Cien Aguas International School

Facility Master Plan/ Ed Specification 2010-2015

Planning by:

Planning & More
A Professional Services Group

1.0 Introduction

The Public School Facilities Authority (PSFA), acting as staff for the Public School Capital Outlay Council (PSCOC), requires that all New Mexico public and state chartered charter schools complete a five-year facilities master plan as a prerequisite for eligibility to receive state capital outlay assistance. This document is the Cien Aguas International Charter School (CA) Facilities Master Plan (FMP)/Educational Specification (ED SPEC) 2010-2015.

Outdoor play area st Cien Aguas leased facility.

The intent of the FMP/ED SPEC is to record existing facility conditions, project enrollment, review the school's education model, and use this information to create a plan for the use of school resources for capital needs. This charter school facility master plan also seeks to demonstrate the education program needs as it relates to space and functionality of the facility. Given the unique nature of a charter school, and through discussions with the New Mexico Public School Facilities Authority (PSFA), this document will also incorporate elements of an educational specification.

Front entry from parking lot at Cien Aguas International School.

This Facilities Master Plan/Educational Specification is designed as a living document to present issues to the community, board of education, and CA staff for input and periodic revision. This document was prepared using a systematic process. The goal was to identify needs and allocate capital resources to bring current facilities up to statewide adequacy standards and charter school policies and plan for a move to a permanent facility within the next five years.

This FMP/ED SPEC is comprised of four sections:

1. **Goals/Process:** Information about Cien Aguas goals and the master planning process.

2. **Existing and Projected Conditions:** Information regarding programs and program delivery, facility capacity and utilization, demographics, and projected enrollment.

3. **Capital Improvement Plan**: Detailed information about capital needs, priorities, and strategies.

4. **Master Plan Support Material:** Condition assessment of existing facilities, site plans, floor plans, detailed demography info, etc.

1.1 Goals

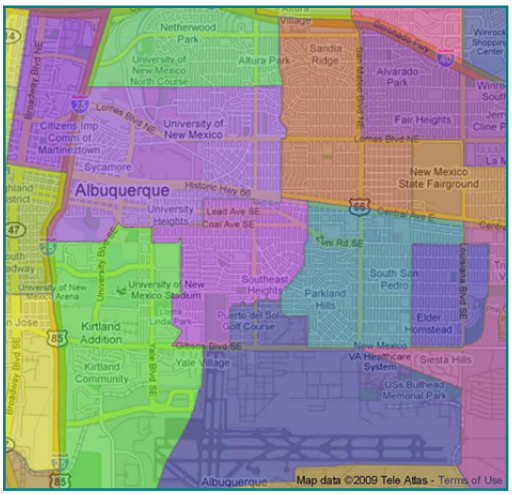
Cien Aguas applied for and was granted a charter from the State of New Mexico in September of 2008.

The education goals, identified in the school charter, are:

- To create a productive learning environment for students of diverse backgrounds.
- To demonstrate that English language learners are capable of higher levels of achievement than they are currently reaching in public education.
- To act as a model for the wider community of schools with Bilingual and English as a Second Language (ESL) programs.
- To use inquiry-based learning to pursue depth of knowledge rather than superficial achievement.
- To utilize student-centered instructional techniques and good literature.
- To offer a high-quality dual language middle school for graduates of dual language elementary schools within the Albuquerque Public Schools (APS) boundaries.
- To promote a small school environment with significant student-teacher interaction.
- To model environmental sustainability through responsible practices and community commitment.

The teaching and learning plans for the school then drive the goals for the school's facilities:

1. Classrooms will be flexible, to encourage individual, team, and small and large group learning.
2. Shared spaces such as the multi-purpose room and the media center will be large and flexible enough to serve as areas for different types of school-wide gatherings.
3. Furniture will be mobile, with the ability to be molded into various configurations to accommodate the diversity of learning and teaching styles.
4. Facilities will model environmental sustainability in design and construction practices, utilizing the building as a teaching tool, and will include teaching opportunities in secure areas on the school site.
5. Facilities will be pleasant and comfortable for the inhabitants, promoting a small school environment where students can feel secure.



Southeastern Albuquerque – Cien Aguas identified enrollment area.

Description of School

The proposed location of Cien Aguas is in southeast Albuquerque. This is an area with a large number of Mexican immigrant families, along with large numbers of highly educated English – dominant families for whom a bilingual educational program with an international and environmental focus is attractive. The majority of southeastern Albuquerque schools suffer from low academic achievement, especially for the English Language Learners, as documented by state standardized testing (NMSBA).

Southeastern Albuquerque also lacks strong bilingual and/or dual language programs. For Cien Aguas to be successful, location is important. The school is considering sites that are in or near lower socioeconomic neighborhoods and located near public bus routes. The current facility, located at 3501 Campus Boulevard, NE, Albuquerque, NM 87106, is located within the identified enrollment area.

Cien Aguas plans to be an integral part of the community in which it currently resides and in the future permanent facility. Plans include, but are not limited to:

- A school website accessible to parents and students that will provide important information about activities within the school.
- Frequent field trips into community areas, such as UNM.
- Utilizing 'real-life' issues within the classroom, which may involve interaction with the community at large.
- Parent rooms in both the current and future facility.
- Parents are encouraged to actively participate in the learning and before/after school activities of their children.

Cien Aguas Mission

Cien Aguas International Charter School is a dual language, K-8 school with an international and environmental focus. The instructional program is deliberately and skillfully crafted to integrate students who differ in language, culture, and income, in order to promote high achievement for all.

Cien Aguas seeks to develop confident, curious, and compassionate young people who are bilingual and bi-literate, committed to a sustainable society, and who will have the academic and interpersonal skills necessary to succeed in further education and in the wider world.

Cien Aguas Values

Academic Program:

- Developed by committed, well-educated professionals utilizing first-rate curriculum and instructional methods.
- Based in rich, important, and meaningful content that aligns with NM standards/benchmarks.
- Teaching and learning are reflective and focus on process as well as product
- Promote team work and accountability

Learner Outcomes:

- People with a high awareness for the world in which they live.
- Communicators who can function well in two languages and are comfortable with different cultures.
- Students who are individuals and who show respect for themselves, others, and the environment.
- Young people who are decision-makers and problem-solvers.
- Citizens who are active community participants.

1.2 Process

A participatory process was utilized in order to assess the current status of CA facilities and prioritize the capital needs of the school for the next 5 years. The process included the following steps:

- Data gathering on the existing building, including lease documents, facility and site plans.
- Conducted a site inspection of the temporary facility to assess the condition of the overall facility for state adequacy.
- Held a kick-off meeting with CA staff and steering committee.

Decision making flow chart for the Cien Aguas FMP.

- Met with PSFA representatives to review guidelines as it applied to this project.
- Conducted a series of four Community Dialogues to inform, gather information, and construct a Learning Plan for the school.
- Held individual interviews with CA principal, steering committee members, and founders.
- Conducted an abbreviated energy audit of the existing facility.
- Examined the educational adequacy of the permanent facility for the next five years and extrapolated a phased plan to reach the enrollment cap of 350 students
- Prepared a phased plan for the CA move to a permanent facility.
- Presented to Cien Aguas Governing Board members for plan acceptance and approval.
- Submitted to PSFA for State approval.

Steering Committee Members:

The steering committee has been instrumental in the development of this FMP/ED SPEC document.

Nick Babic	**Committee Member**
Jeremy Lawrence	**Committee Member**
Michael A. Rodriguez	**Executive Director**
David Rogers	**Governing Board Member**
Alicia San Gil	**Committee Member**
Eva Thaddeus	**Governing Board Member**

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The steering committee provided the primary vision and background information needed to lead this process; they also engaged the stakeholders, including parents, teachers, and community members, to participate in the planning process. The complete list of workshop participants is included in the Learning Plan, which is part of this document.

1.3 Acronyms and Definitions

APS - Albuquerque Public Schools

CA – Cien Aguas International Charter School

CIP – Capital Improvement Plan – budget -planning tool that applies available dollars to capital projects in order of committee defined priorities.

Ed Spec - Education Specification – document that describes the programmatic, functional, spatial, and environmental requirements for the educational facility.

ELL – English Language Learners – those for whom English is not the primary language spoken in the home.

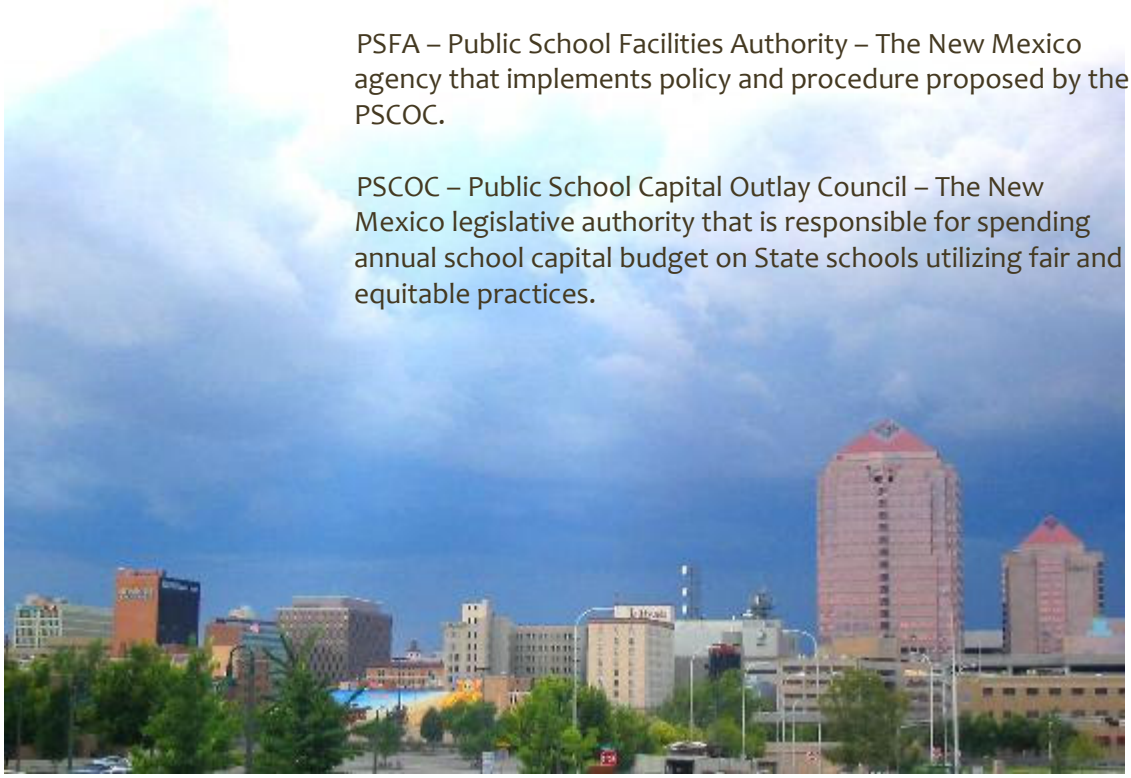
FMP – Facility Master Plan

MP – Master Plan

NM – New Mexico

PSFA – Public School Facilities Authority – The New Mexico agency that implements policy and procedure proposed by the PSCOC.

PSCOC – Public School Capital Outlay Council – The New Mexico legislative authority that is responsible for spending annual school capital budget on State schools utilizing fair and equitable practices.



2.0 Existing and Projected Conditions

2.1 Programs

2.1.1 Overview

Classroom/Instructional Configuration

In order to accommodate the educational framework and curriculum delivery methods of the school, classrooms in the permanent facility will be clustered by grade level; be flexible enough to accommodate diverse teaching/learning styles, promote individual and small group learning; have ready access to outdoor teaching spaces; and be in close proximity to shared spaces.

Cien Aguas will utilize a combination of single-level and multi-grade classrooms. The philosophy is to create a more natural environment, in which younger students learn from older. Inquiry-based education, the workshop approach to literacy, and the cooperative learning strategies of Project GLAD lend them selves to multi grade and multi level classrooms.

Second/Third and Fourth/Fifth will be multi grade classrooms, while multi-level instruction will take place in all Cien Aguas classroom, not just those that are multi-grade. The exception to this is math, which will separate students by grade level.

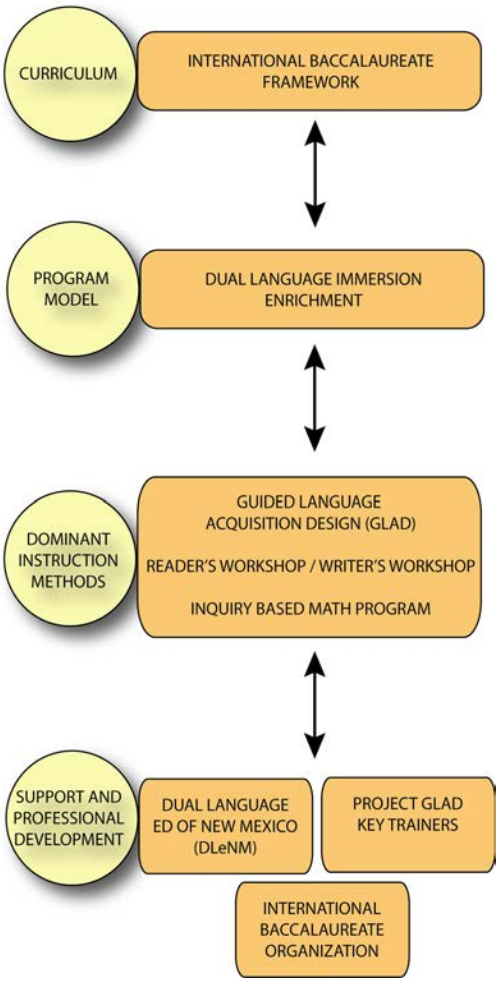
The student/teacher ratio of 20:1 at Cien Aguas will be small to reflect the goal of having a small school learning environment to give students the attention they require to thrive in the education environment.

Program Delivery

International Baccalaureate Framework
Cien Aguas will utilize the curriculum framework of the International Baccalaureate (IB) to unify their K-8 program. Both the Primary Years and Middle Years programs are inquiry-based, interdisciplinary, and process-oriented.

Program Model

Dual Language Immersion Enrichment (DLIE)
DLIE is an approach to teaching academic content in two languages. It is designed for bilingual/multilingual populations,



Delivery of Education at Cien Aguas.

giving students' enrichment education in their own language, a solid base in a second language, and hold high standards for academic achievement in all content areas.

THE IB program at Cien Aguas will be taught through a dual language approach. The school will implement a 90:10 dual language model school-wide in elementary grades, and a 50:50 model school-wide in Middle grades; instruction in kindergarten will be 90% Spanish and 10% English. The amount of English increases each year until a 50%-50% balance is reached in fourth grade and maintained through middle school.

Dominant Instructional Methods

Overall, the Cien Aguas curriculum will always center upon large, meaningful topics. A subject becomes meaningful to a student when taught in a sustained and coherent way, when it is related to the world, builds background knowledge, and promotes teamwork.

Guided Language Acquisition Design (Project GLAD)
GLAD is a sequence of high-quality strategies, systematically delivered to teach academic content to second language learners. Standards-based, thematic units, which are 4-6 weeks in length, integrate language arts, science, and social studies. GLAD makes extensive use of cooperative and individual learning structures, preparing students for the real-world necessity of working well with others.

Workshop based approach to literacy instruction
In this approach each student works independently; much of the time at their own level and pace. The teacher facilitates, conferences, coaches, and pulls small groups as necessary to teach concepts and skills.

- Readers' Workshop
- Writer's Workshop
- Poetry Workshop
- Spelling Workshop

Inquiry based approach to math instruction
The Cien Aguas math programs, for both elementary and middle grade levels will:

- articulate well with one another
- be academically rigorous and effective

- be readily taught in both Spanish and English
- be consistent with the inquiry-based approach of IB programs

In the elementary grades, math will be separated out from the IB units of inquiry and students will be given a daily hour of class time for math investigations and everyday math programs. The middle grade students will be instructed through connected math.

One of the outdoor learning areas that can also be used for community gatherings.

2.1.2 Anticipated or Projected Changes

IB Certification
Although the charter calls for an implementation of IB philosophy, the community expressed interest in attaining full IB certification. This is being investigated for impact on resources – staffing and financial. The program may impact class sizes, teacher ratios, and curriculum delivery.

50/50 Ratio of Spanish to English Language Learners
The instructional delivery calls for a 50/50 ratio; however, at this time the school is only reaching a 10/90 ratio for actual enrollment. In the future, as the school adjusts to the demographics of the actual enrollees, it may be necessary to re-configure some classrooms that are multi-grade or to increase the size of a particular grade to accommodate the ratio for that group only.

Facility Use Changes
To reach the enrollment cap of 330 by year five, Cien Aguas plans a phased yearly enrollment and grade level plan. All planned student enrollment can be encompassed in the current facility years one through four. By year five, plans call for a portion of the permanent facility to be built to accommodate 7th and 8th grade classrooms.

Year One will be comprised of K-6th grades, utilizing a total of 10 classrooms and a total enrollment of 140 students. Year Two will add the 7th grade and increase the number of 1st grade classrooms, utilizing a total of 12 classrooms and a total enrollment of 192 students. Year Three will see an increase in the number of 2nd ,3rd, and 7th graders and the addition of the 8th grade, utilizing a total of 16 classrooms and a total enrollment of 269 students. Year Four will increase the number of 4th and 5th, and 6th grade classrooms, utilizing a total of 17 classrooms and a total enrollment of 279 students.

Year Five is comprised of K-8th Grades. The number of 6th, 7th, and 8th grade classrooms will increase. Thecurrent facility will house K-6th grade with a total enrollment of 250 housed in 15 classrooms. The 7th and 8th grade classrooms will be housed in the permanent facility, with a total enroomment of 80 housed in 4 classrooms. In this manner the charter cap of 330 students will be achieved by year five.

The facility will be used for community events as needed.

2.1.3 Shared Use

The temporary facility will be shared with the community on the weekends and evenings for social programs, youth groups, and the neighborhood community group. Additionally, the CA charter calls for maximum involvement of the parents and community in the program delivery. This community out reach will begin at the temporary facility and will extend to the permanent facility.

It is the intent of CA to develop a permanent facility that allows for continued shared use. Additionally, the students will utilize other community resources as part of their physical education, fine arts, and life skills programs.

Potential shared use may include:

- Evening/weekend ELL classes for parents/community members.
- Weekend community celebration events.
- Frequent field trips into community areas, such as UNM to view fine arts presentations, 'real life' sustainable practices, and physical education opportunities.
- Utilizing 'real-life' issues within the classroom, which may involve bringing members of the surrounding business community into the classroom or visits to the applicable businesses.
- PTO meetings.

2.2 Sites /Facilities

2.2.1 District Location

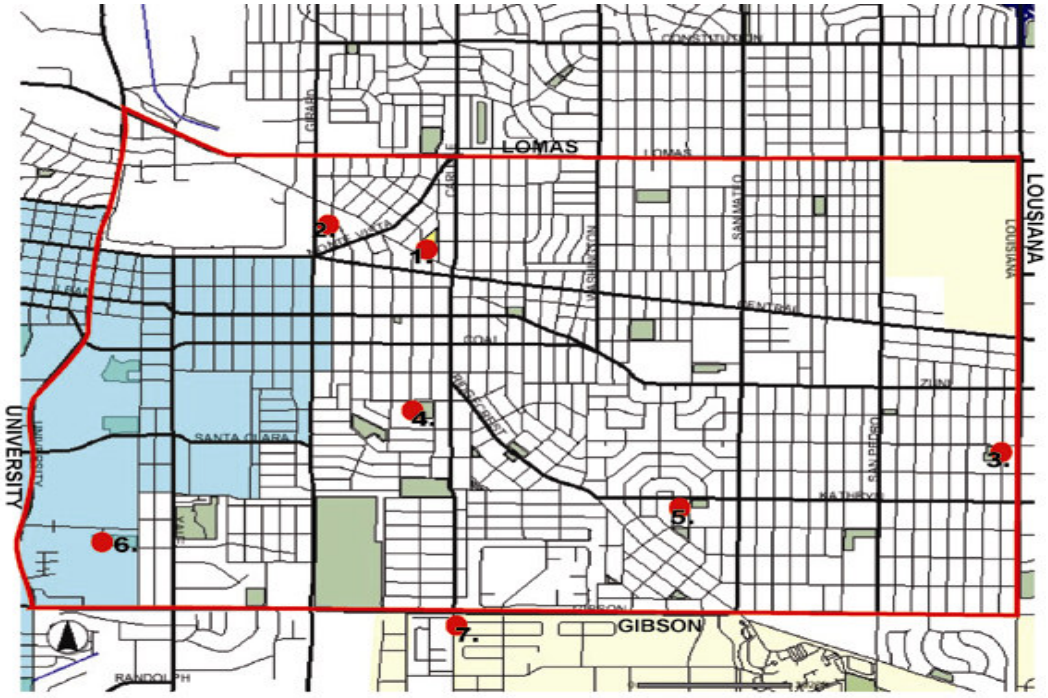
Cien Aguas International Charter School is located in the Southeastern quadrant of Albuquerque, New Mexico. The enrollment area has been identified within the following street boundaries :

- west of Louisiana,
- east of University,
- south of Lomas, and
- north of Gibson;

however, these streets are not official school boundaries and Cien Aguas is not limited to these areas. The school will draw students from all areas based on need and availability.

Zip codes included in the focus area are: 87106, 87108, 87116, 87118, and 87123.

This image outlines areas identified as best suited to reach potential students.



CURRENT ENROLLMENT BOUNDARY:
South of Lomas
East of Universty
North of Gibson
West of Lousiana

CURRENT ELEMENTARY SCHOOLS in/near BOUNDARY
1. Temporary Facility for Cien Aguas
2. Monte Vista
3. Emerson
4. Bandelier
5. Whittier
6. Lowell
7. Kirtland

The southeastern quadrant is close to the University of New Mexico, and affords ample opportunities for Cien Aguas students to participate in social, educational, and cultural offerings. The area also includes Kirtland AFB, where the population is transient, staying approximately 5 years before moving on. This area is also near public bus routes, which will give those families lacking personal transportation better access to the school.

Elementary Schools

Cien Aguas expects to attract students and families from existing Albuquerque Elementary Schools, as shown in Figure 2.1 .

These schools listed with addresses and by zip code:

Monte Vista Elementary School: 3211 Monte Vista Blvd., NE, 87106
Emerson Elementary School: 620 Georgia Street, SE, 87108
Bandelier Elementary School: 3309 Pershing Street SE, 87106
Whittier Elementary School: 110 Quincy Street SE, 87108
Lowell Elementary School: 1700 Sunshine Terrace SE, 87106
Kirtland Elementary School: 3530 Gibson Blvd. SE, 87118 (Kirtland Elementary School also serves Kirtland AFB)

Cien Aguas is currently leasing space in the Monte Vista Christian Church

2.2.2 Site and Facility

New Mexico State ID #: 507-001
FCI: n/a

Cien Aguas is currently leasing space in the Monte Vista Christian Church at 3501 Campus Blvd. NE, Albuquerque, NM 87106. The goal is to inhabit this facility to some degree through SY 2013/2014, with a plan to begin a phased move to a permanent facility as early as SY 2012/2013. Cien Aguas has an enrollment cap of 330 students.

Site Acreage: 1.91 Acres

Total leased interior space, including building support areas:
Year One: 12, 211 SF
Year Two: 12, 852 SF

Net Usable Space:
Lower Level: 6,058 NSF Upper Level: 4,837 NSF

Interior SF for Education Program Delivery: 10,895 NSF

Additionally, CA has full use of several outdoor recreation areas as well as an outdoor courtyard that will provide an extended learning space.

The school enrollment as stated in the charter was planned at 160 students in year one and 220 students in year two. The maximum yearly enrollments have been modified based on available space, educational adequacy, and program implementation requirements.

All classrooms at the facility are permanent. There are no portables on the site.

Classroom Gross Square Feet Per Student Per Year (Current Facility only):

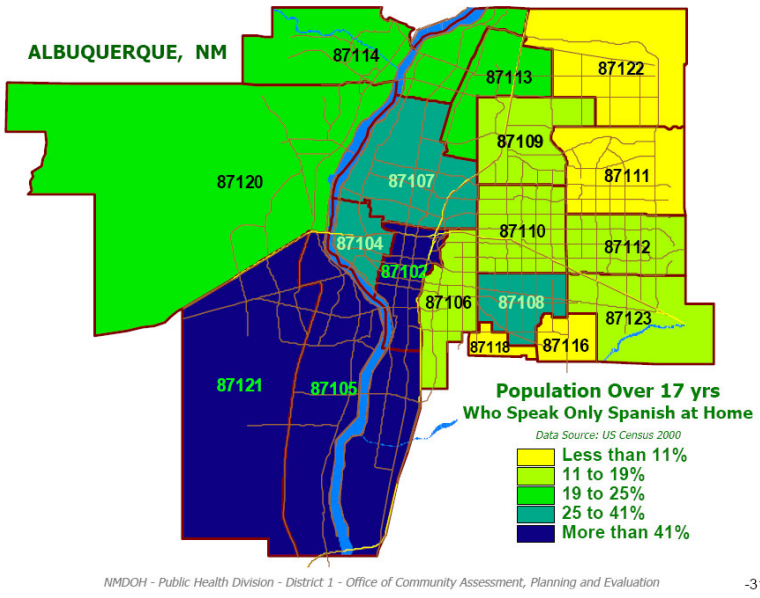
YEAR	GSF CLASSROOMS USED	NUMBER OF STUDENTS	GSF/STUDENT
1	6,125.77	140	43.75
2	7,646.47	192	39.82
3	10,102.47	269	37.55
4	10,552.47	279	37.82
5*	10,139.17	250	40.55

*Current facility only: 40 additional 7th/8th graders to be housed in 4 classrooms at permanent facility, bringing total enrollment to charter cap of 330.

Adequacy of the existing facility is detailed in Section 2.5, Utilization and Capacity, which also focuses on the future needs of the school based on the analysis of their education program and projected enrollments. A phased growth plan for years three through five is planned, utilizing additional space at Monte Vista Christian Church, along with construction of a new permanent facility.

2.3 District Growth

The following demographic data concentrates on those areas from where Cien Aguas expects to draw students. This area has a large number of Mexican immigrant families, and also a large number of highly educated, English-dominant families for whom a bilingual education program with an international and environmental focus is attractive.



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Zip Code 87106[1]

According to the 2000 Census, the population of this area is approximately 25,000, 8.85% are foreign-born, non-citizens. The total number of households is 12,363 with an average of 2.07 persons per household. The average house is valued at $131,400. The Male Population: 12,666 (49.5%) and the Female Population: 12,912 (50.5%); the total median age is 29.70 years. The median household Income is $27,036.

Educational Achievement: (among people 25 years or older)	
Less than 9th grade:	4.2%
9th-12th grade (nongrad):	7.7%
High school graduate:	13.2%
Some college:	22.3%
Associate degree:	3.5%
Bachelors degree:	24.8%
Graduate/Professional:	24.2%
High school or higher:	88%
Bachelors or higher:	49%

[1] Core demographic data for zip codes 87106, 87108,and 87118 is based on information taken from the 2000 Census. Business data is from Business Census 2003 and CBSA data is from December 2006 Census CBSA data.

Zip Code 87108

This current population of this area is 39,725; the 2000 population was 37,711. The total number of households is 18,765 the average persons per household at 2.22. The average house is valued at $108,600. The current population is 37,711; this is down by 2,014 from the 2000 Census. The male Population is 18,569 and the female Population is 19,142. The median age is 34.0 years and the median household Income is $26,248.

Educational Achievement: (among people 25 years or older)	
Less than 9th grade:	0%
9th-12th grade (nongrad):	1.7%
High school graduate:	10.8%
Some college:	28.9%
Associate degree:	14.7%
Bachelors degree:	29.6%
Graduate/Professional:	14.3%
High school or higher:	98.3%
Bachelors or higher:	44%

Zip Code 87118

This area encompasses Kirtland AFG. The current population of the area is unavailable and the 2000 population was 979. The total number of households is 280 and the average persons per household at 3.46. The average house is valued at $108,600. Median Household Income is $42,125.

Educational Achievement: (among people 25 years or older)	
Less than 9th grade:	0%
9th-12th grade (nongrad):	1.7%
High school graduate:	10.8%
Some college:	28.9%
Associate degree:	14.7%
Bachelors degree:	29.6%
Graduate/Professional:	14.3%
High school or higher:	98.3%
Bachelors or higher:	44%

Language Spoken at Home

An examination of these areas suggests that Zip Code Area 87108 has the largest number of Spanish Speakers: The total population over 17 in this area is 28,801. Of those, 17,279, or 59.99% , speak English at home; Spanish is spoken in 9,344 homes or 32.44% .[2] When compared to Zip Code area 87106 or Zip Code area 87118, where 16.54%, or 9.89% respectively, speak Spanish in the home, Zip Code area 87108 is an appropriate choice for Cien Aguas to find Spanish speakers that may fit well in this program.

2.4 Enrollment

Cien Aguas International School is a State-authorized charter located in the Albuquerque Public School boundaries.

CURRENT SITE
3501 CAMPUS BLVD

Enrollment is capped at 330 students grades K-8. Second/third and fourth/fifth grade level classes will be combined to enhance the learning process. At full capacity, the total students by grade level will be as follows:

Kindergarten – 40 students
First Grade – 40 students
Second Grade – 36 students
Third Grade – 32 students
Fourth Grade – 31 students
Fifth Grade – 30 students
Sixth Grade – 40 students
Seventh Grade – 40 students
Eighth Grade – 40 students

[2] See Table: Language Spoken at Home by Age - NMDOH – Public Health Division – District 1 – Office of Community Assessment, Planning and Evaluation

2.5 Utilization and Capacity

2.5.1 Existing/Future Classroom Needs

This section examines the existing and future classroom needs to accommodate the projected enrollment of Cien Aguas and identifies the strategy to be taken to meet the required classroom needs over the next five years.

The maximum student capacity in the current school building is 276 students. This includes the renegotiation of the lease in year three to acquire additional classroom space at the Monte Vista Christian Church.

Utilization identifies the number of classrooms needed to accommodate a given student enrollment. The temporary facility's supply of classrooms is based on the identification of use and inventory of all instructional spaces available. These spaces house both general and special education, which at Cien Aguas will be full inclusion. The demand for classrooms is determined by the yearly phased enrollment and constrained by the state-mandated educational adequacy of classrooms available each year in the temporary and planned permanent facility. The intent of utilization analysis is to identify classroom use and needs.

Capacity identifies the number of students each facility can accommodate. While capacity analysis is very similar to utilization analysis, utilizing the same data, the intent of capacity analysis is to determine the student capacity of a facility, given existing facility and program constraints for that student population.

In the case of Cien Aguas, a hybrid analysis is necessary given the fact that a charter school leases facilities on a yearly basis; it is assumed that the first year lease will be renewed in the same facility for year two, but years three through five are based upon future plans for expansion into additional rooms at the current facility and planning for phased construction of a new permanent building. It is also important to note that a charter school that leases an existing facility has no control over the size of the rooms in which students are housed.

Phased Plan

The enrollment cap for Cien Aguas International Charter School is 330 students. The school will institute a phased enrollment plan over the course of five years to reach this cap.

To ascertain the maximum capacity of this facility in years one and two, 11 classrooms were counted with a total capacity of 190 students. In year one Cien Aguas is at 73.6% capacity.

Cien Aguas
Year 1

Space #	Designated Grade	No. of Students	SF per student	Maximum students	SF Provided	Counted in Capacity
1	6th Grade (Sci)	20	28	30	852	Y
2	Support	N/A			364	N
3	Multi-Purpose	N/A			911.3	N
4	6 (Theatre)	20	28	22	604	Y
5	Reception/Health	N/A			340	N
6	4/5 Grade (Lib)	20	32	20	661.4	Y
7	Kinder A	11	50	12	595.1	Y
8	Kinder A	9	50	10	504.9	Y
9	Kinder B	6	50	8	397.3	Y
10	Kinder B	7	50	8	401.2	Y
11	Kinder B	7	50	8	407.6	Y
12	BookRm/Parent	N/A			573.9	N
13	2/3(across restrooms)	20	32	28	893.57	Y
14	Not Used in Yr. 1	N/A	32	19	609.4	Y
15	1st Grade	20	32	25	808.7	Y
16	Mech/Storage	N/A			261.1	N

190 Maximum Student Capacity

140 Students

The same method is utilized for year two: the maximum capacity of this facility remains 190 housed in 11 classrooms. The total number of students projected for year two is 192; thus by year two Cien Aguas is at 101% capacity and will need to plan for additional space.

Cien Aguas
Year 2

Space #	Designated Grade	No. of Students	SF per student	Maximum Students	SF Provided	Counted in Capacity
1	6th Grade (Sci)	20	28	30	852	Y
2	Support	N/A			364	N
3	7th Grade (MultP)	32	28		911.3	N
4	6th Grade (theatre)	20	28	22	604	Y
5	Reception/Health	N/A			340	N
6	4/5 Grade (Lib)	20	32	20	661.4	Y
7	Kinder A	11	50	12	595.1	Y
8	Kinder A	9	50	10	504.9	Y
9	Kinder B	6	50	8	397.3	Y
10	Kinder B	7	50	8	401.2	Y
11	Kinder B	7	50	8	407.6	Y
12	BookRm/Parent	N/A			573.9	N
13	2/3 (across restrooms)	20	32	28	893.57	Y
14	1st Grade (not used yr 1)	19	32	19	609.4	Y
15	1st Grade	21	32	25	808.7	Y
16	Mech/Storage	N/A			261.1	N
		192 Students		190		

Beginning in Year 3, the capacity of the existing leased facility is shown to be inadequate. The Monte Vista Christian Church, which houses the current school, has potentially 4 additional classrooms, one multi-purpose room, and one resource room available for growth. The Church has indicated that it may be open to further expansion of Cien Aguas into these areas.

In this year the eighth grade will be added and second, third, and seventh grade students will increase; at the same time

Kindergarten, fourth and fifth grades will remain constant and the total enrollment will increase to 269. The school plans to utilize 4 classrooms located on the opposite side of the ball court at the site. The most logical use of this space would be for the middle school students; two 8th grade rooms and two 7th grade rooms. With the addition of these four classrooms, the maximum capacity of the school is increased to 276 and the planned occupancy in year three is 269, a 97% utilization rate.

Cien Aguas
Year 3

Space #	Designated Grade	No. of Students	SF per student	Maximum Students	SF Provided	Counted in Capacity
1	6th Grade (Sci)	20	28	30	852	Y
2	Support	N/A			364	N
3	2nd/3rd Grade	25	32		911.3	N
4	2/3rd Grade	18	32	22	604	Y
5	Reception/Health	N/A			340	N
6	4/5 Grade (Lib)	20	32	20	661.4	Y
7	Kinder A	11	50	12	595.1	Y
8	Kinder A	9	50	10	504.9	Y
9	Kinder B	6	50	8	397.3	Y
10	Kinder B	7	50	8	401.2	Y
11	Kinder B	7	50	8	407.6	Y
12	BookRm/Parent	N/A			573.9	N
13	2nd/3rd Grade	26	32	28	893.57	Y
14	1st Grade	19	32	19	609.4	Y
15	1st Grade	21	32	25	808.7	Y
16	Mech/Storage	N/A			261.1	N
17	8th Grade	20	28	21	591	Y
18	8th Grade	20	28	20	560	Y
19	7th Grade	20	28	23	640	Y
20	7th Grade	20	28	22	665	Y
21	Multi Purpose	N/A			1324	N
22	Classroom	N/A			450	N
		269 Students		276 Maximum Students		

The enrollment in year four will show a decrease in 7th grade, and an increase in 6th grade, resulting in a total enrollment of 279 students. This will call for a reconfiguration of rooms by grade in the original building, along with the addition of one room and reconfiguration of rooms in the expansion facility. The expansion facility will house one 7th grade, two 8th grade, and two 6th grade rooms. In the course of this reconfiguration it will be necessary to use the resource room (room numbered 22). This room is not counted in the maximum capacity figure. In year four the school is 101% capacity.

Cien Aguas
Year 4

Space #	Designated Grade	No. of Students	SF per student	Maximum Students	SF Provided	Counted in Capacity
1	4/5th	20	32	30	852	Y
2	Support	N/A			364	N
3	2nd/3rd Grade	25	32		911.3	N
4	2/3rd Grade	18	32	22	604	Y
5	Reception/Health	N/A			340	N
6	4/5 Grade (Lib)	20	32	20	661.4	Y
7	Kinder A	11	50	12	595.1	Y
8	Kinder A	9	50	10	504.9	Y
9	Kinder B	6	50	8	397.3	Y
10	Kinder B	7	50	8	401.2	Y
11	Kinder B	7	50	8	407.6	Y
12	BookRm/Parent	N/A			573.9	N
13	2/3(across restrooms)	26	32	28	893.57	Y
14	1st Grade	19	32	19	609.4	Y
15	1st Grade	21	32	25	808.7	Y
16	Mech/Storage	N/A			261.1	N
17	7th Grade	20	28	21	591	Y
18	8th Grade	20	28	20	560	Y
19	8th Grade	20	28	23	640	Y
20	6th Grade	15	28	22	665	Y
21	Multi Purpose				1350	N
22	6th Grade	15	28		450	N
		279 Students		276 Maximum Students		

By the fifth year, Cien Aguas will reach the cap of 330 students, with the increase of fifth grade enrollment and increases in both 7th and 8th grades. All rooms at the expansion facility will be utilized, including the larger multi-purpose room, which is not counted in capacity. The current facility, along with the expansion building will house 250 students and the facility will once again be adequate for the on site population.

However by year five, plans call for a portion of the new permanent facility to be built to house forty 7th graders and forty 8th graders, thereby reaching the charter cap of 330 students.

Cien Aguas
Year 5

Space #	Designated Grade	No. of Students	SF per student	Maximum Students	SF Provided	Counted in Capacity
1				30	852	Y
2	Support	N/A			364	N
3	Multi purpose				911.3	N
4	2/3rd Grade	18	32	22	604	Y
5	Reception/Health	N/A			340	N
6	2nd/3rd Grade	21	32	20	661.4	Y
7	Kinder A	11	50	12	595.1	Y
8	Kinder A	9	50	10	504.9	Y
9	Kinder B	6	50	8	397.3	Y
10	Kinder B	7	50	8	401.2	Y
11	Kinder B	7	50	8	407.6	Y
12	BookRm/Parent	N/A			573.9	N
13	2/3(across restrooms)	26	32	28	893.57	Y
14	1st Grade	19	32	19	609.4	Y
15	1st Grade	21	32	25	808.7	Y
16	Mech/Storage	N/A			261.1	N
17	6th Grade	20	28	21	591	Y
18	6th Grade	20	28	20	560	Y
19	4/5th	20	32	23	640	Y
20	4/5th	20	32	22	665	Y
21	4/5th	25	32		1350	N
22	6th Grade Science		28		450	N
		250 Students		276 Maximum Students		

2.5.2 Ed Specification – The Learning Plan

The *Learning Plan* marks the first step in the development of the education specification analysis; it is the written plan for the education program and any facility impacts caused by these plans.

The education program goals as they relate to the facility were formulated through a public process, documented and synthesized by the planning team, and presented in the companion document, *The Learning Plan,* which is included in the appendix of this SES/FMP. The following is a summary of that document.

The process utilized to arrive at the *Learning Plan* was a variation upon the "design down process", drawn from the project *New Designs for Learning*, developed by George Copa of Oregon State University. The process provided a structure to allow the participants, in the course of four planning workshops, to move through a series of design elements with each element building upon the decisions of the previous element. The elements used in the planning process are: Learning Context, Learning Process, and Learning Organization. These three elements lead to the final – the Learning Environment.

Learning Context

The learning context recognizes and reinforces the need of the school to tailor the building design to its unique situation.

The most important overall goals for education at Cien Aguas, both in the existing facility and in the context of building a new facility are as follows:

- Develop world citizens with a connection to the global community.
- Maintain small class size relative to standard classroom space and teacher ratio.
- Consider options of building new or retro-fitting an existing building.
- Commit to obtaining the monetary resources needed for the final capital plan.
- Promote a "love of learning" environment at the school.
- Use technology as an enhancement to learning.

Learning Process

The goal of the Learning Process is the identification of learning products. The learning projects consist of learning events or activities and naturally link the curriculum, instruction, and assessment; both within the school and in the wider community.

The most important features of the learning process (i.e., curriculum content, instructional methods, and assessment strategies) for Cien Aguas, both in the existing facility and in the context of building a new facility are as follows:

- Utilize specialized teaching methods, i.e., Project GLAD, project based learning, small groups, journaling, hands-on, and experiential learning.
- Follow the International Baccalaureate Program (IB) and examine benefits vs. costs of obtaining an IBO certification.

Learning Organization

Learning organization deals with the question of what organizational elements will best support the learning process.

The most important features of the learning organization (i.e., organization of students, time, staff, learning settings, subjects, and decision making) for Cien Aguas, both in the existing facility and in the context of building a new facility are as follows:

- Assure high level science and math programs are implemented.
- Commit to fine arts program to include performing arts.
- Provide space within the school and opportunity in the community to be exposed to fine arts.
- Assure that excellent, well-written materials are developed utilizing grammar advisors in both languages.
- Use technology as an enhancement to learning
- Develop a plan for volunteerism as well as parental and community involvement and facility use, i.e. local business partners, monolingual family training.
- Utilize the building and site as a teaching tool integrated into curriculum.

Learning Environment

Given the recommendations regarding learning context, process, and organization, the most important features of the learning environment (facilities and technology) for Cien Aguas, both in the existing facility and in the context of building a new facility are as follows:

- Variety, inclusiveness, comfort, and flexibility in settings.
- Provide special use spaces
- Utilize sustainable building principals
- Ensure safe and secure settings
- Utilize the site/building as a teaching tool
- Ensure Indoor Air Quality and Lighting

2.5.3 Space Requirements

The following section continues the educational specifications study for Cien Aguas International School. This section will provide a description of the school's educational needs, programs, and services, thereby informing the Facility Master Plan, the facility program, and the architectural design of the permanent facility.

During the planning process several broad themes emerged that should inform and direct the shape of the future building.

1. Develop Sustainable and Maintainable Facilities. According to the Cien Aguas Charter, the goal is to become a "Zero-Energy Campus." The school building and site should be built to function well for many decades, thus quality materials and building systems are specified and correctly installed. An energy-efficient building shell, specifying environmentally preferable building materials, high-performance building systems, sustainable energy sources, and efficient water systems are to be considered.

2. Connect with the Community. Cien Aguas students will learn to ask the "big questions" about themselves, the world, and their place in it. The school is to be designed as an important resource to the immediate community, providing zones for before and after-hours use without impacting the rest of the building.

3. Create a Safe and Secure Facility and Site. Special consideration should be given to the CPTED (Crime Prevention through Environmental Design) concepts that yield safe schools through design rather than systems. This is especially important for Cien Aguas, as their goal is to utilize a large portion of outside spaces for instructional areas.

4. Plan the school site with clear separation of vehicular and pedestrian traffic.

5. Plan site plantings and building perimeter to eliminate areas of concealment. Consider sight lines for supervisory safety.

6. Provide adequate site lighting.

7. Create a clearly identifiable main entrance where all visitors enter. Secure perimeter doors so all visitors must access the building through the main entrance.

8. Develop Flexibility. Cien Aguas instructional delivery will be interdisciplinary, energetic, and active. It promotes small and large group learning, project based learning, as well as independent learning. This flexibility should continue out to the site proper, with easy and safe ingress/egress between classrooms and a secured outdoor learning environment. Both the building and the site will act as a "sustainable" teaching tool to students.

9. Focus on Student Achievement. Properly planned, designed, and maintained spaces create optimal learning environments for students. These spaces allow teachers and students to focus on learning tasks in comfort and with important tools conveniently available. Cien Aguas seeks to impart a "love of Learning" to their students through the inspired use of its very own facility.

2.5.3.1 Core Academic Areas

Core academic spaces reflect the state of New Mexico Statewide Adequacy Standards, issued by the Public School Capital Outlay Council.

The goal of the core academic program at Cien Aguas is to provide opportunities for all students to be academically challenged with

curriculum that is based in rich, important, and meaningful content. In this environment, teaching and learning are energetic and active; they are reflective and focused not only on the product, but also on the process; they promote the importance of working in a team and being accountable to that team. The core academic space should be organized to facilitate an integrated approach to instruction.

Kindergarten is clustered together with a separate and secure play area; the Elementary (1-5) also has its own area; and the Middle School classrooms are clustered in another separate area. All "clusters" have access to a secure, open area in the middle of the facility where they can engage in outdoor learning activities.

Core Academic Spaces are configured in the following manner:

Kindergarten: This level is comprised of two classrooms, each containing 20 students and one teacher per classroom. Both Kindergarten classrooms include an in-room restroom and 60SF of storage per room.

Elementary: The eight elementary classrooms will be configured as follows:

- Two 1st grade classrooms with 20 students per classroom and one teacher per classroom.
- Three 2nd/3rd combination classrooms with 23 students per classroom and one teacher per classroom.
- Three 4th/5th combination classrooms with 20 students per classroom and one teacher per classroom.
- Each classroom will include 60SF of storage per room.

Cien Aguas International Charter School
ACADEMIC CORE SPACES

WORKSHEET	New SF			Existing SF			Renovation SF	\	TOTAL SF		
Space	Qty	SF	Area	Qty	SF	Area	SF	SF	Qty	SF	Area
Kindergarten Classroom	2	1000	2,000	0	0	0	0	0	2	varies	2,000
Kindergarten Restroom	2	50	100	0	0	0	0	0	2	varies	100
Elementary Classroom	8	600	4,800	0	0	0	0	0	8	varies	4,800
In-classroom Built In Storage	16	60	960	0	0	0	0	0	16	varies	960
Middle School Classroom	6	560	3,360	0	0	0	0	0	6	varies	3,360
Science Classrooms	1	480	480	0	0	0	0	0	1	varies	480
Science Prep./Storage Room	1	80	80	0	0	0	0	0	1	varies	80
High School Classroom	0	0	0	0	0	0	0	0	0	varies	0
Science Classrooms	0	0	0	0	0	0	0	0	0	varies	0
Science Prep./Storage Room	0	0	0	0	0	0	0	0	0	varies	0
Science Lecture Room	0	0	0	0	0	0	0	0	0	varies	0
Academic Core Total			11,780			0	0	0			11,780

Middle: The six middle grade classrooms will have 20 students per classroom and one teacher per classroom. Each classroom will include 60SF of storage per room.

Cien Aguas plans to integrate science into the general classroom space at the 6th-8th level, thus the additional 480 sf, along with the science prep/storage room to be incorporated into a general classroom. In general, the Kindergarten rooms should be separated from the middle grade rooms. All core academic spaces should be located with easy access to the Media Center and centrally to the Multi- Purpose/Student Dining area. Computer stations should be made available in all core academic spaces.

2.5.3.2 Specialty Areas

Cien Aguas will not provide a gymnasium for students. Physical activities will take place outside or, during inclement weather, in a multi-use/dining space area, or a nearby community facility will be utilized. To be able to accommodate assemblies of the entire student population, the multi-use dining area will be utilized.

Visual Arts, Music, and Performing Arts will all be incorporated into general classroom space, with performances taking place in the multi-use/student dining area. In addition, Cien Aguas will utilize opportunities available within the greater community – UNM, etc.

2.5.3.3 Student Dining Areas

The student dining area will also function as the multi-purpose gathering area. NM state standards call for a minimum of 15 sf/seated student at 3 separate lunch periods and, at the middle school level, call for a minimum of 1,600 net sf. However, Cien Aguas will have neither gymnasium nor an assembly room and intends to utilize the student dining area as a multi-purpose room for student body assembly, performances, and physical education during inclement weather. For this reason 18sf/seated student at 3 separate lunch periods has been allocated.

2.5.3.4 Media Center

The Media Center is one of the gathering, story-telling, and information gathering hubs of the Cien Aguas facility. It should be easy to access from all of the classrooms. In addition to the book stacks and group spaces with tables and chairs, there should be a sitting area for reading and multiple computer resource stations for access to catalogues and Internet research. An area for story-telling should be integrated in this area, as well.

2.5.3.5 Administrative Areas

The Administrative Area is another area that will perform multiple duties and, with the exception of Reception, Secretarial, Principal's Office, General and Vault/Records Storage, and Restroom, the other spaces may be spread throughout the facility.

Cien Aguas International Charter School
ADMINISTRATIVE SPACES

WORKSHEET	New SF			Existing SF			Renovation SF	Demolition SF	TOTAL SF		
Space	Qty	SF	Area	Qty	SF	Area	SF	SF	Qty	SF	Area
Reception Area	1	150	150	0	0	0	0	0	1	varies	150
Secretarial Area	1	75	75	0	0	0	0	0	1	varies	75
Principal's Office	1	150	150	0	0	0	0	0	1	varies	150
Assistant Principal's Office	0	0	0	0	0	0	0	0	0	varies	0
Conference Room	1	200	200	0	0	0	0	0	1	varies	200
General Storage	1	100	100	0	0	0	0	0	1	varies	100
Vault/Records Storage	1	100	100	0	0	0	0	0	1	varies	100
Restroom	2	55	110	0	0	0	0	0	2	varies	110
Counseling Reception Area	0	0	0	0	0	0	0	0	0	varies	0
Counselor's Office	0	0	0	0	0	0	0	0	0	varies	0
Counseling Storage	0	0	0	0	0	0	0	0	0	varies	0
Counseling Conference Room	1	150	150	0	0	0	0	0	1	varies	150
Individual Testing Room	1	125	125	0	0	0	0	0	1	varies	125
Parent/Volunteer Room	1	150	150	0	0	0	0	0	1	varies	150
Student Health (Nurse)	1	150	150	0	0	0	0	0	1	varies	150
Teacher's Lounge	1	200	200	0	0	0	0	0	1	varies	200
Administrative Total			1,660			0	0	0			1,660

2.5.3.6 Computer Lab/Technology

Cien Aguas plans to incorporate computers into the general academic classroom space, along with a small, dedicated area in the media center. Some computers may be on portable computer cart stations, to go where needed. According to NM adequacy

standards, this space may be in one room or distributed throughout a facility.

Because this school is a combination school, space meets 3 net sf/student of the planned school program capacity of 330, with no less than 800 net sf. (Middle school/junior high school).

2.5.3.7 Overall

Considering New Mexico minimum standards, the findings of the planning process, as well as the original intentions of the charter document, the space required for this education program for 330 K-8 students is 28, 283 SF. This is not intended as a program for a new facility but rather as a tool for planning as part of the education specification process. A complete facility program must be completed prior to design.

Cien Aguas International Charter School

SUMMARY OF SPACES WORKSHEET

WORKSHEET

Grade Configuration:		Area
Student Capacity	K-12	
Enter number of Elementary School students including state funded pre-k students.	210	
Enter number of Middle School students	120	
Enter number of High School students	0	
Total Student Capacity	330	
SF per student		
SF required for Elementary School students	37,000	
SF required for Middle School students	32,400	
SF required for High School students	#N/A	
Total Gross Square Feet Funded		#N/A
SELECT ONE → (●) Single Story Building ( ) Multistory Building		
Plus Vertical Circulation (for Multistory Buildings) Area Allowable		0
Total Adjusted POR Gross Square Footage		#N/A

Program Area	New SF	Existing SF	Renovation SF	Demolition SF	TOTAL SF
Academic Core Spaces	11,780	0	0	0	11,780
Special Education Spaces	2,120	0	0	0	2,120
Administrative Spaces	1,660	0	0	0	1,660
Media Center Spaces	4,300	0	0	0	4,300
Computer Lab	1,090	0	0	0	1,090
Visual Arts Spaces	0	0	0	0	0
Music Spaces	0	0	0	0	0
Performing Arts	0	0	0	0	0
Career Education	0	0	0	0	0
Physical Education Spaces	0	0	0	0	0
Student Dining Spaces	4,530	0	0	0	4,530
Building Services	1,540	0			1,540
Facility Subtotal:	25,480	0	0	0	25,480
Facility Total	25,480	0			25,480
Construction Factor (11% multiplied by the facility total)	0.11	na			na
Actual Gross Square Feet Developed	28,283	0			28,283
Adjusted Existing Area		0			-
Total Adjusted Gross Square Footage Developed					28,283
Difference of SF developed from SF allowable					#N/A

2.5.4 Functional Requirements

Characteristics of the Cien Aguas spaces are consistent with their Charter and include:

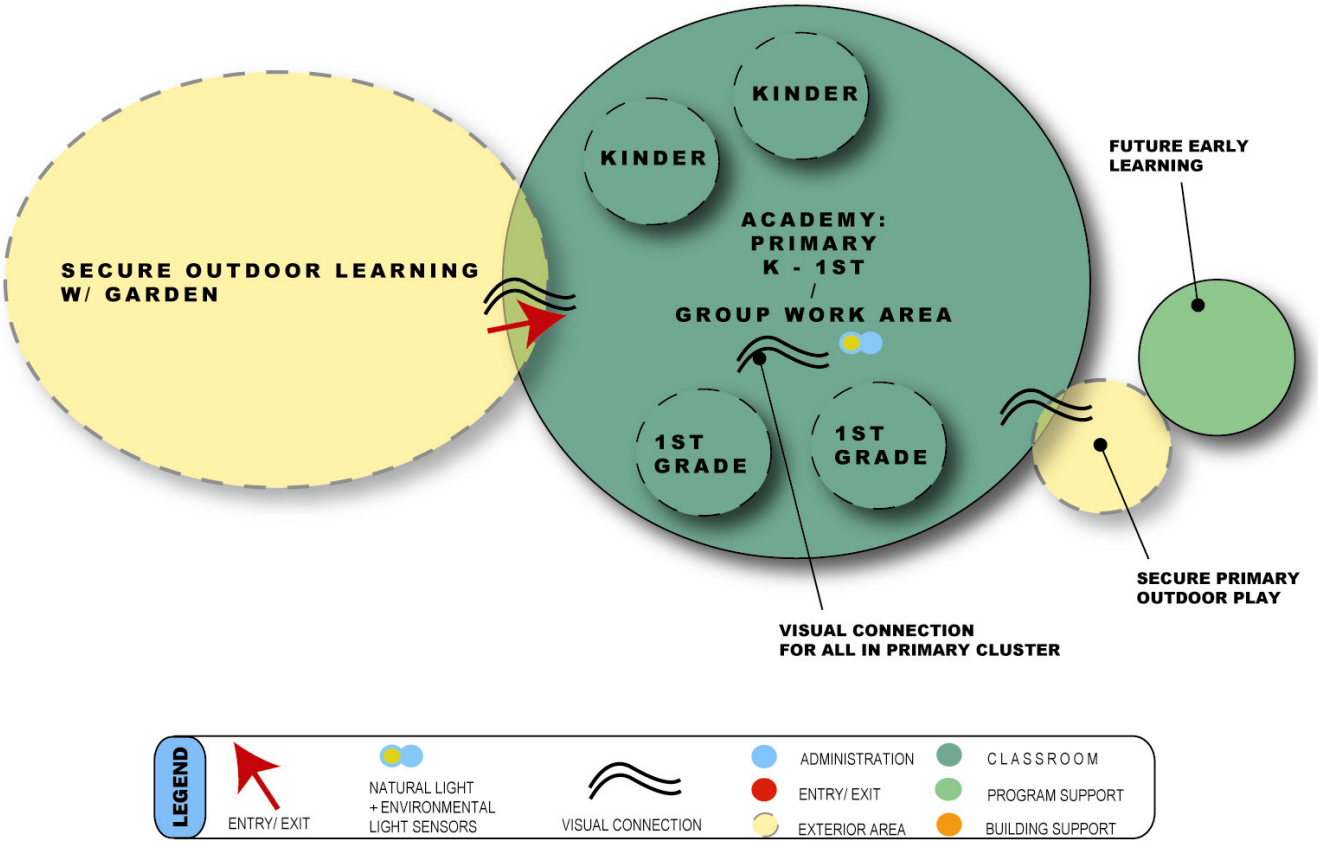
1. The ability to organize space by grade levels, including multi-grade classrooms and multi-level instruction within all classrooms. This includes the concept of separate "clusters" of education levels: Kindergarten, Elementary, and Middle School. Each cluster of learners has different needs, both scholastically and emotionally. At the same time all clusters should have convenient access to shared spaces such as the media center and multi-use room, as well as gathering spaces within and outside the building.

2. Facility space that will facilitate teamwork as well as independent work within the confines of a teacher supervised area.

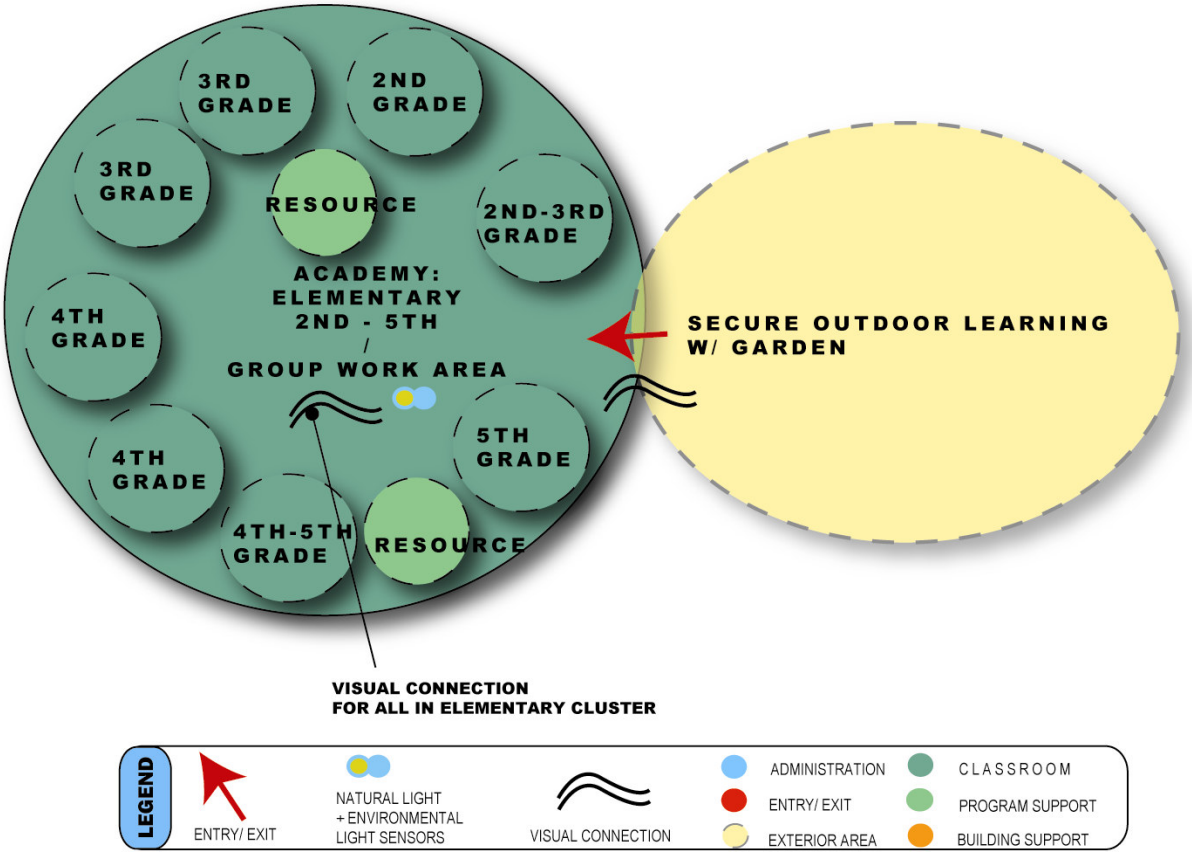
3. Create an outdoor learning environment as an extension of the interior spaces. Gathering and instructional spaces for students should be located both inside and outside. Outside spaces will play a large role in learning at Cien Aguas. Because of their dedication to a "Zero-Energy Campus" and the goal of educating responsible stewards, outdoor space becomes vitally important and an extension of the interior spaces. Outdoor spaces may include gardens, water harvesting, science classes, and solar and wind energy education and projects, to name but a few.

The workshops provided the forum in which the stakeholders were able to express their vision for the school. The design elements are addressed in the section titled "learning environment." Taken in context of a spatial need, planners were able to propose the following functional requirements. In the next phase – design development- the team will use these diagrams to express need as it applies to design of the building.

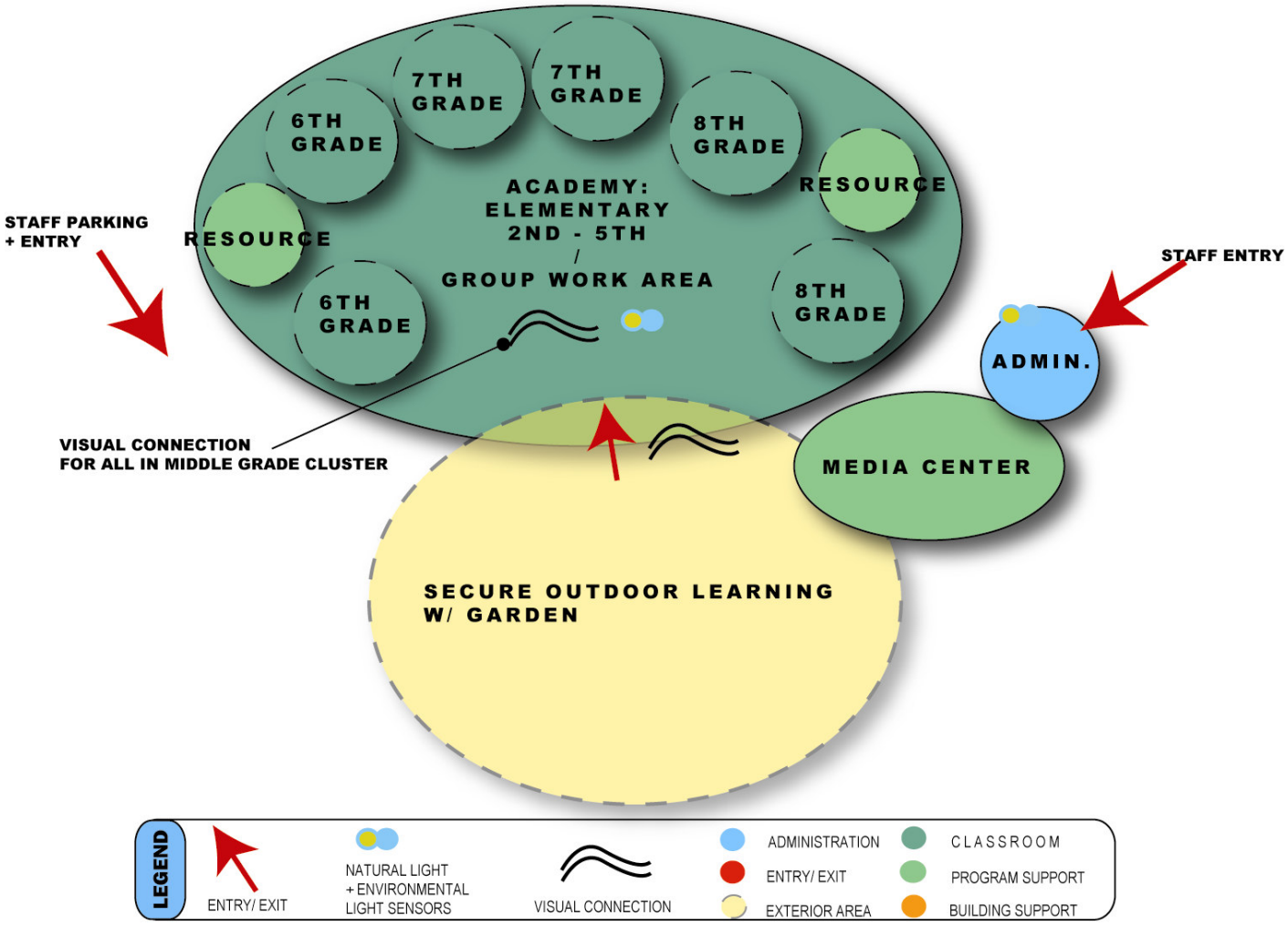
FUNCTIONAL DIAGRAMS: PRIMARY

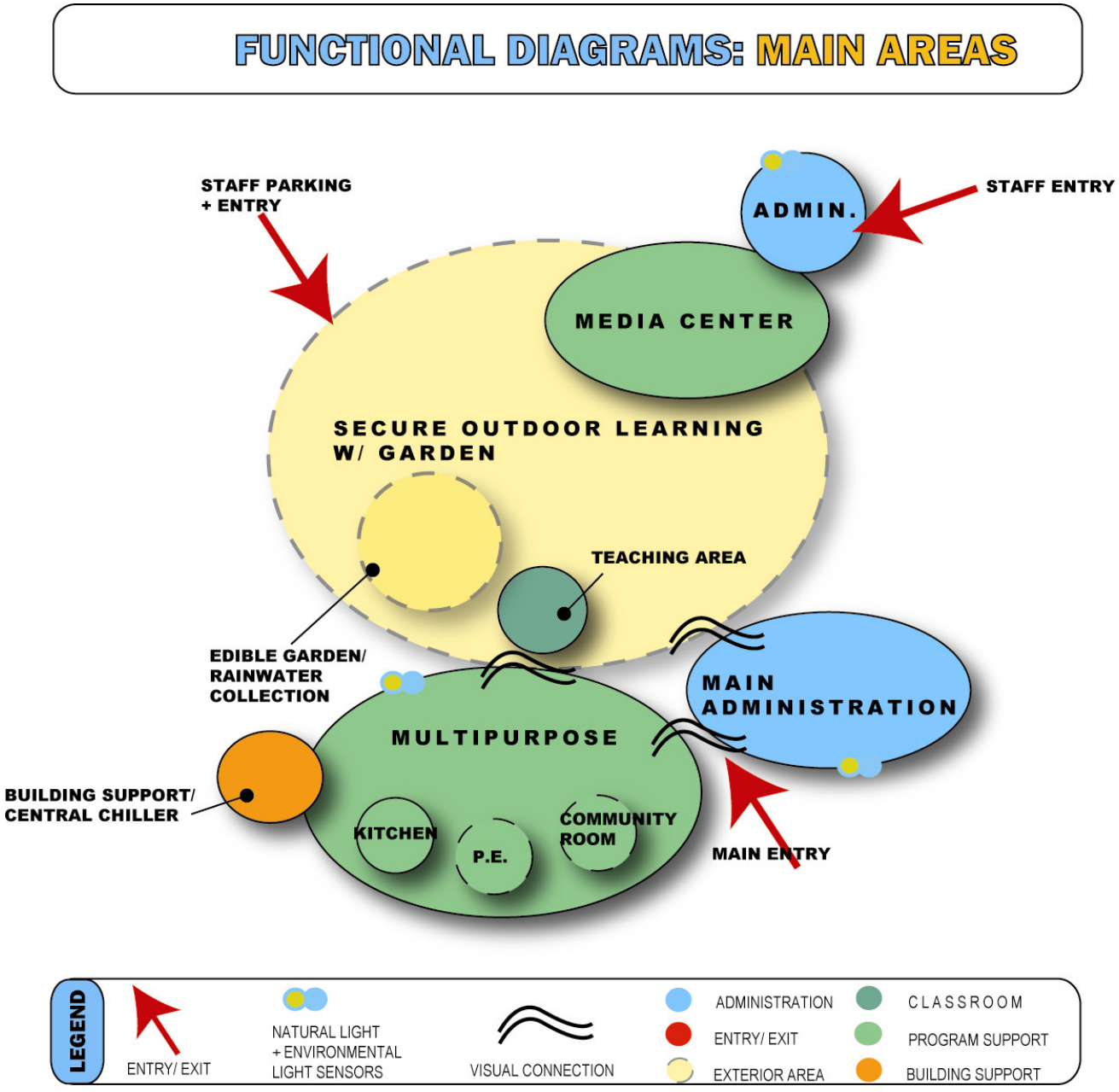


FUNCTIONAL DIAGRAMS: ELEMENTARY

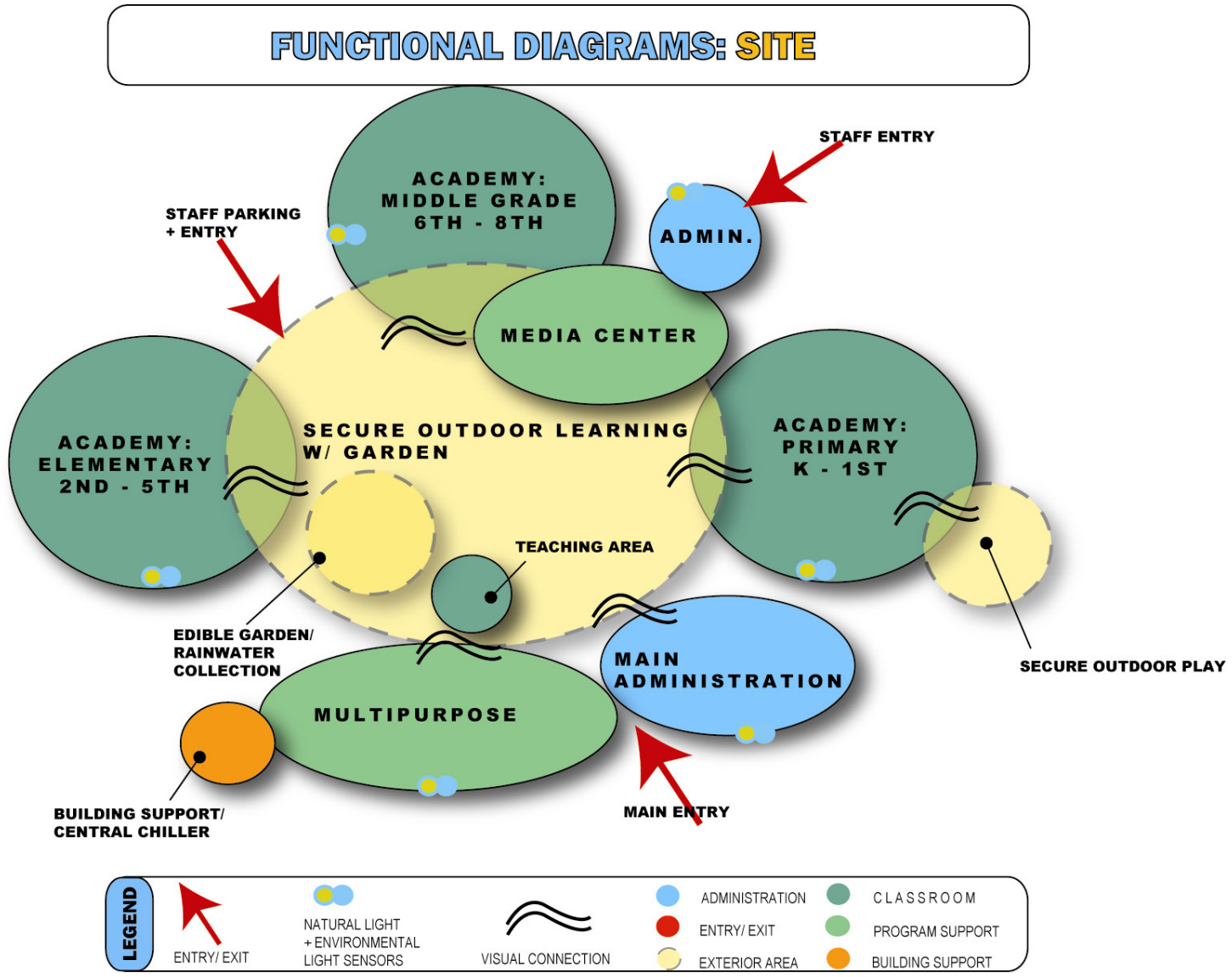


FUNCTIONAL DIAGRAMS: MIDDLE GRADE




FUNCTIONAL DIAGRAMS: MAIN AREAS
STAFF PARKING + ENTRY
ADMIN.
STAFF ENTRY
MEDIA CENTER
SECURE OUTDOOR LEARNING W/ GARDEN
TEACHING AREA
EDIBLE GARDEN/ RAINWATER COLLECTION
MAIN ADMINISTRATION
MULTIPURPOSE
BUILDING SUPPORT/ CENTRAL CHILLER
KITCHEN
P.E.
COMMUNITY ROOM
MAIN ENTRY
LEGEND
ENTRY/ EXIT
NATURAL LIGHT + ENVIRONMENTAL LIGHT SENSORS
VISUAL CONNECTION
ADMINISTRATION
ENTRY/ EXIT
EXTERIOR AREA
CLASSROOM
PROGRAM SUPPORT
BUILDING SUPPORT

2.5.4.3 Overall Site



2.6 Technology Plan

Technology Plan

Cien Aguas International Charter School will utilize technology to support instruction, promote the efficient use of energy and sustainability, to facilitate communication between all school occupants, and to enhance the safety and security of the students on campus.

Cien Aguas intends to educate its students to live effectively in a changing world and will use technology as a tool to encourage and empower students to develop their strengths and intelligence to reach their highest potential.

The Cien Aguas technology plan establishes a vision and broad guidelines for the use of technology in the current facility, with a view toward developing a detailed plan for their new permanent facility.

Technology Goals

1. Student learning is significantly improved when appropriate technologies are utilized, leading to high achievement in New Mexico content standards. Cien Aguas will use technology as a tool. This will necessitate adequate networking, wireless or wired, throughout the school to support current and future needs. Much of the student accessibility to computers will be via portable computer carts or stations, as well as dedicated areas strategically placed throughout the school, including the media center.

2. Educators have the capacity to establish student centered, technology enhanced learning environments that address issues of community, sustainability, and real-world situations. At the same time technology can enhance teamwork among students, as well as independent learning. On-line curricula are available in a number of topics, and access to the internet – with age appropriate censors – is required.

3. A "Zero Energy Campus" will benefit from high-performing, sustainable building controls, which can also be used as a teaching tool.

4. Parent/Community Involvement. Technology will be used to promote and improve parent and community involvement. Strategies include teacher and parent training, awareness efforts, and coordination with other parent or community involvement programs.

5. Information Management. Technology will be used to improve school and classroom effectiveness, communication and efficiency

Current Facility

For the first few years, the technology plan is relatively simple due to constraints of the leased facility. For this 5-year Master Plan, there are no anticipated large capital requirements.

Equipment:

- Computers have been purchased for both staff and student use.
- There have been some modifications/additions to building infrastructure to support computer/internet use during the term of the school's leasing of the facility.
- Infrastructure for heating, ventilation, and air conditioning was already in place in the facility, but has been evaluated, cleaned, and repaired where necessary.
- Records management software has been purchased and implemented.

An energy audit was conducted in the existing facility to identify potential capital investments.

2.7 Energy Management Program

Sustainability is an important element in the Cien Aguas charter, both in the curriculum and in the permanent facility design.

The goal for the permanent facility as stated in the Charter is to "purchase, construct/reconstruct and move into a "Zero-Energy Campus" facility by the fourth year of operations." [3] A "Zero-Energy" campus or building has several different definitions. During the planning process the concept that was embraced is that the energy consumed equals the energy produced. Thus, the cost to operate both building and site will be very close to zero.

[3] Cien Aguas International Charter School Charter document – page 109

Cien Aguas Permanent Facility

The permanent facility will incorporate good overall energy efficient design. Two key factors include selecting the best site for the school and situating the building with the best orientation. Locating the school to take advantage of solar orientation and natural breezes can have a great impact on energy consumption. In some climates, taking advantage of natural ventilation can have a positive impact on the occupants of the facility. In addition, daylighting – the careful placement of windows and other openings – can serve as passive thermal regulators, in addition to saving costs of artificial lighting.

The permanent facility will make use of green building materials: Fore example: recycled materials for carpets, rubber flooring, or linoleum flooring. By utilizing non-toxic, recycled and renewable materials within the school, it becomes a healthier place to learn.

Sustainable waste management during construction is curtailing the enormous amount of refuse that overburdens landfills. This will be an element of construction of the permanent facility.

Utilize energy efficient, sustainable building control systems

Curriculum: Because sustainability will be integrated into the curricula at Cien Aguas, the opportunity exists to create a unique learning tool out of the site and building. By exploring a curriculum around the green school concept itself, students get a first-hand look at the positive effects of environmentally sound architectural design. As a result, the school can become a huge learning lab that spurs the students' imagination and curiosity. A water collection system to hydrate the gardens and landscape can also function as a wonderful teaching tool.

Other elements that may be utilized.

- Solar, geothermal, Photo-voltaic, and wind-generated heating, cooling, and electricity.
- Potential programs/rebates through utility companies; PNM Sky Blue program.
- Low-flow/waterless toilets/urinals
- Daylighting

Cien Aguas is currently leasing space in the Monte Vista Christian Church

Although windows provide great day lighting to the classrooms, the current materials also contribute to some energy inefficiencies.

Cien Aguas Existing Facility

The Cien Aguas dedication to sustainability can begin to be implemented in the current temporary facility. With regard to curriculum: A recycling program can be initiated within the school with the student body participating in the program. In addition a small eco-garden that students can plant, maintain and benefit from would be a good whole school project.

Additionally, a behavior modification program of turning off lights when leaving a classroom, the utilization of non-paper cups, plates, and bowls, and using water fountains instead of water in plastic bottles can be implemented. These eco-friendly behaviors would be carried over into the permanent facility.

The school can use eco-friendly paper items, along with cleaning products.

It may be possible to have the owners of the temporary facility sign up for the wind power from PNM through their PNM SKY BLUE program.

Any renovations/repairs to the temporary facility should be accomplished with sustainable materials: ecologically friendly paint (low VOC) can be used for surfaces to be repainted. Toilets should be replaced with low flow models, incandescent lights and other less efficient lighting systems can be replaced by compact fluorescent and other more efficient lighting.

An abbreviated energy audit was conducted by Jim Palmer, PE at the existing campus. A number of items were cited that could improve the energy efficiency. The full list of recommendations is included in section 4 of this document.

Regardless of whether Cien Aguas is in a temporary or permanent facility, the commitment of the founders, staff, and students to sustainability and the integration of environmental issues into the curriculum will be an integral and important goal of the school.

2.8 Capital Funding

2.8.1 Capital Funding History

As a new State-authorized charter school district, Cien Aguas International School has not previously planned for or budgeted for capital expenditures. The existing facility is leased through a private entity and is paid through the operating budget of the school. CA does receive lease payment funds, which are discussed below. The building renovations to bring the facility up to state standards for the 2009-2010 school year were paid by the property landlord. There are currently no plans for future improvements at the school's or the landlord's expense.

2.8.2 District Capital Resources

The State-authorized charter districts must follow funding guidelines developed by the New Mexico State legislation. Just like public school districts, charter schools' operating funds are covered by a dollar per pupil funding formula.

Funding levels for capital funds in New Mexico are based on district property valuations. Charter districts are not eligible for property taxes or bonds unless the local school district is willing to make arrangements to fund them within their bond program. Charter districts can seek funding elsewhere, through government programs, private grants, and other fundraising.

Current funding resources include:

Lease Assistance
Although not considered capital for the purposes of the capital plan, the lease assistance payments are received from the PSFA. These funds must be applied for and are given based on the total number of students in the school. They apply directly to the lease for the temporary facility.

Public School Capital Outlay Funds
Charter schools are eligible for state level capital funding after 5 years of successful operations of the school. Cien Aguas will be eligible to apply for 2015 capital funds. The school must be in the State facility database and be considered inadequate via the State rankings, or in the top 100 projects. The facility will need to be educationally inadequate in order to be considered.

The local community supports Cien Aguas through contributions of time as well as money.

State Funded Charter Grants
The district can receive special appropriations granted by the is a charter fund that is currently being used to support the master planning process.

Cien Aguas Foundation
Cien Aguas will be supported by a nonprofit foundation, which has been set up to get funding for Cien Aguas International School capital and education program needs.

Cien Aguas is also eligible to receive the following funds, which are not currently in the budget: Title I Funds, IDEA-B Funds, and SEG monies since it is a bilingual program.

3.0 Capital Improvement Plan

3.1 Total Capital Needs

During the next five years, the capital needs of the Cien Aguas International School are as follows:

2010	$	616,005.00
2011	$	563,424.00
2012	$	442,634.00
2013	$	2,123,188.00
2014	$	4,330,742.00
2015	$	2,420,000.00
2016	$	300,000.00

Total five –year capital needs are: **$10,865,253**

3.2 Prioritization Process

3.2.1 Priority of Capital Needs

Priority Classifications

Life, Health, and Safety
Educational Adequacy
Sustainability
Facility Preservation and Renewal
Equipment and Technology
Community Use

Current prioritization practices follow the Priority Classifications list as presented below.

The master plan strategy identified in 2009 is based on the following principals:

1. Move the school into a permanent facility within the next 3 to 5 years.
2. Purchase sustainable materials and products as much as possible, to reflect commitment to the environment, part of the school's mission.
3. Eliminate deficiencies and inefficiencies in the temporary facility as much as possible. Consider the little things that can be done to improve energy use.
4. Use state assistance to address as many needs as possible. State assistance includes grant programs through the

energy department, the facilities authority, and the education commission, as applicable.

5. Assure secure environment for the children while still maintaining an open and welcome community feel.

6. Provide computer system that has the capabilities to utilize today's technology to enhance teaching and learning. This should include access to global opportunities.

7. Maintain the right student ratio and mixed-grade classrooms as are necessary to facilitate the GLAD teaching method and the IB program.

3.2.2 Financial Strategies

The overall Capital Plan includes the lease payments for the existing facility, as well as, capital improvements to that facility. The board has worked out some of these costs to be covered by the landlord. Additionally, it is estimated that in year three when additional space will be needed there will be more facility renewal work. Some facility improvements are needed to improve the energy efficiency of the building; this ties in to the school's mission and should be considered as a capital expenditure in the next fiscal year.

During the next five years, Cien Aguas will follow a phased plan for enrollment of their student body. The master plan has identified strategies to use the temporary facility as well as an additional space to meet adequacy standards for the classrooms while continuing to grow.

Though not ideal, this phased plan, outlined in Section 4 of this document, will also be necessary in order to continue to move forward with the construction of a permanent facility while having limited funding for capital needs. It will take months to develop the capital campaign before it is fully functional, however, once in action the fundraising plan will very quickly help Cien Aguas to meet its preliminary needs for planning and design, as well as site purchase. The expectation is that construction can take place by year 4 as long as the dollars are in place.

3.3 Capital Plan

Cien Aguas International School is a newly approved charter school. There is no historic data to draw upon. There are no systems in place at this time to monitor and coordinate a capital program as of this writing. However, the stakeholders are extremely committed to their school and its needs. By year two, a simple database will be in place to track the capital needs as well as expenditures for the completed projects.

Cien Aguas' Five-Year Capital Projects List

Temporary Facility Project	Type	S.F.	Cost/SF or Lump Sum	Total
Facility Improvements	Life, Health, Safety	1	$ 69,260.00	69,260.00
Lease Year 1	Educational Adequacy	12,211	$ 9.50	116,004.50
Lease Year 2	Educational Adequacy	12,852	$ 10.00	128,520.00
Lease Year 3	Educational Adequacy	17,108	$ 10.50	179,634.00
Lease Year 4	Educational Adequacy	17,108	$ 11.00	188,188.00
Lease Year 5	Educational Adequacy	17,108	$ 11.50	196,742.00
Facility Improvements	Life, Health, Safety	1	$ 23,000.00	23,000.00
Energy Efficiency Upgrades	Sustainability	12,852	$ 2.00	25,704.00
Portable Building for Transition	Educational Adequacy	1,800	$ 75.00	135,000.00
Temporary Facility Total				**1,062,052.50**
Permanent Facility Project	Type	S.F./Unit*	Cost/SF or Lump Sum**	Total
Planning & Design	Educational Adequacy	31,000	$ 13.20	409,200.00
Site Purchase	Educational Adequacy	1	$ 500,000.00	500,000.00
Phase 1 - Middle Grade CR, Science	Educational Adequacy	6,000	$ 200.00	1,200,000.00
Sustainable Materials	Sustainability	1	$ 240,000.00	240,000.00
Phase 2 - Core and Admin	Educational Adequacy	15,000	$ 200.00	3,000,000.00
Sustainable Materials	Sustainability	1	$ 600,000.00	600,000.00
Phase 3 - Elementary Grades and Multipurpose	Educational Adequacy	10,000	$ 200.00	2,000,000.00
Sustainable Materials	Sustainability	1	$ 400,000.00	400,000.00
Landscape/Outdoor Learning Area	Educational Adequacy	5,000	$ 50.00	250,000.00
LEED Certification/Commissioning	Sustainability	31,000	$ 14.00	434,000.00
Perm Facility Total				**9,033,200.00**
Total Capital Projects				**10,095,252.50**

*Total SF for new facility includes recommended 28,000 plus contingency of 10%

**Uses 2009 Cost Per Unit

All projects in the list have been identified as part of a start-up program, as well as projects necessary in the development of a new or renovated facility. In addition, the permanent facility costs reflect the charter's commitment to the use of sustainable practices and sustainable materials as much as possible. A 20% cost factor for those materials is considered in the estimate, as well as a 10% annual construction inflation increase, based on current market trends.

By 2015, Cien Aguas will be operating in multiple venues. Additionally, the classroom and core spaces will be inadequate for the expected enrollment at that time. It is expected that Cien Aguas will apply for PSFA funding in 2015 for the following fiscal year to complete Phase 2 and Phase 3 of the project. This fiscal year will begin in the 6th operating year, outside the scope of this 2010-2015 Facility Master Plan. Because the state-chartered schools will then be eligible for state funding, the FMP/Ed Spec Update will address these costs.

4.0 Master Plan Support Material

Existing Site/School

Northeast entry to Cien Aguas shared parking area

Adequacy of the existing facility is detailed in Section 2.5 of this document. Utilization and Capacity focuses on the future needs of the school based on the analysis of their education program and projected enrollments. A phased growth plan for years three through five is outlined that utilizes additional space at Monte Vista Christian Church if available. If that additional space is not secured at the existing facility, Cien Aguas will seek out alternative space nearby. The phased plan considers growth at the existing facility while also planning for the construction of a new permanent facility.

CURRENT SITE
3501 CAMPUS BLVD

Program Statement

Cien Aguas is a newly approved charter school authorized by the State of New Mexico PED. It will open for students in the fall of 2009. The charter cap is for 330 students, however the school plans to start the 2009-2010 school year with a strategic

alignment of students in grades Kindergarden through 6th for a starting enrollment of 140 students.

A preliminary adequacy analysis of spaces and proposed classrooms was conducted to get final approval from the Public School Facility Authority for Cien Aguas to open its doors.

Cien Aguas
Year 1

Space #	Designated Grade	No. of Students	SF per student	SF Needed	SF Provided	Adequacy
1	6th Grade (Sci)	20	28	560	852	292.00
2	Support	N/A			364	
3	MultiPurpose	N/A			911.3	
4	6 (Theatre)	20	28	560	604	44.00
5	Reception/Health	N/A			340	
6	4/5 Grade (Lib)	20	32	640	661.4	21.40
7	Kinder A	11	50	550	595.1	45.10
8	Kinder A	9	50	450	504.9	54.90
9	Kinder B	6	50	300	397.3	97.30
10	Kinder B	7	50	350	401.2	51.20
11	Kinder B	7	50	350	407.6	57.60
12	BookRm/Parent	N/A			573.9	
13	2/3(across restroom	20	32	640	893.57	253.57
14	Not Used	N/A			609.4	
15	1st Grade	20	32	640	808.7	168.70
16	Mech/Storage	N/A			261.1	

The proposed improvements are intended to bring school to state adequacy for education according to the standards for charter school facilities. Upgrades to include ADA retrofits of bathrooms and doors as well as reconditioning of hvac and heating systems among other things.

Existing Facility Energy Audit

The goal of the energy audit conducted by Jim Palmer, PE is to improve the energy efficiency of the existing building for Cien Aguas, as reflected in the charter's mission. It is recommended that Cien Aguas implement the changes in their temporary facility within the first school year to take advantage of all teaching and money-saving opportunities while housed in this facility.

1. Exit signs currently using incandescent bulbs should be replaced with LED lights to reduce heat emission.

2. Exterior lighting should be replaced with high pressure sodium or metal halide lights.

3. Classroom lighting:
   - Suggest light switches at classroom exits to enable teachers/students to turn off lights when not needed
   - Lights in classrooms are currently T-12, which is ok, however the more energy-efficient T-8 lighting with electronic ballasts would be better. Cost constrained should be examined as the retrofit might cost more than CA would want to pay.
   - Suggest the lighting in classrooms be on 2 switches instead of one so partial lights can be used when appropriate. It should be noted, that the lighting should be dispersed consistently within the classroom
   - Lighting in areas such as bathrooms, halls: Would it be feasible cost wise to install timer switches with delays or install auto controls for lights with on/off sensors?

Existing multipurpose room.

4. Climate Control/Reduction of energy:
   - Suggest intermittent sump dump pumps be added on all evaporative coolers. These can be purchased at any hardware stores for $30-$40 apiece, plugging fans into the pumps. This reduces water usage due to continuous bleeding of water.
   - There are no outlets in the rooms to release evaporative air. The best no-cost solution is to crack the windows open when swamp coolers are in use to keep the humidity at acceptable levels. Where there are no windows, the doors should be cracked open.
   - Thermostats for each room with appropriate programming for occupancy and usage.
   - Suggest replacing the old thermostats with setback thermostats.
   - Boiler: Assure existence of an outside air temperature sensor reset to regulate boiler temperature. If in existence, is should be calibrated.
   - Boiler room: There is a leak at the temperature valve. It looks like hot water is leaking into the drain.
   - Use insulation where ever possible, it is inexpensive, there are no moving parts to maintain, and it works both summer and winter. This would include valves, pipes, and water heaters.
   - New water heaters should have spark igniters rather than continuous pilot lights.

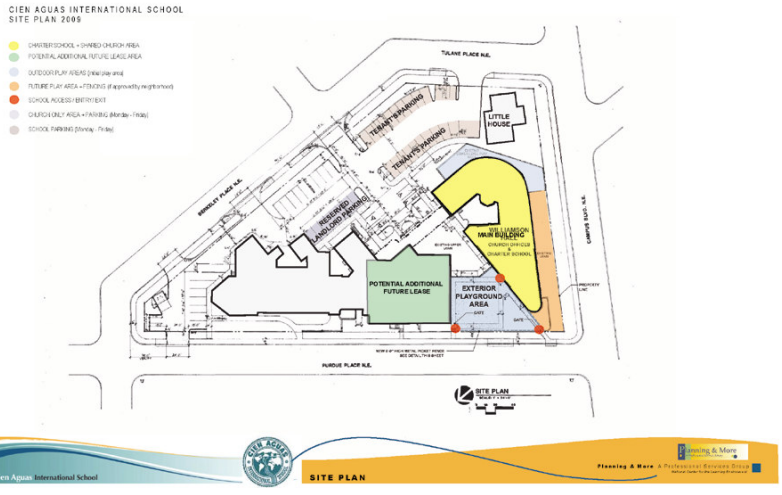
A typical classroom before restoration.

- Suggest installing a flu damper on top of water heater(s) to minimize heat escaping.
- Water Heater temperature should be 120 deg. F rather than 140 deg F. This will increase energy savings and it is safer for the students.
- Hydronic system pumps should have variable speed drives on the motors. This item would have a lower priority.
- Any recirculation system should be put on a timer with properly rated timer amps.
- All windows and doors should be caulked and/or weather stripped.
- Roof insulation should be checked and, if necessary, replaced or additional added.
- Windows are currently single pane. If possible, they should be replace with double pane windows. These could also be phased in over time.
- Rooms with no windows are not really appropriate for winter use.
- Leakage around evaporative cooler fixture in ceiling needs to be checked. Potential of float on evaporative cooler not in proper working order.

Maintenance:
It may be appropriate to have either a video or maintenance manual made.

Site Plan

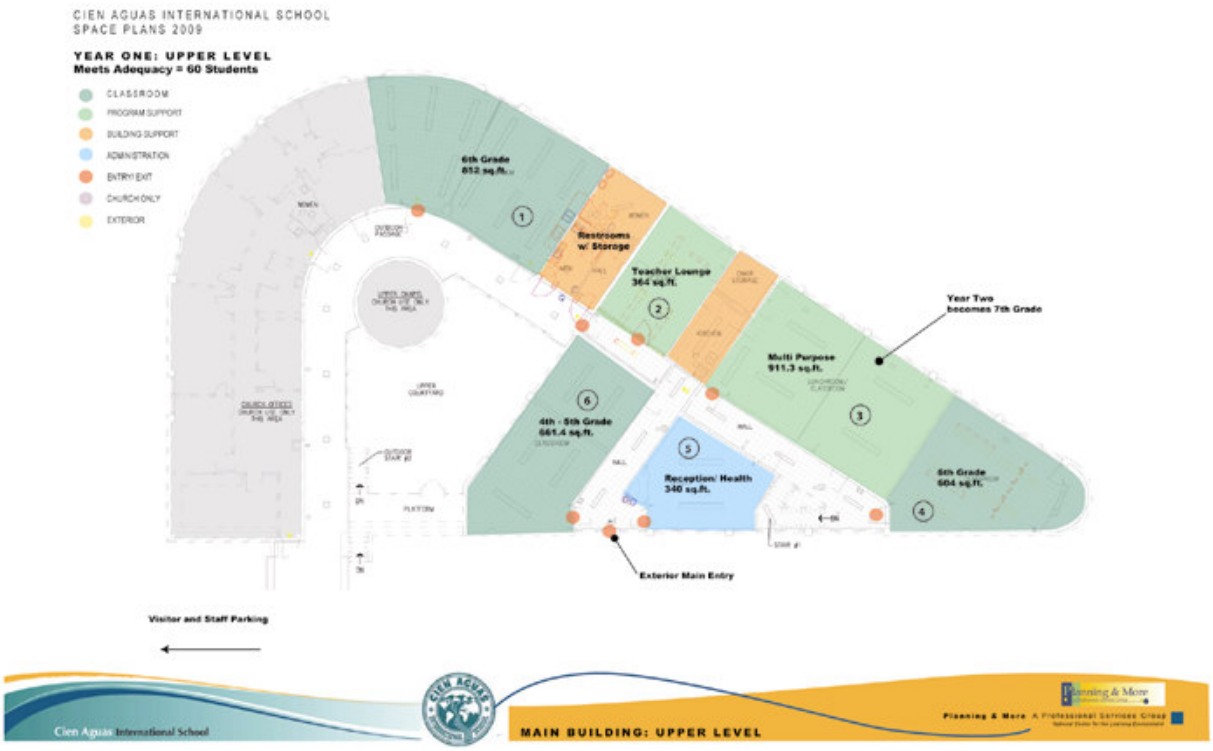
The following page shows a site plan for the existing facility.



Insert Site Plan Here

Floor Plans for Years One through Five

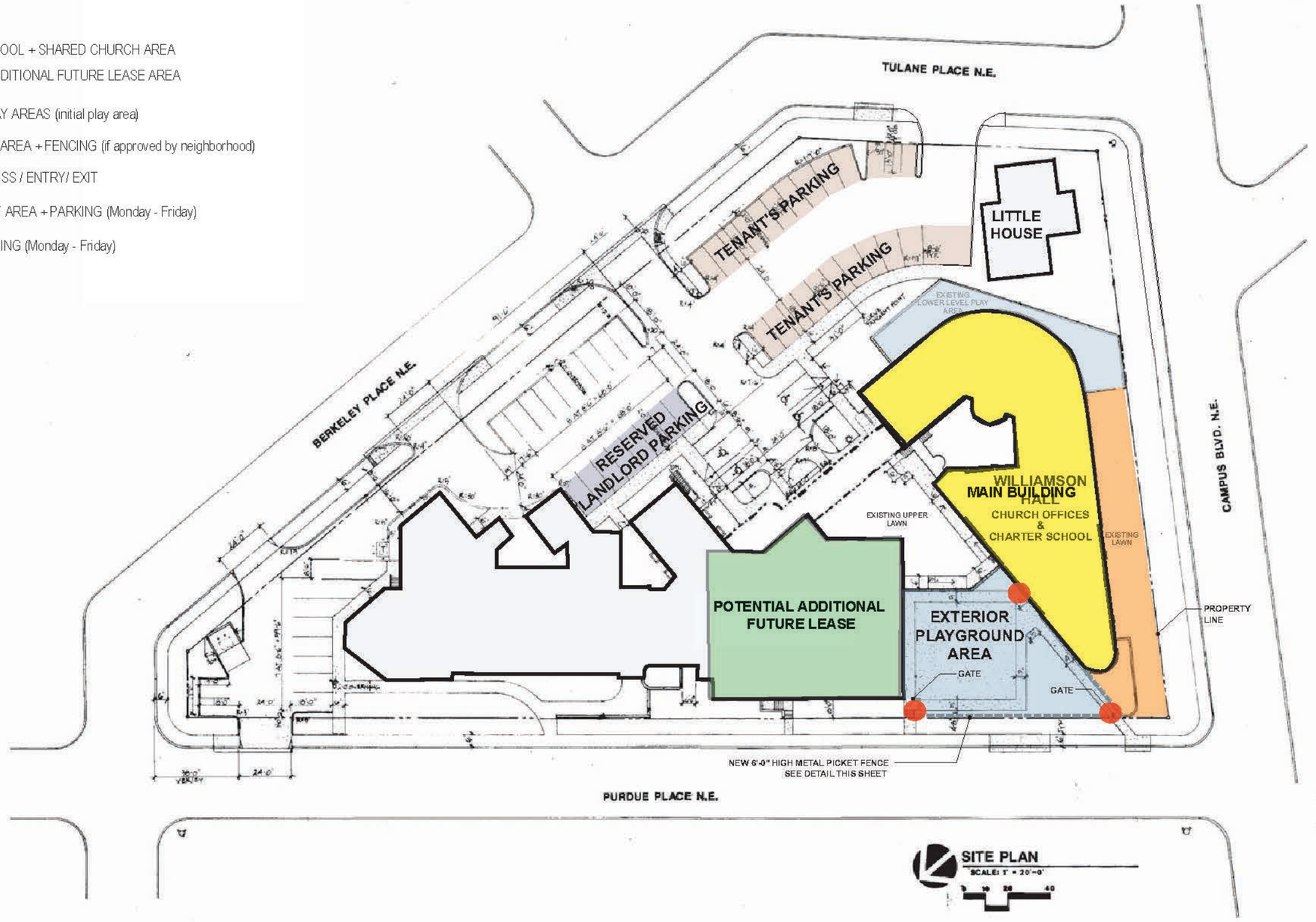
A visual presentation of the charts in Section 2.5 is included in the following pages. These graphics document the phased growth in student enrollment at the existing facility.



Sample floor plan for Cien Aguas existing building.

CIEN AGUAS INTERNATIONAL SCHOOL
SITE PLAN 2009

- CHARTER SCHOOL + SHARED CHURCH AREA
- POTENTIAL ADDITIONAL FUTURE LEASE AREA
- OUTDOOR PLAY AREAS (initial play area)
- FUTURE PLAY AREA + FENCING (if approved by neighborhood)
- SCHOOL ACCESS / ENTRY/ EXIT
- CHURCH ONLY AREA + PARKING (Monday - Friday)
- SCHOOL PARKING (Monday - Friday)



CIEN AGUAS INTERNATIONAL SCHOOL
SPACE PLANS 2009

YEAR ONE: UPPER LEVEL
Meets Adequacy = 60 Students

Visitor and Staff Parking

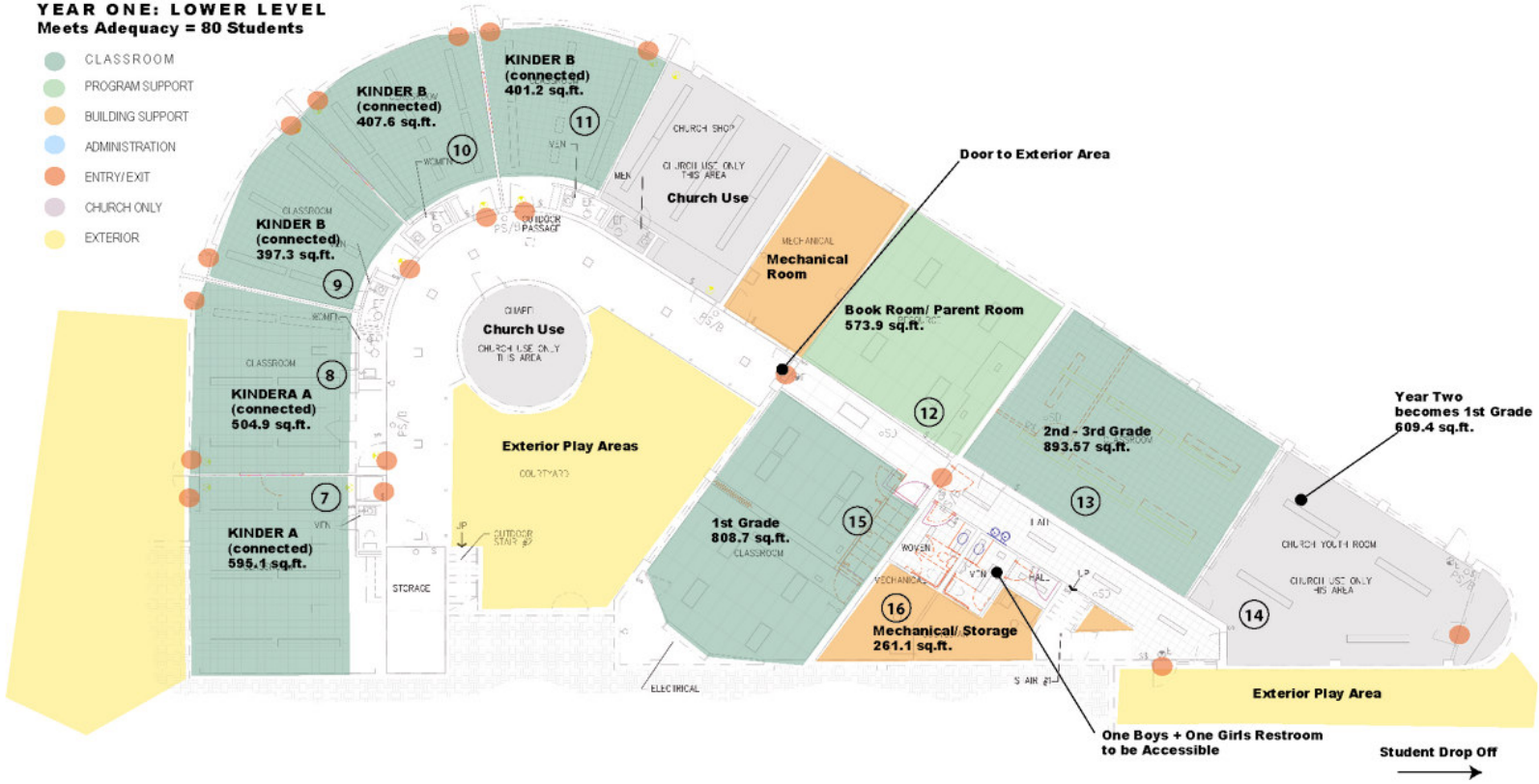
Cien Aguas International School

MAIN BUILDING: UPPER LEVEL

Planning & More A Professional Services Group
National Center for the Learning Environment

CIEN AGUAS INTERNATIONAL SCHOOL
SPACE PLANS 2009

YEAR ONE: LOWER LEVEL
Meets Adequacy = 80 Students



Cien Aguas International School

MAIN BUILDING: LOWER LEVEL

Planning & More A Professional Services Group

CIEN AGUAS INTERNATIONAL SCHOOL
SPACE PLANS 2009

YEAR TWO: UPPER LEVEL

- CLASSROOM
- PROGRAM SUPPORT
- BUILDING SUPPORT
- ADMINISTRATION
- ENTRY/ EXIT
- CHURCH ONLY
- EXTERIOR

Visitor and Staff Parking

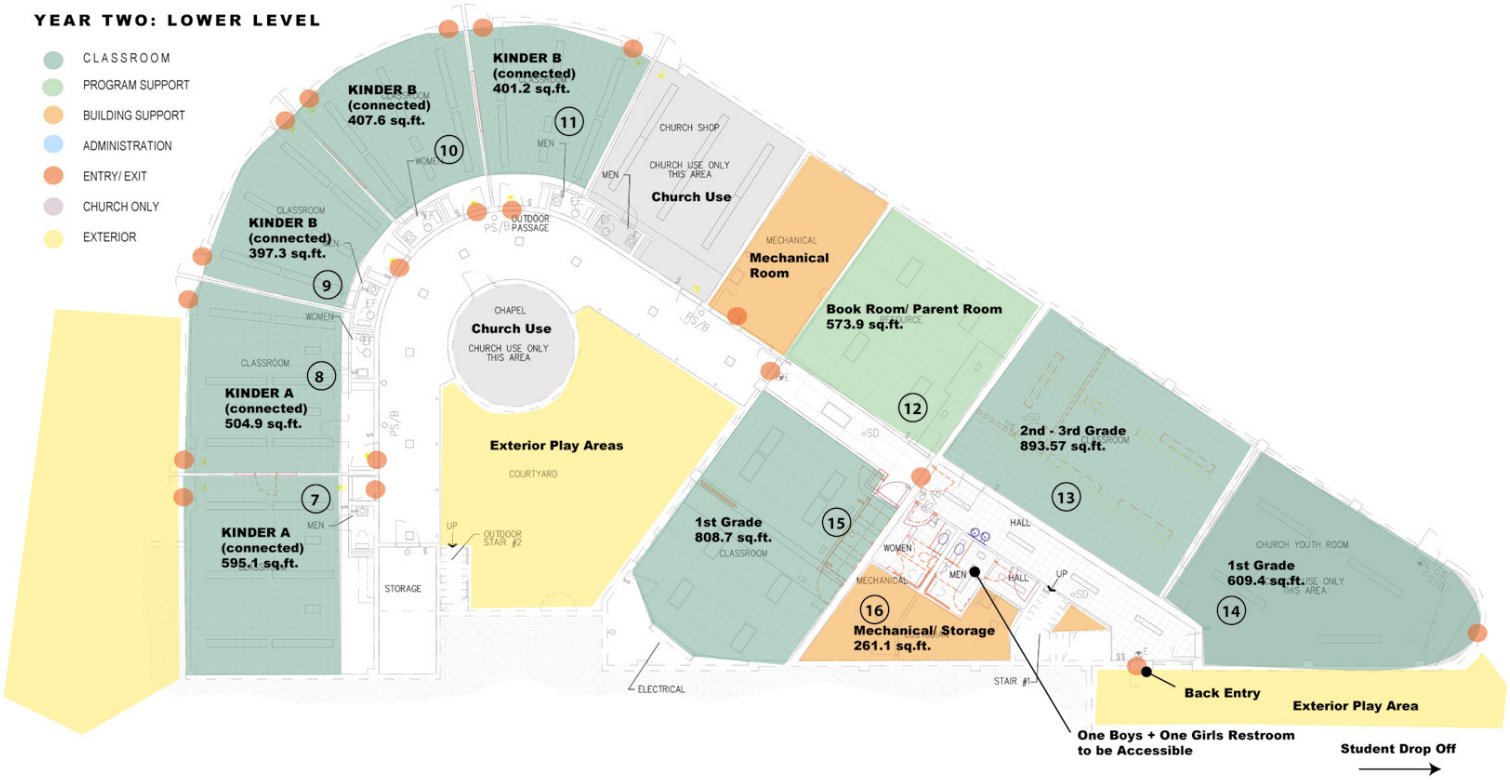
Cien Aguas International School

MAIN BUILDING: UPPER LEVEL

Planning & More A Professional Services Group
National Center for the Learning Environment

CIEN AGUAS INTERNATIONAL SCHOOL
SPACE PLANS 2009

YEAR TWO: LOWER LEVEL



Cien Aguas International School

MAIN BUILDING: LOWER LEVEL

Planning & More A Professional Services Group
National Center for the Learning Environment

CIEN AGUAS INTERNATIONAL SCHOOL
SPACE PLANS 2009

YEAR THREE: UPPER LEVEL

Visitor and Staff Parking

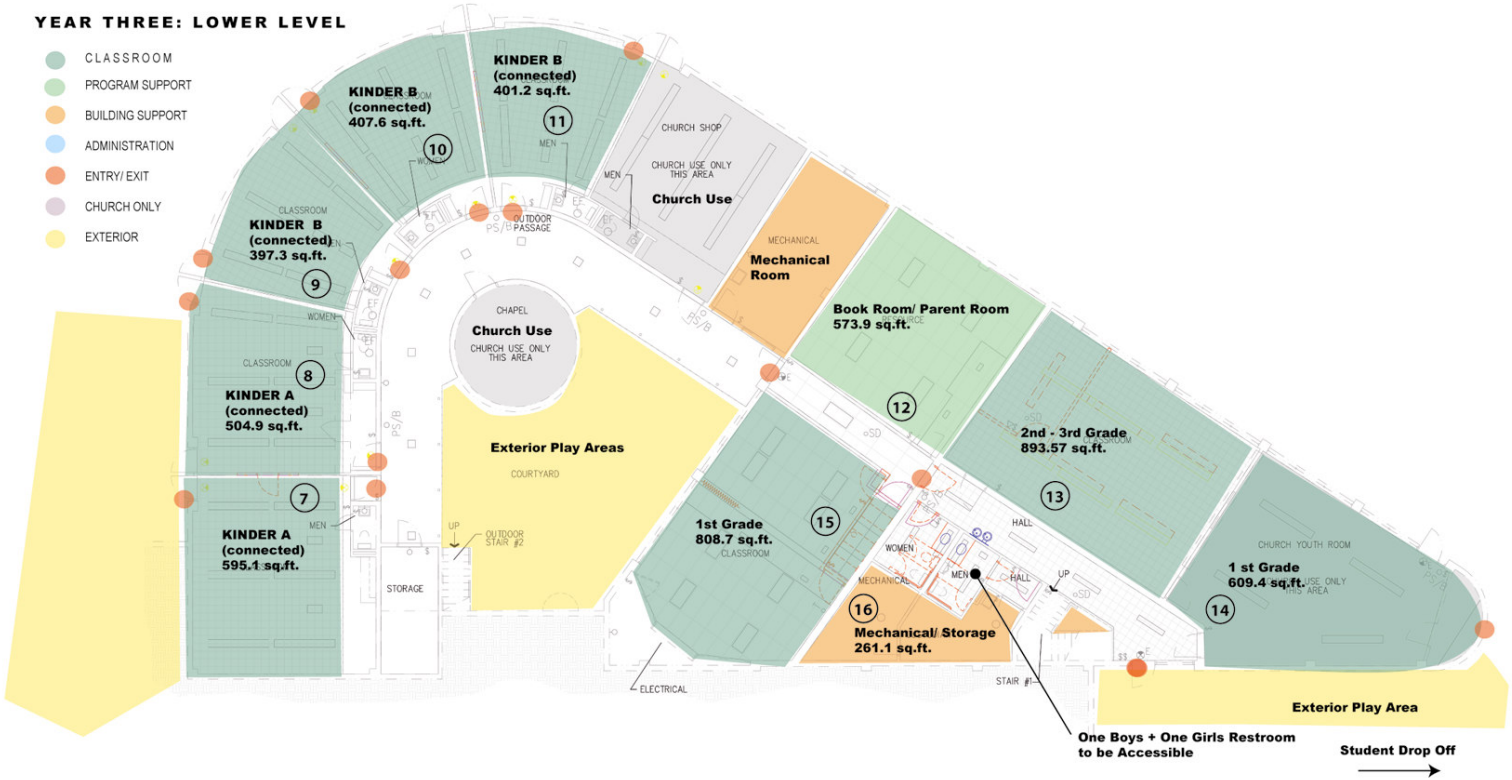
Cien Aguas International School

MAIN BUILDING: UPPER LEVEL

Planning & More A Professional Services Group
National Center for the Learning Environment

CIEN AGUAS INTERNATIONAL SCHOOL
SPACE PLANS 2009

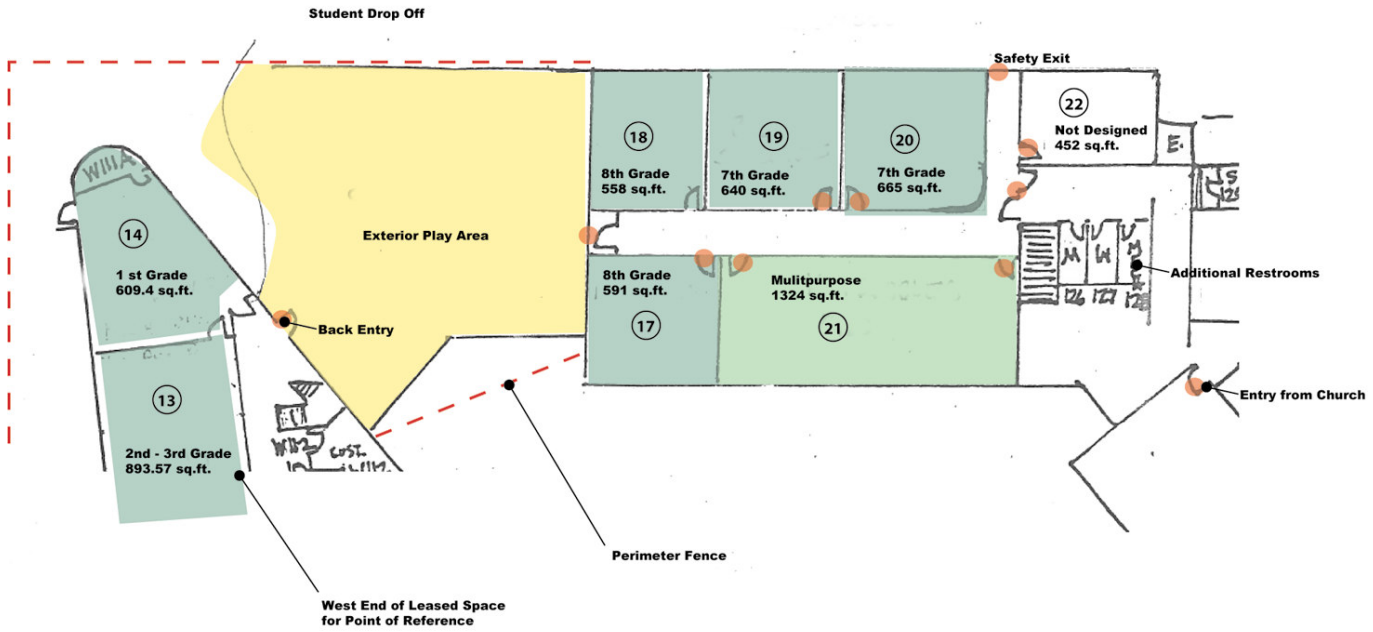
YEAR THREE: LOWER LEVEL



CIEN AGUAS INTERNATIONAL SCHOOL
SPACE PLANS 2009

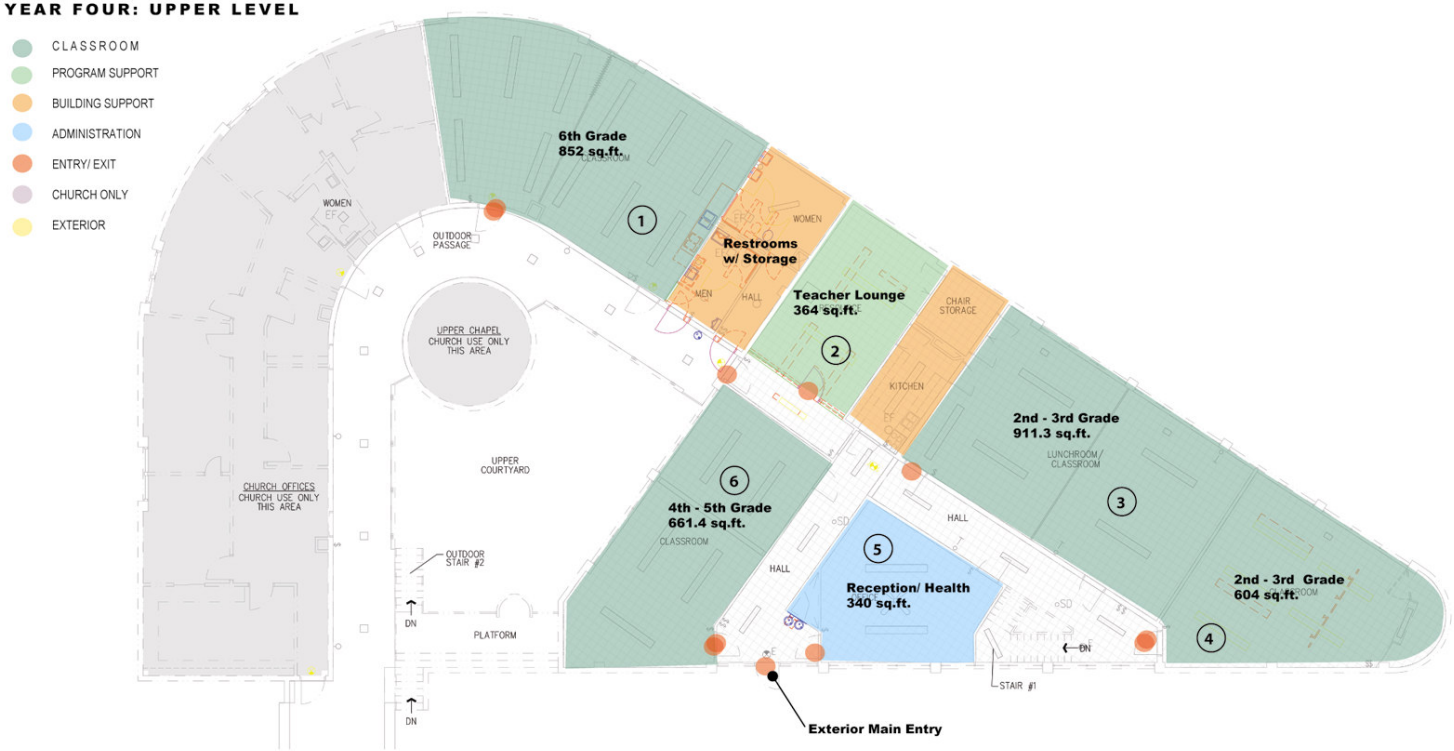
ADDITIONAL LEASE
YEAR THREE: LOWER LEVEL

- CLASSROOM
- PROGRAM SUPPORT
- BUILDING SUPPORT
- ADMINISTRATION
- ENTRY/ EXIT
- CHURCH ONLY
- EXTERIOR



CIEN AGUAS INTERNATIONAL SCHOOL
SPACE PLANS 2009

YEAR FOUR: UPPER LEVEL



Visitor and Staff Parking

Cien Aguas International School

MAIN BUILDING: UPPER LEVEL

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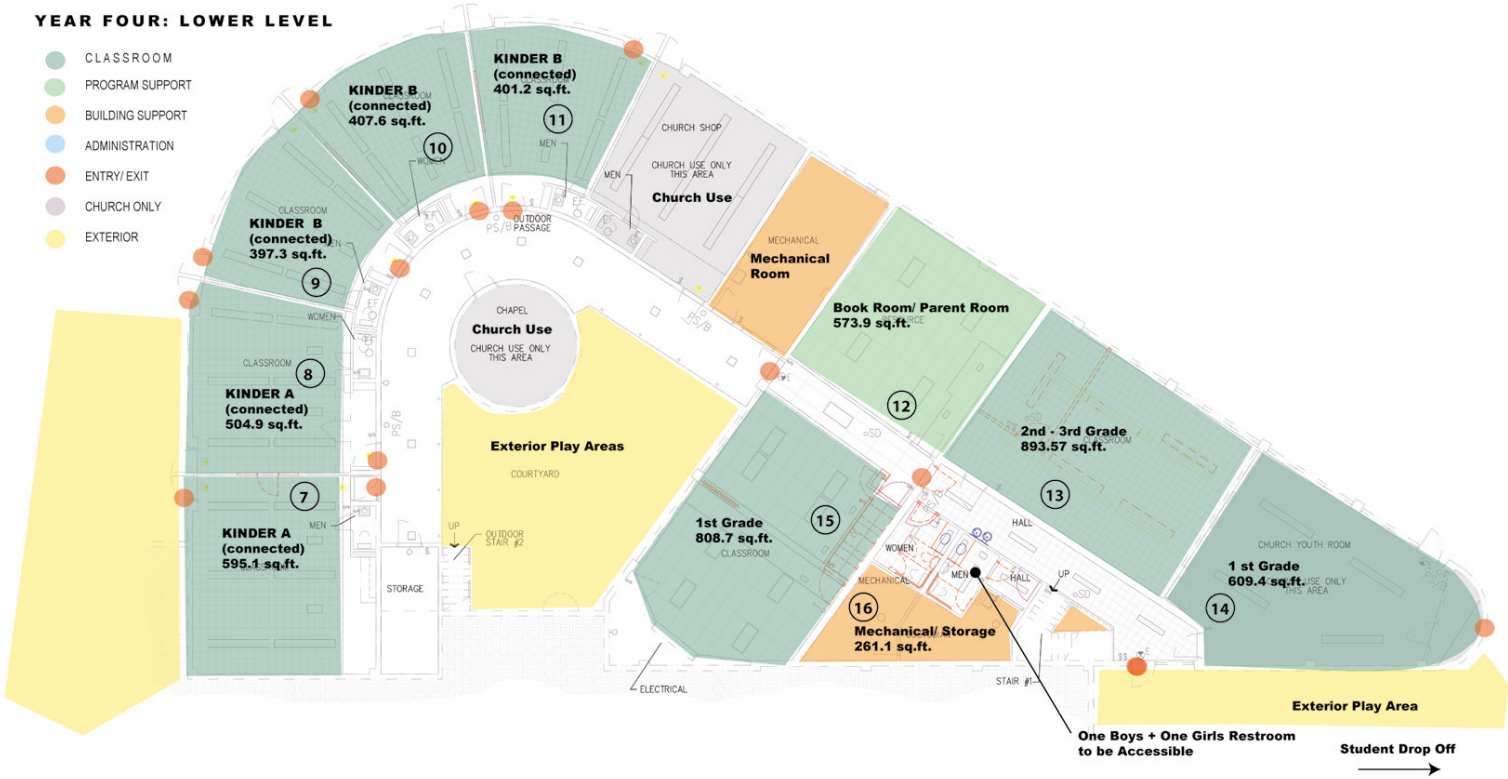
National Center for the Learning Environment

CIEN AGUAS INTERNATIONAL SCHOOL
SPACE PLANS 2009

YEAR FOUR: LOWER LEVEL



Cien Aguas International School

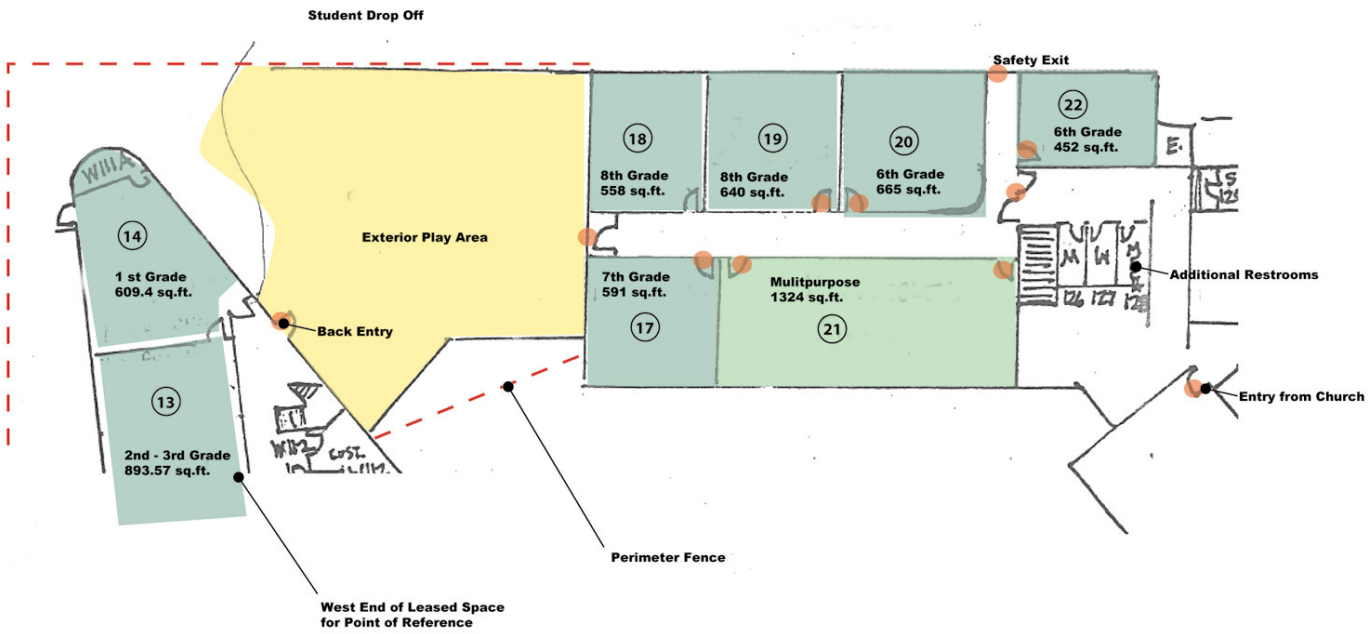
MAIN BUILDING: LOWER LEVEL

Planning & More A Professional Services Group
National Center for the Learning Environment

CIEN AGUAS INTERNATIONAL SCHOOL
SPACE PLANS 2009

ADDITIONAL LEASE
YEAR FOUR: LOWER LEVEL

- CLASSROOM
- PROGRAM SUPPORT
- BUILDING SUPPORT
- ADMINISTRATION
- ENTRY/ EXIT
- CHURCH ONLY
- EXTERIOR



CIEN AGUAS INTERNATIONAL SCHOOL
SPACE PLANS 2009

YEAR FIVE: UPPER LEVEL

Cien Aguas International School

MAIN BUILDING: UPPER LEVEL

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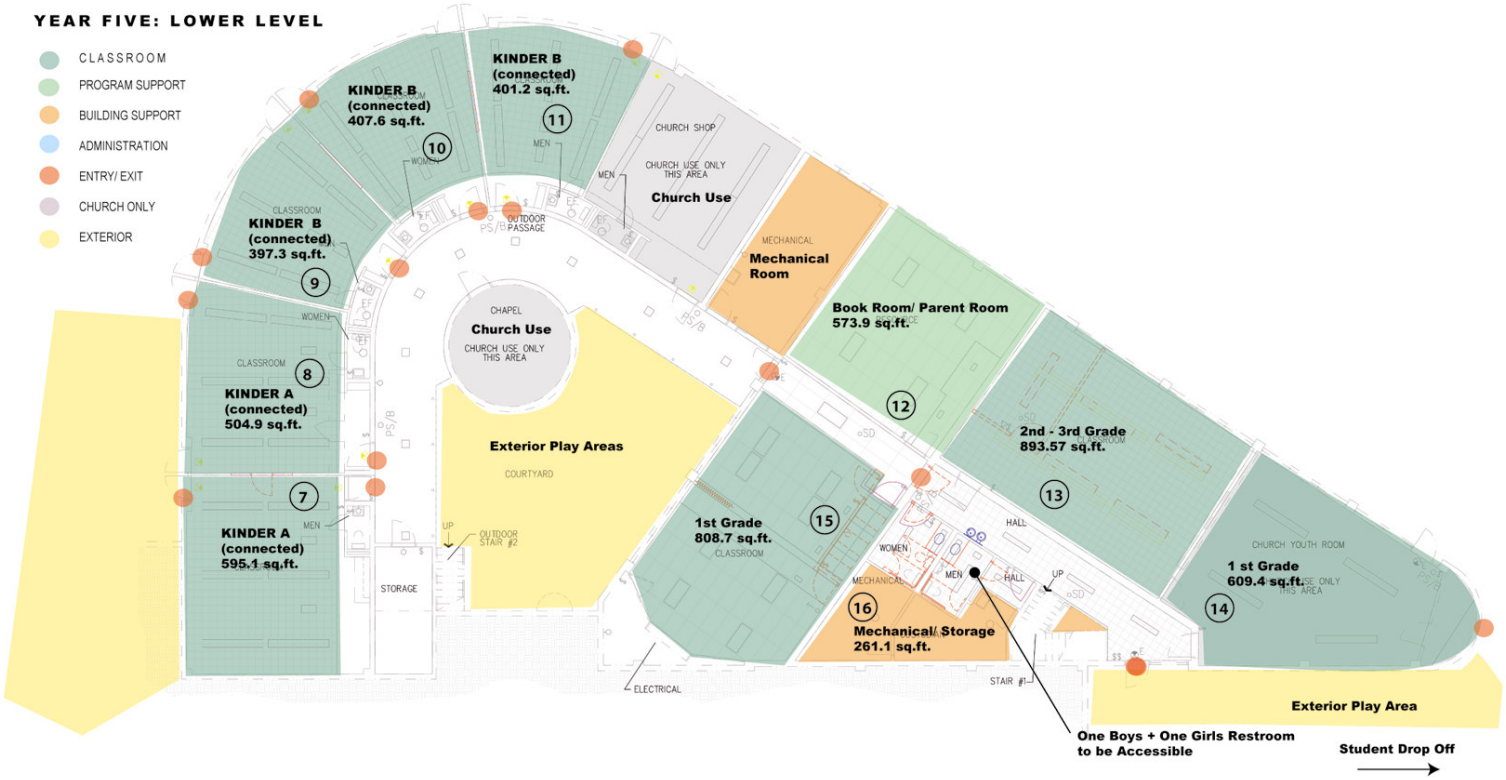
National Center for the Learning Environment

CIEN AGUAS INTERNATIONAL SCHOOL
SPACE PLANS 2009

YEAR FIVE: LOWER LEVEL



Cien Aguas International School

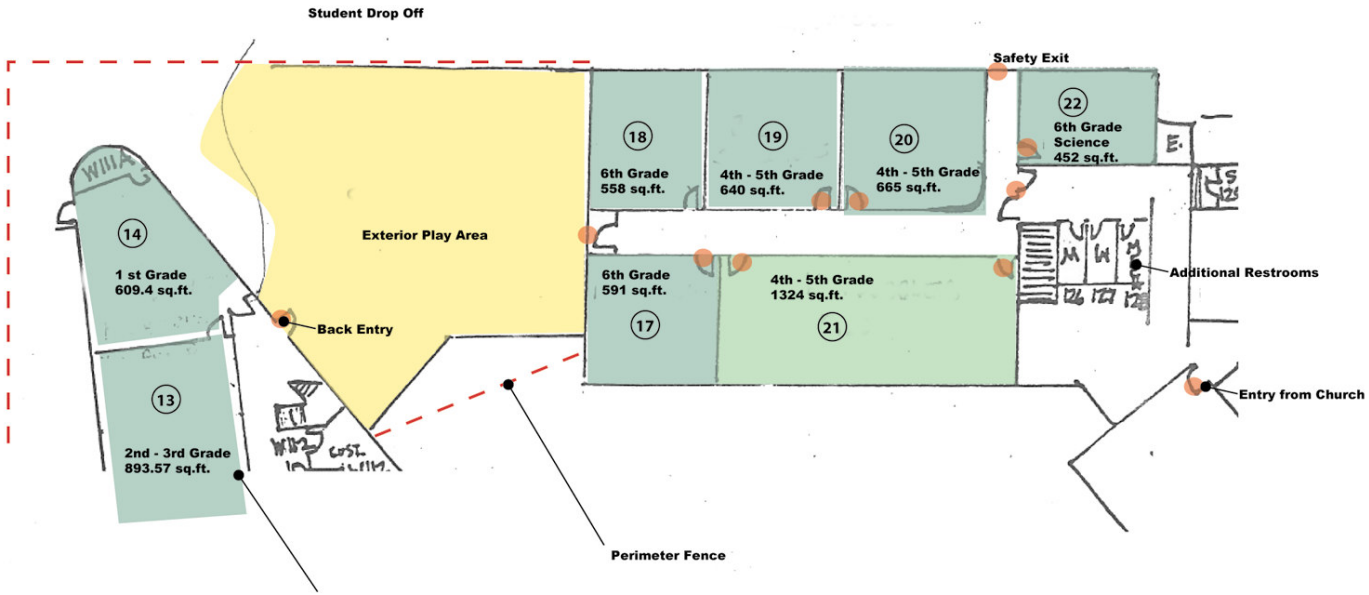
MAIN BUILDING: LOWER LEVEL

Planning & More A Professional Services Group
National Center for the Learning Environment

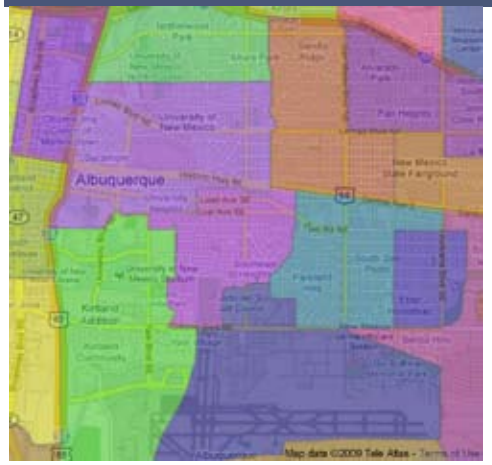
CIEN AGUAS INTERNATIONAL SCHOOL
SPACE PLANS 2009

ADDITIONAL LEASE
YEAR FIVE: LOWER LEVEL

- CLASSROOM
- PROGRAM SUPPORT
- BUILDING SUPPORT
- ADMINISTRATION
- ENTRY/ EXIT
- CHURCH ONLY
- EXTERIOR



CIEN AGUAS :LEARNING PLAN 2009
INTERNATIONAL SCHOOL



Planning & More
A Professional Services Group

Table of Contents

I. Acknowledgements

Learning Plan Acknowledgements

The Cien Aguas International School governing board would like to thank everyone who participated in this process for their support and dedication.

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II. Introduction

Planning Context

The state of NM Public Schools Facility Authority has mandated that all schools, public and charter, must submit a 5-year Capitol Master Plan. Charter schools in NM, whether district or state chartered, must be in public buildings by 2015.

In the case of the charter school, this mandate is new and presents some unique challenges due to the fact that most, if not all newly-formed charter schools do not have permanent facilities, most likely have not even thought about necessary spaces required for their future permanent school buildings, and there are no (at the time of this writing) written policies and procedures in place that specifically detail the processes and procedures to which the charter school must adhere.

Indeed, Cien Aguas is one of the first state chartered schools in New Mexico to complete a facility master plan.

Description of the District

The proposed permanent location of Cien Aguas is in southeast Albuquerque. This is an area with large numbers of Mexican immigrant families, along with large numbers of highly educated English – dominant families for whom a bilingual educational program with an international and environmental focus is attractive. The majority of southeastern Albuquerque schools suffer from low academic achievement, especially for the English Language Learners, as documented by state standardized testing (NMSBA).

Southeastern Albuquerque also lacks strong bilingual and/or dual language programs. For Cien Aguas to be successful, location is important.

The school will consider permanent sites that are in or near lower socioeconomic neighborhoods, and located near public bus routes. The current facility located at Monte Vista Christian Church, 3501 Campus Blvd., NE, Albuquerque, NM 87106, which is in the southeastern Albuquerque quadrant.

District Mission

Cien Aguas Charter School is a dual language, K-8 school with an international and environmental focus. The instructional program is deliberately and skillfully crafted to integrate students who differ in language, culture, and income, in order to promote high achievement for all.

Cien Aguas seeks to develop confident, curious, and compassionate young people who are bilingual and bi-literate, committed to a sustainable society, and who will have the academic and interpersonal skills necessary to succeed in further education and in the wider world.

CIEN AGUAS PLANNING WORKSHOP 2009

District Vision

• Environmentally sustainable campus populated by a diverse mix of students

• High achievement for all

• Learners with a high awareness of the world in which they live

• Students who are individuals, who show respect for themselves, others and the environment

• Decision-makers and problem-solvers

• Value staff, parents and students working together to create a community

• Teaching and learning are energetic and active• Create a productive learning environment for students of diverse backgrounds

• Teaching and learning are reflective and focus on process as well as product

• Promote the importance of working in a team and being accountable to a group

District Core Values

• Demonstrate that English language learners are capable of higher levels of achievement than they are currently reaching in public education

• Inquiry-based learning – pursuing depth of knowledge rather than superficial achievement

• Utilize student-centered instructional techniques

• Small school environment with significant student-teacher interaction

• Model environmental sustainability through responsible practices and community commitment

• Ultimately create a zero-energy campus that generates more energy than it uses

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Planning Process

The planning process was a variation upon the “design down process”, drawn from the project, New Designs for Learning, developed by George Copa of Oregon State University. This process has been used extensively in designing new and remodeled schools nationally and internationally.

The goal of the design down process is to involve stakeholders; Cien Aguas founders, facilities board, teachers, and parents; in building a framework of desired features to direct the District’s planning for their new facility, which must be inhabited by 2015. The process provided a structure to allow the participants, in the course of four planning workshops, to move through a series of design elements with each element building upon the decisions of the previous element.

The design down elements used in the planning process are: Learning Context, Learning Process, and Learning Organization. These three elements lead to the final; Learning Environment.

The design down process encouraged open discussion and consensus building among participants and promoted the development of a coherent set of desired features for all elements of the design.

The planning workshops also served the important function of imparting information to the community and enabling the core committee to learn what was important to the participants. One challenge of this process was that there is no actual history of the school to draw upon for comparison. In addition, and as is seen in the Master Plan document itself, part of the planning process must concern itself with achieving educational adequacy in the existing leased facility, along with envisioning a future facility.

This Learning Plan then is to be viewed in terms of both the existing facility and the future permanent Cien Aguas facility. In addition, considerable time was spent discussing new directions and trends in the education environment. This information was taken into consideration as it would apply to Cien Aguas educational delivery methods and ultimately to spaces necessary to house them.

The planning process assisted the core committee in the identification of areas held in common and for improvement in the current facility as well consideration of current spatial adequacy and future spatial needs.

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Methodology

The purpose of this learning plan is to produce a document that outlines the priorities for education and the facility as the participants have defined them.

Information from the learning plan and its emphasis on teaching and learning is intended to be utilized to make future decisions regarding district standards, capital resource outlay, and the most important elements driving the design of the facility or facilities in the future.

The resulting Learning Plan was created through the support of the Cien Aguas core committee and broad representation from parents, community, and business representatives. It is with this purpose in mind that the recommendations of the group are herein provided.

Core Committee:

David Rogers, Eva Thaddeus, Michael Rodriquez, Nick Babic, Jeremy Lawrence, Alicia san Gil, Lisa Reagan, Lee Bauer

BEST PRACTICES/ RESEARCH

Carlton Elementary School :
308 students
nautical theme
Flansburgh Associates, inc

COMMUNITY INPUT

CORE COMMITTEE MEETINGS

LEARNING CONTEXT

+

LEARNING PROCESS

+

LEARNING ORGANIZATION

+

LEARNING ENVIRONMENT

=

THE LEARNING PLAN

III. Learning Context

The learning context recognizes and reinforces the need of the school to tailor the building design to its unique situation.

This is achieved by exploring three questions:

1. What is working now? What concepts would Cien Aguas want to take into their new school?

2. What are the challenges/problems?

3. What are the opportunities for learning Cien Aguas might take advantage of the then organize the school accordingly?

The most important overall goals for education at Cien Aguas, both in the existing facility and in the context of building a new facility are as follows:

- Develop world citizens with a connection to the global community

- Provide opportunities to connect with local community and globally, possibly through an exchange program. Integrate cultural traditions

- Small class size relative to standard classroom space and teacher ratio

- Provide a smaller student/teacher ratio than NM standards allow, promoting and facilitating more individualized teaching/learning opportunities

- Consider options of building new or retrofitting an existing building

- Explore costs and benefits of constructing a new building or potentially renovating an existing building

- Commit to obtaining the monetary resources needed for the final capital plan

- Look for opportunities for additional funding sources such as grants, alternate funding, and gifts to supplement monies received from New Mexico

- Promote a “love of learning” environment at the school

- Use technology as an enhancement to learning

- Provide ample technology for staff and students without using it as a crutch to learning/teaching

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IV. Learning Process

The learning process examines:

1. The curriculum;
2. Instruction;
3. Assessment

The goal of the Learning Process is the identification of learning products. The focus is on the identification and design of learning projects that would result in the desired learning products.

The learning projects consist of learning events or activities and naturally link the curriculum, instruction, and assessment; both within the school and in the wider community.

This process results in:

1. Curriculum that is interdisciplinary;

2. Instruction which is “construction” – where learners are active participants building their own personal knowledge;

3. Assessment process that is continuous.

The most important features of the learning process (i.e., curriculum content, instructional methods, and assessment strategies) for Cien Aguas, both in the existing facility and in the context of building a new facility are as follows:

• Utilize specialized teaching methods, i.e., Project GLAD, project based learning, small groups, journaling, hands-on, and experiential learning

• Follow the International Baccalaureate Program (IB) and examine benefits vs. costs of obtaining an IBO certification. The structure of the IB program is fundamentally an integrated teaching/learning structure

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V. Learning Organization

The goal of leaning organization deals with the question of how best to organize the following elements to best support the learning process:

1. Time
2. Learners
3. Staff
5. Decision making
6. Technology
7. Learning settings

When these 7 areas are discussed, a definition of the school climate becomes apparent.

The most important features of the learning organization (i.e., organization of students, time, staff, learning settings, subjects, and decision making) for Cien Aguas, both in the existing facility and in the context of building a new facility are as follows:

• Assure high level science and math programs are implemented

• Commit to fine arts program to include performing arts. Provide space within the school and opportunity in the community to be exposed to fine arts

• Assure that excellent, well-written materials are developed utilizing grammar advisors in both languages.

• Use technology as an enhancement to learning

• Develop a plan for volunteerism as well as parental and community involvement and facility use, i.e. local business partners, monolingual family training

• Utilize the building and site as a teaching tool integrated into curriculum

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VI. Learning Environment

Given the recommendations regarding learning context, process, and organization, the most important features of the learning environment (facilities and technology) for Cien Aguas, both in the existing facility and in the context of building a new facility are as follows: (Items are in prioritized order, most important listed first)

Most Important

• Variety, Inclusiveness, Comfort, and Flexibility in Settings.
Provide and encourage a wide variety of comfortable gathering areas that encourage small group, individual, large group, formal/informal learning.

• Special Use Spaces
Provide special use spaces such as a dedicated physical education area, and an indoor kitchen and laundry area, which is child accessible.

• Sustainable Building Principals
Utilize “green” materials and systems as costs permit within the new building along with low-water, native plants on school site.

• Site/Building as Teaching Tool
Utilize the site and the building as a sustainable teaching tool that encourages active, participatory experiences, such as an active windmill pumping water.

• Interior Needs
Indoor Air Quality and Lighting
Provide quality air systems (IAQ) to promote health for building inhabitants. Use of indoor plants will contribute to air quality. Ambient lighting, when possible should be utilized and natural.

Provide abundance of electrical outlets throughout the building to accommodate flexibility.

• Safe and Secure Settings
Provide safety and security by utilizing smart design rather than institutional controls, along with pick-up/ drop-off areas that are safe and easy to access.

Next Most Important

• Special Spaces
Provide a modern library, possibly based on the “kiva”, which would include a media center, reading area, laptops, and WIFI.

Provide an art room, designed by artists to accommodate needs, including lighting.

Provide a school cafetorium/multi-purpose room.

Special spaces could be based upon Feng Shui to facilitate ambiance and productivity.

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• Building as a Teaching/Learning Tool
Provide building elements such as exposed systems, maps on floor, sundials to be integrated into the curriculum.

Integrate a theme into to the school, such as water, NM culture, natural substances.

• Site as Teaching Tool
Outdoor Learning Areas such as a greenhouse.

• Flexible Furnishings
Provide modular furniture, composed of natural materials and colors, which can be utilized in a variety of configurations.

Integrate white board into classrooms

• Sustainable Building Principals
Utilize energy saving building controls, such as lights, thermostats, etc.

Building should have as much natural daylight as possible to avoid interior light use during the school day.

• Classroom Spaces
Provide a combination of built-in cabinets and portable storage in each classroom.

• Consider costs/benefits of building new or retro-fitting; ultimately, learning is more important than the facility.

Next Most Important

• Accessibility to Nature
Provide doors in classrooms to the outside, rollup doors would be preferred.

• Sustainable Building Principals
Provide a building with various 'green' elements, including passive solar heating/cooling. Include acoustical soundproofing for classrooms to accommodate active and participatory learning as found in the GLAD program.

Next Most Important

• Safety and Security
Build facility around outdoor plaza, possibly circular for safety. Visual: Earth is aerial view.

• Outdoor Learning Areas
Provide outdoor amphitheatre and shaded commons/ gathering areas. Playgrounds should utilize natural materials and modular equipment. A big hill should be included for free play.

• Site as Teaching Tool
Provide a garden and compost area for student participation. Include a rain barrel for water collection, use, and measurement.

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VII. Timeline

6 April, 2009
Workshop I
Introduction and Background Briefing
Individual Questionnaire

8 April, 2009
Workshop II
Definitions: Learning Context, Learning Process, Learning Organization
Small Group Exercise and Report Back
Dot Survey

18 April, 2009
Workshop III
Sustainability and “Zero Energy”

20 April, 2009
Workshop IV
Design: Application to Learning Environment
Individual Questionnaire and Prioritization Matrix
Small Group Exercise
Dot Survey

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