SECTION 2.5

Utilization/Capacity

UTILIZATION AND CAPACITY METHODOLOGY

School utilization and capacity are not stationary numbers; they can change from year to year depending on the educational programs available at the school, the pupil/teacher ratio (class size), and scheduling. Special programs can have a dramatic impact on the capacity and utilization of educational facilities. For that reason, it is recommended that the utilization and capacity of the facilities be reviewed annually and updated as necessary to realize the most effective use of the buildings and to enable the district to effectively plan ahead.

The methodology used to determine facility capacity can be slightly different for each school type due to their educational programs and use of facilities. For this facilities master plan, capacities were developed using three different capacity calculation methods to give a better understanding of how capacities can vary. All of the capacities are based on the permanent square footages and number of instructional spaces at each facility. Portable classrooms are used at two schools and identified in the capacity table. The approximate capacity of each school is determined with and without the portables.

CAPACITY/ UTILIZATION METHOD NUMBER ONE

The first capacity calculation method is based on PSFA recommendations for schools using square footage per student. PSFA has developed a chart for all New Mexico schools based on enrollment and square footage of facilities across the country. A schools' capacity can be compared to State standards by taking the current enrollment, going to the PSFA chart and selecting the corresponding recommended square footage per student, then dividing the permanent square footage of the building by the recommended square footage per student. This method of calculating capacity provides a look at how the school compares to the State's standards.

Both Nob Hill ECC and Sierra Vista Primary are below PSFA's recommended square footage per student while White Mountain ES, Ruidoso MS and Ruidoso HS are above the recommended square footage. The square footage listed for each school includes portables. The majority of portables at both Nob Hill ECC and Ruidoso HS are used as support spaces but were included in the capacity calculations. White Mountain ES square footage includes the abandoned square footage of White Mountain Intermediate.

Utilization/Capacity

School	Grades	Enroll	SQ. FT.	PSFA SQ.FT	Difference
Nob Hill ECC	Pre-K - K	209	36,681	37,620	-939
Sierra Vista PS	1-2	359	40,102	53,850	-13,748
White Mountain ES	3-5	526	108,168	68,380	39,788
Ruidoso MS	6-8	498	110,994	75,000	35,994
Ruidoso HS	9-12	690	178,242	119,000	59,242
DISTRICT TOTALS:		2,282	474,187	353,850	120,337

These capacities are based upon square foot per student and include portables.

CAPACITY/UTILIZATION METHOD NUMBER TWO

The second method uses best practice recommendations for determining capacities at elementary, middle and high schools. To determine the capacity for elementary schools using this method, all instructional spaces in the existing facility are counted then a certain number of instructional spaces are set aside for special programs at the school such as special education, art, music, physical education, computer, etc. and the remaining are to be used for general instruction. The number of general instructional spaces set is then multiplied by approximately 22 students per instructional space. The number of students per instructional space can vary depending on the grade configuration of the school. This gives the optimum design capacity of the elementary school. This method generally identifies approximately 68% of the instructional spaces for general instruction and 32% for special programs.

To determine the capacity of middle schools and high schools using this methodology, the total number of existing instructional spaces are counted then multiplied by 25 students per instructional space to give the maximum capacity of the school. The maximum capacity is then multiplied by 85% to account for some flexibility in capacity due to the changing of classrooms each period and the courses being offered. This is a fairly high efficiency rate and the majority of middle and high schools in the State of New Mexico do not reach this efficiency rate.

This method does not take into account the specific special programs being offered at a school. Special programs can have a dramatic effect on the capacity of a school.

The table below shows that both Nob Hill ECC and Sierra Vista Primary current and projected student enrollments exceed design capacities. This is in agreement with the findings in Method Number One which showed that both of these facilities were under PSFA's recommended square footage. White Mountain's current and projected student

enrollments are well below the design capacities calculated using Method Number Two. Again, White Mountain Intermediate abandoned spaces were included in the design capacity calculations for WMES. Ruidoso Middle and High Schools current and projected student enrollments are well below the design capacities calculated using Method Number Two. This is in agreement with the findings using Method Number One which showed that WMES, Ruidoso MS and HS were well above PSFA's recommended square footage per student.

School	Grades	2009-10 Enroll	2014-15 Enroll	Capacity w/o Portables	Difference	Capacity w Portables	Difference
Nob Hill ECC	Pre-K - K	209	219	165	-44	225	16
Sierra Vista PS	1-2	359	352	336	-23	336	-23
White Mountain ES	3-5	526	513	756	230	756	230
Ruidoso MS	6-8	498	501	717	220	717	220
Ruidoso HS	9-12	690	642	954	264	1081	392
DISTRICT TOTALS:		2,282	2,227	2,928	647	3,116	835

These capacities are based upon the number of classrooms in the District. The numbers for White Mountain ES are based on all classrooms including White Mountain Intermediate.

CAPACITY/UTILIZATION METHOD NUMBER THREE

This methodology was used to provide a maximum and a minimum capacity to help provide additional insight to the RMSD schools' capacities. This method is also based upon the number of existing permanent instructional spaces. The maximum capacity of the school is calculated, but then it is based on the premise that somewhere between 75% and 67% of the maximum capacity is a realistic and achievable efficiency rate for elementary, middle and high schools. 75% utilization is a very efficient use of instructional space at all grade levels, while 67% is on the lower end of efficiency but allows for the inclusion of more special programs. Depending upon the need for special programs offered at the elementary level, 75% utilization may be difficult to obtain and this should be factored in when looking at capacities of individual schools. 75% utilization at the middle and high school levels should be more easily obtained. The main variable at the middle and high school levels is the amount of electives and advanced placement programs being offered. Some electives and advanced placement programs have inherently low student enrollment, but are necessary to meet the needs of the students. The State is looking at 85% utilization for both middle and high school facilities. Looking at the range between 75% and 67% utilization of a facility provides the District with an insight as to how well they are currently utilizing their facilities and how that will affect future use.

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Utilization/Capacity

The following is PED's allowable pupil to teacher ratio by grade, which is used in determining maximum capacity of a school:

Pre-K: 8-12 with two aides
Kindergarten: 15 without an aide; 20 with an aide
1st -3rd: 22
4th – 6th: 24
7th - 8th: maximum English class size: 27, or 160 students per teacher per day
9th – 12th: maximum English class size: 30, or 160 students per teacher per day

For elementary schools, special programs include physical education, music, art, computer/technology, bilingual, special education and other special education programs offered at the school. For middle and high schools the average of 25 students per classroom was used for capacity calculations, which takes into account that instruction is offered seven periods per day. For middle and high schools, special programs include special education and other special programs offered at the school.

The table below shows that the current utilization for Nob Hill with portables is approximately 58% and without portables is 77%. As stated above, the majority of portables at NHECC is used for support facilities. 77% utilization of space at the early childhood level is very good and this does not take into account the ALL of the classrooms at NHECC are sized below Adequacy Standards. Sierra Vista Primary is being utilized at 68% which is average for an elementary school. WMES is at 63% utilization which is just below average for an elementary school. The adondoned classrooms at WMI were not included in this calculation. Both Ruidoso Middle and High School are at approximately 58% utilization, which is fairly low for middle and high schools. It is recommended that the utilization of both of these schools be reviewed. The chart on the following page exhibits the above data.

Utilization/Capacity

UTILIZATION STUDIES

Section 4.1 contains a detailed space utilization of each school. When reviewing utilizations, it should be noted that there are differences based on scheduling and the educational program offered. A typical elementary schedule has students occupying one classroom for the majority of the school day; while middle and high school students tend to change instructional spaces for each subject. Middle and high school students have required (core) classes and elective classes. Elective and specialized educational programs can have a dramatic affect on the utilization of instructional spaces because these programs do not lend themselves to maximum student occupancy every class period.

Middle and High School Utilization Studies include capacity and utilization plans for each school as well as a detailed breakdown of every space in the school. The information in these spreadsheets and plans are based on master schedules for the 2009-10 school year.

Number of Classrooms Required

	2009-10		2014-15		
SCHOOL	Total Enroll	Total Clrms Needed	Total Enroll	Total Clrms Needed	# of Existing Clrms
Nob Hill ECC	209	16	219	16	18
Sierra Vista Primary	359	23	352	23	24
White Mountain ES	526	30	513	32	38
White Mountain Int	0	0	0	0	15
Ruidoso MS	498	29	501	28	35
Ruidoso HS	690	39	642	36	48
Gavilan Canyon	0	0	0	0	0
Total:	2,282	104	2,227	135	178

The number of classrooms required for Nob Hill, Sierra Vista and White Mountain schools was based upon the number of general use classrooms needed for enrollment plus allowing for 30% additional classrooms for special programs including special education, music, art, physical education, etc.

The number of classrooms required for Ruidoso MS and HS was based upon the number of classrooms needed to house the enrollment plus allowing for 30% additional classrooms. This allows for the special programs and their smaller class size offered at the middle and high school levels.