space characteristics per student with existing facility use.

### 3. *Data and Analysis*

#### a. Number of Classrooms

Currently, Hillcrest School has 14 classrooms measuring an approximate total of 12,750 square feet.

- Six of these were added in 2006 (in the form of a new building, which replaced three portables).
- One of these is a 1940s-era portable updated by the OUSD just prior to fall 2007 in order to serve as a classroom. (In 2006-2007, this portable served as a space for enrichment programs; prior to that, it had served as the school library; now it is a K-1 classroom.)
- One of these is currently used as a science lab rather than as a dedicated, class-specific classroom. It will be repurposed as a dedicated classroom in 2008-2009 to accommodate the burgeoning middle school. It will still be used for science teaching; but the middle school classes will rotate through the space during the hours of the day that it is not being used as a homeroom for one-third of the middle-school students.
- Prior to 2006, the school had 11 classrooms, three of which were portables that were replaced by the new building.

#### b. School Area and Density

Key factors in evaluating the capacity of a school are the area (square footage) and the density (space per student) for the variety of activities that must take place during the day. This includes classroom instruction, physical activities (such as recess and physical education), art and music instruction, lunch, the use of bathroom facilities, and the like. Because there have

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[www.cde.ca.gov/ls/fa/sf/toiletrequire.asp](http://www.cde.ca.gov/ls/fa/sf/toiletrequire.asp)

14 California Department of Education, "California Code of Regulations, Title 5,"

[www.cde.ca.gov/ls/fa/sf/smallschoolsite.asp](http://www.cde.ca.gov/ls/fa/sf/smallschoolsite.asp)

15 Federal Emergency Management Agency, [www.fema.gov/plan/prevent/earthquake/buildingcodes.shtm](http://www.fema.gov/plan/prevent/earthquake/buildingcodes.shtm)

16 California Education Code, [law.justia.com/california/codes/edc.html](http://law.justia.com/california/codes/edc.html)

17 For the full text of the OUSD's guidelines on calculating optimal overall school population and optimal classroom loads, please see Appendix D.

been significant concerns raised about the overall ability of the school to accommodate the students who currently attend and who may attend in the future, the Supply Subcommittee examined the availability of all currently usable spaces at Hillcrest as well as the density of the classrooms and outdoor space (i.e., how does Hillcrest’s density compare with various density standards on a square-foot-per-child basis?). Tables S-1 through S-3, below, show the results of our investigation of these issues. Section c., which follows these tables, models possible future enrollment patterns.

**Table S-1: Overview of Hillcrest’s Current Space Use**<sup>18</sup>

<b>FEATURE</b>	<b>AREA IN SQ. FT. (approx.)</b>
<b>Usable indoor space (excludes bathrooms, administrative offices, maintenance closets, etc.)</b>	
Fourteen classrooms (including current science lab)	12,750
Library	1,380
Multipurpose room	1,800
Computer lab	413
<b>Total Area for Teaching</b>	<b>16,344</b>
<b>Usable outdoor space (excludes front garden)</b>	
Playground	6,000
Upper courtyard	1,500
<b>Total Outdoor Area</b>	<b>7,500</b>

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18 During the summer 2007 research period, the Supply Subcommittee did not have sufficient time or resources to determine whether additional spaces at Hillcrest, such as the front yard or the “nature area” behind the playground, could be converted into usable indoor or outdoor space.

**Table S-2: Hillcrest Classroom Space and Density**

		A	B	C	D	E	F	G
	2007 Grade Level	Floor Area (Ft. <sup>2</sup> )	No. of Students in 2007	Current Ft. <sup>2</sup> /Child (Col. A/B)	Optimal No. of Students Under CSR	Ft. <sup>2</sup> /Child (Col A/D)	Optimal No. of Students Acc'ding to OUSD	Min. Ft. <sup>2</sup> /Child Rec'd by CSR
Portable	K-1	781	20	39	Breakout Space			68
<b>Main Building</b>								
Room 1	2-3	900	20	45	20	45	20	48
Room 2	3-4	900	26	35	20	45	20	48
Room 3	K	900	20	45	20	45	20	68
Room 4	K	1187	21	57	20	59	20	68
Room 5	1	900	20	45	20	45	20	48
Room 6	2	900	20	45	20	45	20	48
Room 7	1	900	20	45	20	45	20	48
<b>New Building</b>								
Room 8	2	897	20	45	20	45	20	48
Room 9	Middle	897	33	27	30	30	25	32
Room 10	Middle	897	Science	N/A	30	30	25	32
Room 11	Middle	897	34	26	30	30	25	32
Room 12	4	897	30	30	30	30	20	32
Room 13	5	897	34	26	30	30	20	32
				<b>Average Total</b>		<b>Average Total</b>		
	<b>Totals</b>	<b>12,750</b>	<b>318</b>	<b>40</b>	<b>310</b>	<b>41</b>	<b>275</b>	

Table S-2 lists each of Hillcrest’s fourteen classrooms by room number and current grade-level use. (Grade level assignments to specific rooms shift from year to year based on changing combination classes and other factors.)

- **Column A** is the floor area estimate for each classroom. The school has approximately 12,750 square feet of classroom space.
- **Column B** is the number of children in each grade for 2007-2008.
- **Column C** shows the area per student in 2007-2008 based on Columns A and B.
- **Column D** is an estimate of school enrollment if each class is optimally enrolled (full, but not substantially overcrowded). These estimates are based on OAE/OUSD teacher contract limits and CSR student-per-class limits.
- **Column E** shows the area per student if an optimal number of students is enrolled in each class, based on Columns A and D. The higher-level grade rooms are at maximum capacity with 30 students, meeting the CCR-mandated minimum of 30 square feet per student.

- **Column F** shows the optimal number of students per class, per grade, according to OUSD guidelines supplied to the Supply Subcommittee by district representatives via email in October 2007.<sup>19</sup>
- **Column G** shows the minimum square footage per child recommended by CSR guidelines.

**Conclusions:**

- As demonstrated in Column C, only one of Hillcrest’s three current kindergarten classrooms fully meets CCR square footage and space characteristic requirements.<sup>20</sup> Hillcrest’s two current higher-level grade rooms are over capacity with 33 and 34 students respectively, allotting 27 and 26 square feet per student.
- CSR guidelines recommend even larger square-footage-per-child ratios than does the CCR, with different recommendations for kindergarten, grades 1 to 3, and grades 4 to 6 (see Column G). Under CSR guidelines, every classroom at Hillcrest is currently over capacity.
- The school administration and faculty have the final decision on the overall school enrollment number and how best to accommodate grade levels where the number of students exceeds optimal grade-level enrollment numbers.
- OUSD recommends even more stringent class-size numbers in grades 4 through 7 than the CSR guidelines the LRPC has adopted as a standard.
- It had been hoped that in 2008-2009, the portable—which was converted from a multi-purpose space to a K-1 classroom due to the overenrollment of the K class in 2007-2008—could again be used as a multipurpose breakout room, which was its purpose prior to the overenrollment of 2007-2008. This is unlikely, however, given the need to maintain a complement of 14 dedicated classrooms to accommodate the total school population even if incoming K classes are substantially curtailed.
- It will be necessary in 2008-2009 to use the Science Lab as a dedicated classroom to accommodate a third middle school class. Currently, there are 67 middle school students divided into two sixth-seventh-eighth multi-grade classes, using two classrooms. In 2008-2009, the expectation is that there will be 75 or more middle school students, more than can be accommodated in two rooms.

In addition to primary classroom teaching, there are numerous other activities that require space at Hillcrest. Examples of these include, but are not limited to:

- **Adventure Time:** On-site before- and after-school child care. Currently housed in the multipurpose room.
- **Arts and Music:** There is currently no dedicated space for art and music. (These activities had previously utilized the portable now being used as a K-1 classroom.) Art and music

19 “Students are 'loaded' based on the following ratios per classroom: K-3: 20; 4-6: 25; 7-12: 25.5.” For the full text of the OUSD email, see Appendix D, “OUSD Guidelines.”

20 The CCR, Title 5, Section 14030(g)(1)(A) mandates that classrooms measure a minimum of 960 square feet or be in “an equivalent space” that provides no less than 30 square feet per student in grades 1 through 12.

[www.cde.ca.gov/ls/cs/k3/recommend.asp](http://www.cde.ca.gov/ls/cs/k3/recommend.asp)

CCR, Title 5 Section 14030(2)(A) states that a permanent kindergarten classroom should not be less than 1,350 square feet and should include self-contained restrooms and storage, teacher preparation, and wet and dry areas.

[www.cde.ca.gov/ls/fa/sf/title5regs.asp](http://www.cde.ca.gov/ls/fa/sf/title5regs.asp), [www.cde.ca.gov/ls/cs/k3/title5.asp](http://www.cde.ca.gov/ls/cs/k3/title5.asp),

[www.cde.ca.gov/ls/fa/sf/toiletrequire.asp](http://www.cde.ca.gov/ls/fa/sf/toiletrequire.asp)

teachers are “itinerant,” and must move their substantial supplies from classroom to classroom whenever they are working with a particular group.

- **Computers:** There is a computer lab in the new building, but there has been discussion about repurposing this breakout room as a dedicated classroom. Computers would be replaced with portables that could be pushed in and out of classrooms and rotated throughout the school as needed.
- **Drama:** A before- or after-school activity that usually utilizes the multipurpose room.
- **Language School:** A before-school (and, formerly, after-school) activity that takes place in classrooms.
- **Lunch:** Takes place in the multipurpose room in shifts. Children are allotted a very short lunch period in order to make way for other incoming classes in shifts.
- **Other Extracurricular Activities:** Weekly classes are offered on site during minimum-day afternoons. Some classes take place in classrooms, others use the stage of the multipurpose room (while AT is in session).
- **Pull-outs:** Special Education and small learning groups currently use any available breakout space, mainly the multipurpose room. OUSD’s guidelines recommend that a school of Hillcrest’s size have a dedicated Special Education room, as well as a Parent Resource Center. Hillcrest has neither.
- **Sports/Physical Education:** Usually takes place on the playground, but also takes place offsite at Temescal Park. This activity requires storage space within the school facility.

**Table S-3: Current Use of Non-Classroom and Miscellaneous Space**

	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
<b>Computer Lab</b>	No. of hours	Percent of total hours	Sq. ft.	Student Capacity
Total hours in school week	24.5		413	14
Total Hours in Use	16.25	66.3%		
Total Hours Free	8.25	33.7%		

<b>Science Lab</b>	No. of hours	Percent of total hours	Sq. ft.	Student Capacity
Total hours in school week	26		897	30
Total Hours in Use	26	100.0%		
Total Hours Free	0	0.0%		

<b>Library</b>	No. of hours	Percent of total hours	Sq. ft.	Student Capacity
Total hours in school week	26		1381	40
Total Hours in Use	18.3	70.4%		
Total Hours Free	7.7	29.6%		

<b>Multi-Purpose Room</b>	No. of hours	Percent of total hours	Sq. ft.	Student Capacity
Total hours in school week	29		1800	60
Total Hours in Use	22.5	77.6%		
Total Hours Free	6.5	22.4%		

Table S-3 lists Hillcrest’s current breakout spaces.

- **Column A** is the number of hours that each space is available during a standard school week.
- **Column B** is the percent of the available hours that each space is currently used.
- **Column C** shows the square footage of each space.
- **Column D** is the student capacity of the space, based on requirements allotting a minimum of 30 square feet per student.

c. Assessment of Increasing Building Capacity at the Hillcrest Site

The Supply Subcommittee considered various ways of expanding Hillcrest’s physical capacity. Ideas included adding a new building; renovating or reconfiguring the existing buildings; placing portable classrooms on the playground; and increasing the utilization of

unused space on the current campus. The LRPC reviewed these possibilities with a perspective of seeking both viable short- and long-term solutions.

During the LRPC's deliberations, the Supply Subcommittee reviewed data provided by parents who had been involved in the construction of the building annex that was completed on the Hillcrest site in 2006. Key facts presented during those discussions are as follows:

- **Timeline:** The project took five years to travel from initial design proposals to completion. This is the same timeline on which plans to add a new building at nearby Chabot Elementary are currently proceeding.
- **Review process:** Hillcrest's new annex is constructed from 16 prefabricated pieces shipped from a manufacturer in Stockton, CA. The overriding reason for choosing a prefabricated building was to expedite construction; the prefabricated design was pre-approved by the Department of the State Architect (DSA) on all fire egress and other safety requirements. Without a pre-approval in place, the DSA review process itself (which applies to schools and hospitals) takes between one and three years from the time complete architectural drawings are submitted, such that the review process for any building that is not pre-fabricated would be between six and eight years if the process goes well.
- **Seismic issues:** Even with a pre-fabricated building and expedited review process, Hillcrest's proximity to known seismic faults, including the Hayward, triggered additional review by DSA of seismic safety issues.
- **Site and construction limitations:** The design of the building included substantial consultation with water and soil engineers and major consultation with OSHA engineers. One outcome of these consultations is that the new building is angled toward the playground. This choice grew out of the desire to minimize demolition of and closures to Hermosa Street (so that our neighbors would continue to have street access to their homes). A building set parallel to the playground would have required demolition of Hermosa Street to the midline in order to secure the Hillcrest site for the safe construction of retaining walls (shoring) that would have exceeded 20 feet in height. This would have increased costs substantially, delayed review processes, and potentially created neighbor opposition to the project.
- **Funding:** The total cost of the 2006 building was approximately \$5 million. A substantial portion of this cost—\$1.2 million—was covered by the Hillcrest Fund; the majority was funded by voter-approved bonds that support facilities construction in the OUSD. In 2006, voters in Oakland approved Measure B, a \$435 million school facilities improvement bond, with 78 percent passage rate. A 55 percent majority had been required to pass the bond; that relatively low majority passage-rate requirement was predicated on the fact that OUSD was required to publicize *in advance* a list of the specific projects to which the bond funds would be allocated. Additional construction at Hillcrest was not included in that list, so the 2006 bond funds are not available for

construction at Hillcrest. The 2006 bond will expire in five years (2011) and will then presumably be brought back to Oakland's voters for renewal. At that time, Hillcrest may request that it be included in any new facilities construction lists. Until that time, no funds are available for new construction at Hillcrest, nor is there a structure or mechanism in place to create a special bond specifically for Hillcrest construction.

*(i) Is it feasible to add another story to Hillcrest's original building?*

During the initial planning process that ultimately led to the construction of the new building, it was suggested that adding a second story to the existing building would be an effective method of increasing building capacity to accommodate the then-existing student population. Indeed, this idea has been talked about within the Hillcrest community for more than 20 years. Consultation in 2001 with architects who launched the idea in the late 1980s revealed that the structural issues involved in a second-story addition would require demolition of the existing building. As this would have a) been prohibitively expensive and b) necessitated the relocation of the entire school population for several years, the idea was not pursued further. The architects who came to this conclusion are still active in the community and can be reached for further consultation if needed; but based on this information, the LRPC concluded that a second-story addition would not be a viable solution. In addition, in response to a question from the LRPC, OUSD stated that it is not considering the construction of additional building capacity at Hillcrest.<sup>21</sup>

*(ii) Can the existing building be reconfigured to expand capacity?*

The Supply Subcommittee did present the fact that the existing library and enclosed computer lab, both located in the new annex, are constructed of two modules that could be reconfigured into classrooms. While the obvious limitation of this idea is the elimination of the library and computer lab, it was considered a plausible solution to have a temporary remodel of the lab and half of the library during the year 2011, when overall enrollment at Hillcrest is expected to peak given current enrollment estimates as presented in this report.<sup>22</sup> This temporary remodel would provide one additional classroom space (bringing the classroom total in the current buildings to 15, at the cost of half of the library book space, the computer lab, and half the break-out and large-table space the library affords), while allowing the school to remain in compliance with state secondary code dictating that elementary schools have libraries.

In sum, given the constraints of the existing campus and its current buildings, the LRPC has concluded that there is no obvious space on which to build another new annex, nor funding

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21 In an email exchange in early October, the LRPC posed the following question to OUSD staff: Is OUSD considering the permanent expansion of the physical plant at Hillcrest? If so, what would the time frame be (for example, within the next year, within the next two years, three years, five years, etc.)? If so, where in the queue would this be with regards to other capital investment projects currently being considered by the district? OUSD responded: *OUSD is not currently considering the permanent expansion of the physical plant at Hillcrest.*

22 For more information on enrollment predictions, see the Demand Subcommittee section, or refer to Appendix F, the Supply Subcommittee Enrollment Prediction Model.

available to support such construction, nor ways to permanently expand the current buildings. The most that can be done in the way of renovating or reconfiguring existing space is to repurpose the library and computer lab on a short-term basis to temporarily expand classroom capacity by one room. This temporary repurposing of the library will very likely have to take place simply to accommodate the current school population as it grows with the addition of incoming near-future kindergarten classes. The temporary addition of this one classroom space will not, however, solve the overall long-term overenrollment situation.

*(iii) Can portable classrooms be placed on the playground to expand capacity?*

The LRPC explored the possibility of using portable classrooms. Several issues are raised in this regard, including fire safety and required playground space for students to have recess and physical education. By way of background, it is worth noting that the placement of the 2006 building addition and design of the playground were managed in consultation with Oakland’s fire marshal, DSA, and the architects who led the project.

The playground is currently designed to accommodate several large fire trucks that could approach the site from Mandalay Gate. Access to fire hydrants is accomplished by “firefighter-only” staircases that lead from particular gates on the playground to the base of Mandalay Road. Egress for students is through the upper courtyard, and the new staircase installed at the rear of the playground (Hermosa Gate). Any consideration of adding capacity to Hillcrest by installing portable classrooms would require further consultation with the fire marshal on all aspects of fire safety. The LRPC’s understanding is that fire safety considerations would prohibit additional portable classrooms from being added to the site.

If, however, the LRPC is mistaken in this understanding, it should be noted that the installation of all utilities (gas, electricity, water, sewage) and seismic staking would be required; none of these utilities currently exist on the perimeter of the playground. On top of that, the playground space (as noted elsewhere in this report) is already too small for the current population and adding portable classrooms would necessarily exacerbate this problem.

To accommodate an additional kindergarten class would require the addition of not one portable but—in short order—at least five, as three kindergarten classes would move on through the years to become three first grade classes, three second grade classes, and so on. The current cost of portable classrooms before installation is approximately \$150,000 per portable. For these reasons, we believe that adding portables to satisfy likely enrollment as described in the Demand Subcommittee section of this report is not a viable solution.<sup>23</sup>

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<sup>23</sup> In the email exchange with OUSD, *see* n. 21, *supra*, referenced above, the following additional question was posed to the district. OUSD is not considering adding portables at Hillcrest. An LRPC/OUSD email exchange in early October contained the following question and response: Is the district considering expanding capacity at Hillcrest via the use of portables? OUSD responded: *OUSD is not currently considering expanding capacity at Hillcrest via the use of portables.*

Finally, the Supply Subcommittee performed a complete time/space utilization evaluation during the LRPC's deliberations. Findings were that, in addition to Hillcrest's current classroom space being utilized 100 percent of the school day, the non-classroom spaces are fully utilized more than 79 percent of the school day. Substantial reworking of space utilization will not free up additional capacity to serve more students than the 310 (+/- 5%) that has been reported.

Taking these findings together, the Supply Subcommittee concluded that developing additional capacity at Hillcrest is difficult, and likely impossible, particularly in any near-term time frame. Given the small size of the existing playground, any plans to increase classroom capacity would reduce usable playground space. They would also take years to accomplish and would generate substantial cost. Long-term solutions are always possible, but short-term solutions seem unlikely to offset the demand estimates that are presented in this report.

d. Adopting a K-5 Model as a Potential Method of Addressing Demand

The Supply Subcommittee considered whether moving from a K-8 to a K-5 model would free up enough classroom space to permanently accommodate a third kindergarten class as well as the other additional classes in subsequent, higher grade bands that a third kindergarten would eventually necessitate.

Currently Hillcrest has 13 dedicated classrooms, one of which is a substandard portable, housing an all-time high of 318 students. Next year, the current middle school science lab will have to be repurposed for use as an additional dedicated classroom in order to accommodate the burgeoning middle school population, bringing the total number of classrooms up to 14. After 2008, it is possible that the current library and computer lab will also have to be repurposed—hopefully, temporarily—to add a 15<sup>th</sup> classroom. Beyond this, additional classrooms can only be added through the use of portables or through the addition of a new building, neither of which—as addressed in the previous section of this report—the LRPC considers to be viable alternatives, and neither of which are under consideration by the OUSD.

Based on surveys conducted by the Demand Subcommittee, the number of applicants for kindergarten slots for 2008-2009 from within the current attendance-area boundaries may be close to or greater than 60. There is additional evidence to suggest that the number of kindergarten applications will remain at a similar level for the next few years.

Therefore, in order to accept all applicants, Hillcrest would have to move from having two K classes to having three K classes. (This year, for the first time, Hillcrest has two and a half K classes, to accommodate what was thought to be a one-time overenrollment situation.) Overall school attrition rates in recent years have been very low. Thus, the expectation is that three K classes would move on to being three grade 1 classes (of 20 students each, in keeping with CSR mandates), three grade 2 classes (of 20 each), three grade 3 classes (20 each), two grade 4 classes (of 30 students each, per CSR guidelines for grades 4 through 6), and two grade 5 classes (of 30 each).

This would require a total of 16 classrooms, housing 240 students in grades K through 3 and 120 students in grades 4 and 5, for a total enrollment of 360 students. These are numbers—of both classrooms and students—that Hillcrest’s current campus cannot support under any scenario. Thus, the LRPC concludes that adopting a K-5 model would not solve Hillcrest’s overenrollment challenge.

In addition, adopting a K-5 model would mean a) sacrificing the highest-achieving middle school in the OUSD, b) eradicating a clear driver of OUSD student retention, and c) effectively causing the involuntary redirection of a large—and continually growing—number of students who for years have been assured that they could attend grades 6-8 at Hillcrest. Furthermore, there is abundant pedagogical support for the K-8 model. This is addressed in the Best Practices section of this report, in subsection c., “Relative merits of the K-8 educational model.”

#### e. School Population Model

As part of the process of evaluating how space is utilized at Hillcrest and how it might be used in the future, the Supply Subcommittee developed a spreadsheet model of the student population by grade for current and future years. The model is designed to help assess the ideal and maximum number of students that can occupy the current physical plant if it is used in a manner that is the same or similar to its current use structure.

Before going into the details of the model, it is instructive to consider Hillcrest’s enrollment dilemma. There is a fundamental challenge in reconciling the school’s current physical plant with ideal class size targets. In other words, it is impossible to simultaneously take advantage of the school’s full theoretical capacity *and* guarantee that no grade will be enrolled beyond certain predefined limits.

For example, given the class-size limit of 20 for grades K through 3 and 30 for grades 4 through 8, the smallest physical plant that could simultaneously guarantee use of all of the available classroom capacity *and* respect the class-size limits would be a school with 22 classrooms. That represents three classes each for grades K-3 and two classrooms each for grades 4-8, with a total incoming enrollment of 60 students annually, and no attrition. Given that this is distant from the current reality, any path forward that includes neither expansion of Hillcrest’s physical capacity nor switching to a time-shifted schedule must involve at least one and possibly more of the following:

1. A reliance on at least some degree of attrition. The danger is that attrition is under the control of enrollees, not the school or the district. To whatever extent actual attrition deviates from what is assumed, certain grades end up either under capacity or overcrowded.
2. Lack of use of full theoretical capacity of the school
3. Overenrollment in some grades relative to the desired per-grade limits.

Consider the most conservative scenario: Assume zero attrition in the future (i.e., no risky reliance on attrition is assumed, and to whatever extent attrition actually occurs, Hillcrest has the benefit of allowing in new neighborhood arrivals or intradistrict transfers). Given recent trends outlined in the Demand Subcommittee's report, zero attrition may be a reality. In that case, we have a spectrum of bad options to choose from.

- At the “no overcrowding” end of the spectrum, the incoming kindergarten could be permanently limited to 30, guaranteeing that no class is over-subscribed, but dramatically underutilizing the school's capacity (school size would be 270 rather than the “ideal” of 310).
- At the “no under-utilization” end of the spectrum, we could target the ideal size for grades K-3 by accepting 40, but end up overenrolled by 10 students (33%) in each grade from 4 through 8.

Both ends of the spectrum have drawbacks, and the practical reality would be to aim for an approach that strikes a balance between use of available capacity in K-3 and control of overenrollment in grades 4-8. It is also a reality that, in practice, adherence to desired class sizes will be somewhat “lumpy,” complicated significantly by the fact that currently grades K-2 comprise about half of the total population of the school. With these significant challenges noted, we proceed with an explanation of a model for how the existing and future students might flow through the school.

Since 2001, Hillcrest has consistently had more than enough kindergarten applicants to fill two kindergarten classes. (In the most recently past three years, it has had enough applicants to fill two and a half classes or more under CSR limits.) As students matriculated through the grades over successive years, the population was divided into two first grades, two second grades, and two third grades. These sets of grade bands, which tended to decrease in numbers from year to year through a fairly steady five percent attrition rate, then combined to form a single fourth grade class and a single fifth grade class. In the years prior to 2006, when a new building was added to the Hillcrest campus primarily to accommodate the middle school, there was significant attrition as students matriculated from fifth to sixth grade. The resulting small middle school population was accommodated in two combination classes of mixed sixth, seventh, and eighth graders. As a result of the addition of the new building and the introduction of numerous program improvements (many of which were made possible by the new building), the number of students staying at Hillcrest for middle school rose substantially in 2006. The model inputs and estimates reflect this shift.

It is important to recognize that the model is a tool that can be used to evaluate the effect that student enrollment, including kindergarten enrollment, has in any year and on future years. It does not predict, however, what parents will actually decide in terms of retention or initial enrollment, nor does it predict what classroom or space allocation will be configured by the school administration and faculty during any given school year. *The school administration and faculty always have the final decision on enrollment size and how best to accommodate grades with an excess number of students.* This model does not reflect any additional students entering Hillcrest after kindergarten. The tool can be run with different assumptions, including zero attrition, to evaluate a set of enrollment scenarios.

Key aspects of the model are as follows.

1. **Initial Year of 2008-2009** – The model starts with an initial set of assumptions for the 2008-2009 school year and estimates the number of students per year as they move through the grade levels. It assumes the following:
  - A fixed number of 40 students incoming in each kindergarten class going forward.
  - No additional students enrolling in grades other than kindergarten.
  - Stable middle school population of, preferably, 90 or fewer students divided into three equally-sized classes. (Currently there are two combined-grade middle school classes.)
  - Several combined-grade classes in grades other than K and middle school in order to meet CSR limits.
2. **Space Assumptions** – Uses 14 classrooms.
3. **Attrition** - The attrition assumption plays a critical role, and there is no way to accurately predict what future attrition will be. We present here two possible scenarios based on historical data and acknowledge that the reality may well differ significantly from what we estimate here. (For two more scenarios, one of which uses attrition rates based on the Demand Subcommittee’s retention survey result and another of which curtails incoming kindergarten enrollment in order to reach an ideal steady-state school population, please see Appendix D.)
  - Table S-4: Uses long-term historical attrition rates, based on attrition data going back to 1993.
    - 4.8% attrition per year for grades K-4.
    - 20.7% attrition in grade 5. That is, 20.7% of the fifth graders do not stay for middle school.
    - No attrition once students enter middle school in 6th grade.
  - Table S-5: Uses actual attrition estimates from the most recent year available: the attrition from 2006-07 to 2007-08.
    - 1.3% attrition per year for grades K-4.
    - 6.9% attrition per year in grade 5.
    - No attrition once students enter middle school in 6th grade.

**Table S-4: Hillcrest Enrollment Projection Model – Scenario 1**

- Assumes 40 kindergarteners enrolling annually from 2008 onwards.
- Assumes the average rate of attrition observed since earliest available records, which go back to 1993 (4.8% for grades K-4, 20.7% for grade 5, 0% for grades 6-7).

Fall 2007				Fall 2008			Fall 2009		
Grade	Total Enrollment	Number of Classrooms @ Hillcrest	Average Class Size	Total Enrollment	Number of Classrooms @ Hillcrest	Average Class Size	Total Enrollment	Number of Classrooms @ Hillcrest	Average Class Size
K	52	2.50	21	40	2.00	20	40	2.00	20
1	49	2.50	20	50	2.50	20	39	1.95	20
2	47	2.00	24	47	2.35	20	48	2.40	20
3	32	1.50	21	45	1.50	30	45	1.50	30
4	36	1.50	24	31	1.03	30	43	1.43	30
5	34	1.00	34	35	1.17	30	30	1.00	30
MS	68	2.00	34	72	2.32	31	83	2.68	31
6	28			27			28		
7	17			28			27		
8	23			17			28		
Total	318	13.00		320	12.87		328	12.96	

  

Fall 2010				Fall 2011			Fall 2012		
Grade	Total Enrollment	Number of Classrooms @ Hillcrest	Average Class Size	Total Enrollment	Number of Classrooms @ Hillcrest	Average Class Size	Total Enrollment	Number of Classrooms @ Hillcrest	Average Class Size
K	40	2.00	20	40	2.00	20	40	2.00	20
1	38	1.90	20	39	1.95	20	39	1.95	20
2	37	1.86	20	37	1.85	20	38	1.90	20
3	46	1.52	30	36	1.20	30	36	1.20	30
4	43	1.43	30	44	1.47	30	35	1.17	30
5	41	1.36	30	41	1.37	30	42	1.40	30
MS	79	2.55	31	85	2.74	31	90	2.90	31
6	24			33			33		
7	28			24			33		
8	27			28			24		
Total	324	12.62		322	12.58		320	12.52	

  

Fall 2013				Fall 2014			Fall 2015		
Grade	Total Enrollment	Number of Classrooms @ Hillcrest	Average Class Size	Total Enrollment	Number of Classrooms @ Hillcrest	Average Class Size	Total Enrollment	Number of Classrooms @ Hillcrest	Average Class Size
K	40	2.00	20	40	2.00	20	40	2.00	20
1	38	1.90	20	38	1.90	20	38	1.90	20
2	37	1.86	20	36	1.81	20	36	1.81	20
3	36	1.21	30	35	1.18	30	35	1.15	30
4	34	1.14	30	34	1.15	30	34	1.12	30
5	33	1.11	30	33	1.09	30	33	1.09	30
MS	100	3.23	31	94	3.03	31	87	2.81	31
6	34			27			26		
7	33			34			27		
8	33			33			34		
Total	319	12.45		311	12.16		302	11.89	

  

Fall 2016				Fall 2017			Fall 2018		
Grade	Total Enrollment	Number of Classrooms @ Hillcrest	Average Class Size	Total Enrollment	Number of Classrooms @ Hillcrest	Average Class Size	Total Enrollment	Number of Classrooms @ Hillcrest	Average Class Size
K	40	2.00	20	40	2.00	20	40	2.00	20
1	38	1.90	20	38	1.90	20	38	1.90	20
2	36	1.81	20	36	1.81	20	36	1.81	20
3	35	1.15	30	35	1.15	30	35	1.15	30
4	33	1.10	30	33	1.10	30	33	1.10	30
5	32	1.07	30	31	1.04	30	31	1.04	30
MS	79	2.55	31	78	2.52	31	77	2.48	31
6	26			26			25		
7	26			26			26		
8	27			26			26		
Total	293	11.58		291	11.52		290	11.49	

  

Fall 2019				Fall 2020			Fall 2021		
Grade	Total Enrollment	Number of Classrooms @ Hillcrest	Average Class Size	Total Enrollment	Number of Classrooms @ Hillcrest	Average Class Size	Total Enrollment	Number of Classrooms @ Hillcrest	Average Class Size
K	40	2.00	20	40	2.00	20	40	2.00	20
1	38	1.90	20	38	1.90	20	38	1.90	20
2	36	1.81	20	36	1.81	20	36	1.81	20
3	35	1.15	30	35	1.15	30	35	1.15	30
4	33	1.10	30	33	1.10	30	33	1.10	30
5	31	1.04	30	31	1.04	30	31	1.04	30
MS	76	2.45	31	75	2.42	31	75	2.42	31
6	25			25			25		
7	25			25			25		
8	26			25			25		
Total	289	11.46		288	11.42		288	11.42	

**Table S-5. Hillcrest Enrollment Projection Model – Scenario 2**

- Assumes 40 kindergarteners enrolling annually from 2008 onwards.
- Assumes same rate of attrition as was observed most recently in the transition from 2006-07 to 2007-08 (1.3% for grades K-4, 6.9% for grade 5, 0% for grades 6-7).

Fall 2007				Fall 2008			Fall 2009		
Grade	Total Enrollment	Number of Classrooms @ Hillcrest	Average Class Size	Total Enrollment	Number of Classrooms @ Hillcrest	Average Class Size	Total Enrollment	Number of Classrooms @ Hillcrest	Average Class Size
K	52	2.50	21	40	2.00	20	40	2.00	20
1	49	2.50	20	52	2.60	20	40	2.00	20
2	47	2.00	24	49	2.45	20	52	2.60	20
3	32	1.50	21	47	1.57	30	49	1.63	30
4	36	1.50	24	32	1.07	30	47	1.57	30
5	34	1.00	34	36	1.20	30	32	1.07	30
MS	68	2.00	34	77	2.48	31	94	3.03	31
6	28			32			34		
7	17			28			32		
8	23			17			28		
Total	318	13.00		333	13.37		354	13.90	

  

Fall 2010				Fall 2011			Fall 2012		
Grade	Total Enrollment	Number of Classrooms @ Hillcrest	Average Class Size	Total Enrollment	Number of Classrooms @ Hillcrest	Average Class Size	Total Enrollment	Number of Classrooms @ Hillcrest	Average Class Size
K	40	2.00	20	40	2.00	20	40	2.00	20
1	39	1.97	20	40	2.00	20	40	2.00	20
2	39	1.97	20	39	1.95	20	40	2.00	20
3	51	1.71	30	39	1.30	30	39	1.30	30
4	48	1.61	30	51	1.70	30	39	1.30	30
5	46	1.55	30	48	1.60	30	51	1.70	30
MS	96	3.10	31	108	3.48	31	119	3.84	31
6	30			44			45		
7	34			30			44		
8	32			34			30		
Total	361	13.91		365	14.03		368	14.14	

  

Fall 2013				Fall 2014			Fall 2015		
Grade	Total Enrollment	Number of Classrooms @ Hillcrest	Average Class Size	Total Enrollment	Number of Classrooms @ Hillcrest	Average Class Size	Total Enrollment	Number of Classrooms @ Hillcrest	Average Class Size
K	40	2.00	20	40	2.00	20	40	2.00	20
1	39	1.97	20	39	1.97	20	39	1.97	20
2	39	1.97	20	39	1.95	20	39	1.95	20
3	39	1.32	30	39	1.30	30	38	1.28	30
4	38	1.28	30	39	1.30	30	38	1.28	30
5	38	1.28	30	38	1.27	30	38	1.28	30
MS	137	4.42	31	129	4.16	31	120	3.87	31
6	48			36			36		
7	45			48			36		
8	44			45			48		
Total	372	14.25		363	13.95		354	13.64	

  

Fall 2016				Fall 2017			Fall 2018		
Grade	Total Enrollment	Number of Classrooms @ Hillcrest	Average Class Size	Total Enrollment	Number of Classrooms @ Hillcrest	Average Class Size	Total Enrollment	Number of Classrooms @ Hillcrest	Average Class Size
K	40	2.00	20	40	2.00	20	40	2.00	20
1	39	1.97	20	39	1.97	20	39	1.97	20
2	39	1.95	20	39	1.95	20	39	1.95	20
3	38	1.28	30	38	1.28	30	38	1.28	30
4	38	1.27	30	38	1.27	30	38	1.27	30
5	38	1.27	30	37	1.25	30	37	1.25	30
MS	108	3.48	31	108	3.48	31	107	3.45	31
6	36			36			35		
7	36			36			36		
8	36			36			36		
Total	341	13.22		340	13.20		339	13.17	

  

Fall 2019				Fall 2020			Fall 2021		
Grade	Total Enrollment	Number of Classrooms @ Hillcrest	Average Class Size	Total Enrollment	Number of Classrooms @ Hillcrest	Average Class Size	Total Enrollment	Number of Classrooms @ Hillcrest	Average Class Size
K	40	2.00	20	40	2.00	20	40	2.00	20
1	39	1.97	20	39	1.97	20	39	1.97	20
2	39	1.95	20	39	1.95	20	39	1.95	20
3	38	1.28	30	38	1.28	30	38	1.28	30
4	38	1.27	30	38	1.27	30	38	1.27	30
5	37	1.25	30	37	1.25	30	37	1.25	30
MS	106	3.42	31	105	3.39	31	105	3.39	31
6	35			35			35		
7	35			35			35		
8	36			35			35		
Total	338	13.14		337	13.11		337	13.11	

- Teacher contract limits state the following class-size maximums under CSR: 20 students in grades K-3, and 31 in grades 4-6. Limits are expressed less simply for grades 7 and 8, as it is assumed by the OEA/OUSD agreement that the format for secondary school education is different from that of primary school. (In essence, primary school students have one teacher for all subject matters whereas students in grades above 6 are more likely to have “periods” in which they pursue specialized areas of study with different teachers.) Therefore, teacher contract limits for grades 7 and 8 are expressed in the OEA/OUSD agreement in terms of the maximum “pupil contact” per period by different subjects. The upper limit for English, for instance, is 32 students at one time; but the upper limit for lab science is 31, and for fine arts, 30.
- OUSD classroom loading guidelines express a preference for limiting classes to 20 students in grades K-3, 25 per class in grades 4-6, and 25.5 per class in grades 7-8.
- For approximately ten years up until 2005-2006, Hillcrest operated with two half-day K classes sharing space in one classroom. In order to meet a state-mandated full-day K requirement, in 2006 an existing classroom on the campus was designated as a second K classroom.
- In 2006-2007, Hillcrest operated with two K classrooms, two first grade classrooms, two second grade classrooms, two third grade classrooms, one fourth grade, one fifth grade, and two combination classes of sixth, seventh, and eighth graders. Planned attrition, without any fill-in enrollment in grades 1-3, is a necessity in achieving a manageable class size for fourth and fifth grades.
- In order to meet the demand for classroom space created by overenrollment of kindergarteners in 2007-2008, a third kindergarten classroom was created by overhauling an existing portable on the campus. This classroom is substantially smaller than any other Hillcrest classroom and does not meet the size requirements for any K-9 grade as stated by the CCR and the CSR. (It is also inadequate by other measurements, such as self-contained restrooms and wet area.) This classroom is actually utilized as a K-1 space, with 11 kindergarteners and 9 first graders.
- In 2008-2009, it is assumed that the existing science lab will have to be converted to a classroom to accommodate the growing middle school. This will allow for three separate middle school classes rather than two combined-grade classes. With the move to three classes, some spaces might be available for fill-in in the eighth grade to maximize school utilization.
- In 2008-2009, Hillcrest’s principal and staff will be tasked with designing combination classes to accommodate oversubscribed first, second, and fifth grades. The school will, overall, be substantially over the maximum optimal student population as measured by a student to square-foot ratio. The undersized portable currently serving as a K-1 class will not revert to a multipurpose enrichment space, but will have to serve as classroom for a grade or grades higher than K.
- By fall 2011, the school population will exceed the number of students that can be accommodated in any configuration in the existing 14 classrooms.

f. Optimal Student Population for Hillcrest

As discussed above, the Supply Subcommittee’s work included collecting and analyzing data on the number and size of Hillcrest’s classrooms, teacher contract limits and Class Size Reduction limits for student-to-teacher ratios, and OUSD policies on classroom loading. Following the collection of this data, the LRPC engaged in considerable discussion about the concept of an optimal student population number for Hillcrest.

Hillcrest currently has 318 students (2007-2008). At this enrollment level, many existing classrooms are substantially above their ideal subscription levels, as defined by a) the guidelines described above as well as b) by the anecdotally experiences of students, teachers, administrators, and parents.

Table S-2, printed earlier in this section, demonstrates that the LRPC’s recommended model for Hillcrest is 310 students. This number is based on two key concepts. First, the LRPC used CSR guidelines to predicate 20 children per classroom in eight classrooms for grades K through 3, or 160 children. Second, we assume 30 children per classroom—again using CSR guidelines—in five classrooms for grades 4 through 8, providing capacity for 150 children in a total of 13 classrooms. Thus the recommended optimal population for Hillcrest is **310 students**.

This recommendation, which assumes the use of 13 classrooms, does not count the remodeled portable as a classroom; instead, it assumes that that room can be reclaimed as a breakout room. The recommendation does assume, however, a third middle-school classroom housed in the science laboratory. The science classroom will be a matrixed homeroom for a single class or middle-school students and a science room for *all* middle-school students. OUSD recommends that a school of Hillcrest’s size provide a room to be used as a “parent resource center.” Hillcrest does not have room for such an additional space.

OUSD guidelines supplied to the committee in October 2007 suggest that the LRPC’s method of establishing an optimal student-population number is generous compared with OUSD’s approach. In particular, the LRPC has assumed 30 students as a maximum population for each class in grades 4-8, whereas OUSD assumes 25 (grades 4-6) and 25.5 (grades 7-8). If we combine the OUSD class-size maximums with its guidelines for classroom usage, Hillcrest should not use more than 13 of its possible classrooms as dedicated class spaces. The resulting population would be:

2 – K classes	= 40 students
2 - 1st grades	= 40
2 - 2nd grades	= 40
2 - 3rd grades	= 40
1 - 4th grade	= 25
1 - 5th grade	= 25
1 - 6th grade	= 25
1 - 7 <sup>th</sup> grade	= 25.5
1 - 8 <sup>th</sup> grade	= 25.5

Thus, with 13 classrooms Hillcrest could ideally support **286 students**.

It is important to recognize that Hillcrest will have a larger-than-ideal student population for many years to come based on the current enrollment and attrition models. How large the population grows will depend on a) trends in how many children stay for middle school, b) normal attrition as families move or leave the school, c) the principal's ability to limit enrollment in grades other than kindergarten, and d) the size of future incoming kindergarten classes.

#### 4. *Findings of the Supply Issues Subcommittee*

**Finding S1:** The maximum total number of students at Hillcrest should not exceed 310, plus or minus five percent. This is the maximum number of students that can be accommodated within the 14 classrooms provided by the existing building configuration, taking into account the minimum square footage requirement per student as expressed by CCR, Title 5 (footnote each Section 14030(2)(a)). It is noted that the current total population is already in excess of this ideal value and that if nothing is changed other than to limit the size of the incoming kindergarten class, this value could be exceeded significantly. For example, if the incoming K were limited to 40 and if the attrition seen last year continued (1.3% for grades K-4 and 6.9% for grade 5), the school size would peak at 373 in Fall 2013.

**Finding S2:** Estimates for attrition in grades K-4 range from 1.3% (value based on the most recent year) to 4.8% (value based on all historical data). Estimates for attrition in grade 5 range from 6.9% (value based on the most recent year) to 20.7% (value based on historical data). Attrition in grades 6 and 7 were assumed to be zero, though historically actual attrition in grades 6 and 7 have closely mirrored attrition in grades K-4. These estimates will, naturally, vary over time

**Finding S3:** Should the attrition estimates expressed above prove substantially understated, the committee offers the following recommendations for allowing entry of children to the school after kindergarten:

- Create and maintain a waiting list or “second-chance” enrollment program for families within the attendance area whose children were not originally admitted to Hillcrest when applying for K spots or who have moved into the attendance area after kindergarten.
- Create a systematic alert to the OUSD announcing available spots within grades higher than K that might be filled with students wishing to transfer from OUSD Program Improvement schools.

#### 5. *Recommendations of the Supply Issues Subcommittee*

- **Recommendation S1: Kindergarten Enrollment**—In order to have even a chance of maintaining a steady-state school population not exceeding 310 students, the maximum enrollment for kindergarten each year should be capped at 40 or fewer students. It is noted

that even this cap will not guarantee that the school population will remain within this limit. In fact, if attrition is the same in the future as it was last year, the school population will reach 373 by 2013.

- **Recommendation S2: Long Term Planning**—The School Site Council or another body (potentially the LRPC, if it becomes institutionalized) should rerun the Hillcrest Enrollment Projection model each spring following the enrollment period for the coming fall to facilitate ongoing short- and long-range planning.